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STATE OF IOWA

1922

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RULES  
AND REGULATIONS  
OF THE  
IOWA STATE BOARD  
OF HEALTH

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The State of Iowa  
Des Moines

**OFFICIAL NOTICE**

The following Rules and Regulations revised and adopted by the Iowa State Board of Health Aug. 5, 1922, have been prepared and promulgated under the provisions of Code Section 2565, which statute gives to the State Board of Health supervision over the interests of the health and life of the citizens of the state, and confers the authority upon said board to make such rules and regulations and sanitary investigations as the board may from time to time find necessary for the preservation and improvement of the public health, which rules and regulations when made shall be enforced by local boards of health and peace officers of the state.

State of Iowa  
1922

Rules and Regulations  
of the  
Iowa State Board of Health

Revised and Adopted  
Aug. 5, 1922

This Issue Supersedes all Previous Issues  
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# Rules and Regulations, Iowa State Board of Health

Approved August 5, 1922

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## CHAPTER 1.

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### COMMUNICABLE DISEASES.

**Sec. I—Necessity.** It is hereby declared by the State Board of Health to be necessary and proper for the preservation of the public health to make the following rules and regulations concerning intercourse with infected places and for the apprehension and treatment of persons who may be affected with or who shall have been exposed to any infectious, contagious or communicable disease.

1. It is hereby declared by the Iowa State Board of Health that these Rules and Regulations are to be the MINIMUM REQUIREMENTS for the safeguarding of the public health within this state.

2. Local Boards of Health are hereby authorized and empowered to make such additional rules and regulations for the care and control of communicable diseases as may be necessary, provided they are not in conflict with these basic Rules and Regulations and are not contrary to the best public health practice.

**Sec. II—Penalty for Violation.** 1. Section 2573 of the Code provides that any one who "neglects or refuses to comply with and obey any order, rule and regulation of the Local or State Board of Health after notice thereof has been given as herein provided, shall forfeit and pay the sum of \$20.00 for each day he refuses such obedience."

2. Section 2572 of the Code provides that "Local Boards of Health shall OBEY and ENFORCE the Rules and Regulations of the State Board of Health, and peace officers and police officers within their respective jurisdiction when called upon to do so by local boards shall execute the orders of such board."

#### DUTIES OF LOCAL BOARD OF HEALTH.

The Local Boards of Health upon receiving a report of a communicable disease from a person who is not a licensed physician must at once give an order to the Local Health Officer to visit and examine the case reported. The Health Officer or representative of the Local Board of Health after receiving the order must examine the person suspected of having the disease and make a report to the Local Board of Health with his recommendations.

Local Boards of Health must forward the reports of all communicable diseases to the State Board of Health within 24 hours after they are received.

**Sec. III—Scope.** 1. For the purpose of these Rules and Regulations, the following diseases are declared to be infectious, contagious and communicable.

- |  |   |
|--|---|
| 1. Actinomycosis   | 20. Measles                                   |
| 2. Acute infectious conjunctivitis (ophthalmia neonatorum) | 21. Mumps                                     |
| 3. Ankylostomiasis   | 22. Paratyphoid                               |
| 4. Anthrax   | 23. Plague                                    |
| 5. Cerebro-spinal meningitis                               | 24. Pneumonia (lobar or broncho)              |
| 6. Chancroid   | 25. Poliomyelitis                             |
| 7. Chickenpox  | 26. Rabies                                    |
| 8. Cholera   | 27. Rocky Mountain fever                      |
| 9. Dengue  | 28. Scarlet fever (scarlatina) (scarlet rash) |
| 10. Diphtheria (membranous croup)                          | 29. Septic sore throat                        |
| 11. Dysentery (amoebic or bacillary)                       | 30. Smallpox                                  |
| 12. Erysipelas   | 31. Syphilis                                  |
| 13. Favus  | 32. Tetanus                                   |
| 14. German measles   | 33. Trachoma (granular conjunctivitis)        |
| 15. Gonorrhoea   | 34. Trichinosis                               |
| 16. Glanders   | 35. Tuberculosis (pulmonary)                  |
| 17. Influenza  | 36. Typhoid                                   |
| 18. Leprosy  | 37. Typhus                                    |
| 19. Malaria  | 38. Whooping cough                            |
|  | 39. Yellow fever                              |

**Sec. IV—Definitions.** For the purposes of these Rules and Regulations the following terms, words and sentences are hereby defined:

*Contact.* A contact or an exposed person is any person known to have been sufficiently near to an infected person to have been exposed to the transfer of infectious material directly, or exposed to articles freshly soiled with such infectious material.

*Quarantine.* For the purpose of these Rules and Regulations the term "Quarantine" shall mean the segregation of persons suffering from any communicable disease in such a place and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to the public.

*Disinfection.* For the purpose of these Rules and Regulations the term "disinfection" shall mean the exercise of such specific measures for each disease and each infectious discharge and each infected article as will render them innocuous and harmless.

*Concurrent Disinfection.* For the purposes of these Rules and Regulations the term concurrent disinfection shall mean the immediate disinfection of all discharges and fomites at the earliest possible moment after they have left the patient. Concurrent disinfection shall be carried on at all times during the quarantine period and as long thereafter as shall be directed by the local board of health.

*Terminal Disinfection.* For the purpose of these Rules and Regulations the words "terminal disinfection" shall mean that process of rendering the person, personal clothing and immediate physical environment (the room or the house, as the case may be) of the patient free from the possibility of conveying the infection to others, at the time that the patient is no longer giving off infectious material.

*Cleansing.* This term signifies the removal, by scrubbing or other mechanical means, of organic material on which and in which disease-producing organisms find favorable conditions for prolonging life and virulence; also the removal by the same means of bacteria adherent to surfaces.

*Isolation.* This term signifies the isolation of cases or suspected cases of communicable disease, or known carriers of infecting organisms, in such places and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to other persons.

*Contact-control.* By contact-control is meant such restraint of exposed persons as will prevent such persons from infecting others should they develop the disease to which they have been exposed.

*Impounding of Infected Material.* This term signifies the control of possibly infected inanimate material in the immediate environment of the patient until it shall have been disinfected.

*Susceptible Person.* This term signifies a person who is not known to have become immune to the disease to which such a person has been exposed, by reason of age, a previous attack, or other natural or artificial process.

*Vaccination.* Vaccination for the prevention of smallpox signifies an inoculation by incision, puncture, scarification or injection beneath the epidermis of a vaccine which produces with some constitutional disturbance, the typical vaccine vesicle, and which leaves, after the pock has healed, a characteristic scar.

*Immunity.* For the purpose of these Rules and Regulations a person may be said to be immune from a disease under the following conditions for a period of five years.

Typhoid Fever immunity may be established by the inoculation of 2 1-2 billion dead typhoid bacilli within a period of three weeks.

Whooping Cough immunity may be established by the inoculation of 6 billion dead B. Pertussi within a period of three weeks.

Diphtheria immunity may be established by the inoculation of 3 cubic centimeters of diphtheria toxin-antitoxin mixture within a period of three weeks.

Smallpox immunity may be established by having cowpox. (Vaccinia)

All persons who have had any of the hereinafter mentioned diseases are declared to be immune to those diseases, providing this fact has been made a matter of record with the local board of health at the time of the illness.

a. Scarlet Fever	c. Mumps	e. Whooping Cough	g. German Measles
b. Smallpox	d. Measles	f. Chickenpox	h. Typhoid

All other persons are hereby declared to be SUSCEPTIBLE.

**Sec. V—Reports of Cases.** 1. For the purposes of these Rules and Regulations a case of any of the diseases mention in (Section 3, paragraph 1, page 4, may be said to be REPORTED immediately by the physician or other persons required to make such reports when the name of the person, address, age, sex, color and race, together with the name of the disease existing or suspected is given IN WRITING to the Local Board of Health, within 6 hours after seeing such a case. The report shall be properly dated and signed with address by the physician or other person so reporting.

2. For reporting CHANCROID, GONORRHEA or SYPHILIS, special blanks are obtainable at the office of each city or village township clerk which must be filled out and submitted as the official report of the case.

3. CASES MUST BE REPORTED as described above by the following persons provided that no person shall be prosecuted for not reporting a case that has already been reported.

(a)....Physicians must report all cases known or suspected by them of having any of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

(b) Keepers of hotels or lodging houses must report all persons who they have any reason to believe might have one of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

(c) Parents, guardians and heads of households must report all persons who they have reason to believe might have any of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

(d) Superintendents, teachers of public and private schools must report all persons who they have reason to believe have any of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

(e) Persons in charge of any public or private institution, hospital, clinic, dispensary, jail, asylum or charitable institutions must report all persons who they have any reason to believe might have one of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

(f) The owner or manager of any dairy farm or place where dairy products are handled or prepared for sale must report any persons in their employ or handling such dairy products who they have reason to believe might have one of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

(g) Every good citizen is requested to report any person who they have reason to believe has any of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

(h) All licensed embalmers must report all cases where they are called to embalm a body and the death certificate certifies that the primary or contributory cause of death was one of the diseases mentioned in Section 3, paragraph 3, page 4, of these Rules and Regulations.

4. Every case of a reportable communicable disease developing in a family where one already exists MUST BE REPORTED.

#### Sec. VI—Quarantine and Placarding.

1. For the purposes of these Rules and Regulations the term QUARANTINE shall mean the segregation of persons suffering from any communicable disease in such a place and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to the public.

2. For the purposes of these Rules and Regulations, publicity shall mean notices in the public press, special letters, printed instructions and placards on the quarters or houses of persons affected.

3. For the purpose of these Rules and Regulations there shall be four placards as follows:—

##### (a) QUARANTINE PLACARD.

A QUARANTINE placard shall be a YELLOW card not less than twelve inches square having printed thereon in large letters the following:—

QUARANTINE  
(NAME OF THE DISEASE)  
KEEP OUT

Notice: No person shall enter or leave this quarantine except as provided by the Rules and Regulations of the State Board of Health.

Signed.....  
Mayor or Clerk.

This placard with the appropriate name of the disease inserted MUST be used in placarding all diseases designated as quarantinable.

##### (b) TEMPORARY QUARANTINE PLACARD.

A TEMPORARY QUARANTINE PLACARD shall be a yellow card not less than twelve inches square having printed thereon in large letters the following:

TEMPORARY QUARANTINE  
KEEP OUT

Notice: No person shall be permitted to enter or leave this quarantine except as provided by the Rules and Regulations of the State Board of Health.

Signed.....  
Mayor or Clerk.



A Temporary Quarantine placard will be used in the event that the type of the disease is not immediately determined or diagnosed. All persons in a household under "Temporary Quarantine" shall observe all the requirements of quarantine until a proper and correct diagnosis shall be made. When a definite diagnosis can be established the report of this diagnosis must be given in writing to the Local Board of Health who will change the placard as required by these Rules and Regulations.

(c) **WARNING PLACARD.**

A **WARNING PLACARD** shall be a yellow card not less than twelve inches square having printed thereon in large letters the following:—

**WARNING  
(NAME OF DISEASE)  
WITHIN**

It is a misdemeanor punishable by law:  
To expose minor children to this disease.  
For any child susceptible to this disease  
to return to school from this premises  
while this card is up.  
To remove this placard without authority  
of the Local Board of Health.

Signed.....  
Mayor or Clerk.

(d) **CARRIER QUARANTINE PLACARD.**

A **CARRIER QUARANTINE PLACARD** shall be a yellow card not less than twelve inches square having printed thereon in large letters the following:

**DIPHTHERIA CARRIER  
KEEP OUT**

Modified Quarantine.  
Notice: No one shall enter or leave  
this premises except those persons  
as provided by the Rules  
and Regulations of the State  
Board of Health.

Signed.....  
Mayor or Clerk.

(e) **UNAUTHORIZED REMOVAL** of any of these placards is hereby declared to be a misdemeanor and punishable by law.  
**Sec. VII.**

**SMALLPOX (VARIOLA) (VARIOLOID)**

What to do for the **CASE.**

1. Must be **REPORTED.** Yes, immediately as provided in Section 5, page 5, paragraph 3.
2. Doubtful and suspected cases must also be reported and quarantined until certain they are free from infection.
3. Must be **PLACARDED.** Yes, quarantine card as provided in Section 6, page 6, paragraph 3.
4. Must be **QUARANTINED.** Yes, as provided in Section 6, page 6, paragraph 6, for at least 14 days and until full recovery. All lesions must be healed and there must be return of complete continuity of the skin.
5. Must be **EXCLUDED FROM SCHOOL** and all public gatherings as provided in Section 7, page 8, paragraph a.
6. Must practice **CONCURRENT DISINFECTION.** Yes, discharges from lesions; also bed clothing, dishes, and the hands as provided in Section 8, page 25, paragraph 1.
7. Must perform **TERMINAL DISINFECTION.** Yes, of the persons, rooms and clothing as provided in Section 8, page 26, paragraph 1.

What to do for **PERSONS EXPOSED.**

1. *Children.*

(a) **CHILDREN WHO ARE IMMUNE**, as defined in Section 4, page 5, paragraph 9, may be instructed, disinfected and released to live elsewhere and may return to school at once.

(b) **CHILDREN WHO HAVE BEEN EXPOSED TO THE DISEASE WHO ARE SUSCEPTIBLE** as defined in Section 4, page 5, paragraph 3, must be quarantined 17 days from the date of the last possible exposure or until they have been successfully immunized by \*vaccination against smallpox.

## 2. Adults.

(a) **ADULTS WHO ARE IMMUNE** as described in Section 4, page 5, may be instructed and released to live elsewhere. No restrictions.

(b) **ADULTS WHO HAVE BEEN EXPOSED TO THE DISEASE AND WHO ARE SUSCEPTIBLE** must be quarantined 17 days from the date of the last possible exposure or until they have been successfully immunized by \*vaccination against smallpox.

### General Measures.

1. General vaccination as defined of all persons who have been directly or indirectly exposed to a case of smallpox as defined in Section 4, page 5, paragraph 4.

### SCARLET FEVER (Scarlatina) (Scarlet Rash)

#### What to do for the CASE.

1. Must be **REPORTED**. Yes, immediately as provided in Section 5, page 5, paragraph 3.

2. Doubtful and suspected cases must also be reported and quarantined until certain they are free from infection.

3. Must be **PLACARDED**. Yes, quarantine card as provided in Section 6, page 6, paragraph 3.

4. Must be **QUARANTINED**. Yes, as provided in Section 6, page 6, paragraph 6.

Cases may be released after 28 days from beginning of sickness beginning the count not more than 48 hours prior to the rash, provided there is no clinical evidence of disease and there is complete cessation of all abnormal discharges. Maximum quarantine period is eight weeks.

5. Must be **EXCLUDED FROM SCHOOL** and public gatherings. Yes, as provided in Section 7, page 8, paragraph a.

6. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from the nose, mouth, ears and glands should be gathered on bits of cotton, paper or cloth and burned at once. Also bed clothing, dishes and hands should be disinfected as provided in Section 8, page 25, paragraph 1.

7. Must perform **TERMINAL DISINFECTION**. Yes, of the person, rooms and clothing as provided in Section 8, page 26, paragraph 1.

#### What to do for PERSONS EXPOSED.

All exposed children, students in any school or college, or any other young adult must be quarantined until properly released in accordance with these rules and regulations.

All other adults exposed, at the discretion of the local health officer, depending on age, occupation, degree of exposure, etc., may be instructed and released; or they may be isolated and kept under observation until they themselves and the public shall be safe from the disease; or they may be quarantined until released in accordance with these rules and regulations. However, no one who has been exposed may come in contact with any school or public gathering or handle milk or other food-stuff without permission of the Local Board of Health.

Any exposed person who is immune as defined in Section 4, page 5, paragraph 10, may be instructed, disinfected and released at any time, when if attending school they may return at once.

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\***Court Holding on Vaccination.** In addition the Iowa courts have held that the administration by mouth of a proper preparation of variolinum constitutes a legal method of vaccination.

If exposures are quarantined where a case of scarlet fever exists, as in the family, they may be released at the same time the case is released; however, such persons shall not attend or come in contact with schools for one week thereafter.

If exposed persons be quarantined elsewhere than with a case of the disease and scarlet fever does not develop within 7 days from the last exposure the persons may be released when, if attending school, they may return at once.

In case of death, exposures shall be held 7 days.

#### General Measures.

1. It is forbidden to sell milk or dairy products from any premises, area or enclosure quarantined on account of Scarlet Fever, Scarlet Rash or Scarlatina or any suspected case thereof.

2. When a case of scarlet fever develops in a school it is of importance that there should be a careful daily health examination of each child in the room for 7 days after the last case occurred.

### DIPHTHERIA (Membranous Croup)

#### What to do for the CASE.

1. Must be **REPORTED**. Yes, as provided in Section 5, page 5, paragraph 3. Doubtful or suspected cases must also be reported and quarantined until certain they are free from infection.

2. Must be **PLACARDED**. Yes, with a Quarantine Card as provided in Section 6, page 6, paragraph 3.

3. Must be **QUARANTINED**. Yes, as provided in Section 6, page 6, paragraph 3. Minimum period 12 days and until complete clinical recovery and also two (2) consecutive cultures from the nose and throat or other infected focus taken at an interval of 24 hours apart, must have been examined by the State Bacteriologist or the Asst. State Bacteriologist and these cultures must have failed to show the presence of diphtheria bacilli. All cultures for the release of quarantine must be examined by the state officers just designated.

4. Must be **EXCLUDED FROM SCHOOL** and all public gatherings. Yes, as provided in Section 7, page 8, paragraph a.

5. Must practice **CONCURRENT DISINFECTION**. Yes, as provided in Section 8, page 25, paragraph 1.

Discharges from the nose and other infective lesions should be gathered on bits of paper, cotton or cloth and burned at once. Also the hands, bed clothing, dishes, and everything for the care of the patient should be immediately disinfected.  
Section 8, page 26, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. Yes, as provided in

#### What to do with a CARRIER.

1. If diphtheria bacilli are found on a person who has no clinical evidence of diphtheria, they shall be termed a **DIPHTHERIA CARRIER**.

2. A person shall not be termed a diphtheria carrier within twenty-eight (28) days after having had diphtheria.

3. If a person has had diphtheria and the diphtheria bacilli persist in the nose, throat or other area of the body for a period of 28 days after the onset of the disease and there is complete cessation of all clinical manifestation of the disease the local health officer at his discretion may declare the case to be a **DIPHTHERIA CARRIER**.

4. All persons found to be diphtheria carriers must be isolated, preferably in their own homes.

5. All persons living in the home of a diphtheria carrier must have nose and throat cultures taken after each diphtheria carrier in the house is found or remain in isolation until there is no longer a carrier in the house.

6. No adult or child will be allowed to attend school or to come in

contact with school children or handle milk while they are living in the house with a diphtheria carrier.

7. Adults living in the home of a diphtheria carrier but not being carriers themselves may go and come from the home unless they come in contact with school children or handle milk.

8. School children living in the home of a diphtheria carrier must not attend school until they have moved to some other place of abode and have had a throat culture taken which did not show the presence of diphtheria bacilli.

9. The house where a diphtheria carrier lives shall be placarded **DIPHTHERIA CARRIER HERE** as long as a carrier lives in the house.

10. All diphtheria carriers and contacts with carriers may be released on one negative laboratory report.

11. Diphtheria carriers should get plenty of exercise and fresh air but must not come in contact with persons outside the isolation.

12. After the isolation of a diphtheria carrier, fumigation is not necessary, but bathing the body and washing the clothing is desirable.

13. Whenever a local health officer has reason to believe that the health of the community is being jeopardized by the careless actions of a diphtheria carrier, or contact with such carrier, he will establish a quarantine upon such a home.

14. Whenever the quarantine and isolation period on a home shall be more than 8 weeks, the situation should be referred to the State Board of Health for disposition.

#### What to do for PERSONS EXPOSED.

1. All exposed children, any students in school or college or any other young adult must be quarantined until properly released in accordance with these rules and regulations.

2. All other exposed persons at the discretion of the local health officer, depending on age, occupation, degree of exposure, etc., may be instructed and released; or they may be isolated and kept under observation until they themselves and the public shall be safe from the disease; or they may be quarantined until released in accordance with these rules and regulations. However, no one who has been exposed may come in contact with any school or public gathering or handle milk or other foodstuff without permission of the local Board of Health.

3. Any exposed person who is immune as defined in Section 4, page 5, paragraph 8, may be released at any time after one (1) negative culture from the nose and throat.

4. Any exposed person previously not known to be immune may be released at any time after an immunizing injection of antitoxin and one (1) negative culture from the nose and throat.

5. Any nurse on a case or older adult may be released after one (1) negative culture from the nose and throat.

6. Any exposed child, or student attending any school or young adult not immune as defined in Section 4, page 8, paragraph 5, or who has not had an immunizing injection of antitoxin may be released only after two (2) negative cultures.

7. Children and others in contact with schools may return immediately after release according to these rules and regulations.

#### What to do for EXPOSED PERSONS ATTENDING SCHOOL.

1. Whenever a case of diphtheria is found in a school all children in the school room should have their throats cultured to detect subsequent cases before clinical symptoms begin.

2. When taking cultures from an entire school it is very important to be sure to either get a culture or a report on every individual who was in the school at the time cases were occurring. It frequently occurs that the source of infection was one of the first cases and at the time cultures were taken this patient was at home in quarantine. All teachers,

janitors and attendants of all descriptions who have come in contact with the children in the school room should be included in any throat culture survey of the school room. Superintendents and principals should always be included.

3. The Schick test should be used to determine which of the children are immune and which are susceptible to diphtheria.

4. Toxin-antitoxin immunization is highly recommended for all children who are found to be susceptible to diphtheria.

#### General Measures.

1. **DIPHTHERIA CARRIERS.** Any person who is known to be harboring diphtheria bacilli without clinical manifestations of the disease shall be termed a diphtheria carrier. When patients are found to be carrying diphtheria bacilli in their tonsils, complete enucleation of the tonsils and adenoids is the method that has been found most effective in terminating the carrier conditions. Where diphtheria bacilli are being harbored in the nasal cavity this method is, of course, of little value. Sprays, gargles, swabs, and other similar methods are all found to be about of equal value and clear up carrier conditions a few days earlier than nature would clear them up unassisted.

2. Local boards of health are advised to make free use of culture method to identify carriers of virulent diphtheria bacilli and to assist in early diagnosis.

3. The use of the Schick test to identify persons susceptible to diphtheria infection is highly recommended.

4. The administration of toxin-antitoxin mixture to all susceptible persons is urged. Toxin-antitoxin does not give immediate immunity.

5. The early administration of large doses of diphtheria antitoxin to clinical cases is most necessary.

### EPIDEMIC CEREBROSPINAL MENINGITIS

#### What to do for the CASE.

1. Must be **REPORTED.** Yes, immediately as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED.** Yes, with a Quarantine Card as provided in Section 6, page 6, paragraph 3.

3. Must be **QUARANTINED.** Yes, as provided in Section 6, page 6, paragraph 3.

Release from quarantine:

1. May be released after complete clinical recovery provided that 2 naso-pharyngeal cultures taken after recovery, 24 hours apart, do not reveal the diplococcus intracellular meningitis or may be released after cessation of all clinical symptoms and after seven days of normal temperature. Minimum period fourteen days.

2. Must be **EXCLUDED FROM SCHOOL.** Yes, during the time of the quarantine and for one week thereafter.

3. Must practice **CONCURRENT DISINFECTION.** Yes, discharges from nose and throat, bed clothing, dishes and hands as provided in Section 8, page 25, paragraph 1.

4. Must perform **TERMINAL DISINFECTION.** Yes, of the person, rooms and clothing as provided in Section 8, page 26, paragraph 1.

#### What to do for PERSONS EXPOSED.

##### 1. Children.

All children or young adults who have been exposed to a case of cerebrospinal meningitis shall immediately be placed within quarantine where they shall remain until quarantine is lifted from the case; provided that under such circumstances as the local health officer may direct the person exposed may be allowed to remain outside the quarantine, provided the person does not attend any school or public gathering for a period of one week.

2. **ANY OTHER PERSON** who has been exposed to a case of cerebrospinal meningitis by reason of having lived in a home or where a case of cerebrospinal meningitis develops may be instructed, disinfected and released to live elsewhere as provided in Section 10, uage 28, paragraph 1.

**General Measures.**

1. The culturing of the naso pharynx of all exposed persons is advised under circumstances where these cultures can be examined in the laboratory immediately and without transmission through the mail.

2. Dairy products must not be removed from a premises where a case of cerebrospinal meningitis is quarantined except as provided in Section 11, page 31.

**POLIOMYELITIS (INFANTILE PARALYSIS)**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. Yes, with a Quarantine Card as provided in Section 6, page 6, paragraph 3.

3. Must be **QUARANTINED**. Yes, as provided in Section 6, page 6, paragraph 3.

**Release from Quarantine:**

Cases may be released from quarantine in not less than 21 days or more than 28 days from the date of the onset of the disease.

4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes, as provided in Section 7, page 8, paragraph a.

5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from the bowels, nose and mouth. Also bed clothing, dishes and hands as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. Yes, of the person, rooms and clothing as provided in Section 8, page 26, paragraph 1.

**What to do for PERSONS EXPOSED.**

1. (a) All **EXPOSED CHILDREN, STUDENTS IN SCHOOL** or any other **YOUNG ADULT** must be quarantined until properly released in accordance with these Rules and Regulations.

(b) If exposures are quarantined with a case of poliomyelitis they may be released at the same time as the patient; however, such prsons shall not attend or come in contact with any school for one week thereafter.

(c) If exposed persons be quarantined elsewhere than with a case of the disease and poliomyelitis does not develop within seven days from the date of the last exposure they may be released, when if attending school they may return at once.

(d) In case of death of the patient the exposures under quarantine with the patient may be released one week thereafter and return to school immediately.

2. **OTHER ADULTS** may be disinfected, instructed and released to live elsewhere.

**TYPHUS**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. Yes, with a Quarantine Sign as provided in Section 6, page 6, paragraph 3.

3. Must be **QUARANTINED**. Yes.

4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes.

6. Must perform **TERMINAL DISINFECTION**. Yes.

What to do for **PERSONS EXPOSED**.

1. Delousing of all persons in contact with the case.
2. The quarters of the patient must also be deloused.

### YELLOW FEVER

What to do for the **CASE**.

1. Must be **REPORTED**. Yes, immediately as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. Yes.

3. Must be **QUARANTINED**. Yes.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**.  
Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes.

6. Must perform **TERMINAL DISINFECTION**. Yes.

What to do for **PERSONS EXPOSED**.

1. Give full instructions regarding spread.

General Measures.

1. Screen against mosquitoes.
2. Eliminate breeding places of mosquitoes.

### PLAGUE

What to do for the **CASE**.

1. Must be **REPORTED**. Yes, immediately as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. Yes.

3. Must be **QUARANTINED**. Yes.

4. Must be **EXCLUDED FROM SCHOOL**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes.

(a) Very important to disinfect the discharges from the lesions in the lungs or glands. These discharges must be collected on bits of cotton, paper or cloth and burned at once.

(b) All articles soiled with these discharges must be disinfected as discharged as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. Yes, as provided in Section 8, page 26, paragraph 1.

General Measures.

1. Examination of rats and squirrels for cases among these animals.

### LEPROSY

What to do for the **CASE**.

1. Must be **REPORTED**. Yes, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. Yes.

3. Must be **QUARANTINED**. Yes, or isolate under satisfactory supervision.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**.  
Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes. Disinfect discharges and articles soiled with discharges as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. Yes, a thorough cleansing of premises of the patient is necessary.

What to do for **PERSONS EXPOSED**.

1. **CHILDREN** are not excluded from school and public gatherings.

**CHOLERA****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. Yes.
3. Must be **QUARANTINED**. Yes.
4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**.  
Yes.
5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from bowels, vomited matter, and articles soiled thereby, and the hands should be disinfected, as described in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. Yes.  
Bodies of those dying should be cremated or cared for as provided in Section 9, page 26, paragraph 1.

**What to do for PERSONS EXPOSED.**

1. The attending physician shall give full instructions regarding the seriousness of the disease and mode of spread.

**SYPHILIS (LUES) (BIG POX)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately without the name as provided in Chapter III, page 64, paragraph 4.
2. Must be **PLACARDED**. Yes, if endangering the health of others, as provided in Chapter III, page 66, paragraph 2.
3. Must be **QUARANTINED**. Yes, unless under the treatment of a competent physician and following advice regarding the exposure of others.
4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**.  
Yes, if in infective stage.
5. Must practice **CONCURRENT DISINFECTION**. Yes, all discharges are to be collected on bits of cotton or gauze and burned immediately.
6. Must perform **TERMINAL DISINFECTION**. No. Cleansing and airing recommended.

**General Measures.**

1. The Physician and the Health Officer should instruct and do everything within their power to disseminate information regarding the gravity and seriousness of this infection.

**GONORRHEA****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, without the name as provided in Chapter III, page 64, paragraph 4.
2. Must be **PLACARDED**. Yes, if endangering the health of others, as provided in Chapter III, page 66, paragraph 2.
3. Must be **QUARANTINED**. Yes, unless under the treatment of a competent physician and following advice regarding the exposure of others, as provided in Chapter III, page 65, paragraph 2.
4. Must be **EXCLUDED FROM SCHOOL**. Yes.
5. Must practice **CONCURRENT DISINFECTION**. Yes, all discharges are to be collected on bits of cotton, paper, or cloth and burned immediately. All articles soiled with the discharges must be disinfected as described in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. No. We recommend cleansing.

**What to do for PERSONS EXPOSED.**

1. **CHILDREN** are not excluded from school unless themselves suspected of infection.
2. **ADULTS**. The Health Officer and Physician should give instruc-



tions and do everything in their power to disseminate the information regarding the gravity and seriousness of this infection.

**General Measures.**

The use of 1 per cent silver nitrate solution in the eyes of new-born is required by law, except under certain circumstances.

**ACUTE INFECTIOUS CONJUNCTIVITIS**

(Not including trachoma)

Synonyms—Ophthalmia Neanatorum, Babies' Sore Eyes, Gonorrhœal Ophthalmia.

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately as provided in Chapter III, page 64, paragraph 4.
2. Must be **PLACARDED**. No.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes, until complete clinical recovery and negative smears.
5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges to be gathered on bits of cotton or gauze and burned immediately. All articles soiled with these discharges must be disinfected as provided in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. No. Cleansing recommended.

**What to do for PERSONS EXPOSED.**

1. **CHILDREN** need not be excluded from school, unless themselves suspected of infection.
2. The seriousness of this disease must be impressed upon everyone coming in contact with the patient. Where 24 hours nursing service is not available cases should be removed to hospitals where such service can be given. The strictest precautions must be observed regarding all infectious discharges and everything that might be soiled with these discharges. All visible discharge must be collected on bits of cotton, paper or cloth and burned at once. All bed clothing, pillow slips, sheets, towels and instruments used in taking care of the case must be washed and boiled before being used by other persons.

**General Measures.**

1. Silver nitrate 1 per cent solution or ARGEROL 10 per cent solution have been approved by the State Board of Health for the prevention of this disease. Except in special cases it is required by law that one of these prophylactics be used in the eyes of each child born in this state.

**CHANCROID**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided by Chap. III, page 64, paragraph 4.
2. Must be **PLACARDED**. Yes, if endangering the health of others as provided in Chap. III, page 66, paragraph 2.
3. Must be **QUARANTINED**. Yes, unless under the treatment of a competent physician and following advice regarding the exposure of others.
4. Must be **EXCLUDED FROM SCHOOL**. Yes.
5. Must practice **CONCURRENT DISINFECTION**. Yes, all discharges to be collected on bits of cotton or gauze and burned immediately.
6. Must perform **TERMINAL DISINFECTION**. No, cleansing recommended.

**General Measures.**

1. Physicians and Health Officer should instruct and do everything in their power to disseminate information regarding the gravity and seriousness of this infection.

**WHOOPING COUGH (PERTUSSIS)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5 page 5, paragraph 3.
2. Must be **PLACARDED**. Yes, a warning card for 14 days minimum, as provided in Section 6, page 6, paragraph 3.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes. Minimum period, 14 days.
5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from nose, throat, bed clothing and dishes should be disinfected as provided in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. No, thorough cleansing and airing recommended.

**What to do for PERSONS EXPOSED.**1. *Children.*

(a) Children who are immune as defined in Section 4, page 5, paragraph 7, should not be excluded from school.

(b) Children who are susceptible as defined in Section 4, page 5, paragraph 3, should be excluded from school for the same period as the patient.

2. *Adults.*

No restrictions for exposures.

**General Measures.**

Pertussis vaccine if fresh and in large doses effectively prevents many cases of whooping cough.

**MUMPS (PAROTITIS)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. Yes, a warning card for minimum period of 14 days and until glandular enlargement and tenderness has disappeared as provided in Section 6, page 6, paragraph 3.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes. Minimum period, 14 days.
5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from the nose and mouth. Also bed clothing and dishes as provided in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. No, thorough cleansing and airing recommended.

**What to do for PERSONS EXPOSED.**1. *Children.*

(a) Children who are immune as defined in Section 4, page 5, paragraph 10, should not be excluded from school.

(b) Children who are susceptible as defined in Section 4, page 5, paragraph 3, must be excluded from school for the same time as the patient.

2. *Adults.*

No restrictions for exposures.

**GERMAN MEASLES (ROTHELN)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. Yes, a warning card for 8 days and until recovery as provided in Section 6, page 6, paragraph 3.

3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes. Minimum period, 8 days.
5. Must practice **CONCURRENT DISINFECTION**. Yes, disinfect discharges from nose and throat, bed clothing and dishes as provided in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. No, thorough cleansing and airing recommended.

**What to do for PERSONS EXPOSED.**

1. *Children.*

(a) Children who are immune as provided in Section 4, page 5, paragraph 5, should not be excluded from school.

(b) Children who are susceptible as defined in Section 4, page 5, paragraph 3, should be excluded from school for the same period as the patient.

2. *Adults.*

No restrictions for exposures.

**General Measures.**

1. Guard against pneumonia.

**MEASLES (MORBILLI)**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. Yes, warning card 14 days and until recovery as provided in Section 6, page 6, paragraph 3.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes. Minimum period, 14 days.
5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from nose, throat, bed clothing and dishes as provided in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. No. Thorough cleansing and airing recommended.

**What to do for PERSONS EXPOSED.**

1. *Children.*

(a) Children who are immune as defined in Section 4, page 5, paragraph 5, should not be excluded from school.

(b) Children who are susceptible as defined in Section 4, page 5, paragraph 3, must be excluded from school for the same time as the patient.

2. *Adults.*

No restrictions for exposures.

**General Measures.**

Guard carefully against pneumonia and tuberculosis.

**CHICKEN POX (VARICELLA)**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. Yes, warning card 14 days minimum period, and until complete return of continuity of the skin as provided in Section 6, page 6, paragraph 3.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes. Minimum period 14 days.
5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges

from lesions, bed clothing and dishes as provided in Section 8, page 25, paragraph 1.

6. Must practice **TERMINAL DISINFECTION**. No, thorough cleansing and airing recommended.

**What to do for PERSONS EXPOSED.**

1. *Children.*

(a) Children who are immune as defined in Section 4, page 5, paragraph 5, should not be excluded from school.

(b) Children who are susceptible as defined in Section , page 5, paragraph 3, must be excluded from school for the same period as the patient.

2. *Adults.*

No restrictions for exposures.

**General Measures.**

This disease is often diagnosed when the patient really is suffering from smallpox. Great care should be exercised.

**TYPHOID FEVER**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from the bowels and bladder as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. Yes, as provided in Section 8, page 26, paragraph 1.

**What to do for PERSONS EXPOSED.**

1. *Children.*

Children need not be excluded from school.

2. *Adults.*

The attending physician shall give full instructions regarding the seriousness and mode of spread of this disease, and the value of typhoid vaccine.

**General Measures.**

1. Because of similarity of exposure all other members of the family should be immunized against typhoid.

2. Because of close contact all attendants should be immunized against typhoid.

3. After recovery from a case of typhoid all persons are forbidden from engaging in certain occupations, viz:—cook, waiter, kitchen helper, handling of milk, for a period of one year unless two specimens of stool collected not less than 24 hours apart shall have been examined at the Laboratories for the State Board of Health, and the B. typhosus shall have not been found.

4. No dairy products shall be allowed to be removed from a farm where a case of typhoid fever exists without permission from the Secretary-Executive Officer of the State Board of Health on written recommendation of the local Health Officer.

**PARA-TYPHOID FEVER**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 1.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**.  
Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from the bowels and bladder as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. No. Special care in cleaning the hands should be exercised.

**What to do for PERSONS EXPOSED.**

1. *Children.*

School children need not be excluded from school.

2. *Adults.*

The attending physician shall give full instructions regarding the seriousness, mode of spread and the value of typhoid and para-typhoid vaccine.

**TUBERCULOSIS (Pulmonary)**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes, all "open cases." "Open Cases" are defined as those cases where tubercle bacilli have been found in the sputum.

5. Must practice **CONCURRENT DISINFECTION**. Yes. All discharges from the nose and throat must be collected and burned; also the bed clothing and dishes as provided in Section 8, page 25, paragraph 1.

**What to do for PERSONS EXPOSED.**

1. *Children.*

Children need not be excluded from school.

2. *Adults.*

The attending physician should advise periodic chest examinations.

**General Measures.**

1. Tuberculin test for early cases.

2. Chest examination of exposed persons.

3. "Open Cases" as defined in Section 7, page 19, paragraph 10, are forbidden the privilege of engaging in certain occupations, viz.—barber, cook, waiter, kitchen helper, handling of milk or any other occupation which brings them in direct or indirect contact with food offered for sale.

**ANCHYLOSTOMIASIS (Hook Worm)**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**.  
Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes. Discharges from the bowels as provided in Section 8, page 25, paragraph 1.

6. Must be **TERMINAL DISINFECTION**. No.

**What to do for PERSONS EXPOSED.**

1. *Children.*

Children need not be excluded from school.

2. *Adults.*

The attending physician shall give full instructions regarding the seriousness and mode of spread of this disease.

**General Measures.**

Eradication of this disease can be obtained by personal cleanliness and installation of proper privies or sanitary disposal systems.

**DYSENTERY (Amoebic and Bacillary)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. No.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes.
5. Must practice **CONCURRENT DISINFECTION**. Yes. Disinfect the bowel discharges as provided in Section 8, page 25, paragraph 1.
6. Must perform **TERMINAL DISINFECTION**. No.

**What to do for PERSONS EXPOSED.**

Attending physician should give full instructions regarding seriousness and mode of spread of this disease.

**General Measures.**

1. Boil drinking water and protect food and water from contamination.
2. Dairy products must not be removed from the premises when a case of dysentery (amoebic or bacillary) occurs except as provided in Section 11, page 30, paragraph A.

**RABIES (Hydrophobia)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. No.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes.
5. Must practice **CONCURRENT DISINFECTION**. Yes. The saliva carries the infectious agent and this should be collected on bits of cotton, paper or cloth and burned at once.
6. Must perform **TERMINAL DISINFECTION**. No. Air and cleansing recommended.

**What to do for PERSONS EXPOSED.**

1. Should be given Pasteur Treatment if it is thought they have been bitten by an animal not known to be free from Rabies.

**General Measures.**

1. Kill all stray dogs.
2. Muzzle all dogs in public places.
3. Detention of all dogs suspected of being rabid for 10 days.

**SEPTIC SORE THROAT (S. Hemolyticus)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.
2. Must be **PLACARDED**. No.
3. Must be **QUARANTINED**. No.
4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes, until S. Hemolyticus is no longer present.
5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from mouth and throat; also dishes, hands and bed clothing, as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. No. Airing and cleansing recommended.

What to do for **PERSONS EXPOSED**.

1. *Children*.

Children need not be excluded from school.

2. *Adults*.

Give full instructions regarding danger and mode of spread.

### ERYSIPELAS

What to do for the **CASE**.

1. Must be **REPORTED**. Yes, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes.

6. Must perform **TERMINAL DISINFECTION**. No, cleansing and airing recommended.

What to do for **PERSONS EXPOSED**.

1. The physician in attendance will give full instructions regarding the means of spread.

### TRACHOMA

(Contagious Granular Conjunctivitis, Granular Eyelids).

What to do for the **CASE**.

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes, until pronounced non-contagious by Health Officer.

5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from lesions are to be collected on bits of cotton, paper or cloth and burned immediately as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. No.

What to do for **PERSONS EXPOSED**.

1. *Children*.

Children need not be excluded from school.

2. *Adults*.

No restrictions.

**General Measures.**

1. The attending physician will give instructions regarding the seriousness and means of spread of this disease.

2. The importance of using individual towel, sleeping alone, and avoiding all direct and indirect contact with discharges from the eyes of infected people, should be stressed by physicians and health officers.

### TETANUS

What to do for the **CASE**.

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes. All discharges from the wound must be collected on bits of paper, cotton or cloth and burned at once.

6. Must perform **TERMINAL DISINFECTION**. No. Cleansing, airing and sunshine recommended.

**What to do for PERSONS EXPOSED.**

1. No restriction.

**General Measures.**

1. Tetanus antitoxin should be administered to all such wounds as produce conditions suitable for the growth of B. Tetanus in the human body. Gunshot wounds, powder burns and deep perforating wounds are especially likely to be infected with B. Tetanus.

**TRICHINOSIS**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. No.

5. Must practice **CONCURRENT DISINFECTION**. No.

**What to do for PERSONS EXPOSED.**

1. The attending physician will give full instructions regarding the means of spread.

**General Measures.**

1. Pork should never be eaten raw.

2. All pork should be cooked white before eaten.

**MALARIA**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must practice **CONCURRENT DISINFECTION**. No. Destroy the Anopheles mosquitoes.

5. Must perform **TERMINAL DISINFECTION**. No.

**What to do for PERSONS EXPOSED.**

1. *Children.*

Children need not be excluded from school or public gatherings.

**General Measures.**

1. The administration of prophylactic doses of quinine should be insisted upon for those constantly in contact.

**PNEUMONIA (Broncho. Croupous, Lobar.)**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes, all discharges from nose and throat should be collected on cotton or gauze and burned. All articles soiled with these discharges must be disinfected as described in Section 8, page 25, paragraph 1.



**What to do for PERSONS EXPOSED.**1. *Children.*

Children need not be excluded from school.

2. *Adults.*

Advise periodic chest examinations.

**GLANDERS****What to do for the CASE.**

1. Must be **REPORTED**. Yes, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes, until complete clinical recovery.

5. Must practice **CONCURRENT DISINFECTION**. Yes, disinfect discharges from nose and mouth, dishes, hands and bed clothing, as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. No. Air, sunshine and cleansing recommended.

**What to do for PERSONS EXPOSED.**1. *Children.*

Children need not be excluded from school or public gatherings. Physician in charge must give full instructions regarding danger and mode of spread of the disease.

**General Measures.**

1. Horses are frequently a source of infection.

**FAVUS****What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes, until the patient is receiving treatment tending to diminish the infectiousness.

5. Must practice **CONCURRENT DISINFECTION**. Yes. Disinfect toilet articles of patient, according to Section 8, page 25, paragraph 1. Collect discharges from lesions on bits of cotton, paper or cloth and burn immediately.

6. Must perform **TERMINAL DISINFECTION**. No.

**What to do for PERSONS EXPOSED.**1. *Children.*

Children need not be excluded from school and public gatherings.

**General Measures.**

1. Elimination of common utensils, such as hair brushes and combs.

**ACTINOMYCOSIS (Lump Jaw)****What to do for the CASE.**

1. Must be **REPORTED**. Yes, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**. Yes, exclude until complete clinical recovery.

5. Must practice **CONCURRENT DISINFECTION**. Yes, discharges from

the lesions must be gathered on bits of cotton, paper or cloth and burned at once. All articles soiled with these discharges must be disinfected as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. Yes, of the person, rooms and clothing as provided in Section 8, page 26, paragraph 1.

**What to do for PERSONS EXPOSED.**

1. *Children.*

Children need not be excluded from school.

2. *Adults.*

Give full instructions as to means of spread of this disease.

**ANTHRAX**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. Yes, discharge from the lesions should be collected on bits of cotton or paper and burned at once. All articles soiled with these discharges must be disinfected as provided in Section 8, page 25, paragraph 1.

6. Must perform **TERMINAL DISINFECTION**. Yes, as provided in Section 8, page 26, paragraph 1.

**What to do for PERSONS EXPOSED.**

1. *Children.*

Children need not be excluded from school.

2. *Adults.*

Give full instructions regarding the seriousness of disease and mode of spread.

**General Measures.**

1. Animals dead from Anthrax harbor many virulent organisms of the disease and all such animals should be burned at once with a minimum amount of handling.

**DENGUE**

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL and PUBLIC GATHERINGS**. Yes.

5. Must practice **CONCURRENT DISINFECTION**. No.

6. Must perform **TERMINAL DISINFECTION**. No.

**General Measures.**

Screen rooms. Destroy mosquitoes.

**ROCKY MOUNTAIN FEVER.**

Synonyms: Spotted Fever, Tick Fever.

**What to do for the CASE.**

1. Must be **REPORTED**. Yes, immediately, as provided in Section 5, page 5, paragraph 3.

2. Must be **PLACARDED**. No.

3. Must be **QUARANTINED**. No.

4. Must be **EXCLUDED FROM SCHOOL** and **PUBLIC GATHERINGS**.  
Yes.

5. Must practice **CONCURRENT DISINFECTION**. No.

6. Must perform **TERMINAL DISINFECTION**. No.

**General Measures.**

1. Eradicate ticks.

2. Tick-proof clothing.

**Sec. VIII—Disinfection.**

1. For the purpose of these Rules and Regulations the term "Disinfection" shall mean the exercise of such specific measures for each disease and each infectious discharge and each infected article as will render them innocuous and harmless.

2. No quarantine shall be terminated until all the directions for concurrent and terminal disinfection shall have been carried out in compliance with these Rules and Regulations and to the satisfaction of the Local Board of Health.

3. **CONCURRENT DISINFECTION** shall be carried out at all times while the patient is giving off infectious material. **TERMINAL DISINFECTION** will be started after the patient has ceased to give off infectious material.

4. Full directions for concurrent and terminal disinfections are found on page 25, paragraph 1.

5. The State Law provides that the **PARTIES WITHIN THE QUARANTINE** shall carry out all disinfection in cases where they are physically and financially able. In cases where they are not financially and physically able it becomes the duty of the Local Board of Health to see that this disinfection is done in compliance with the Rules and Regulations of the State Board of Health. Payment for such services must be made from the same source and in the same manner as all other bills created in the interests of Public Health and in the enforcement of the Quarantine Laws. (See Section 2571 A Code of 1913.)

**CONCURRENT DISINFECTION**

1. For the purposes of these Rules and Regulations the term "Concurrent Disinfection" shall mean the immediate disinfection of all discharges and fomites at the earliest possible moment after they have left the patient. Concurrent disinfection shall be carried on at all times during the quarantine period and as long thereafter as shall be directed by the Local Board of Health.

2. Disinfection of the **BOWEL DISCHARGES** shall be carried out by adding 3 tablespoonfuls of freshly opened chloride of lime to a liquid stool and stirring the mixture until all parts of the stool have been thoroughly impregnated with the chlorine. This mixture should be allowed to stand, protected from flies, for 30 minutes before being discharged into a sewer or privy vault.

Solid stools should have one pint of water added and be thoroughly stirred until the stool assumes a liquid character and all lumps broken and then treated as described above.

3. Disinfection of bladder discharges shall be carried out by stirring 3 tablespoonfuls of freshly opened chloride of lime into each passage and allowing this mixture to stand 30 minutes before being discharged into a sewer or privy vault. Bed pans and urinals must be thoroughly cleaned after each time used and rinsed out and left containing a small amount of chloride of lime. Sufficient chloride of lime should be left in the receptacles so that the chloride shall be repugnant for flies. They should also be kept screened away from flies.

4. The disinfection of all normal and abnormal discharges from eyes, ears, nose, throat, skin lesions or glands, etc., during the time of illness from any of the diseases listed in Section III of these Rules and Regu-

lations shall be carried out by being collected on bits of cotton, cloth or paper and burned at once.

5. Disinfection of fomites. All bed clothes, pillow slips, sheets, night gowns, towels and any other cloth or clothing of any kind that has been in contact with the patient shall be thoroughly boiled with soap and water for at least 15 minutes before it shall be allowed to leave the quarantined area. A wash boiler or wash tub should be kept in the sick room, 1-3 full of cold water. All soiled bed linen and clothes should be immediately placed in this cold water. Once a day this should be carried to the stove and allowed to boil for 15 minutes. Clothes so treated may be hung out to dry. Prompt moistening and boiling is much better than immersion in any disinfectant.

6. The attendant's hands should be washed with soap and water after each service performed for the patient. This is especially necessary after taking care of any of the patient's normal or abnormal discharges, as it is in these discharges that the infectious material is leaving the patient's body. Disinfecting chemicals are not advised in the water because the attendant who is giving proper care to a patient will wash the hands at least every half hour and this amount of washing will soften and irritate the skin if any disinfecting chemical is added. Soap and water used frequently enough is sufficient.

7. Remnants of food from the sick room should never be eaten by anyone but should be collected and boiled or burned immediately.

8. Thermometers, rectal tubes, etc., should never be taken from the sick room until the termination of the case and should be kept submerged in alcohol except while being used.

9. All dishes, glassware, knives, forks, spoons, trays, or any utensils used in feeding the patient in a quarantined area shall be promptly disinfected by boiling in soap and water for 15 minutes. Such dishes and utensils shall not be used during the quarantine by other persons in the quarantined area, but shall be set aside and used only for the patient. It shall be the duty of the Local Board of Health to see that such segregation of dishes and utensils is carried out.

10. Water that has been used to bathe the patient should be boiled for ten minutes before being discarded.

### **TERMINAL DISINFECTION.**

1. For the purpose of these Rules and Regulations the words "Terminal Disinfection" shall mean that process of rendering the person, personal clothing and immediate physical environment of the patient free from the possibility of conveying the infection to others, at the time that the patient is no longer giving off infectious material.

2. Terminal disinfection of all clothes, bed clothes and towels, bed pans, urinals, thermometers, rectal tubes, dishes, glassware, eating utensils, etc., which have been exposed to the patient while giving off infectious material, shall be carried out as described for concurrent disinfection.

3. Terminal disinfection of the person, rooms or dwellings shall be carried out by the use of chemicals, soap and water, fresh air and sunlight as shall be required for the individual case. Bedsteads, chairs, tables, floors, furniture, woodwork, and windows shall be scrubbed with hot water and soap.

4. Comfortables, Comforts, mattresses, carpets, and rugs and all other articles that have been soiled by the infected discharges of the patient and which by the nature of the material used in their manufacture, would be damaged by immersion in boiling water, or washing with soap and water, may be disinfected by being spread on the ground in the full rays of the sun for the entire sunshine period of three successive days.

5. Books, papers, magazines and childrens' toys used by the patient while in an infectious state should be destroyed by burning. There is no adequate way of disinfecting them.

6. Milk bottles, milk pails or food containers of any sort must never be allowed to leave the quarters until the termination of the quarantine. If milk bottles, milk pails and food containers are brought into the quarantined area they must be allowed to collect during the whole period of quarantine and be thoroughly sterilized by being completely immersed in boiling water for 15 minutes AFTER quarantine has been lifted.

7. We recommend that a pitcher or other suitable container be placed outside the door of the quarantined premises and that the milk man simply pour his milk into it and carry his bottle away immediately. Having touched nothing or exchanged nothing there will be no contamination and the uncertainty of sterilizing accumulated bottles at the termination of the quarantine will be entirely avoided.

## Sec. IX.

### FUNERALS

**WHEN DEATH OCCURS** in a quarantined area no one shall enter the quarantined area except the physician and the undertaker without permission from the Local Board of Health.

**NO PUBLIC SERVICES** of any kind shall be held in the presence of any person dead of a quarantinable disease. Bury within 24 hours.

A limited number of persons intimately related or associated with the patient who have been in the quarantined area may be released from the quarantine for the purpose of accompanying the body to the cemetery **PROVIDED** they are furnished with a separate carriage from which they do not dismount or leave until they have returned to the quarantined area. All persons granted **THIS** privilege must keep themselves separate and apart from all others at the cemetery on pain of having committed a misdemeanor before the law.

It hereby becomes the duty of the Local Board of Health and in the absence of the Health Officer, it shall be the duty of the licensed embalmer in charge of the funeral to see that the public are not exposed to any contagious disease by reason of the visit of the quarantined persons to the cemetery and it shall be their duty to see that the persons who have left the quarantine to visit the cemetery shall return at once and re-enter the quarantine where they must remain until released by the Local Board of Health.

## Sec. X.

### TERMINATION OF QUARANTINE.

When a person suffering from a communicable disease reaches that stage where they are not giving off infectious material the attending physician should notify the Local Board of Health and as soon thereafter as the minimum number of days have elapsed and all other Rules and Regulations of the State Board of Health and of the Local Board of Health have been complied with, the Health Officer will direct that terminal disinfection be performed.

Quarantine can only be **TERMINATED** when all concurrent and **TERMINAL DISINFECTION** has been carried out to the complete satisfaction of the Local Board of Health and in full compliance with the Rules and Regulations of the State Board of Health. Concurrent Disinfection must be carried on at all times when the patient is giving off infectious material. Terminal Disinfection shall be begun only after the patient has ceased to give off infectious material. Terminal and Concurrent Disinfection shall be done and paid for by the householder in cases where he is able to pay and in other cases it shall be done by the Local Board of Health and paid for same as other bills incurred in protecting the public. (See Section 2571 A Supplement to the Code 1913.)

Concurrent and Terminal Disinfection will be carried out as described in Section 8, page 25, paragraph 1.

Upon the death of a patient, quarantine may be terminated as soon as all Rules and Regulations of the State Board of Health regarding disinfection have been carried out to the complete satisfaction of the Local Board of Health and in compliance with the Rules and Regulations of the State Board of Health, except there be exposed persons. It is hereby directed that persons susceptible to the disease who were exposed to the patient while giving off infectious material shall be managed as other exposed persons according to these Rules and Regulations, governing the various diseases.

### **GENERAL MEASURES.**

#### **Sec. XI—Removal to Hospital.**

1. Whenever in the opinion of the Local Board of Health, the public Health demands it, it may order and cause to be removed any person affected with any communicable disease, to such place as may be in its judgment, suitable for the adequate protection of the public.

2. Persons removed under authority of this Section will be released at such time as their condition is not communicable and they are no longer a menace to the public.

3. The expense of carrying out this Rule shall be borne the same as all other expenses created in protecting the public as provided in Section 2571 A Code of 1913.

### **ENTRANCE INTO THE STATE.**

1. No person shall bring, fetch or carry into this state any person exposed to or suffering from any communicable disease, or anything exposed to such a person without first notifying and obtaining permission in writing from the State Board of Health.

2. No person or corporation shall transport or carry across this state any person exposed to or suffering from any communicable disease without first securing permission in writing from the Secretary of the State Board of Health.

### **PROTECTION AGAINST INFECTED AREAS.**

1. Whenever any contagious disease becomes unduly prevalent in any section of this State it shall become the duty of the State Board of Health to prohibit or regulate inter-course between such and other places within this state in such a manner and in such ways that the health of the public will be protected.

2. The State Board of Health, or its authorized representative, may stop, detain and examine every person coming from such an infected area in order to prevent the introduction of disease into other parts of the state.

3. It may cause persons found affected with or whom it may have reason to believe has been exposed to any communicable disease, to be removed to such hospital, quarantined building or other place as it may determine and there detain and treat them.

### **DISINFECTION OR DESTRUCTION OF PROPERTY.**

1. Any Local Board of Health may at its descretion cause to be destroyed, disinfected, cleaned or renovated any furniture, wearing apparel, goods, wares, merchandise, or property of any kind which is known or believed to have been exposed to or infected with infectious material from a case of contagious disease or which is likely to be dangerous to life or health or likely to cause sickness provided, however, that such property shall be appraised by two disinterested parties, in order that remuneration may be made therefore by the Local Board of Health.

### **EXPOSURE OF INFANTS TO COMMUNICABLE DISEASE.**

1. No person shall permit or cause any minor child to be exposed needlessly to any communicable disease. The needless exposure of a

minor child to any communicable disease is hereby declared to be a misdemeanor and punishable by law.

#### EXPOSURE TO COMMUNICABLE DISEASE.

1. Any person who has any communicable disease, who exposes any other person needlessly to liability of such infection is hereby declared to have committed a misdemeanor and such persons shall be punished as prescribed by law.

#### DISINFECTING LODGING HOUSES.

1. No proprietor or owner of a hotel, boarding house, lodging house, home or apartment shall let, hire or allow anyone to occupy a room or apartment previously occupied by any person ill with any communicable disease, or rent such rooms or apartments until the room or apartments have been cleaned, renovated or disinfected to the satisfaction of the Local Board of Health and in full compliance with these Rules and Regulations. In the case of a quarantinable disease, the house or quarters shall be quarantined until such cleansing, renovating or disinfection shall have been completed.

#### DISINFECTION OF TOWELS.

1. It is hereby declared to be a misdemeanor to furnish or allow the use of a towel, that has been used by a person having a communicable disease, by another person, before it has been thoroughly washed and cleaned.

#### INDIVIDUAL DRINKING CUPS.

1. It is hereby declared to be a misdemeanor to furnish or allow the use of a cup for drinking purposes, that has been used by any person having a communicable disease, before it has been thoroughly washed and cleaned.

#### SPITTING.

1. Spitting upon the floors of public buildings or buildings used for public assemblage or upon the floor, or platform of any car or boat or other public conveyance is hereby declared a misdemeanor and punishable by law.

#### PROVISIONS FOR FREE SERVICE.

1. It shall be the duty of every Local Board of Health within this state to furnish the services of a physician to administer the prophylaxis against Typhoid Fever and Smallpox furnished free by the State Board of Health, free to all persons who are unwilling or unable to pay for the same.

#### DIRECTIONS FOR PHYSICIANS.

1. In every case of illness that might be **DIPHTHERIA**, it shall be the duty of the attending physician to take material for laboratory examination as provided free at the laboratory of the State Board of Health.

2. In every case of illness that might be **TYPHOID FEVER**, it shall be the duty of the attending physician to take samples of blood and stools for an examination as provided free at the laboratories for the State Board of Health.

3. In every case of a person bitten by a dog, cat or other domestic animal, it shall be the duty of the attending physician or other interested person, if no physician be called, to take care of the biting animal as described on page 20.

#### PROVISION FOR QUESTIONABLE DIAGNOSIS.

1. When the character of the symptoms are such that the **EXACT NATURE OF THE DISEASE IS IN DOUBT**, but one of the probabilities is that it may be a communicable disease it should be handled as the communicable disease until definitely proven otherwise.

2. If the communicable disease probability under consideration is **MUMPS, MEASLES, WHOOPING COUGH, CHICKEN POX or GERMAN MEASLES, EXCLUDE FROM SCHOOL and PUBLIC GATHERINGS** until definite diagnosis is established.

3. If the communicable disease probability under consideration is Diphtheria, Scarlet Fever, Small Pox, Cerebro-Spinal Meningitis or Poliomyelitis a "Temporary Quarantine Placard" may be used. During the time Temporary Quarantine Placard is used the family must observe **ALL THE REQUIREMENTS OF QUARANTINE** as defined in these Rules and Regulations. When a **DEFINITE DIAGNOSIS** can be established, the report of this diagnosis must be given in writing to the Local Board of Health, who will then change the placard as required by these Rules and Regulations.

4. When there is a question between a diagnosis of a quarantinable disease and some other communicable disease which is not quarantinable, the case must be handled as described in these Rules and Regulations for a quarantinable disease until such time as it can be proven definitely to be the communicable disease that does not require quarantine, according to these Rules and Regulations. Example: Questionable diagnosis between Small Pox and Chicken Pox **ALWAYS** vaccinate patient and all contacts and establish Temporary Quarantine as for Small Pox. Example: Questionable diagnosis between Measles and Scarlet Fever **ALWAYS** establish Temporary Quarantine as for Scarlet Fever.

#### MOVING PERSONS IN QUARANTINE.

Whenever it is for the best interests of any person suffering from any quarantinable disease to be moved, such change of residence may be instituted only under the following conditions:

1st. When the patient is to be moved from one place to another entirely within the health jurisdiction, permission must be obtained from the Local Board of Health for such removal.

2nd. Where the patient is to be moved from one health jurisdiction to a contiguous jurisdiction, permission must be obtained from the Local Board of Health, where the case was originally quarantined and also from the Local Board of Health into which the case is to be moved.

3rd. When the movement of a person suffering from any quarantinable disease would involve three or more separate health jurisdictions, permission for such removal must be obtained from each Local Board of Health, or from the State Board of Health.

4th. Whenever a person suffering from any quarantinable disease wishes to be removed from this state to any other state, permission for such removal can only be issued by the Secretary of the State Board of Health.

#### DAIRY PRODUCTS FROM QUARANTINE.

A. Whenever a case of Diphtheria, Scarlet Fever, Small Pox, Meningitis, Poliomyelitis, Cholera, Dysentery (amoebic or bacillary), Septic Sore Throat, Typhoid or Para-typhoid exists on any farm or property producing milk, cream, butter or other dairy products for sale, it shall be the duty of the Local Board of Health:

1. To immediately forbid the further sale or distribution of any of the above mentioned dairy products.

2. And to notify the State Board of Health of such action.

3. The sale of dairy products can only be resumed by special order of the State Board of Health, or its duly authorized representative.

#### EXCLUSION FROM SCHOOL AND PUBLIC GATHERINGS.

1. Such persons as are designated by these Rules and Regulations shall not attend any public or private school, any theater, church, picnic,



street car or public gathering of any kind or description for the period specifically designated for each disease.

### QUARANTINE—GENERAL MEASURES

A Quarantine should be established only in a dwelling or such part of a dwelling that has facilities for preparing food, washing clothes and means of personal toilet. Any other rooms under the same roof not needed by the persons in quarantine may be sealed off by a representative of the Local Board of Health and used for other purposes, provided that entrance and egress can be had without entering the quarantined area.

A Quarantine can only be established in such quarters as have the facilities required to carry on all the functions of life and the additional requirements of the particular patient. Where such facilities do not exist the Local Board of Health may remove the case to a proper place as authorized on page 29, paragraph 1. (Removal to Hospital.)

**NO PERSON OR THING WILL BE ALLOWED TO ENTER OR LEAVE** a quarantine without permission of the Local Board of Health. The physician in attendance upon the case is hereby granted permission while carrying out professional duties. Ministers of the gospel may be granted permission with the consent of the Local Board of Health.

**APPROPRIATE NOTICE** shall be given to the public of all area in quarantine by means of placards or otherwise.

**MEMBERS OF THE FAMILY AND PERSONS IMMEDIATELY EXPOSED** to the case before quarantine was established may be immunized, disinfected, instructed and released to live outside of quarantine only as provided for each particular disease.

**ADULTS** in quarantine **NOT ILL WITH THE DISEASE** may go into the yard surrounding the house for the purpose of hanging out properly disinfected clothes, getting coal and emptying ashes provided there is no other person in the yard or adjacent thereto.

**NO CATS OR DOGS** will be allowed in a quarantined area, when practical to avoid it. Cats, dogs or other pet animals will not be allowed to run out or in from a quarantined area. They must be kept inside or outside, preferably outside.

**QUARANTINE SHALL NEVER BE RELEASED** until all concurrent and terminal disinfection has been completed to the satisfaction of the Local Board of Health and in compliance with the Rules and Regulations of the State Board of Health.

## RULES AND INFORMATION REGARDING THE USE OF THE LABORATORIES FOR THE STATE BOARD OF HEALTH.

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### CHAPTER II.

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#### INTRODUCTION.

The Laboratories for the State Board of Health are constantly receiving specimens which they are not authorized to examine or which have been collected in such a manner as to make difficult or even defeat the purpose of the laboratory test. Many specimens are also received in containers which are a violation of the Postal Laws and Regulations governing the mailing of such matter. It is frequently necessary to refuse to examine specimens which show evidence of having been carelessly collected or which have been damaged in transit because of improper packing. This bulletin has, therefore, been issued for the pur-

pose of giving the physician detailed information concerning the regulations governing the laboratories, the authorized examinations and instructions for the proper collection, packing and shipping of laboratory specimens.

### LABORATORIES FOR THE STATE BOARD OF HEALTH.

#### I. *Laboratory Divisions.*

For the purpose of internal administration the activities of the laboratories shall be divided into the following divisions:

1. Bacteriological Division.
2. Serological Division.
3. Water Analysis Division.
4. Epidemiological Division.
5. Record Division.

#### II. *General Information and Rules for the Conduct of Laboratories.*

Carefully collected specimens are as essential to satisfactory public health laboratory work as are reliable reagents to the analytical chemist. The laboratories can examine a specimen and report on what is found but it is impossible for the laboratory worker to tell whether this small specimen is representative of the conditions concerning which information is desired. Neither can reliable results be obtained from a specimen which, through careless packing, has been broken in transit. In consequence the laboratories are at the mercy of the physician sending in the specimen and it not infrequently happens that they are subjected to much unjust criticism because certain conditions have not been detected when in reality the carelessness of the physician sending in the specimen is responsible for the negative report. It is, therefore, of the utmost importance to both the physician and the laboratories to use extreme care in obtaining and shipping specimens.

##### A. Collection of Specimens.

1. Specimens are received from patients residing in the State of Iowa only.
2. Specimens submitted to these laboratories shall be collected by or under the supervision of the attending physician, local Health Officer or representatives of the State or Local Boards of Health.

##### B. Time of Examination.

1. Only examinations of an especially urgent nature, such as diphtheria, meningitis, etc., shall be made on Sundays and holidays.
2. All specimens shall be examined at the earliest practicable moment after receipt at the laboratories.

##### C. Labeling and Shipping.

Specimens should be shipped promptly as, in many cases, the reliability of the examination decreases in proportion to the age and degree of decomposition of the specimen.

1. In order to avoid confusion, specimens shall be labeled with the physician's name, patient's name and the type of examination desired.
2. Specimens which are not accompanied by the above information shall not be examined.
3. Postal Regulations.

The majority of specimens may be sent to the laboratories by mail, if packed in containers which comply with the Postal Laws and Regulations. The following is an abstract of these regulations governing the transmission of bacteriological specimens through the mails. **VERY SEVERE PENALTIES ARE IMPOSED FOR THE INFRACTION OF THESE REGULATIONS.**

## a. Postage Rate.

Bacteriological specimens constitute mail matter of the fourth class. "The written matter in the blank spaces on the form enclosed with the specimen is regarded as for the purpose of description and does not affect the rate of postage chargeable thereon."—Circular III, P. O. Dept.

If the question "Shall telegraphic report be sent at physician's expense?" is answered, it is regarded as a communication and changes the postal rate to that of the first class.

## b. Containers.

The Postal Laws and Regulations require that all bacteriological specimens which may contain disease producing organisms shall be packed in properly constructed containers, bearing the specified inscription on the outside of the container.

(1) Specimens must be packed in double mailing tubes (the inner one of tin) with screw caps. The specimen tube must be surrounded with absorbent cotton. THE OUTFITS SUPPLIED BY THESE LABORATORIES COMPLY WITH THESE REGULATIONS.

(2) The label must bear the inscription: "Specimen for bacteriological examination. This package to be pouched with letter mail. Par. 6, Sec. 473, P. L. & R."

(3) The package must bear the return address of the sender.

## (4) Prohibited Material.

(a) Material suspected of being infected with bubonic plague.

(b) Material suspected of being infected with cholera.

(c) BROTH OR LIQUID CULTURES.

(d) Alcohol or material preserved in alcohol.

(e) Material capable of injuring the mail or endangering the health of postal employees.

(f) Specimens which must be shipped on ice.

Material which cannot be sent by mail should be forwarded by PREPAID EXPRESS in accordance with the Traffic Regulations of the express company.

## D. Outfits.

## 1. Outfit Stations.

a. The laboratories shall maintain at least one laboratory outfit supply station in each county in the state where containers may be obtained by physicians without cost.

These stations are usually located in drug stores. The location of the nearest station may be obtained by addressing the Director, Laboratories for the State Board of Health, Iowa City, Iowa.

b. Those in charge of stations shall keep an adequate supply of containers, in good condition, on hand at all times.

c. The stock at laboratory supply stations will be replenished upon receipt of request addressed to the Director of Laboratories by either the station or a local physician.

d. Spoiled or damaged outfits shall be returned to the laboratory "express collect."

## 2. Outfits Supplied.

\*a. Blood culture (Wooden box).

b. Diphtheria (Yellow label).

- \*c. Feces (Green label).
  - d. Gonorrhoea (Manilla envelope).
  - \*e. Miscellaneous (Red label).
  - f. Tuberculosis (Blue label).
  - g. Typhoid-Widal (Pink envelope).
  - h. Wassermann (White label).
  - \*\*i. Water containers.
3. Misuse of Outfits.
- a. The above mentioned outfits are furnished by the State Board of Health for the sole purpose of sending specimens to the Laboratories for the State Board of Health.
  - b. THE EMPLOYMENT OF THESE OUTFITS OR PARTS OF THESE OUTFITS FOR ANY OTHER PURPOSE WHATSOEVER CONSTITUTES A MISUSE OF STATE PROPERTY.

#### E. Reports.

1. Reports are sent out at the earliest practicable moment after completion of the test. The time consumed in making different tests is given under the instructions for collecting different types of specimens.
2. The results of examinations are reported only to the physician sending in the specimen or to the local Health Officer, upon request.
  - a. Reports on venereal disease examinations are made ONLY to the physician sending in the specimen.
  - b. If, for any reason, it is desirable to make a report on venereal disease examinations to any person other than the physician submitting specimen, the written consent of the physician submitting the specimen must be presented to the Director of Laboratories before such report shall be made.

#### III. *Bacteriological Division.*

The work of the Bacteriological Division shall be restricted to the following examinations:

1. Actinomycosis.
2. Anchylostomiasis.
3. Anthrax.
4. Botulism.
5. Bubonic plague.
6. Cholera.
7. Diphtheria.
  - A. Presence of B. diphtheria in throat cultures.
  - B. Virulence tests.
8. Dysentery (amoebic).
9. Dysentery (bacillary).
10. Entomological examinations.
11. Favus.
12. Glanders.
13. Infectious conjunctivitis.
14. Intestinal parasites.
15. Leprosy.
16. Malaria.

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\* For the present, at least, these outfits will not be stocked at laboratory supply stations but will be forwarded upon receipt of request from the physician.

\*\* For information concerning water containers see section on Water Analysis Division.

17. Meningitis.
18. Rabies.
19. Septic sore throat.
20. Tetanus.
21. Trichinosis.
22. Tuberculosis.
  - A. Direct microscopic examination.
    - a. Sputum.
    - b. Urine.
    - c. Pleural fluids, etc.
  - B. Animal inoculations.
23. Typhoid and Para-Typhoid fevers.
  - A. Widal.
  - B. Blood culture.
  - C. Feces and urine.
24. Typhus fever.
25. Vincents Angina.

#### IV. *Serological Division.*

1. The Serological Division is established to aid in the control of venereal diseases within the state.
2. This division is authorized to perform the following examinations:
  1. Balanitis gangrenosa.
 

Smears for direct microscopic examination.
  2. Chancroid.
 

Smears for direct microscopic examination.
  3. Gonorrhoea.
 

Smears for direct microscopic examination.

    - A. Clinical gonorrhoea.
    - B. Ophthalmia neonatorum.
    - C. Vulvovaginitis.
  4. Syphilis.
    - A. Wasserman test.
      - a. Blood.
      - b. Spinal fluid.
    - B. Smears of chancre juice for spirochaetes.

#### V. *Water Analysis Division.*

1. The Water Analysis Division will "make examinations of water whenever requested to do so by the State Board of Health, any state institution or any school, citizen or municipality when in the interest of the public health and for the purpose of preventing epidemics of disease."

##### 2. Water Containers.

The containers for collecting specimens of water are so expensive that they are not kept at the laboratory supply stations with other State Board of Health property. When an examination of water is desired by any of the above named individuals or institutions, a request for water container should be sent to the laboratory. On receipt of such requests, the containers will be sent by express with instructions for the proper collection of the sample.

##### 3. Fee.

A fee of \$1.00 per sample to cover the cost of the examination is required by law for all examinations of water sent to the lab-

oratories. In addition to this fee the express charges on the containers both to and from the laboratory must be paid by the person or institution requesting the examination.

4. If an institution or community desires to have a considerable number of specimens of water examined at any one time or daily examinations for a considerable period of time, special arrangements for the transportation of containers and a fee can be arranged.

#### VI. *Epidemiological Division.*

1. This division of the laboratory shall "make the necessary investigation by both laboratory and field work to determine the source of epidemics of disease and to suggest methods of overcoming such epidemics and to prevent the recurrence of such whenever requested to do so by the State Board of Health, Executive Officer of any state institution or any local board of health.

2. The institution or community desiring epidemiological service in the field must pay the traveling expenses and necessary living expenses of the epidemiologist while he is away from Iowa City and the transportation charges on any portable laboratory or other apparatus or supplies found necessary for making the investigation.

3. As soon as possible after completion of the epidemiological investigation or during the course of such investigation the epidemiologist shall send to the director of the laboratory a report of all findings and a detailed account of such laboratory and field work as may be done and also a copy of the same will be filed with the Secretary of the State Board of Health, the chairman of the local board of health or superintendent of the state institution where the investigation is made.

#### VII. *Record Division.*

The Division of Records shall perform the following duties:

1. Sending of reports on laboratory examinations.
2. Correspondence and filing.
3. Routine office work.

#### UNAUTHORIZED EXAMINATIONS.

The laboratories are only authorized to make the examinations listed in Sections III, IV and V of the preceding regulations. As a matter of accommodation to the physicians of the state, any unauthorized specimens such as urine for analysis, material for autogenous vaccines, etc., will be turned over to a competent member of the staff of the College of Medicine, who will handle the work as a private matter and charge a fee.

#### TISSUE EXAMINATIONS.

The laboratories are not authorized or equipped to do pathological tissue examinations. Such specimens should be addressed to the Dept. of Pathology, College of Medicine, State University of Iowa, Iowa City, Iowa.

#### INSTRUCTIONS FOR THE COLLECTION AND SHIPMENT OF LABORATORY SPECIMENS.

##### I. *BACTERIOLOGICAL DIVISION.*

##### 1. *ACTINOMYCOSIS.*

##### I. *Outfit: Miscellaneous (Red Label).*

The outfit consists of a sterile tube enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

##### II. *Time Required.*

1. If it is possible to identify the organism by direct microscopic examination, the test will be completed within a few hours after the

specimen reaches the laboratories.

2. Should cultural methods be required, it may take from a few days to two weeks to complete the examination.

### III. *Collection of Specimen.*

1. Endeavor to secure a representative sample of the material.
2. Do not endanger the health of the laboratory worker by contaminating the outside of the tube with the material.

## 2. ANCHYLOSTOMIASIS.

### I. *Outfit: Feces (Green Label).*

The outfit consists of a sterile tube, with swab attached to the cork, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

### II. *Time Required.*

Examination can be completed within a few hours after the specimen reaches the laboratories.

### III. *Collection of Specimen.*

1. By means of the swab attached to the cork, secure a small quantity of feces and place in the tube.
2. Do not endanger the health of the laboratory worker by contaminating the outside of the tube with the material.

## 3. ANTHRAX.

### I. *Time Required.*

From three to seven days are required for the identification of *B. anthracis*.

### II. *Collection of Specimen.*

1. Shaving Brushes.  
Suspected shaving brushes should be carefully packed and shipped to the laboratory.
2. Dead Animals Suspected of Having Died of Anthrax.
  - A. The ear of an animal makes the most satisfactory specimen for anthrax examination as it can be removed without danger of contaminating the person collecting the specimen or the premises.
  - B. To Remove Ear.
    - a. Wash the ear with soap and water to eliminate contamination as far as possible.
    - b. Ligate close to head and cut off below point of ligation.
    - c. Sear both cut surfaces of the ear by using red hot knife blade or branding iron.
  - C. If not practicable to send ear, a string dipped in blood or spleen juice and enclosed in a Miscellaneous Specimen Outfit (Red label) may prove satisfactory.

### III. *Packing and Shipping.*

1. Place ear in a cleaned and boiled Mason jar (inner container).
2. Jar should be sealed perfectly and placed in a tin (outer) container.
3. Cracked ice and saw dust should then be placed in the outer container in such a manner as to completely surround the inner container.
4. Ship immediately by Prepaid Express.

### IV. *Precautions.*

1. The reliability of a tissue examination for anthrax is proportional to the age of the specimen and the degree of decomposition. **PACK IN ICE. SHIP IMMEDIATELY. DO NOT USE PRESERVATIVES.**
2. Do not pack specimen in such a manner as to be a menace to the health of the laboratory worker opening it.

**4. BOTULISM.****I. Type of Specimens Examined.**

1. Food which is suspected of containing *B. botulinis*.

**II. Packing and Shipping.**

1. Cans of food which have been opened.
  - A. Place contents of can in cleaned and boiled Mason jar.
  - B. Seal jar perfectly and place in a tin (outer) container.
  - C. Place cracked ice and saw dust in outer container in such a manner as to completely surround inner container.
  - D. Ship to the laboratories immediately by PREPAID EXPRESS.
2. Unopened cans of food.
  - A. Ship by PREPAID EXPRESS. Pack carefully.

**5. BUBONIC PLAGUE.****I. Time Required.**

From three to seven days are required for the isolation and identification of *B. pestis*.

**II. Type of Specimens Received.**

1. Human cases (Living).
  - A. Pus or gland fluid from buboes, aspirated by syringe or collected after incision, on tubes of media or in sterile test tubes.
  - B. Portions of tissues affected, removed at operation, in sterile bottles, securely stoppered.
  - C. Blood specimens, in sterilized, sealed glass ampules or test tubes.
2. Human cases (Necropsy).
  - A. Portions of affected tissue—preferably bubo—lung and spleen, in sterilized bottles, securely stoppered.
3. Rodents.
  - A. The whole rodent in a cleaned and boiled Mason jar.

**III. Packing and Shipping.**

1. FEDERAL LAWS PROHIBIT THE SHIPMENT OF PLAGUE INFECTED MATERIAL OR CULTURES BY MAIL. SHIP BY PREPAID EXPRESS.

2. Do not place rodents or tissue in preservative. The laboratory diagnosis of plague depends upon the isolation and identification of the causative organism.

## 3. PACK IN ICE.

- A. Place tissue or rodents in sterilized and perfectly sealed bottles or jars (inner container).
- B. Place bottle or jar in a tin (outer) container.
- C. Place cracked ice or saw dust in outer container in such a manner as to completely surround the inner container.

**IV. Precautions.**

1. The reliability of a plague examination is directly proportional to the age of the specimen and the degree of decomposition.

2. Do not pack in such a manner as to be a menace to the health of the laboratory worker opening it.

**6. CHOLERA.****I. Outfit: Feces (Green Label).**

The outfit consists of a sterile glass tube, with swab attached to the cork, enclosed in mailing tubes.



## II. *Time Required.*

From one day to a week is required for the isolation and identification of *Sp. cholerae*.

## III. *Collection of Specimen.*

By means of swab attached to the cork of the sterile tube, secure a small quantity of feces and place in tube.

## IV. *Packing and Shipping.*

FEDERAL LAWS PROHIBIT THE SHIPMENT OF CHOLERA INFECTED MATERIAL OR CULTURES BY MAIL. SHIP BY PREPAID EXPRESS.

## V. *Precautions.*

1. Avoid contamination of the outside of the tube with the fecal material.

2. Do not pack specimen in such a manner as to be a menace to the health of the laboratory worker opening it.

## 7. DIPHThERIA.

### I. *Outfit: (Yellow Label).*

The outfit furnished by the laboratory for the collection and transportation of diphtheria specimens consists of the regulation mailing cases required by the Postal Laws and Regulations, a tube of Loeffler's blood serum media, two sterile swabs (for nose and throat cultures) and a data card.

### II. *Time Required for Examination.*

Except in very warm weather, it requires at least a few hours incubation, after the culture reaches the laboratories, before a reliable examination can be made. Cultures received during the day are examined at 4 P.M. and those showing the presence of the diphtheria bacillus are reported at once. Cultures which are negative on the afternoon examination are reincubated until the following morning and final examination made. **All reports on diphtheria examinations are sent out within twenty-four hours after the culture reaches the laboratories.** Reports are sent by telegraph at the physician's expense, if requested.

### III. *Taking Culture.*

1. Endeavor to secure a representative culture.

2. With the patient in a good light and the tongue depressed, rub the swab gently but firmly over the inflamed area.

3. Remove the cork from the culture tube (do not allow anything to touch the portion of the cork which enters the tube) and rub the swab over the surface of the media while rotating the swab.

4. **DO NOT RUB HARD ENOUGH TO BREAK THE SURFACE OF THE MEDIUM.**

5. The second swab is used for the purpose of obtaining culture from the nose. The same tube is used for both nose and throat cultures unless a differential diagnosis is desired. (Cultures from both nose and throat are required for release from quarantine).

### IV. *Precautions.*

1. Do not take culture until from two to four hours after the application of an antiseptic.

2. Do not break the surface of the medium by pushing the swab into it. **SUCH CULTURES GIVE UNRELIABLE RESULTS.**

3. Do not use a culture tube which is dried up or contaminated with mold or bacteria.

### V. *Interpretation of Reports.*

1. Diphtheria Bacilli Found.

a. The patient has diphtheria, or

b. The person is carrying diphtheria bacilli in the nose or throat

even though not affected by the disease at the time. Such a person is a "carrier." A carrier may transmit the disease to susceptible persons.

2. Diphtheria Bacilli Not Found.
  - a. The entire absence of diphtheria bacilli, or
  - b. That some antiseptic was applied to the throat shortly before the culture was taken which has interfered with the subsequent development of the diphtheria bacilli in the culture, or
  - c. That the infection was in the larynx and the swab may not have touched the infected membrane, or
  - d. That only a few diphtheria bacilli were present in the early stages of the disease and may have been "overgrown" by other organisms and escaped observation when making the examination. More organisms will probably be present in a later culture. REMEMBER THAT A NEGATIVE REPORT DOES NOT NECESSARILY MEAN THAT THE CASE IS NOT DIPHTHERIA. IF IT IS CLINICALLY DIPHTHERIA IT SHOULD BE CONSIDERED AND TREATED AS SUCH UNTIL PROVEN OTHERWISE.
  - e. Membrane may be caused by diseases other than diphtheria, such as Vincent's angina, scarlet fever and streptococcus infection.
3. Organisms Morphologically Similar to Diphtheria Bacilli—Repeat.
  - a. Organisms of the diphtheria group present which may or may not be virulent. IF THE PERSON IS SICK—TREAT AS DIPHTHERIA. If the person is well—probably a carrier. REPEAT THE CULTURE IN EITHER CASE.
4. No Growth—Repeat.
  - a. Antiseptic applied to the throat shortly before the culture was taken, or
  - b. Culture improperly taken.
  - c. Swab not properly applied to the medium.
5. Contaminated. Repeat.
  - a. Culture grossly contaminated with organisms which will "overgrow" or inhibit the growth of the diphtheria bacillus.

#### VI. *School Surveys and Epidemics.*

Tubes and swabs (without mailing cases) will be furnished in quantities, upon request, for use in school surveys and epidemics.

Do not put patient's name on the tube but number the tubes and retain a list of the names corresponding to the numbers on the tubes. Cultures will be reported by number. Experience has shown that this system avoids confusion due to illegible writing.

#### VII. *Virulence Tests.*

When a carrier condition persists for from six to eight weeks the laboratory will run a test to determine the virulence of the organism, upon request. It requires from five to seven days to complete the test.

#### VIII. *Cultures for Virulence Test.*

1. Take cultures in the usual manner.
2. Write plainly across the data card: "For Virulence Test."

### 8. DYSENTERY (Amoebic).

#### I. *Difficulties of Examination at a Distance From Patient.*

1. Only warm, freshly voided feces specimens are satisfactory for amoebic dysentery examinations.
2. It is necessary therefore to have the patient present at the laboratory for this examination.

### 9. DYSENTERY (Bacillary).

#### I. *Outfit: Feces (Green Label).*

The outfit consists of a sterile tube, with swab attached to the cork, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

#### II. *Time Required.*

From four to seven days are required for the isolation and identification of *B. dysenteriae*.

#### III. *Collection of Specimen.*

1. By means of the swab attached to the cork of the sterile tube, secure a small quantity of feces and place in tube.

2. AVOID CONTAMINATION OF THE OUTSIDE OF THE TUBE.

### 10. ENTOMOLOGICAL EXAMINATION.

#### I. *Insects Examined.*

1. Mosquitoes.
2. Ticks.
3. Fleas, etc.

#### II. *Packing and Shipping.*

1. Mosquitoes.
  - A. Kill with chloroform.
  - B. pack between layers of cotton in pill boxes.
2. Ticks, fleas, etc.
  - A. Kill by dropping in 70 percent alcohol.
  - B. Pack between layers of cotton in pill boxes.

#### III. *Precautions.*

1. Do not use tin boxes or test tubes as the specimen may mold because of retained moisture.
2. Do not use boxes with sliding covers as the specimens may be crushed.

### 11. FAVUS.

#### I. *Outfit: Miscellaneous (Red Label).*

The miscellaneous outfit consisting of a sterile tube enclosed in the regulation mailing cases, required by the Postal Laws and Regulations.

#### II. *Time Required.*

It may frequently take a considerable length of time to identify the causative organism.

#### III. *Packing and Shipping.*

Collect a number of infected hairs or other suspected material and enclose in the sterile tube of the miscellaneous outfit.

### 12. GLANDERS.

#### I. *Outfit: Miscellaneous (Red Label) or Feces (Green Label).*

Either one of these standard outfits may be used depending upon convenience.

#### II. *Time Required.*

Several days may be required for the isolation and identification of *B. mallei*.

#### III. *Collection and Shipment of Specimen.*

1. Nasal discharge. Material should be carefully taken on a sterile cotton swab and placed in sterile tube of either the Miscellaneous or Feces outfits.

2. Pus. When pus can be collected from unopened abscesses such as occur in farcy the diagnosis is more certain. The abscess should be opened and pus collected in sterile tube of the Miscellaneous outfit.

Note: These methods of diagnosis are applicable to the disease in animals as well as man.

#### IV. *Precautions.*

1. Ship promptly.
2. Avoid contamination of the outside of the tube or any other method of collection or shipment that may endanger the health of the laboratory worker opening the specimen.

### 13. INFECTIOUS CONJUNCTIVITIS.

#### I. *Outfit: Miscellaneous (Red Label) and Gonorrhoea (Manilla Envelope).*

The Miscellaneous Outfit consisting of a sterile tube enclosed in the regulation mailing cases required by the Postal Laws and Regulations and the Gonorrhoea outfit consisting of two microscopic slides with protective case for shipping should be used.

#### II. *Time Required.*

1. Pus for culture. Several days may be required for isolation and identification of the causative organism.
2. Direct smear for microscopic examination. If possible to identify the organism by direct microscopic examination the examination will be completed within a few hours after the specimen reaches the laboratory.

#### III. *Collection of Specimen.*

##### 1. Preparation.

- A. Before taking material for cultures or smears, cleanse the eyelids, especially about caruncles, with sterile salt solution.
- B. By gently pressing the eyelids it is frequently possible to obtain pure cultures of the organism causing the infection.

##### 2. Pus for culture.

- A. Collect material on a sterile cotton swab and enclose in the sterile tube of the Miscellaneous Outfit (Red label).  
Note: The diphtheria culture outfit may prove satisfactory in some cases. Some organisms will not grow on Loeffler's medium.

##### 3. Direct smears.

- A. Collect a second portion of the material on a sterile swab and make thin smears on microscopic slides of the Gonorrhoea outfit.
- B. Mark plainly across the data card the type of examination desired.

#### IV. *Precautions.*

1. Be sure to cleanse the area before collecting material as various skin organisms, especially staphylococci, are found in the region of the caruncles.

### 14. INTESTINAL PARASITES.

#### I. *Outfit: Feces (Green Label).*

The outfit consists of a sterile tube, with swab attached to the cork, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

#### II. *Time Required.*

Examinations can usually be completed within a few hours after the specimen reaches the laboratories unless additional time is required for the identification of an unusual organism.

III. *Collection of Specimen.*1. *Feces for ova or cysts.*

By means of the swab attached to the cork of the tube, secure a small quantity of feces and place in tube.

2. *Parasites.*

Parasites which are visible to the naked eye should be placed in the feces tube and shipped. It is usually advisable to send a small quantity of the feces also as any ova which may be present may assist in the identification of the parasite.

15. **LEPROSY.**I. *Outfit: Gonorrhea (Manilla Envelope).*

The outfit consists of two microscopic slides with protective shipping case of wood.

II. *Time Required.*

Organisms may be identified within a few hours after the specimen reaches the laboratory.

III. *Collection of Specimen.*1. *Scrapings from the nasal septum.*

Examinations of the nasal mucus or scrapings from ulcerations on the nasal septum are of great diagnostic value in the early diagnosis of leprosy. The examination is most successful when a coryza exists. A drug coryza may be produced by the administration of iodide of potash.

A. Make a fairly thick smear of the nasal mucus or scrapings from the nasal septum.

B. Dry in the air.

C. Pass quickly through the flame three times to fix material.

2. *Nodular leprosy.*

A. Puncture a node deeply with a Spencerian steel pen, one point of which has been broken off. Discard the pen after using it once.

B. Remove the first few drops of secretion with a piece of gauze, which should be sterilized and discarded.

C. Make a thick smear of the secretion on a microscopic slide.

a. Dry in the air.

b. Pass quickly through the flame three times to fix.

IV. *Precautions.*

1. Mark plainly across the front of the data card the type of examination desired.

16. **MALARIA.**I. *Outfit: Gonorrhea (Manilla Envelope).*

This outfit consists of two microscopic slides with protective shipping cases of wood.

II. *Time Required.*

Examination may be completed within a few hours after the specimen reaches the laboratory.

III. *Collection of Specimen.*

Several slides should be made as some may be unsatisfactory, or it may be desirable to employ more than one stain in the examination.

Malaria parasites are more easily found and identified if the specimen is taken shortly before a paroxysm. The administration of quinine usually causes most or all of the parasites to disappear from the peripheral circulation.

1. *Obtaining blood.*

- A. The specimen is obtained from the tip of the finger or the lobe of the ear.
- B. Wash the skin thoroughly with alcohol.
- C. Puncture the skin with a sterile needle or lancet.
- D. Wipe away the first drop of blood.
- E. Do not hasten the flow of blood by compression of the parts.

2. Preparation of smear.

- A. A large drop of blood is not desirable.
- B. Touch the flat surface of the slide, near one end, to the drop of blood.
- C. Place the edge of a second slide in the drop of blood on the first slide.
- D. Holding the second slide at an angle of 30 to 40 degrees to the first slide, draw or push the second slide to the other end of the first slide with a firm even motion.
- E. Allow the slide to dry without heating.

IV. *Precautions.*

1. Slides should be absolutely clean to insure satisfactory preparations.
2. Alcohol is most satisfactory in cleaning slides for blood smears.

### 17. MENINGITIS.

I. *Difficulties of Making Epidemic Cerebro-Spinal Meningitis Examination at a Distance From the Patient.*

1. Characteristics of the organism.

- A. *Micrococcus intracellularis meningitidis* (meningococcus) when freshly isolated from the body will die out if held at a temperature below that of the body for a short length of time.
- B. The meningococcus is rapidly autolyzed. A spinal fluid from a case of epidemic cerebro-spinal meningitis may frequently give negative cultural and microscopic findings if it has been in transit for twenty-four hours or more at a temperature below that of the body.

2. Contaminated specimens.

- A. It is very difficult to isolate the meningococcus from a specimen of spinal fluid which has been contaminated in collection.

II. *Outfit and Collection of Specimen.*

1. Spinal fluid.

- A. Collect specimen under strict asepsis in glass tube furnished in the Wassermann outfit (white label).
- B. Keep at body temperature.
- C. Pack in cotton in a WARM thermos bottle. Ship at once.

Note: The physician must furnish his own thermos bottle as they are not supplied by the laboratories. The laboratories will return all such bottles.

2. Naso-Pharyngeal cultures.

- A. Culture material for naso-pharyngeal cultures will be forwarded upon request. Consisting of the following:

1. Sterile bent wire swab.
2. Tube of medium containing considerable water of condensation.

B. Culturing.

1. With the tongue well depressed, swab the naso-pharynx with the bent wire swab, avoiding contamination of the swab by the tongue, etc.
2. Place swab in the water of condensation in the media

tube. Do not rub swab over the surface of the medium. **HAVE MEDIUM AT BODY TEMPERATURE AND KEEP IT WARM.**

C. Packing and shipping.

1. Pack in cotton in a WARM thermos bottle. Ship immediately.

Note: The physician must furnish his own thermos bottle as they are not supplied by the laboratories. The laboratories will see that all such bottles are returned.

III. *Precautions.*

1. Do not allow the suspected material to become chilled.
2. It is necessary to follow the above instructions implicitly in order to insure reliable results.

## 18. RABIES.

I. *Preferred Procedure.*

1. **DON'T KILL THE SUSPECTED ANIMAL.**
  - A. If in the infectious stage of the disease at the time the biting occurs it will develop clinical symptoms and probably die within two weeks.
  - B. This leaves an ample margin of safety for the Pasteur treatment if the disease is rabies. (Usual minimum incubation period in the human being is forty days.)
- C. **LABORATORY FINDINGS ARE MUCH MORE APT TO BE DEFINITE IN THE LATER STAGES OF THE DISEASE.**
2. Confine the animal in comfortable quarters.
  - A. Give it plenty of food and water.
3. If the animal is alive and normal at the end of two weeks.
  - A. Person bitten need not take the Pasteur treatment.
  - B. Animal may be safely released.
4. If animal develops suspicious symptoms within two weeks.
  - A. Do not kill the animal unless conditions make it absolutely necessary. Give an opportunity for the disease to develop.
  - B. If necessary to kill the animal, **DO NOT INJURE THE HEAD IN KILLING.**

II. *Preparation and Shipment of Head.*

1. Preparation of head.
  - A. Sever the head from the body as close to the shoulders as possible.
2. Packing.

The following is an abstract of the Traffic Regulations of the express company governing the packing and shipment of the heads of dogs and other animals. Infractions of these regulations will be reported to the express company for action.

- A. Place the head in a tin or metal (inner) container which will not permit the leakage of fluids. (A lard pail may be used).
- B. Place tin container in a water tight (outer) container. (A wooden candy bucket is very satisfactory).
- C. Place cracked ice and saw dust in outer container in such a manner as to completely surround inner container.
- D. Label the package: "CAUTION—This package contains the head of a dog (or name of other animal) suspected of having died of hydrophobia."
- E. Ship by **PREPAID EXPRESS**. Postal regulations exclude rabies specimens from the mails.
- F. Do not ship so that the specimen will reach Iowa City on Sunday as no express is delivered on that day.

### III. *Information Desired.*

1. Send the following information to the laboratory.
  - A. Description of the actions of the animal before death.
  - B. Duration of the illness.
  - C. Number of persons or animals bitten.
  - D. Was the animal killed or allowed to die of the disease.

### IV. *Time Required.*

1. Three types of examinations are made, each requiring a different length of time.

#### A. Direct smear method.

Report can be sent out in a few hours after the head reaches the laboratory.

#### B. Paraffine section method.

This method requires several days and is slightly more reliable than the direct smear method. It is used on specimens which are negative or doubtful by Method A.

#### C. Animal inoculation.

This method requires at least two weeks for report. It is used on all specimens which are negative or doubtful by methods A and B if specimens are not too badly decomposed.

### V. *Interpretation of Reports.*

#### 1. Negri Bodies Found.

A. Positive evidence of the disease.

#### 2. Bodies Suggestive of Negri Bodies Found But Not Definitely Positive.

A. Necessity for Pasteur treatment will have to be judged from the symptoms of the animals disease and the circumstances which lead to the biting, or

B. It will be necessary to await the results of the animal inoculation to determine definitely whether the animal had the disease.

#### 3. Negri Bodies Not Found.

A. Animal did not have rabies, or

B. Disease had not advanced sufficiently to show Negri bodies when the animal was killed. (About three percent of the cases of rabies do not show Negri bodies at any stage of the disease).

#### 4. Specimen Unsatisfactory.

A. Specimen in advanced stage of decomposition (not properly iced).

B. Brain lacerated or destroyed in killing the animal.

### VI. *Precautions.*

#### 1. Don't kill the animal unless absolutely necessary.

A. Don't injure the head in killing.

B. Confine the animal in a comfortable place and observe its actions in preference to killing and sending to the laboratory.

C. When sending heads to the laboratory, PACK IN ICE in conformity with the traffic regulations of the express company.

Failure to ice properly is the most common cause of unsatisfactory specimens.

D. SHIP BY PREPAID EXPRESS.

The laboratories have no funds available for the payment of express charges and will refuse to accept "collect" specimens.

### V. *Pasteur Treatment.*

#### 1. The Pasteur treatment is no longer given at the laboratories.

#### 2. The Pasteur treatment is now prepared in such a form that it can



be administered by the physician in the patient's home. The technique of injection is about the same as that used for diphtheria antitoxin. The State Board of Health supplies this material to the local physician for \$25. Requests for the Pasteur anti-rabic treatment, ready for injection, should be made to the Secretary-Executive Officer, State Board of Health, Des Moines, Iowa.

### 19. SEPTIC SORE THROAT.

#### I. *Outfit: Diphtheria (Yellow Label).*

This outfit consists of a tube of Loeffler's blood serum medium, and two sterile swabs, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

#### II. *Time Required.*

From twenty-four to forty-eight hours are required for the completion of the examination.

#### III. *Collection of Specimen.*

1. With the patient in a good light and the tongue depressed, rub the swab gently but firmly over the inflamed area.

2. Remove the cork from the culture tube (do not allow anything to touch the portion of the cork which enters the tube) and rub the swab over the surface of the medium while rotating the swab.

3. Do not break the surface of the medium with the swab.

#### IV. *Precautions.*

1. Be sure to mark the data card "FOR SEPTIC SORE THROAT." Otherwise the culture will be examined for the presence of *B. diphtheria* only.

### 20. TETANUS.

#### I. *Outfit: Miscellaneous (Red Label).*

The outfit consists of a sterile tube and swab, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

#### II. *Time Required.*

Several days may be required for the identification of *B. tetani*.

#### III. *Collection of Specimen.*

Scrape out the granulation tissue or foreign material from the suspected wound and place in the sterile tube of the outfit.

### 21. TRICHINOSIS.

#### I. *Outfit: Feces (Green Label).*

The outfit consists of a sterile tube with swab attached to the cork, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

#### II. *Time Required.*

##### A. Feces.

The examination may usually be completed within a few hours after the specimen reaches the laboratories.

##### B. Tissue from animals suspected of having trichinosis.

If the identification can be done by direct microscopic examination the report can be sent out within a few hours after the specimen reaches the laboratories. If it is necessary to do animal feeding experiments it may be several weeks before a definite report can be made.

#### III. *Collection of Specimen.*

##### A. Feces.

(Gastro-intestinal symptoms appear during the first two or

three days of the disease. A feces examination during this period will usually give a definite and speedy diagnosis.

By means of the swab attached to the cork of the specimen tube, secure a small quantity of feces and place in tube.

B. Tissue from animals suspected of having trichinosis.

Ship a portion of the suspected muscle to the laboratories in such a manner as to prevent putrefaction while in transit. **PACK IN ICE. SHIP BY PREPAID EXPRESS.**

## 22. TUBERCULOSIS.

### I. *Sputum.*

A. Outfit: Sputum (Blue label).

The outfit consists of a sputum bottle (one-third full of 5 per cent carbolio acid solution) and a data card, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

B. Time required.

In order to insure the destruction of any organisms which may be on the outside of the bottle, sputum specimens are placed in fumigating jars for twenty-four hours before the examination is made.

With the exception of specimens which reach the laboratories on Saturday afternoon, tuberculosis examinations are made and reports sent out twenty-four hours after receipt of the specimen.

C. Collection of specimen.

1. The first sputum raised in the morning is more likely to contain large numbers of tubercle bacilli than specimens collected later in the day.

2. Endeavor to obtain specimen from the lungs, not saliva from the mouth and throat.

3. Do not fill the bottle more than two-thirds full.

D. Precautions.

1. Only specimens collected in containers furnished by the laboratories will be examined. Many specimens received in non-regulation containers do not comply with the Postal Regulations and are also a menace to the health of the laboratory worker making the examination.

**2. Do not empty the carbolio acid out of the sputum bottle.**

3. If the carbolio acid has leaked out of the container, fill the bottle about one-third full of 5 per cent carbolio acid before collecting the specimen.

**4. Endeavor to obtain sputum and not saliva.**

E. Interpretation of reports.

1. It should be remembered that the tubercle bacillus is found in the sputum only when the patient has an "open lesion." A single negative report, therefore, means nothing. Specimens should be examined at frequent intervals over a considerable period of time before any weight can be placed on negative findings.

2. The number of tubercle bacilli found in the sputum is not considered a reliable index of the condition of the patient and is not reported.

3. The search for the tubercle bacillus is the only test which the laboratories can make to assist the physician in his diagnosis. The finding of the tubercle bacillus in the sputum, coupled with a positive clinical picture may be considered to constitute a positive diagnosis of the disease.

4. In cases in which the nature of the sputum is such as to suggest the possibility of tuberculosis, the laboratories will frequently request a second specimen.

## II. *Urine, Pleural Fluids, Etc.*

- A. Outfit: Sputum (blue label) container may be used.
- B. Time required.  
Same as for sputum examination.
- C. Collection of specimen.  
1. Only carefully catheterized urine specimens should be submitted as non-catheterized specimens sometime contain the smegma bacillus which has morphological and staining characteristics similar to the tubercle bacillus.
- D. Interpretation of reports.  
1. A positive report on a urine specimen cannot be considered positive evidence of the disease unless the specimen has been so collected as to exclude the possibility of the presence of the smegma bacillus.

## III. *Animal Inoculations.*

When negative results are obtained by direct microscopic examination of urine, pleural fluids, etc., animal inoculations will be made upon request.

- A. When collecting specimens for animal inoculation the carbolic acid should be emptied out of the container and the container boiled or rinsed out with boiling water. **LIVE ORGANISMS ARE NECESSARY FOR SATISFACTORY ANIMAL INOCULATION.**
- B. Write plainly across data card 'FOR ANIMAL INOCULATION.'

## 23. TYPHOID AND PARATYPHOID FEVERS.

### I. *Widal.*

- A. Outfit: Pink envelope.  
The outfit consists of an envelope, data card, direction sheet, two aluminum slides and envelope for these slides.
- B. Time required.  
With the exception of Sunday, Widal's are run once a day. Specimens reaching the laboratory after the daily run are held over until the next day.
- C. Collection of specimen.  
1. Wash the tip of the finger or the lobe of the ear with soap and water.  
2. Prick the skin deeply with a sterile needle or scalpel.  
3. Collect one or two drops of blood in the depression of one of the aluminum slides.  
4. Allow the blood to dry in the air. **DO NOT HEAT.**  
5. Place the aluminum slides face to face and put them in the small envelope.  
6. Place slide envelope along with data card in large envelope and mail.
- D. Precautions.  
1. The best results are obtained on specimens which have been allowed to dry before the slides are placed together.  
2. If widal outfits are not available, collect specimen on tin foil. Do not use paper.  
3. **REMEMBER:** A person who has had typhoid fever or typhoid vaccination may give a positive Widal reaction.
- E. Interpretation of Reports.  
1. TYPHOID REACTION PRESENT.  
a. The patient is now or has been affected with typhoid bacilli (usually typhoid fever). The reaction may be due to

- obscure localized infection with typhoid bacilli such as osteomyelitis, pneumonia, pleurisy, etc., or
- b. Persistence of reaction from old typhoid infection.
  - c. Reaction from vaccination against typhoid fever.
2. VERY WEAK TYPHOID REACTION: REPEAT.
    - a. Too early in the disease for a strong reaction, or
    - b. Weak reaction may be due to tuberculosis, jaundice or paratyphoid fever.
  3. TYPHOID REACTION ABSENT.
    - a. Absence of typhoid infection, or
    - b. That it is too early in the disease for the appearance of the reaction. (Usually the reaction is not present until the end of the first week of the disease and rarely is delayed beyond the second week).
    - c. Typhoid fever with the reaction absent. In a small percentage of cases of typhoid fever no reaction appears at any stage of the disease.

## II. *Feces and Urine.*

### A. Outfit: Feces (Green label).

The outfit consists of sterile tube with swab attached to the cork, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

### B. Time required.

From four to seven days are required for the isolation and identification of typhoid or paratyphoid bacilli, depending upon the steps required.

### C. Collection of Specimen.

1. By means of the swab attached to the cork, secure a small quantity of feces and place in the tube.
2. General considerations.

- a. The organisms are most frequently found in liquid or semi-solid stools.

- b. In the case of carriers, the organisms are most frequently found following the administration of a mild cathartic. Elaratin has been found to be especially suitable for this purpose.

### D. Precautions.

1. The age of the specimen is important. Fresh specimens give the best results.
2. Do not endanger the health of the laboratory worker by contaminating the outside of the tube with the material.

### E. Interpretation of reports.

1. The isolation of the typhoid or paratyphoid bacillus from feces is definite confirmation of typhoid fever, paratyphoid fever or a carrier condition.
2. One negative examination is not conclusive proof that the suspect is not a carrier as the organisms are usually given off intermittently.

## III. *Blood Culture.*

### A. Outfit: Blood culture (Wooden box).

The outfit consists of a four ounce bottle, half full of liquid culture medium, sealed with a soft rubber cap. Bottle enclosed in a wooden box for shipping.

This outfit is not at present stocked at the regular outfit stations but will be sent out to physicians upon receipt of request addressed to the Director, Laboratories for the State Board of Health, Iowa City, Iowa.

## B. Time required.

From two to seven days may be required for a report on a blood culture. Because of the occasional slow multiplication of organisms, blood cultures cannot be reported definitely negative until they have been incubated at least five days.

## C. Collection of specimen.

1. Cleanse thoroughly and sterilize the skin over a large, superficial vein of the arm, such as the median basilic, at the elbow.

2. Apply tourniquet to upper arm.

3. Make venipuncture in the usual manner, using a sterile five or ten cubic centimeter syringe. **OBSERVE STRICT ASEPSIS THROUGHOUT.**

4. Withdraw five cubic centimeters of blood.

5. Paint the soft rubber cap of the blood culture bottle with iodine and plunge needle through cap. Discharge contents of syringe into bottle.

## D. Precautions.

1. **OBSERVE STRICT ASEPSIS. A CONTAMINATED BLOOD CULTURE IS WORTHLESS.**

2. **SHIP BY PREPAID EXPRESS.** The Postal Laws and Regulations prohibit the sending of liquid cultures by mail.

3. Do not allow more than five cubic centimeters of blood to enter the blood culture bottle as it is necessary to have the blood well diluted in order to overcome its bacteriocidal effect.

## 24. TYPHUS FEVER.

I. *Outfit: Wassermann (White Label).*

The outfit consists of a sterile tube and bleeding needle, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

II. *Time Required.*

The examination can usually be completed in a few hours after the specimen reaches the laboratories.

III. *Collection of Specimen.*

1. Collect blood in accordance with the instructions for the collection of specimens for the Wassermann tests.

## 25. VINCENT'S ANGINA.

I. *Outfit: Gonorrhoea (Manilla Envelope).*

This outfit consists of two microscopic slides, protected by wooden shipping case.

II. *Time Required.*

The examination can be completed within a few hours after the specimen reaches the laboratory.

III. *Characteristics of the Disease and Organisms.*

1. Confused with diphtheria.

2. Organisms will not grow on ordinary culture media such as Loeffler's blood serum.

IV. *Collection of Specimen.*

1. Rub swab over infected area (obtain piece of membrane if possible).

2. Smear a thin film over the surface of the microscopic slide and allow to dry.

V. *Precautions.*

1. Do not stain the specimen.

2. Write plainly across data card: "EXAMINE FOR VINCENT'S ANGINA.

## II. SEROLOGICAL DIVISION.

### 1. BALANITIS GANGRENOZA.

#### I. *Outfit: Gonorrhoea (Manilla Envelope).*

The outfit consists of two microscopic slides, with protective case of wood, data card and mailing envelope, approved by the Postal Laws and Regulations.

Physician should change data card to read "FOR BALINITIS GANGRENOZA." Otherwise examination will be made for gonorrhoea only.

#### II. *Time Required.*

Examination can usually be made and report sent out within a few hours after the specimen reaches the laboratories.

#### III. *Collection of Specimen.*

1. Spread a drop of pus on each slide in the same manner as used in making blood smears.
2. Allow to dry in the air.
3. Place slides back to back in the mailing case.

#### IV. *Precautions.*

1. Secure as fresh pus as possible.
2. Make a thin smear of the pus.
3. Slides stuck together while pus is moist will cause autolysis in transit and examination will be of little value.

#### V. *Interpretation of Reports.*

##### 1. POSITIVE.

Organisms with the morphological and staining characteristics of the spirilla and vibrios causing balanitis gangrenosa were found.

##### 2. DOUBTFUL.

Suspicious looking organisms were found. Not definitely positive.

##### 3. NEGATIVE.

No suspicious looking organisms found. This does not necessarily exclude the existence of infection.

#### VI. *Precautions.*

1. The disease is very destructive to tissue if unrecognized.
2. Care should be taken to determine whether there is also an infection with syphilis. Every case should be regarded as a potential case of syphilis. Wassermann tests should be made at weekly intervals for six weeks and the patient kept under observation for syphilis for two months thereafter.

### 2. CHANCROID.

#### I. *Outfit: Gonorrhoea (Manilla Envelope).*

The outfit consists of two microscopic slides, with protective case of wood, data card and mailing envelope, approved by the Postal Laws and Regulations.

Physician should change data card to read "FOR CHANCROID." Otherwise examination will be made for gonorrhoea only.

#### II. *Time Required.*

Examinations are usually made and reports sent out within a few hours after the specimen reaches the laboratories.

#### III. *Collection of Specimen.*

1. Spread drop of exudate on each slide in the same manner as used in making blood smears.

2. Allow to dry in the air.
3. Place slides back to back in mailing case.

#### IV. *Precautions.*

1. Material should be obtained before lesion ulcerates.
2. Slides stuck together while material is moist will cause autolysis in transit and examination will be of little value.

#### V. *Interpretation of Reports.*

##### 1. POSITIVE.

The bacillus of chancroid is a short coccobacillus occurring chiefly in chains and showing bipolar staining. It is seldom recognized except in culture on special media, a procedure not practical when the patient and laboratory are separated.

##### 2. DOUBTFUL or NEGATIVE.

Because of the difficulty of recognition of the organism except by cultural procedure, a negative or doubtful laboratory report does not exclude the existence of the specific infection.

#### VI. *Precautions.*

A careful search should be made in every case of chancroid to determine whether or not there is also an infection with syphilis. Every chancroid must be regarded as a potential case of syphilis; in addition to routine examinations for spirochetes, Wassermann tests should be made at weekly intervals for six weeks, and the patient kept under observation for syphilis for two months more.

### 3. GONORRHEA.

Under this heading are included the common gonococcus infections known as clinical gonorrhoea, ophthalmia neonatorum and vulvovaginitis.

#### I. *Outfit: Gonorrhoea (Manilla Envelope).*

The outfit consists of two microscopic slides, with protective case of wood, data card and mailing envelope, approved by the P. O. Department.

#### II. *Time Required.*

Examinations are usually made and reports sent out within a few hours after the specimens are received at the laboratories.

#### III. *Collection of Specimen.*

There is difficulty in finding gonococci in discharges in which many other bacteria are present or in which pus cells have deteriorated. It is, therefore, very important that as pure pus as possible be obtained, directly from the suspected lesion. The material should be spread in a thin layer on at least two slides.

##### A. Male.

1. Remove "old pus" by washing glans with soap and water.
2. Express a drop of pus by pressure on the urethra.
3. Touch the slide (near the end) to the drop of pus.
4. Draw the end of the other slide through the pus drop, making a continuous sweep over the surface of the first slide.
5. Prepare the second slide in the same way.
6. In the case of chronic gonorrhoea, discharge representing material squeezed out of the prostrate gland should be procured.

##### B. Female.

In the female, the material should be taken from the urethra, which is infected in about 90 percent of acute and 30 percent of chronic cases; the crevix, which is infected in about 80 percent of acute and 90 percent of chronic cases; and also the glands of Bartholin, if they are inflamed which occurs in about one-third of all cases. Vaginal material often contains such an ad-

mixture of bacteria as to make an examination of such unsatisfactory.

1. From the urethra (Including Skene's glands).
  - a. Insert a finger in the vagina and apply pressure against the floor of the urethra from within outward.
  - b. Collect the exuding pus by means of a probe tipped with a small amount of cotton and spread thinly on slide.
2. From the cervix.
  - a. Expose the cervix by means of speculum.
  - b. Carefully mop away secretions with sterile cotton.
  - c. Insert a probe, tightly wound with a small amount of cotton, into the cervical canal. Rotate probe several times.
  - d. Spread material secured on a slide.
3. General Considerations.

Let the smear dry in the air. When dry, place the slides in the mailing case, back to back, and fasten by means of a rubber band or string. Fill out card and mail in envelope provided.

#### IV. *Precautions.*

- A. Secure as fresh pus as possible.
- B. Spread smears thinly, yet sufficiently thick to be distinctly visible.
- C. Smears stuck together will autolyze during transit and give unreliable results.
- D. Specimens on culture media or on cloth are worthless.

#### V. *Interpretation of Reports.*

##### A. GONOCOCCI PRESENT.

Means that intracellular Gram negative, flattened diplococci are present. Although it is not possible, without cultural and serological tests, to state with absolute certainty that these organisms are gonococci, if the material was obtained from the genitals or conjunctiva, the probability that these organisms are not gonococci is very slight.

##### B. NO GONOCOCCI FOUND.

Means that no intracellular Gram negative, flattened diplococci were found. This does not necessarily mean the absence of gonorrhoeal infection. It may be due to the fact that the particular specimen submitted for examination did not contain them although a specimen from some other location or collected at another time, may indicate their presence (see note below).

##### C. Doubtful.

##### 1. DOUBTFUL ON BACTERIA.

Means that Gram negative, flattened diplococci were present but since they were not found within pus cells, it is not possible to say positively that they are gonococci (see note below).

##### 2. DOUBTFUL ON PUS CELLS.

Means that pus cells indicative of an inflammatory process were present but no bacteria resembling gonococci were found (see note below).

##### D. NOTE:

Reports must be interpreted in the light of clinical history and symptoms. In such cases it may be advisable to submit another or several specimens taken from different parts of the genitals, care being taken that as far as possible, pus be secured from parts which are not likely to contain an admixture of bacteria. A special effort should be made to secure material from the



prostrate gland and, in the female, from the urethral glands, cervix and glands of Bartholin.

If several successive carefully collected specimens are negative or doubtful, it may be advisable to stimulate a latent lesion to discharge gonococci and pus cells by massage, injections of solutions which are slightly irritating or by hypodermic injections of gonococcus vaccine, though this might result undesirably in stimulating a latent infection to activity.

#### 4. SYPHILIS.

##### I. Wassermann Test.

###### A. Outfit: Wassermann (White label).

The outfit consists of a sterile tube containing sterile needle and data card, enclosed in the regulation mailing cases required by the Postal Laws and Regulations.

###### B. Time required.

The Wassermann test is run on Tuesday and Fridays. Specimens arriving on these days will not be run until the next run as the tests are started before the first mail delivery.

###### C. Collection of Specimen.

###### 1. Blood.

Blood is most easily obtained from the great toe of infants and the median basilic vein at the elbow in adults.

a. Clean and sterilize the skin over the vein with soap and water and alcohol.

b. Place tourniquet on the upper arm tightly enough to constrict the venous circulation without stopping the pulse below.

c. Holding the sterile needle by the grip, remove it from the cork, taking care to avoid touching either end of the needle or the small end of the cork.

d. Lay the cork down, small end up. Do not allow anything to touch the portion of the cork which enters the tube.

e. With a steady thrust, pass the needle through the skin and wall of the vein, all the time holding the blunt end of the needle inside the tube.

f. When the tube is three-fourths full of blood release the tourniquet, withdraw the needle and apply a piece of cotton moistened with alcohol to the puncture for a few seconds.

g. Discard the needle and wire, replace the cork in the tube, avoiding contamination.

h. Allow coagulation to take place at room temperature (one-half hour required) with the tube slanted. Keep in the ice box until mailed.

###### 2. Spinal fluid.

###### a. Needle.

Stiff—Length 5 cm. (for children) to 9 cm. (for adults)  
—Sterile.

###### b. Position of patient.

Sitting, bent over, or lying on right side with knees well drawn up.

###### c. Location of puncture.

Between the 3rd and 4th lumbar vertebra. The spinous process of the 4th is on a level with the crests of the ilia.

###### d. Disinfect skin.

Tincture of iodine may be used.

###### e. Insert needle.

Beginning at a point midway between the 3rd and 4th

lumbar vertebra and one cm. to the right of the median line, insert the needle directing it slightly upward and inward toward the median line. Spinal fluid should appear when the needle has reached a depth of 3 to 4 cm. in children and 7 to 8 cm. in adults.

f. Allow the first few blood-tinged drops to flow away and collect the remainder (at least 5 cc.) in the sterile test tube provided.

g. Dress the puncture wound with sterile gauze, fastening with adhesive tap. Keep specimen in ice box until mailed.

#### D. Precautions.

Even with the greatest care taken in collection and mailing of specimens, a small number arrive at the laboratories in a condition unsuitable for examination. The most common causes for reporting specimens as being UNSATISFACTORY are:

1. Broken tube. Before using tubes should be inspected for small cracks.

2. Hemolysis (excessive) which may be caused by:

a. Agitation of specimen during coagulation.

b. Certain kinds of bacterial contamination.

c. Use of ether, alcohol or water or other substances about needle or tube.

d. Needle left in specimen.

e. Extremes of heat or cold during transit.

3. Turbidity (excessive) which may be caused by:

a. Chyle, especially if specimen is drawn within two hours after meal.

b. Bacterial contamination.

4. Specimen insufficient in amount.

Four or five cc. (3-4 of a tube) of blood should be collected. Unless the cork is inserted tightly, most of the serum or spinal fluid may leak out during transit.

5. Specimen anticomplementary, caused by:

a. Bacterial contamination.

b. An inherent property of the serum of an individual which may continue indefinitely.

#### E. Interpretation of reports.

Results of the test are classified by this laboratory in six degrees as follows:

POSITIVE 4+, Strongly positive.

POSITIVE 3+, Moderately positive.

POSITIVE 2+, Weakly positive.

DOUBTFUL, 1+, Of doubtful significance.

DOUBTFUL +, Of doubtful significance.

NEGATIVE, Absence of reaction.

THE RESULTS OF THE WASSERMANN TEST SHOULD ALWAYS BE INTERPRETED IN THE LIGHT OF HISTORY AND CLINICAL EVIDENCE.

##### 1. POSITIVE.

A. POSITIVE reaction with BOTH ANTIGENS indicates one of the following conditions:

1. The patient has syphilis.

a. If 4+, syphilis may be diagnosed regardless of history or symptoms if items 2 and 3 (noted below) can be excluded.

b. If 3+ or 2+, diagnose syphilis only when there is other evidence of the disease.

2. The patient has been under ANAESTHESIA within two days.

3. Presence of another disease which occasionally gives a positive Wassermann reaction such as Yaws, leprosy and possibly also some cases of malaria. All these diseases are however of such infrequent occurrence in Iowa as to have practically no significance.

**B. POSITIVE with CHOLESTERINIZED ANTIGEN and NEGATIVE or DOUBTFUL with plain antigen.**

Cholesterinized antigen is more sensitive than are other antigens and may give a positive reaction even though syphilis is absent. Its chief value is for the control of treatment.

**1. FOR DIAGNOSIS.**

a. A 4+ with cholesterinized antigen and a 3+ or 2+ with plain antigen may be regarded as indicating the presence of syphilis, if items 2 and 3 of Sec. 1 A can be excluded.

b. A 4+ with cholesterinized antigen and a doubtful or negative with plain antigen is quite certain evidence of syphilis although it should be corroborated by clinical evidence.

**2. FOR TREATMENT.**

A positive reaction of any degree with cholesterinized antigen in a person who has had syphilis indicates the need of further treatment even though the case is apparently cured.

**2. DOUBTFUL (1+ or +).**

This should not be regarded as indicating the presence of syphilis unless there is clinical evidence suggesting such. With plain antigen, a doubtful reaction is seldom obtained with sera from persons free from syphilis. With cholesterinized antigen, however, a doubtful reaction is obtained in about 10 percent of sera from persons not affected by syphilis. It should be remembered that during the first few weeks of the disease, the reaction is likely to be negative or doubtful. Such reactions are also frequently obtained in the late tertiary and latent stages. It may be advisable to send in another specimen for examination in the course of a month.

**3. NEGATIVE.**

A negative reaction does not mean the absence of syphilis. Negative reactions are obtained in about 20 per cent of the cases in the primary stage of the disease, 8 per cent in the secondary, 20 per cent in the tertiary and 30 per cent in the latent stage of the disease.

The ingestion of ALCOHOL within 24 hours previous to the taking of the specimen may cause a positive serum to give a doubtful or negative reaction.

Specific ANTISYPHILITIC TREATMENT will tend to cause the reaction to become negative. This will be shown with plain antigen sooner than with cholesterinized antigen. A positive or doubtful reaction with cholesterinized antigen indicates the need for further treatment.

In obscure or latent cases of syphilis, a single PROVOCATIVE treatment followed by a test 3 or 4 days later may show a positive reaction which would otherwise be negative. Following treatment negative reactions even with cholesterinized antigen should not be taken as evidence of complete cure unless, for a period of at least one year in the absence of treatment, the tests performed every three months have

all been negative, and even not then, if at the end of that time, a provocative test is positive.

## II. Examination of Tissue Juice for *Spirochaetes*.

### A. Outfit: Gonorrhoea (Manilla envelope).

The gonorrhoea outfit consisting of two microscopic slides, wooden case, and envelope may be used. Physician should change data card to read "FOR TREPONEMA PALLIDUM EXAMINATION." Otherwise examination will be made for gonorrhoea only.

### B. Time required.

Usually reports are sent out the day that the specimen is received at the laboratories.

### C. Collection of specimen.

Dark field illumination can be used only upon fresh juice. This necessitates the presence of the patient at the laboratories. However special staining methods for the dried juice are reliable and more practical.

1. Wash the suspected lesion (chancre or mucous patch) with alcohol and allow to dry, leaving clean oozing surface without bleeding.

2. With sterile gauze or sterile scalpel apply friction to induce extravasation of lymph from the deeper structures. Squeezing may be advantageous.

3. Spread the lymph on scrupulously clean glass slide in the same manner as for making blood smear.

4. Allow to dry in the air.

5. Place back to back in gonorrhoea mailing case (changing card as noted under "Outfit") and mail.

### D. Precautions.

1. Avoid bloody lymph.

2. Secure juice from the deeper structures.

### E. Interpretation of Reports.

#### 1. POSITIVE.

Valuable in making early diagnosis which is so desirable.

#### 2. DOUBTFUL.

Treponema similar to *T. pallidum* exist in the buccal cavity, so that the laboratory never makes a positive report upon material known to be obtained from suspected syphilitic ulcerations of the throat. Clinical symptoms and the Wassermann reaction are more trustworthy than the morphology of buccal organisms.

#### 3. NEGATIVE.

A negative laboratory report does not exclude syphilis, since it is very difficult to secure juice from the deeper tissues where the organisms live and multiply under anaerobic conditions.

## III. THE WATER LABORATORY.

### I. THE LABORATORY AND ITS SCOPE.

The Water Laboratory Division was established in 1914 to conduct the examination of public and private water supplies of the State in order to determine their fitness for drinking purposes. Its function is to prevent the use of unsafe waters and so keep down the number of cases of typhoid fever and other water-borne diseases. Since any well or other water supply, if infected, may become the source of an epidemic of such preventable diseases, water from any source may be submitted for analysis.

The act of the 36th General Assembly which regulates the work of the Laboratory, specifies that all work shall be "in the interest of the public health and for the purpose of preventing epidemics of disease." The Water Laboratory therefore does not make mineral analyses to determine the quality of water for boiler purposes, nor to determine the supposed therapeutic value of the water of mineral springs or wells. These are held to be commercial matters and without interest to the people of the State of Iowa.

On the other hand, an infected well may become a menace to the people of the community in which it is located, because of its likelihood to spread disease, both directly among the people who use its water for drinking purposes, and indirectly among the people who came in contact with those who have so contracted the disease, or from milk and food contaminated by their body wastes, by flies, and so on. The eradication of such dangers, or the warning that such possibilities exist, are of direct personal importance to the entire people of the State of Iowa.

Many of the public supplies of the larger cities of the State must be filtered, or otherwise treated, in order to render them safe for use. If the treatment is insufficient, there is danger of disease being spread throughout the community. Laboratory experiments on the water are the only means of knowing how efficient the purification of the water may be. Frequent analyses should be made to assure sufficient treatment as the water available varies with weather and drainage conditions. In order to exercise a more close supervision of the water supplies of purification plants, the State Board of Health has passed a regulation which requires each water purification plant to submit at least one specimen of its treated water to the Water Laboratory at Iowa City, during each calendar month. Where authorized branch laboratories are available in the community, the examinations may, if desired, be made in the branch laboratories, but the results are to be promptly reported on special forms supplied by the Water Laboratory at Iowa City. In addition the operation data for the plant are to be reported at weekly intervals on forms supplied by the State Board of Health. The reports are to be mailed to the Chief, Water Laboratory Division, Iowa City. The purpose of the entire scheme is to assist the operators of all plants, publicly owned as well as privately owned, to operate their water plants so that the health of the public may be safeguarded in an adequate manner.

Well casings often deteriorate as a result of the action of the water on the metal of the casing. Holes and breaks may allow polluted water to enter the well at higher levels and the dangerously contaminated water may then be pumped to homes of the consumers. If such a condition exists, it is important to know it in order that the water may not be used until suitable repairs have been completed. Even the deepest wells are subject to such difficulties. They should be examined at sufficiently frequent intervals to avoid pumping unsafe water.

Shallow wells are even more likely to receive surface drainage than deep wells. This fact is generally appreciated. They may be satisfactory during a part of the year and actually dangerous at others according as they receive surface drainage. Surface drainage is likely to carry with it material of a sewage-like nature, and this material is likely to contain the specific organisms which are the cause of typhoid fever and other intestinal diseases.

Recognizing these facts the State Board of Health has passed a regulation requiring that the Local Boards of Health shall cause the public water supplies to be examined according to a schedule based upon the likelihood of the supplies to cause disease:

Wells over 100 feet in depth, which were found at last examination to be of good quality, must be examined at least semi-annually.

Water from wells less than 100 feet in depth, which at last examination were found to be of good quality, must be examined at least

once in each three months.

Water from wells found unsatisfactory at last examination, must be examined as often as deemed necessary by the Chief of the Water Laboratory Division, Laboratories for the State Board of Health, State University, Iowa City, and in any event at least once each month.

While the chief part of the work of the Water Laboratory Division consists of the examination of samples of drinking waters, the Laboratory is also prepared to assist municipalities and institutions in the control of sewage treatment plants, where such exist.

## II. SECURING THE CONTAINERS FOR THE SAMPLES.

In order to have an examination made it is first necessary to secure a water container from the Laboratory. Experience has shown that the results obtained on samples collected in ordinary bottles, rinsed out, or even boiled in water, are almost always affected by the manner of collection in such a way that the information obtained is untrustworthy. The work usually has to be done over with consequent useless expenditure of time and money. For this reason samples which are not sent in the containers supplied by the Laboratory are discarded.

The water containers are larger, more complicated in construction and more expensive than the other outfits supplied. They cannot therefore be deposited in the various stations where the other outfits may be secured. It is necessary in each case to write to the Laboratory and request that a container be shipped by express. The containers are not suitable for sending by mail, due to the fact that water from the ice used in packing may run out if the container is tilted, thus damaging other mail matter.

Examination will be made whenever requested by the State Board of Health, any State Institution, or citizen, school or municipality. In the case of citizens, schools or municipalities, the request should have the written endorsement of the Local Board of Health having jurisdiction.

Upon receipt of the request a container will be forwarded by express without delay. It will be sent "express charges collect." When returned to the Laboratory all express charges must be prepaid by the sender of the sample. Full directions for the collection of the sample will be found in a tag envelope attached to the container. It is very important that these instructions be followed implicitly, and that the information asked for be supplied as fully as possible.

## III. THE FEE FOR THE EXAMINATION.

The act of the 36th General Assembly which regulates the work of the Water Laboratory requires that a fee be charged for each specimen of water examined. This fee, which is expected to cover merely the cost of materials used, has been set at \$1.00 per sample. This fee must be collected irrespective of the source of the specimen. It is required that the fee shall be received by the Laboratory before the report upon the water sample is forwarded. The money derived from these fees reverts to the General Funds of the State of Iowa and is not available for the purposes of the Laboratory.

Remittance should be made by check, draft, warrant, or money order made payable to "Director, Laboratory for Water Analysis." If sent by mail separate from the sample, sufficient data as to the source to enable the remittance to be credited to the proper sample.

## IV. THE CONTAINER.

The bottle used for the collection of the sample of water is a one-quart, wide-mouth, glass-stoppered bottle. It has been thoroughly cleaned using chromic acid. After cleaning it is thoroughly rinsed, dried, and baked in a hot-air sterilizer at a temperature of at least 175 degrees Centigrade for an hour. After cooling in the sterilizer a piece of

aluminum foil, similarly sterilized, is put over the stopper to protect it from contamination. A piece of muslin is then put over the foil to protect it, and tied in place with a cord. The ends of the cord are then brought up on top of the bottle and sealed in place with a wax seal. If the seal has not been tampered with, the sterility of the bottle is assured.

The bottle is slipped into a galvanized iron cylinder provided with a slip-cap cover. The function of the cylinder is to protect the bottle from breakage and also to prevent it from coming into contact with the water from the melting ice used in packing the bottle for its return journey to the Laboratory.

One or two of the cylinders are then packed in a special metal-lined wooden case. Excelsior is used as packing. It is expected that when the container is to be returned to the laboratory, most of the excelsior will be removed, about ten pounds of broken ice will be placed around the cylinders, and as much excelsior as can then be put in will be packed around the top of the cylinders.

The wooden case which is used is lined with galvanized iron. There is a layer of about half an inch of insulating material between the wooden siding and the metal lining. If properly packed, the case will insure the keeping of the sample at a low temperature for at least 24 hours even in hot weather.

When the container is packed, the hasp of the container is sealed with a lead seal carrying the letters S. U. I. An envelope is then attached to the hasp bearing the name and address of the person requesting the examination. Inside the envelope will be found a return tag-envelope and the direction and data sheet.

The box is heavy enough to withstand ordinary handling in shipment. A handle is affixed to the lid of the case.

## V. COLLECTING THE SAMPLE.

On the face of the data blank will be found detailed directions for the collection of the sample. An effort has been made to avoid any needless complication of procedure, and it is particularly requested that the directions be followed implicitly. The directions are as follows:

### WATER FOR ANALYSIS—INSTRUCTIONS

#### READ CAREFULLY AND COMPLY WITH THE REQUIREMENTS IN EVERY PARTICULAR

**1st. From a Water Tap**—Avoid using an obviously unclean or leaky tap. If possible, flame the tap outlet using a blow-torch, lamp, or several matches, after which the water should run freely from the tap for a few minutes before it is collected. The cloth covering the stopper of the bottle should be removed and the metallic foil pulled out from the bottle so as to form a hood for the stopper. The stopper should be loosened, if necessary, by gentle tapping. When removed it should be held by the top while still hooded by the metallic foil to prevent contamination by touching any object or contamination by falling particles. The bottle is then to be placed directly under the tap and rinsed out with the water at least twice, pouring out the water completely each time.

It is then again to be placed under the tap and filled to overflowing, and then a small quantity poured out, so that there shall be left an air space under the stopper. The stopper is inserted into the bottle, the metallic foil crimped around the neck of the bottle and the stopper secured by tying over it a clean piece of cotton cloth. The ends of string must be sealed on the top of the stopper. **Under no circumstances should the inside of the neck of the bottle or the stem of the stopper be wiped with a cloth or touched by the hand or any other object.**

**2nd. From a Stream, Pond, or Reservoir.**—The bottle and stopper should be rinsed with water, if this can be done without stirring up the

**sediment on the bottom.** The bottle, with the stopper in place, should then be entirely submerged in the water and the stopper taken out at a distance of about twelve inches below the surface. When the bottle is full, the stopper is replaced below the surface, if possible, and finally secured as above. It will be found convenient in taking samples in this way to have the bottle weighted, so that it will sink below the surface. It is important that the sample should be obtained free from the sediment on the bottom of the stream and from the scum on the surface. If the stream should not be deep enough to admit this method of taking a sample, the water must be dipped up with an **absolutely clean, sterile vessel** and poured into the bottle after it has been rinsed.

**3rd. From a Well.**—Pump or draw the water until the water in the pump stock is replaced by fresh water, **rinse** the bottle, then fill, **using all the precautions above mentioned**, and seal as directed.

The sample of water should be collected **immediately before shipping by express**, so that as little time as possible shall intervene between the collection of the sample and its examination.

## VI. PRECAUTIONS IN TAKING THE SAMPLE.

Since the sample of water as collected represents only the water passing through a particular point of the system at a particular time, it is necessary to endeavor to obtain a sample that will be as nearly representative of the supply as possible. If the water comes from a well, it is important that the well be pumped until all water which has been standing in the pump is thoroughly flushed out. If from a city system, the water which has been standing in a dead end or service pipe should be removed also. The quality of the water from filter plants will vary from day to day, or even from hour to hour, perhaps from minute to minute. Try to get a representative sample.

If a stream of water trickles down over the outside of the faucet from which you are collecting a sample, be sure to see that none of that water flows into the sample bottle. Otherwise you may contaminate the sample with the washings which carry material that has been left on the faucet by your hands or the hands of some one else. If the water strikes against a surface from which a part is splashed back toward the bottle, a similar contamination may take place.

The greatest care is taken in the laboratory to avoid any contamination of the water samples. Equal diligence in the collection of the sample is necessary.

It is very important that the sample be packed in ice and forwarded to the laboratory with the least possible delay. Bacteria multiply in water samples when held in bottles. Icing the bottle slows up their growth. Chemical changes, as well as bacteriological changes, take place. Icing the bottle retards those changes. But the best that icing can do is to slow up the changes. The sooner the bottles of water get to the laboratory the smaller the amount of change that can take place.

## VII. THE INFORMATION CONCERNING THE SAMPLE.

It is essential that in addition to proper identification there shall be provided adequate information concerning the sample of water.

A large number of water samples are examined in the Water Laboratory. It is not sufficient to write a letter stating the position in the case which particular samples occupy, or to trust to pencil markings on the galvanized iron cylinder containing the bottle. Where more than one bottle is sent in a case, each should be labeled, tagged, or provided with a descriptive paper placed in the can with the sample. Label the samples so that there can be no misunderstanding as to the source of each specimen.

The information asked for on the data blank is all material information. A water analysis is much like a diagnosis. The more information



that is withheld, the less likely the analyst is to make the correct interpretation. It is especially important to know the time of the collection of the sample, the type of source, the depth, character of surroundings and strata through which wells pass, and the history of the supply from a clinical standpoint.

#### VIII. THE EXAMINATION.

Immediately upon receipt of the sample of water at the Laboratory the bacteriological examination is begun. Certain chemical tests which are particularly subject to variation with the age of the sample are also promptly carried out. And the whole examination is carried through without unnecessary delay.

The examination includes the enumeration of bacteria on litmus lactose agar plates at 37 degrees Centigrade for 24 hours; on plain agar plates at 20 degrees for 48 hours; an enumeration of acid forming colonies on the litmus lactose agar plates; detection of gas-forming organisms in lactose broth; and the confirmation of organisms of the *Bacterium coli* group, if present.

The physical and chemical examination includes the following determinations: Color, Odor, Turbidity, Sediment, and Ammonia Nitrogen, Albuminoid Nitrogen, Nitrite Nitrogen, and Chlorine. The results of the determinations of Chlorine and the nitrogens are expressed as parts per million by weight.

The examination usually requires a week to ten days.

#### IX. THE REPORT.

Upon the completion of the examination a typewritten report is made out and is signed by the analyst in charge of the work. This report gives the numerical data obtained and a very brief statement as to the character of the supply as determined by the analytical results. If the supply is other than satisfactory, an explanatory letter is written and forwarded with the report.

A copy of the report, but not of the explanatory letter is sent to the mayor of the town or city, as president of the local board of health having jurisdiction over the source of the sample. A similar copy is forwarded to the Sanitary Engineer, State Board of Health, Des Moines.

#### X. THE INTERPRETATION OF THE RESULTS.

In order to obtain the most reliable information concerning a source of water supply, the examination should be supplemented by a sanitary examination of the surroundings by some person who is familiar with such matters. Since under the present conditions, it is impossible for the Laboratory staff to do this work, and collect the specimens, it is necessary to depend upon information supplied by the senders of specimens, and to assume that the samples have been carefully collected in strict accordance with the directions furnished to them.

The interpretation of the results of the examination depends in large part on the type, location, geological conditions and surroundings of the supply. The time in shipment, icing, and precipitation of iron compounds must be noted and considered. Some determinations, such as the presence of the *Bacterium coli* in water, vary little in significance with the age of specimen, and source, when they are found positive. Other determinations, such as Nitrite Nitrogen, vary greatly in importance with outside conditions. Great care is necessary in order to avoid error, and extensive experience is essential in order to give the proper weight to the values obtained. The process closely resembles a diagnosis based upon a number of variable factors.

Certain determinations which are significant in untreated waters are without significance in treated waters, or at least are of modified significance. The reason for this is that the determinations give some

information as to the past history of the water, but are not greatly changed by the methods of purification commonly employed in this vicinity.

All of the examination is aimed at one particular question: Is the water receiving contamination by sewage-like matters? If it is, it is likely to carry with it at any time the organisms which cause typhoid fever and similar diseases. If surface wash is getting into the water, the dangerous sewage-like matters may get in also, if conditions are favorable.

In most cases the point of entrance of such contaminating material is at, or near, the surface of the ground. Usually the casing is not tight, or the top of the well is defective. Then the remedy is obvious. In other cases, it seems that the contamination is due to taking water from solution channels in the rock, which happen to be carrying a polluted water. The remedy then is casing out the objectionable supply, but this is not always possible. Where treated waters are found to be in an unsafe condition, the trouble usually lies in the overloading, or careless handling of the sand filter beds, or to an insufficient quantity of applied chemicals. The proper remedy can usually be found by carefully inquiry into the methods of operation of the plant.

### CHAPTER III.

#### SPECIAL RULES RELATING TO THE CONTROL OF VENEREAL DISEASES

##### Chaneroid, Gonorrhoea, Syphilis.

###### REPORTING OF CASES.

1. It shall be the duty of every person having knowledge of or reason to believe in the existence of a case of the above mentioned Venereal Diseases in any form to report the same to the local board of health as provided in chapter 299 of the Acts of the 38th General Assembly.

2. For the purpose of these Rules and Regulations cases of Venereal Diseases may be said to be reported when the local board of health is notified by mail on a report blank supplied by the State Board of Health through the city or township clerk, stating the age, sex, color, marital condition and occupation of such diseased persons and the nature and previous duration of such disease and its probable origin. Such report blanks shall be mailed immediately after the first examination or treatment of such diseased persons.

3. The local board of health shall forward all such reports to the State Board of Health within one week after they are received.

4. The above mentioned diseases must be reported as described above, by the following persons, as provided by law who shall furnish all required data relating to the case, including when and by whom and under what designation the case may have been previously reported.

- a. Licensed physicians.
- b. Superintendents of hospitals.
- c. Heads of dispensaries.
- d. or any person who gives treatment for Venereal Diseases.

5. It shall be the duty of every licensed physician and of every other person who treats a person afflicted with any venereal disease to give to such person at the first examination a circular of information and advice concerning Venereal Diseases. This circular shall be furnished by the State Board of Health to physicians on request.

6. All information and reports concerning persons infected with venereal diseases shall be confidential and shall be inaccessible to the public, except in so far as publicity may attend the performance of the duty imposed upon the local board of health and the laws of the State of Iowa, and to those injured by contracting said disease from said diseased person, and to public officers in the performance of their official duties.

7. Whenever a person with a venereal disease fails to report for treatment for ten days, it shall be the duty of the attending physician to report this fact to the local board of health on a "Confidential Report Blank" supplied by the State Board of Health through the city or township clerk.

8. Any druggist or other person who sells any drug compound, alleged specific, or preparation of any kind except prescriptions of practicing physicians for the cure of any of the said venereal diseases shall keep a record of the name, address and sex of person making such purchase. A copy of this record without the name shall be filed each week with the local board of health or the health officer of the city, town or village wherein the sale of the drug, compound, specific or preparation for the treatment of venereal disease was made, upon the "Druggists Report of Sale of Specific for Venereal Disease" blank furnished by the State Board of Health through each city, town or village clerk.

9. Whenever any person infected with a venereal disease shall apply for treatment to any licensed physician, superintendent or manager of a hospital or dispensary or to any person who gives treatment for venereal disease and shall furnish the information that they have previously been under treatment by another physician, the physician to whom application for treatment is made shall make a written report to the physician previously in charge of the case on the "Report of Change of Medical Advisor" blank which shall be furnished by the State Board of Health through all city, township and village clerks.

#### INTERMENT.

1. It shall be the duty of the local board of health or its duly authorized representative to intern and restrict the movement of all cases of venereal disease, who, by their actions or habits, constitute a menace to the public health. Cases of Venereal Diseases who are held in internment for the public good will be treated at public expense if the patient is unable to pay for adequate treatment.

2. Persons infected with venereal disease who are reported to the local board of health as conducting themselves so as to constitute a menace to the public health shall be served with a written notice of internment, which notice shall specifically state the places and hours wherein such interned persons may work, reside or go for treatment. After service of such notice of internment, the interned person shall conduct himself or herself in strict accord with this order of the local board of health regarding his or her movements and habits, or, the house may, when necessary, be placarded and the individual quarantined and treated within the quarantine.

3. Cases of Venereal Disease **not interned** must be receiving adequate treatment from and following the advice of a competent licensed physician.

4. Cases of venereal diseases **not interned but under the care of a competent physician** who shall discontinue such treatment while still in an infectious state or conduct themselves in a manner declared by the local board of health to be a menace to the public shall be immediately interned and placed under proper treatment.

5. Persons who have venereal disease who conduct themselves in such a manner that internment is deemed necessary by the local board of health for the protection of the public, shall have their liberty restricted at such hours of the day and to such parts of the village, city or township as shall be deemed advisable by the local board of health.

## PLACARD.

1. Placards announcing the name of the disease interned shall not be used on the residence of interned persons unless all members of the family or household are affected or such is deemed necessary to prevent the spread of venereal diseases. •

2. When, in the opinion of the local board of health it is absolutely necessary in order to protect the public, the house wherein a case of venereal disease resides may be placarded.

**READMITTING OF CHILDREN INTO SCHOOL WHO HAVE HAD  
VENEREAL DISEASE.**

Children who have had venereal disease should not be permitted to enter or re-enter school until following conditions have been complied with:

**Gonorrhoea.** Must be no purulent discharges. Must have three negative smears taken under following conditions. Leave off all treatment, then at end of 24 hours may take 1st smear, at end of 38 hours may take 2nd smear, and at end of 72 hours may take 3rd smear.

For females secure specimen from cervix and meatus, also massage Bartholin's and Skenes glands. May secure specimen from any other suspected lesion likewise.

In males massage prostate in obtaining suspected specimen.

Shall then be readmitted only at the discretion of the local health officer.

3. Children who have had syphilis shall not be permitted to enter or re-enter school until they have been rendered non-infectious by proper treatment, and so declared by the attending physician and approved by the local Board of Health.

Children who have had chancroid shall not be permitted to enter or re-enter school until they have been rendered non-infectious by proper treatment, and so declared by the attending physician and approved by the local Board of Health.

**Syphilis-Chancroid.** Known houses of prostitution wherein a case of venereal disease resides may be placarded by the local board of health.

## HOSPITALIZATION.

1. Hospitalization may be carried out as provided in Section IV of these Rules and Regulations.

2. Authority is hereby given for the removal of any person interned under these Rules and Regulations from the place of internment to the University Hospital or any other hospital provided by law to furnish service for venereal diseases, where they shall again be interned.

3. The local board of health may at its discretion give permission for the removal of any person interned by these Rules and Regulations to any hospital for the treatment of these diseases, provided that they shall again be interned on arrival at such hospital.

## RELEASE FROM INTERNMENT.

Cases of venereal disease will be released from internment or considered non-infectious only after repeated clinical and laboratory examinations prove to the satisfaction of the local board of health that the person is no longer infection and a menace to the public.

## DISINFECTION OF INTERNED QUARTERS.

None.

## DISINFECTION OF DISCHARGES.

All discharges from all lesions of venereal diseases shall be gathered on bits of cotton, paper or cloth and burned at once.

**INTERSTATE TRAVEL OF VENEREALLY INFECTED PERSONS.**

(a) Any person infected with syphilis, gonorrhoea, or chancroid who wishes to engage in interstate travel must first obtain a permit, in writing, from the local health officer under whose jurisdiction he resides. This permit shall state that, in the opinion of the health officer, such travel is not dangerous to the public health.

(b) Any person infected with syphilis, gonorrhoea, or chancroid who wishes to change his residence from one State to another must first obtain his release, in writing, from the local health officer. He shall inform the local health officer as to the place where he intends to reside, and shall agree, in writing, to report in person to the proper health officer within one week after arrival at his new residence. It shall be the duty of the health officer who issues the release to promptly notify the health officer under whose jurisdiction the infected person is to enter of its issue. This release shall contain the name and address of the infected person. The receiving health officer shall, in turn, report the arrival of the infected person to the health officer who issued his release and notify the State health officer of his State that a person infected with venereal disease has entered his jurisdiction.

(c) Any person infected with syphilis, gonorrhoea, or chancroid who wishes to engage in interstate travel or change his residence shall agree to continue treatment under the direction of a reputable physician until the health officer, or his accredited representative, shall have complied with the State board of health requirements for release of venereally infected persons.

**APPENDIX.**

**Duties of Local Boards of Health Defined.** The duties of the local boards of health relative to the Rules and Regulations of the State Board of Health are defined by Section 2572, Supplement to the Code of Iowa, 1913, as follows:

**Sec. 2572. Regulations of State Board.** Local boards of health shall obey and enforce the Rules and Regulations of the State Board; and peace and police officers within their respective jurisdictions, when called upon to do so by the local boards, shall execute the orders of such board. If any local board of health shall refuse or neglect to enforce the Rules and Regulations of the State Board of Health, the State Board of Health may enforce its Rules and Regulations within the territorial jurisdiction of such local board, and for that purpose shall have and may exercise all of the powers given by statute to local boards of health; and the peace and police officers of the state, when called upon by the State Board of Health to enforce its Rules and Regulations, shall execute the orders of such board. All expenses incurred by the State Board of Health in determining whether its Rules and Regulations are enforced by a local board of health, and in enforcing the same when a local board has refused or neglected to do so, shall be paid in the same manner as is now provided for the payment of the expenses of enforcing such Rules and Regulations by the local boards of health. (29 G. A., Chapter 107, Sec. 1.)

**Penalties for Disobeying Any Rule or Regulation of State Board.**—Section 2573 of the Code prescribes the following penalties for disobeying any rule or regulation of the State Board of Health or the Local Board of Health:

**Sec. 2573. Failure to comply with orders or regulations.** Any person being notified to remove any nuisance, source of filth or cause of sickness, as in this chapter provided, who fails, neglects or refuses to do so after the time fixed in such notice, or knowingly fails, neglects or refuses to comply with and obey any order, rule or regulation of the state or local board of health, or any provision of this chapter, after notice thereof has been given as herein provided, shall forfeit and pay the sum of twenty dollars for each day he refuses such obedience, or for each day he knowingly fails, neglects or refuses to obey such rule or regulation, or knowingly violates any provision of this chapter, to be re-

covered in an action in the name of the clerk of the board, and, when collected, to be paid to the clerk of the town, city or township, as the case may be, and for its benefit; and, in addition thereto, any one so offending, or knowingly exposing another to infection from any contagious diseases, or knowingly subjecting another to the danger of contracting such disease from a child or other irresponsible person, shall be liable for all damages resulting therefrom, and guilty of a misdemeanor. (24 G. A., Chapter 59; 18 G. A., Chapter 151, Sections 16, 17; C. '73; Sec. 419.)

Dated at Des Moines, Iowa, this 5th day of August, 1922.

RODNEY P. FACEN, M. D.,  
Secretary.

CHAS. S. GRANT, M. D.,  
President.

### THE IOWA QUARANTINE LAW

Sec. 2571-a. Quarantine—care of infected person—fumigation—disinfection—report of undertaker—expenses. That the law as it appears in sections twenty-five hundred seventy-a, twenty-five hundred seventy-one-a, twenty-five hundred seventy-b, and twenty-five hundred seventy-one of the supplement to the code, 1907, is hereby repealed and the following enacted in lieu thereof.

"When any person shall be sick or infected with any contagious or infectious disease, dangerous to the public health, whether a resident or otherwise, the local board of health through the mayor or township clerk, shall make such provisions as are best calculated to protect the inhabitants therefrom, and may remove such person to a separate house, a house of detention or hospital; but quarantine shall not be established or maintained, except in cases of scarlet fever (including scarlet rash and scarlatina), small pox, diphtheria (including membranous croup), cholera, leprosy, cerebro-spinal meningitis, anterior poliomyelitis, Spanish influenza, and bubonic plague, or any other infectious or contagious disease, by the State Board of Health. In case any person or persons liable for the support of such person under quarantine or restrained under and by virtue of this act, shall be financially unable to secure the proper care, provisions or medical attendance, it shall be the duty of the mayor or township clerk to procure for such diseased person proper care, provisions, supplies and medical attendance, while so quarantined or restrained. All bills for supplies furnished and services rendered by order of the mayor or township clerk as herein provided, for persons removed to a separate house, or house of detention, or hospital, or for persons financially unable to provide for their sustenance and care, shall be allowed and paid for only on a basis of the local market price for such provisions, services and supplies in the locality in which such services and supplies may have been furnished. All services and supplies furnished to individuals or families under the provisions of this section must be authorized by the local board of health or by the mayor or township clerk acting under standing regulations of such local board, and a written order therefor designating the person or persons employed to furnish such services or supplies, issued before said services or supplies were actually furnished, shall be attached to the bill when the same is presented for audit and payment. No bill for any expense incurred for any person during quarantine or for disinfecting premises or effects shall be allowed or paid except in cases removed to a separate house, or house of detention, unless it shall be found that such person is financially unable to pay said bill. Provided that nothing contained in this section shall be construed to prevent any person removed to a separate house or house of detention or hospital, as herein provided, from employing, at his own expense, the physician or nurse of his choice, nor from providing such supplies and commodities as he may require. It is further provided that if the person receiving services or supplies be not a legal resident of the county in which such bills were incurred and paid, the amount so paid shall be certified to the board of supervisors of the county in which said party claims residence or owns property and

the board of supervisors of such county shall reimburse the county from which such claim is certified, in the full amount originally paid by it. All fumigations and disinfections, for the protection of the public health, shall be done in accordance with the regulations of the State Board of Health and under the directions of the local board, which shall direct the attending physician to superintend or perform the work. In case there be no attending physician or in case the attending physician refuses to perform this duty, then it shall be the duty of the local board of health to provide some other suitable person to perform such work. The undertaker or person in charge of the funeral of any person, dying of tuberculosis, shall within forty-eight hours after the death of such person, report to the mayor of the city or town, or to the township clerk, the name and residence of the deceased person, together with the cause of death. Upon receipt of the notice as herein provided, the mayor of the city or town, or clerk of the township shall cause said premises to be disinfected in accordance with the regulations of the State Board of Health. All bills and expenses incurred in carrying out the provisions of this section and establishing, maintaining and raising quarantine and furnishing necessary detention hospitals shall be filed with the clerk of the local board of health. This board at its next regular meeting or special meeting called for the purpose shall examine and audit the same and if found correct, approve and certify the same to the county board of supervisors for payment. If the board of supervisors determine such bills payable, under the provisions of this act, it shall order the county auditor to draw warrant therefor upon the poor fund of said county. The board of supervisors shall not be bound by the action of the local board of health in approving such bill but may increase or diminish the same as may be just and reasonable. The forcible removal of infected persons as herein provided shall be effected by an application to any civil magistrate in the manner provided in section twenty-five hundred sixty-nine of the Code for the removal and abatement of nuisances, who shall issue the warrant, as directed in such cases, to remove such person or persons to the place designated by the local board of health and to take possession of a condemned or infected house, lodging room, premises or effects. The officers designated by such magistrate shall be entitled to receive for such services such reasonable compensation as shall be determined by the local board of health, the amount so determined to be certified to and paid in the same manner as other expenses incurred under the provisions of this section. (34 G. A., Chapter 119, Sec. 1; 33 G. A., Chapter 156, Sec. 1.)

**Sec. 2568. Local board of health—quarantine.** The mayor and council of each town or city, or the trustees of any township, shall constitute a local board of health within the limits of such towns, cities or townships of which they are officers. The town, city or township clerk shall be clerk of the local board, which board shall appoint a competent physician as its health officer, who shall hold office during its pleasure. It shall regulate all fees and charges of persons employed by it in the execution of health laws and its own regulations and those of the State Board of Health; have charge of all cemeteries dedicated to public use not controlled by other trustees or incorporated bodies, and the burial of the dead; make such regulations as are necessary for the protection of the public health respecting nuisances, sources of filth, causes of sickness, rabid animals and quarantine, not in conflict with any regulations of the State Board of Health, which shall also apply to boats and vessels in harbors or ports within their jurisdiction; to proclaim and establish quarantine against all infectious or contagious diseases dangerous to the public, and maintain and remove the same, as may be required by regulations of the State Board; may, when satisfied upon due examination that any cellar, room, tenement building or place occupied as a dwelling or other wise has become, or is by reason of the number of occupants, uncleanness or other cause, unfit for such purpose, or a cause of nuisance or sickness to the occupants or the public, issue a notice in writing to such occupants or any of them, requiring the premises to be put in

proper condition as to cleanliness, or requiring the occupants to remove or quit such premises within a reasonable time to be fixed; and, if the persons so notified or either of them neglect or refuse to comply therewith, may by order cause the premises to be properly cleaned at the expense of the owner or owners, or may forcibly remove the occupants and close the premises, and peace and police officers shall execute such orders, which premises so closed shall not be again occupied as a dwelling place without written permission of the board. The quarantine authorized by this section in case of infectious or contagious diseases may be declared or terminated by the mayor of any city or the township clerk outside of such city or town, in cases required by regulations of the State Board of Health, upon written notice given by any practicing physician of the existence of such disease, or termination of the cause for quarantine, as the case may be. (24 G. A., Chapter 59; 18 G. A., Chapter 151, Sections 13, 14, 16-19; C. '73, Sections 415, 417, 418.)

### DUTIES OF HEALTH OFFICER.

#### REPORTS OF LOCAL BOARDS OF HEALTH TO STATE BOARD OF HEALTH.

**Rule I. Duties of Health Officer and His Relations to Local Board and the Community in General; Also to Schools, Public Buildings and Utilities, Nuisances, Water Supply, Sanitary Conditions, etc.** The local health officer shall be the adviser of the local board of health in all matters pertaining to the protection of the public health; the control of infectious and contagious diseases; the establishing, maintenance and release of quarantine; sources of filth; disposal of garbage, refuse, and night soil; pollution of wells and other sources of water supply; and shall recommend to the local board the proper measures to be enacted by said local board, in addition to the rules and regulations of the State Board of Health, for the abatement of unhealthful conditions and for the preservation of the public health. The health officer shall personally inspect, or cause to be inspected, the schools, public buildings and public utilities within the jurisdiction of the local board, at least twice each year, and oftener if necessary, and shall recommend to the local board the necessary measures to be enacted by said local board for the maintenance of such schools, public buildings and public utilities in a sanitary condition. In cases of sickness where no physician is in attendance, the health officer shall investigate the character of such sickness and report his findings to the mayor or township clerk. In addition, the health officer shall perform such other duties as the Local Board of Health may by order, resolution or regulation require of him.

**Rule II. Local Boards of Health Shall Report Quarantinable Diseases to Secretary of State Board of Health and Shall Keep Complete Record of Quarantinable Diseases Reported to Them.** In compliance with the provisions of Section 2571-b, Supplement to the Code, 1913, Local Boards of Health shall report quarantinable diseases to the Secretary of the State Board of Health, using the blanks furnished for such purpose; and mayors of incorporated cities or towns, and township clerks shall keep a complete record of all cases of quarantinable diseases reported within their jurisdictions during each calendar year, said record shall include the name of the disease, patient's name, age, sex, address, social condition, attending physician and nurse, together with the date quarantined, date released, date disinfected, person who disinfected the premises and such other information as may seem necessary. A copy of said record, including all data for the calendar year ending December 31st, shall be forwarded to the Secretary of the State Board of Health by the 1st day of the following February.

**Note: How to Keep Record of Quarantinable Diseases and How to Report to State Board of Health.** A record book will be furnished to mayors and township clerks upon request, for the purpose of keeping a proper and complete record of all cases reported to them.



TEMPORARY QUARANTINE

CHAPTER 397.—ACTS OF THE 38th GENERAL ASSEMBLY

Sec. 1. Communicable Diseases—Type Undetermined—Warning Card—Form. That all quarantinable and placard diseases shall as soon as possible be definitely diagnosed and the proper placard placed in a conspicuous place on the house, dwelling, or place where the quarantinable or placard disease exists. The sign establishing a quarantine shall be the form adopted by the State Board of Health. In any event, when the type of the disease is not immediately determined or diagnosed, a warning sign shall be placed upon the house, dwelling or place where the disease exists, giving prominent notice that a communicable disease exists in the house, dwelling or place, and all persons connected therewith shall observe all the requirements of quarantine, until a proper and correct diagnosis shall have been made, when the proper quarantine placard shall replace the former warning, provided however that such temporary quarantine shall terminate within twenty-four hours after being in force. The warning sign hereinbefore mentioned and required shall be followed in the same manner as a quarantine placard, and shall be in the following form and language:

A yellow card, not less than twelve (12) inches square, having printed thereon in large letters "Temporary Quarantine, Keep Out," followed by the words: "Notice: No person shall be permitted to enter or leave these premises except as provided by the rules and regulations of the State Board of Health."

"Signed.....  
Mayor or Township Clerk."

The form and wording of the warning sign where the diagnosis has not been determined shall be as follows:

TEMPORARY  
QUARANTINE  
KEEP OUT

Notice: No person shall be permitted to enter or leave these premises except as provided by the Rules and Regulations of the State Board of Health.

Signed.....  
Mayor or Township Clerk.

Sec. 2. Acts in Conflict Amended. That all acts or parts of acts, in so far as they are in conflict with this act, are hereby amended to conform to the provisions of this act.

VACCINATION CERTIFICATE

This is sample form of Vaccination Certificate that may be issued by local boards of health to persons who are immune.

CITY BOARD OF HEALTH.

.....Iowa  
.....19.....

This is to certify that ..... has been successfully vaccinated against Smallpox—Typhoid Fever—Diphtheria.

(Persons vaccinated against Typhoid Fever have received three injections ten days apart—Diphtheria, three injections toxin antitoxin seven days apart, or shown immune by Schick Test.

Model Notice of Quarantine. One Copy Should Be Left With the Family Quarantined, and One Kept in the Office of the Mayor or Township Clerk. OFFICIAL NOTICE OF QUARANTINE—( For use either by City or Township Boards.)

BOARD OF HEALTH.

City or Township of .....  
County, ....., Iowa. }

To ..... You are hereby notified that your premises No. .... Street, in City of ....., Iowa, Sec. ...., Twp. ...., County ....., Iowa, and all persons and effects upon or within said premises have this day been placed in QUARANTINE, as provided by law.

YOU ARE FURTHER NOTIFIED that all persons excepting the attending physician are prohibited from entering or leaving said premises except they be in possession of a WRITTEN ORDER signed by the Mayor (or Twp. Clerk) and approved by the Health Officer of this Board.

YOU ARE FURTHER NOTIFIED that it is a misdemeanor for any person to remove or deface the Official Quarantine signs placed upon said premises, except upon the written order of the Mayor (or Twp. Clerk), countersigned by the Health Officer.

YOU ARE FURTHER NOTIFIED that upon failure to comply with any part of this notice or any Regulation pertaining to quarantine, the full penalty, as provided by law, will be enforced against you, and in addition thereto you will render yourself liable for all damage resulting therefrom.

Signed: .....  
 Mayor of .....  
 or Twp. Clerk of .....

Date.....

NOTE—One copy of this should be left with the party notified, and one kept in the office of the Mayor or Township Clerk.

**N. B.—RETAIN THIS NOTICE UNTIL THE QUARANTINE IS RELEASED.**

The attending physician has no authority in matters pertaining to quarantine. Such authority is vested in the Board of Health and its Officers.

Actual size 8½x7¼ inches.

**Model Notice of Release of Quarantine. One Copy Should Be Left With the Family Quarantined, and One Kept in the Office of the Mayor or Township Clerk.**

RELEASE OF QUARANTINE—(For use either by City or Township Boards.)

BOARD OF HEALTH.	}
City or Township of .....	
County, ....., Iowa.	
OFFICE OF (Mayor or Township Clerk.)	

To All Whom It May Concern:

To .....  
 No. .... Street, in City of .....  
 Iowa, Sec. ...., Twp. ...., County.....  
 Iowa.

WHEREAS, the above described premises, having been quarantined as provided by law, and the Regulations of the State Board of Health, for ..... which is a communicable disease; and, whereas the sick have fully recovered, and the premises having been thoroughly disinfected, and approved by the Health Officer, and there being no further danger from infection thereby, it is ordered that the quarantine of said premises be, and the same is, hereby released.

Dated....., 19.....

.....  
 Mayor or Township Clerk.

NOTE—One copy of this should be left with the party notified, and one kept in the office of the Mayor or Township Clerk.

Actual size 8½x7¼ inches.

**Model Notice to Be Given to Principal or Teacher, and One Copy Left With the Family Quarantined.**

OFFICE OF (Mayor or Township Clerk.

To the Principal or Teacher of .....19.....  
.....School:

Notice having been received of the prevalence of.....  
in the family of.....you are hereby notified to prohibit the further attendance at school of all children from said family, dwelling house or tenement, and forbid any of them to return until you receive official notification from this office. Such notice will be given to you in due time after the recovery of the sick, and after the house has been thoroughly disinfected.

.....  
Mayor or Township Clerk.  
Actual size 8½x5½ inches.

SECRETARY'S CERTIFICATE.

To the County Auditor of .....County.  
State of Iowa:

I hereby certify that the foregoing Rules and Regulations were adopted by the Iowa State Board of Health, Aug. 5, 1922; and that the same will go into full force and effect on the first day of November, 1922.

RODNEY P. FAGEN, M. D.,  
Secretary, State Board of Health.

(SEAL)

Dated at Des Moines, Iowa, this 1st day of November, A. D. 1922.

**AVERAGE INCUBATION PERIOD OF COMMUNICABLE DISEASES****DIPHTHERIA.**

Usually two to five days, occasionally longer if a healthy carrier stage precedes the development of clinical symptoms.

*Period of communicability.* Until virulent bacilli have disappeared from the secretions and the lesions. The persistence of the bacilli after the lesions have healed is variable. In fully three-quarters of the cases they disappear within two weeks. In 95 per cent of cases, the bacilli disappear in four weeks. In exceptional cases virulent bacilli remain in the throat and discharges for from two to six months.

**SCARLET FEVER.**

Two to seven days, usually three or four days.

*Period of communicability.* Four weeks from the onset of the disease, without regard to desquamation, and until all abnormal discharges have stopped and all open sores have healed.

**SMALL POX.**

Twelve to fourteen days. (Cases with incubation period of 21 days are reported.)

*Period of communicability.* From first symptoms to disappearance of all scabs and crusts.

**MENINGITIS.**

Two to ten days, commonly seven.

*Period of communicability.* While Meningococci persist, and one week of normal temperature.

**INFANTILE PARALYSIS.**

From 3 to 10 days, commonly 6 days.

*Period of communicability.* Unknown; apparently not more than 21 days from the onset of disease, but many precede onset of clinical symptoms by several days.

**INFLUENZA.**

Short duration, onset sudden.

**MEASLES.**

Seven to eighteen days; usually 14 days.

*Period of communicability.* During the period of catarrhal symptoms and until the cessation of abnormal mucous membrane secretions—minimum period of seven days; from two days before to five days after the appearance of the rash.

**WHOOPIING COUGH.**

Within 14 days.

*Period of communicability.* Particularly communicable in the early catarrhal stages before the characteristic whoop makes the clinical diagnosis possible. Communicability probably persists not longer than two weeks after the development of the characteristic whoop or approximately four weeks after the onset of catarrhal symptoms.

**MUMPS.**

From 4 to 25 days. The most common period, 18 days, accepted as usual. A period of 21 days is not uncommon.

*Period of communicability.* Unknown, but assumed to persist until the parotid gland has returned to its normal size.

**CHICKENPOX.**

Two to three weeks.

*Period of communicability.* Until the primary scabs have disappeared from the mucous membranes and the skin.

**GERMAN MEASLES.**

From 10 to 21 days.

*Period of communicability.* Eight days from onset of the disease.

**TYPHOID.**

From 7 to 23 days, averaging 10 to 14 days.

*Period of communicability.* From the appearance of prodromal symptoms, throughout the illness and relapses during convalescence, and until repeated bacteriological examinations of the discharges show persistent absence of the infecting organism.

**PARA-TYPHOID.**

Four to ten days; average, seven days.

*Period of communicability.* From the appearance of prodromal symptoms, throughout the illness and relapses, during convalescence, and until repeated bacteriological examination of discharges show absence of the infecting organism.

**RABIES.**

Usually 2 to 6 weeks. May be prolonged to 6 months or even longer.

*Period of communicability.* For 15 days in the dog (not known in man) before the onset of clinical symptoms and throughout the clinical course of the disease.

**MALARIA.**

Varies with the type of species of infecting organism and the amount of infection; usually 14 days in the tertian variety.

*Period of communicability.* As long as the malaria organism exists in the blood.

**PNEUMONIA.**

Short, usually two to three days.

*Period of communicability.* Unknown; presumably until the mouth and nasal discharges no longer carry the infectious agent in an abundant amount or in a virulent form.

**TETANUS.**

Six to fourteen days, usually nine.

*Period of communicability.* Patient not infectious except in rare instances where wound discharges are infectious.

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