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Local & Munl. (189) Department.

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G.O., No. 1985 Hc

DATED 18. 11-96

[Despatch Abstract.]

Bubonic plague

Approving, with certain alterations, the rules proposed by the Sanitary Commissioner for combating — in his municipalities

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Government {1896} of Madras.

LOCAL AND MUNICIPAL.

Gazette Part I-A

Recd. } 1896. *Enclosures*

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G.O., No. 1985 M., 18th November 1896.

NOVEMBER.

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8 & 5 pers 23/11/96

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

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ABSTRACT.—Suggesting certain modifications in the rules issued in G.O., No. 1536 M., dated 9th September 1896, to adapt them for the prevention of bubonic plague.

From Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Fort St. George, 2nd November 1896, No. 2047-S.

With reference to this office letter, No. 1925-S., dated 14th October 1896, I have the honour to state that, on reconsideration, I am of opinion that the issue of a mere list of corrections so as to adapt the procedure already approved in cases of cholera for dealing with an outbreak of plague is liable to lead to unnecessary confusion. My object was to prevent municipalities feeling they were called upon to deal with a multitude of regulations, by showing that those already existing for cholera could be readily adapted for the emergency. It, however, seems to me that, instead of issuing a list of corrections, the simpler method and one more likely to be appreciated is to adapt the rules *in extenso*. I now submit such proposals and trust Government will be pleased to approve of this arrangement.

ORDER—No. 1985 M., dated 18th November 1896.

The rules proposed by the Sanitary Commissioner in the second letter read above are approved with the following alterations:—

(*a*) *Rule* 2.—The proposal to place both the preventive and observation staffs under the medical officer referred to in this rule does not commend itself to Government. The last sentence of this rule will accordingly be altered thus:—"The preventive staff referred to in Rule 12 below shall be under the medical officer . . . . spot, while the observation staff mentioned in Rule 6 shall be directly under the Chairman."

(*b*) *Rule* 8.—Following the alteration made in Rule 2 above, the word "Chairman" will be substituted for the words "Medical officer appointed under Rule 2" at the end of this rule.

2. The Rules, as thus amended, will be circulated to all municipal councils and Collectors for remarks, which should be submitted not later than the 23rd February 1897, and the following notification will be published in the *Fort St. George Gazette*. Meanwhile the Rules will be strictly observed in all municipalities as departmental instructions:—

NOTIFICATION.

The following draft rules, framed under section 250 (*m*) of Act IV of 1884, for the prevention of bubonic plague in municipalities, are published under section 256 (1). Any objection or suggestion that may be made in respect of these Rules by any persons interested therein will be considered on or after the 23rd February 1897:—

Rules for combating Bubonic Plague ("Mahammari") in Municipalities.

NOTE.

The following is a description of the disease known as Bubonic plague:—

(*a*) After date of acquiring infection a period of a few hours to three or, in exceptional cases, even ten days may elapse. There occurs a gradually increasing feeling of lassitude, the colour of the skin may change till a yellowish tint is acquired; at times there is much restlessness and drowsiness; frontal head-ache of a severe character, attended with darting pains in the back, loins and abdomen, are frequent. High fever is ushered in with shivering, and after two or three days of usually continuous fever glandular swellings may appear in the groins, arm-pits, or neck, or in all three positions. On appearance of the swellings the fever may diminish slightly. The disease may then abate, accompanied by disappearance of the swellings or their breaking down by suppuration. But if the disease continues, the patient may vomit blood, and blood may be discharged from the nose, the mouth, the bowels, and mixed with urine; the swellings may become gangrenous and hæmorrhage may occur from their sites; death may be ushered in by convulsions, delirium, insensibility, &c.

(*b*) The prime cause of the disease is believed to be a microbe found in the blood and especially in the neighbourhood of the enlarged glands. Its mode of dissemination has not been fully ascertained, but there is good reason to believe its propagation is favoured by foul soil, and that not only the bloody discharges, but the excretions, more especially the fæcal, demand special care as to disinfection. The relation of infection to water is open to doubt; but certain facts have been observed that point to this being a possible medium. The clinging of the infective agent to clothing and rooms is more certain. Foul soil, crowded and narrow streets and badly-ventilated dwellings are specially favouring causes. Rats, snakes and cats being liable to infection may act as conveyers of the disease.

(*c*) It is the object of these rules, therefore, to ensure (1) that the earliest possible information of every attack of plague should be conveyed to the authorities, so that the plague microbes may be at once prevented from being conveyed into situations in which they might spread the infection; (2) that the microbes should be at once completely destroyed; and (3) that medical assistance may be provided for those who, in spite of precautions, are attacked by the disease. They accordingly follow these three divisions.

RULES.

1. These rules shall be applicable to all municipalities in the Madras Presidency except Madras town.

2. Municipal councils shall be responsible for the general carrying out of the scheme, and District Medical and Sanitary Officers for the necessary medical arrangements both in their head-quarters and elsewhere, except in municipalities where there are Civil Surgeons. In these, the Civil Surgeons shall be responsible. The preventive staff referred to in Rule 12 shall be under the medical officer designated by the District Medical and Sanitary Officer or the Civil Surgeon, as the case may be, to carry out the necessary arrangements, or, in the absence of such designation, under the senior medical officer on the spot, while the observation staff mentioned in Rule 6 shall be directly under the Chairman.

3. For the purpose of these rules, every municipality to which they apply shall be divided into "circles", which should, as far as possible, follow ward divisions so that they may be readily comprehended. In municipalities where there are wards containing less than 1,200 houses and a population of less than 5,000 persons each, two or more wards may be comprised in one circle. Three circles shall ordinarily form a division, and in no case shall a division contain more than four circles. Chairmen will at once map out their towns into "circles" and "divisions," and after approval by the Collector record the maps in their offices and send a copy to the senior medical officer of the municipality.

4. For each division, the Chairman shall at once procure and retain in the municipal stores not less than the following apparatus and disinfectants, and will be responsible that these stores are always maintained and in good condition:—

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9 lb. perchloride of mercury.
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60 lb. carbolic acid.
600 lb. of sawdust and 600 lb. of unslaked lime.

[*Note.*—The prices of these articles are approximately as follow :—

	Rs.	A.	P.
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One ounce commercial hydrochloric acid	0	2	0
One ounce carbolic acid	0	4	0
One lb. sawdust	0	1	9]
One lb. unslaked lime			

I.—Observation.

5. Should it appear to the Collector of the district that plague imminently threatens to attack any municipality to which these rules apply, he shall warn the Chairman of the council and the District Medical and Sanitary Officer and the senior medical officer of the town accordingly.

6. Upon receipt of such warning or otherwise receiving information, the Chairman shall immediately appoint in each circle of the town an observation staff consisting of an Inspector, a peon and a toti, and in each division a Divisional Inspector and an orderly, or such smaller establishment as the Collector may, under the circumstances of the particular occasion, consider sufficient. The orderly should be allowed a jutka or pony to enable him to carry without delay such orders to Circle Inspectors as may be given. The Chairman shall, without delay, report to the Collector the date on which these appointments were made.

[*Note.*—The salaries and allowances of this staff should not ordinarily exceed the following rates :—

	Rs.
Circle Inspector	15
„ peon	8
„ toti	7
Divisional Inspector	35
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7. This staff may consist of competent temporary hands if available and competent. Otherwise, it should be drawn from the existing sanitary establishment of the municipality, whose local knowledge will be valuable. In the latter case, the vacancies so caused should be filled by temporary hands, who should be paid at the rates sanctioned for that establishment.

8. It will be the duty of the members of the observation staff to constantly and systematically patrol the whole of their circle in order to gain intelligence of the first case of plague in it, so that immediate action may be taken. The members of the observation staff should also be employed in removing, with the aid of the ordinary conservancy establishment, all defects in sanitation which would favour the propagation of plague (such as accumulations of rubbish or stagnant sewage, absence of perflation of groups of dwellings and ventilation of individual buildings) and should report their action to the Chairman.

9. They should further warn the inhabitants of the circle to adopt the precautions against plague prescribed in the extract from Surgeon-Lieutenant-Colonel King's "Simple Sanitary Rules" which is printed as an Appendix to these rules, and should distribute gratis and as widely as possible copies of this, which the Chairman will keep ready printed in the vernacular.

10. The Chairman and councillors and municipal servants of all ranks should assist the observation staff in every way possible, and the police in every way that is compatible with their other duties, both in getting information of the first attack and in removing sanitary defects in the circle.

II.—Prevention of Infection.

11. On receipt of information under the above system of the first attack of plague, the Chairman shall at once employ in the circle in which it has occurred (but not in other circles) three peons and three toties or such smaller establishment as the Collector may, under the circumstances of the particular case, consider sufficient, and shall report to the Collector and the District Medical and Sanitary Officer the date on which he did so.

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13. The preventive staff shall visit every house in which plague has occurred and shall use the greatest care in seeing that all sputa, vomit, fluid and solid excreta are at once collected in separate vessels, mixed with carbolic sawdust*, paddy husk, or other combustible matter, and, where necessary, with kerosine-oil, and thoroughly, completely, and immediately burnt on or near the premises. The burning shall, when possible, be carried out in the presence of the Divisional or Sanitary Inspector, but in the absence of both, it may be carried out in the presence of the peon—the Divisional Inspector, Sanitary Inspector or peon, as the case may be, being responsible that it is thoroughly done. The Chairman shall delegate to the senior medical officer of the town, and to such others as may have to act under this rule, his powers under section 231 (1) of Act IV of 1884 of entering and inspecting houses.

* One part of carbolic acid to ten parts of sawdust.

14. Rags, clothes and bedding stained with vomit or excreta, or blood passed from any part of the body, or discharges from the nose, mouth, open sores, boils or wounds should similarly be burnt upon the spot under the same precautions, the danger of keeping such articles being fully explained to the owners and full compensation in money or kind being offered in the case of the really poor, but, where the owners or other persons concerned so desire, articles of clothing proved to the satisfaction of the medical officer appointed under Rule 2 to be of great value may be disinfected in such manner as he may direct. In each such instance, that officer, by a certificate signed by him, shall define the method of disinfection employed and certify to its having been conducted with care.

15. Floors and furniture stained with vomit or excreta, or blood or any discharge, should be disinfected by being thoroughly sprinkled with a solution of perchloride of mercury made up as shown in the margin. The burning of tar and sulphur in houses and streets should be discontinued as it is inefficient as a disinfectant, but street drains outside the houses attacked and the drains of these houses where possible should be flushed with the above solution.

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3 gallons (one small chatty full) of water with a pinch of red ink powder to colour it to prevent accidents.

[*Note.*—Wooden buckets or earthen pots should alone be used for carrying about this solution, as it destroys metal vessels, and the packets of the solid perchloride should be labelled "Poison" in English and the vernacular and only entrusted to the Inspectors themselves.]

16. The greatest courtesy and consideration should be used by the preventive staff to all classes in carrying out these instructions, as the exercise of extreme tact is essential to the success of the scheme.

17. Special measures should be taken to ensure free ventilation of the room in which the patient is under treatment.

18. Removal to isolation hospitals provided for under section 233 of Act IV of 1884 should be freely exercised. If the patient be treated in his own house, however, the utmost care should be taken to strictly limit the number of persons entering the room or house to those absolutely necessary for the patient's welfare. Disinfectants for washing the hands of persons touching the patient should be available. Native food vessels used by the patient would be best disinfected by heating, till they cannot be touched, directly over fire.

19. After a patient has recovered, the house, and especially the room which he occupied during the attack, should be thoroughly disinfected. The floors should be dug up wherever stained with plague matter and the earth burnt, or, if this cannot be easily done, the floors should be burnt over. The floor, the walls, the house-drains and the furniture should also be liberally sprayed and washed with the perchloride of mercury solution above described. The walls should subsequently be brushed with a dry broom, and be whitewashed with fresh slaked lime in the proportion of one part of lime to five of water.

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With reference to this office letter, No. 1925-S., dated 14th October 1896, I have the honour to state that, on reconsideration, I am of opinion that the issue of a mere list of corrections so as to adapt the procedure already approved in cases of cholera for dealing with an outbreak of plague is liable to lead to unnecessary confusion. My object was to prevent municipalities feeling they were called upon to deal with a multitude of regulations, by showing that those already existing for cholera could be readily adapted for the emergency. It, however, seems to me that, instead of issuing a list of corrections, the simpler method and one more likely to be appreciated is to adapt the rules *in extenso*. I now submit such proposals and trust Government will be pleased to approve of this arrangement.

ORDER—No. 1985 M., dated 18th November 1896.

The rules proposed by the Sanitary Commissioner in the second letter read above are approved with the following alterations:—

(*a*) *Rule* 2.—The proposal to place both the preventive and observation staffs under the medical officer referred to in this rule does not commend itself to Government. The last sentence of this rule will accordingly be altered thus:—"The preventive staff referred to in Rule 12 below shall be under the medical officer ... ... spot, while the observation staff mentioned in Rule 6 shall be directly under the Chairman."

(*b*) *Rule* 8.—Following the alteration made in Rule 2 above, the word "Chairman" will be substituted for the words "Medical officer appointed under Rule 2" at the end of this rule.

2. The Rules, as thus amended, will be circulated to all municipal councils and Collectors for remarks, which should be submitted not later than the 23rd February 1897, and the following notification will be published in the *Fort St. George Gazette*. Meanwhile the Rules will be strictly observed in all municipalities as departmental instructions:—

NOTIFICATION.

The following draft rules, framed under section 250 (*m*) of Act IV of 1884, for the prevention of bubonic plague in municipalities, are published under section 256 (1). Any objection or suggestion that may be made in respect of these Rules by any persons interested therein will be considered on or after the 23rd February 1897:—

Rules for combating Bubonic Plague ("Mahammari") in Municipalities.

NOTE.

The following is a description of the disease known as Bubonic plague:—

(*a*) After date of acquiring infection a period of a few hours to three or, in exceptional cases, even ten days may elapse. There occurs a gradually increasing feeling of lassitude, the colour of the skin may change till a yellowish tint is acquired; at times there is much restlessness and drowsiness; frontal head-ache of a severe character, attended with darting pains in the back, loins and abdomen, are frequent. High fever is ushered in with shivering, and after two or three days of usually continuous fever glandular swellings may appear in the groins, arm-pits, or neck, or in all three positions. On appearance of the swellings the fever may diminish slightly. The disease may then abate, accompanied by disappearance of the swellings or their breaking down by suppuration. But if the disease continues, the patient may vomit blood, and blood may be discharged from the nose, the mouth, the bowels, and mixed with urine; the swellings may become gangrenous and hæmorrhage may occur from their sites; death may be ushered in by convulsions, delirium, insensibility, &c.

(*b*) The prime cause of the disease is believed to be a microbe found in the blood and especially in the neighbourhood of the enlarged glands. Its mode of dissemination has not been fully ascertained, but there is good reason to believe its propagation is favoured by foul soil, and that not only the bloody discharges, but the excretions, more especially the fæcal, demand special care as to disinfection. The relation of infection to water is open to doubt; but certain facts have been observed that point to this being a possible medium. The clinging of the infective agent to clothing and rooms is more certain. Foul soil, crowded and narrow streets and badly-ventilated dwellings are specially favouring causes. Rats, snakes and cats being liable to infection may act as conveyers of the disease.

(*c*) It is the object of these rules, therefore, to ensure (1) that the earliest possible information of every attack of plague should be conveyed to the authorities, so that the plague microbes may be at once prevented from being conveyed into situations in which they might spread the infection; (2) that the microbes should be at once completely destroyed; and (3) that medical assistance may be provided for those who, in spite of precautions, are attacked by the disease. They accordingly follow these three divisions.

RULES.

1. These rules shall be applicable to all municipalities in the Madras Presidency except Madras town.

2. Municipal councils shall be responsible for the general carrying out of the scheme, and District Medical and Sanitary Officers for the necessary medical arrangements both in their head-quarters and elsewhere, except in municipalities where there are Civil Surgeons. In these, the Civil Surgeons shall be responsible. The preventive staff referred to in Rule 12 shall be under the medical officer designated by the District Medical and Sanitary Officer or the Civil Surgeon, as the case may be, to carry out the necessary arrangements, or, in the absence of such designation, under the senior medical officer on the spot, while the observation staff mentioned in Rule 6 shall be directly under the Chairman.

3. For the purpose of these rules, every municipality to which they apply shall be divided into "circles", which should, as far as possible, follow ward divisions so that they may be readily comprehended. In municipalities where there are wards containing less than 1,200 houses and a population of less than 5,000 persons each, two or more wards may be comprised in one circle. Three circles shall ordinarily form a division, and in no case shall a division contain more than four circles. Chairmen will at once map out their towns into "circles" and "divisions," and after approval by the Collector record the maps in their offices and send a copy to the senior medical officer of the municipality.

4. For each division, the Chairman shall at once procure and retain in the municipal stores not less than the following apparatus and disinfectants, and will be responsible that these stores are always maintained and in good condition:—

12 portable tin canisters for disinfectants.
9 lb. perchloride of mercury.
9 lb. commercial hydrochloric acid.
60 lb. carbolic acid.
600 lb. of sawdust and 600 lb. of unslaked lime.

[*Note.*—The prices of these articles are approximately as follow :—

	RS.	A.	P.
One tin canister	1	8	0
One ounce perchloride of mercury	0	3	0
One ounce commercial hydrochloric acid	0	2	0
One lb. carbolic acid	0	4	0
One lb. sawdust	0	1	9]
One lb. unslaked lime			

I.—Observation.

5. Should it appear to the Collector of the district that plague imminently threatens to attack any municipality to which these rules apply, he shall warn the Chairman of the council and the District Medical and Sanitary Officer and the senior medical officer of the town accordingly.

6. Upon receipt of such warning or otherwise receiving information, the Chairman shall immediately appoint in each circle of the town an observation staff consisting of an Inspector, a peon and a toti, and in each division a Divisional Inspector and an orderly, or such smaller establishment as the Collector may, under the circumstances of the particular occasion, consider sufficient. The orderly should be allowed a jutka or pony to enable him to carry without delay such orders to Circle Inspectors as may be given. The Chairman shall, without delay, report to the Collector the date on which these appointments were made.

[*Note.*—The salaries and allowances of this staff should not ordinarily exceed the following rates :—

	RS.
Circle Inspector	15
„ peon	8
„ toti	7
Divisional Inspector	35
Jutka or horse allowance	15
Orderly	8
Jutka or pony allowance to orderly	7]

7. This staff may consist of ~~competent~~ temporary hands if available and competent. Otherwise, it should be drawn from the existing sanitary establishment of the municipality, whose local knowledge will be valuable. In the latter case, the vacancies so caused should be filled by temporary hands, who should be paid at the rates sanctioned for that establishment.

8. It will be the duty of the members of the observation staff to constantly and systematically patrol the whole of their circle in order to gain intelligence of the first case of plague in it, so that immediate action may be taken. The members of the observation staff should also be employed in removing, with the aid of the ordinary conservancy establishment, all defects in sanitation which would favour the propagation of plague (such as accumulations of rubbish or stagnant sewage, absence of perflation of groups of dwellings and ventilation of individual buildings) and should report their action to the Chairman.

9. They should further warn the inhabitants of the circle to adopt the precautions against plague prescribed in the extract from Surgeon-Lieutenant-Colonel King's "Simple Sanitary Rules" which is printed as an Appendix to these rules, and should distribute gratis and as widely as possible copies of this, which the Chairman will keep ready printed in the vernacular.

10. The Chairman and councillors and municipal servants of all ranks should assist the observation staff in every way possible, and the police in every way that is compatible with their other duties, both in getting information of the first attack and in removing sanitary defects in the circle.

II.—Prevention of Infection.

11. On receipt of information under the above system of the first attack of plague, the Chairman shall at once employ in the circle in which it has occurred (but not in other circles) three peons and three toties or such smaller establishment as the Collector may, under the circumstances of the particular case, consider sufficient, and shall report to the Collector and the District Medical and Sanitary Officer the date on which he did so.

[*Note.*—The salaries of the peons and toties appointed under this rule should not, respectively, exceed Rs. 8 and Rs. 7 each per mensem.]

12. This staff, like the observation staff, may consist of temporary hands if available and competent. Otherwise, it should be selected from the ordinary existing municipal establishment, the vacancies caused in the latter case being filled by temporary men on the sanctioned rates, and it should be combined with the observation staff of the circle, so that the whole may thenceforth form "a preventive staff" to carry out the duties set forth below.

13. The preventive staff shall visit every house in which plague has occurred and shall use the greatest care in seeing that all sputa, vomit, fluid and solid excreta are at once collected in separate vessels, mixed with carbolic sawdust*, paddy husk, or other combustible matter, and, where necessary, with kerosine-oil, and thoroughly, completely, and immediately burnt on or near the premises. The burning shall, when possible, be carried out in the presence of the Divisional or Sanitary Inspector, but in the absence of both, it may be carried out in the presence of the peon—the Divisional Inspector, Sanitary Inspector or peon, as the case may be, being responsible that it is thoroughly done. The Chairman shall delegate to the senior medical officer of the town, and to such others as may have to act under this rule, his powers under section 231 (1) of Act IV of 1884 of entering and inspecting houses.

* One part of carbolic acid to ten parts of sawdust.

14. Rags, clothes and bedding stained with vomit or excreta, or blood passed from any part of the body, or discharges from the nose, mouth, open sores, boils or wounds should similarly be burnt upon the spot under the same precautions, the danger of keeping such articles being fully explained to the owners and full compensation in money or kind being offered in the case of the really poor, but, where the owners or other persons concerned so desire, articles of clothing proved to the satisfaction of the medical officer appointed under Rule 2 to be of great value may be disinfected in such manner as he may direct. In each such instance, that officer, by a certificate signed by him, shall define the method of disinfection employed and certify to its having been conducted with care.

15. Floors and furniture stained with vomit or excreta, or blood or any discharge, should be disinfected by being thoroughly sprinkled with a solution of perchloride of mercury made up as shown in the margin. The burning of tar and sulphur in houses and streets should be discontinued as it is inefficient as a disinfectant, but street drains outside the houses attacked and the drains of these houses where possible should be flushed with the above solution.

½ oz. perchloride of mercury.
1 oz. hydrochloric acid.
3 gallons (one small chatty full) of water with a pinch of red ink powder to colour it to prevent accidents.

[*Note.*—Wooden buckets or earthen pots should alone be used for carrying about this solution, as it destroys metal vessels, and the packets of the solid perchloride should be labelled "Poison" in English and the vernacular and only entrusted to the Inspectors themselves.]

16. The greatest courtesy and consideration should be used by the preventive staff to all classes in carrying out these instructions, as the exercise of extreme tact is essential to the success of the scheme.

17. Special measures should be taken to ensure free ventilation of the room in which the patient is under treatment.

18. Removal to isolation hospitals provided for under section 233 of Act IV of 1884 should be freely exercised. If the patient be treated in his own house, however, the utmost care should be taken to strictly limit the number of persons entering the room or house to those absolutely necessary for the patient's welfare. Disinfectants for washing the hands of persons touching the patient should be available. Native food vessels used by the patient would be best disinfected by heating, till they cannot be touched, directly over fire.

19. After a patient has recovered, the house, and especially the room which he occupied during the attack, should be thoroughly disinfected. The floors should be dug up wherever stained with plague matter and the earth burnt, or, if this cannot be easily done, the floors should be burnt over. The floor, the walls, the house-drains and the furniture should also be liberally sprayed and washed with the perchloride of mercury solution above described. The walls should subsequently be brushed with a dry broom, and be whitewashed with fresh slaked lime in the proportion of one part of lime to five of water.

[*Note.*—It is most desirable that the excreta of a patient for at least ten days after he has recovered from an attack should be carefully collected, disinfected and carried away. These probably still contain plague microbes. For this purpose, a Dindigul bullock lorrie costing Rs. 50 and air-tight iron excreta drums costing Rs. 2–8–0 each may be provided. The purchase of these will, however, be left to the option of the councils].

20. Rats, cats and snakes suffer from the disease. If found alive in infected localities, these animals should be got rid of as quickly as possible by killing them, as a matter of prevention. Where found dead, their bodies should invariably be burnt.

21. The Chairman shall provide the medical officer responsible for working the rules with a permanent advance of Rs. 50 per division, which shall be recouped from time to time by bills supported by vouchers where possible.

22. The preventive staff shall continue to be maintained in an affected circle for ten days after the last attack of plague in it, and the observation staff in all circles or groups of circles as the Collector may approve for twenty-one days after the last attack in the town. During this time, they should be employed in remedying sanitary defects.

III.—Medical Aid.

23. There shall be a head-quarters in each division at which a medical subordinate shall reside, who shall be supplied with medicines and medical comforts from the municipal hospital for the treatment of those attacked, and who shall be available for attendance gratis on the sick in their own houses. This shall also be the head-quarters of the Division Inspector and of the preventive staff on night duty.

24. In one place at least in each town, there shall be isolation huts with separate accommodation for males and females for the treatment of those who desire it or who are brought there. These shall be in charge of a medical subordinate with the necessary staff, and supplied with equipment, medicines and medical comforts. This subordinate shall be deputed to no other duty. He shall reside with his staff on the spot and shall be adequately housed.

25. Charges for medical treatment under these rules shall be met from the allotment in the budget under Grant III, Hospitals and Dispensaries.

26. The head-quarters of the divisions and the sites for the isolation hospitals shall be at once selected, and shall be marked on the maps referred to in Rule No. 3 above.

27. In order to make provision for meeting the charges under the portions of this scheme relating to observation and prevention, the council of every municipality to which the scheme applies shall be required to allot in every budget under "Epidemic charges" a sum which shall be in the proportion of Rs. 1,000 to every 25,000 inhabitants in the municipality—provided such provision has not already been made under G.O., No. 1536 M., of the 9th September 1896, when such funds shall also be applicable to the purpose of these rules. This shall be called the "Epidemic reserve," and shall not be spent upon any object but the carrying of this scheme into execution.

28. The provision of this reserve should not be allowed to disturb the existing percentages to the total municipal income of the expenditure upon communications, education, sanitation, &c., or to swell the total of the allotment made for sanitary purposes under Grants I, III and IV taken together, but should be set aside from funds which are at present annually expended upon sanitary works of a permanent nature.

29. Municipal councils are hereby authorized to employ establishments on the scales above laid down as the necessity for them arises, and to defray the charges from the "Epidemic reserve" in anticipation of the sanction of Government, but this sanction should be obtained without delay.

30. The medical officer responsible for working these rules shall, within seven days of the final withdrawal of the special staff, forward a report on the epidemic and the operation of the rules through the Chairman of the municipality to the Collector for the orders of Government. In cases where the medical officer in question is subordinate to the District Medical and Sanitary Officer or the Civil Surgeon, such report shall be forwarded through those officers. In every case, such communications shall be submitted to Government through the Sanitary Commissioner.

[Extract from Surgeon-Lieutenant-Colonel King's "Simple Sanitary Rules."]

Precautions to be observed on the approach of Plague.

A.—Habitations.

1. Each house must be thoroughly cleansed, that is, all manure, dirty water, washings of cattle stalls and collection of dirt of any description, must be completely removed.

2. Where the earth remains damp and foul after such removal, it should be dug up till dry and clean earth is reached.

3. The old earth should be taken far from the town and may be used as manure for the fields; new earth from a clean place should be laid down.

4. The interior and exterior of houses should be whitewashed. If persons cannot afford to do the outside, the inside at least should be whitewashed.

5. Bundles of clothing and other materials hanging from the beams, or occupying in any other way the rooms in which persons sleep, should be removed.

6. Doors and windows should at all possible hours be left open, so that free ventilation be obtained.

7. If private latrines are used, they must be kept free from fæcal matter by removal at least twice daily.

8. The drains leading from houses should be cleansed twice daily.

9. Cesspools and pits for receipt of urine of cattle should be emptied daily.

B.—The Person.

1. The body and clothing should be kept scrupulously clean. If delicate, persons should use warm, not cold, baths.

2. The food should be plain, nourishing and of good quality.

3. All vegetables, or leaves, or fruits, likely to cause diarrhœa, should be abandoned.

4. All forms of drinking to excess, debauchery, late hours and exposure to wet and cold should be avoided.

5. Cold cooked food should never be used. Care should be taken not to allow flies to settle upon food. Vegetables and leaves should never be eaten otherwise than after cooking. Before being cooked, they should be well washed in water that has been purified by boiling. Salt should be freely used with the diet; but, on the other hand, it must not be used in such unusual amounts as to excite uneasiness or looseness of the bowels.

6. An inferior quality of water should not be kept in the house; only the cleanest available should be employed.

7. Water for drinking purposes and for washing the mouth or eating and drinking vessels, and milk, should be boiled before use.

(True Extract.)

for *Secretary to Government.*

To all Chairmen of Municipal Councils.
" all Collectors of Districts.
" the Surgeon-General.
" the Sanitary Commissioner.
" the Sanitary Engineer.
" the Accountant-General.
" the Judicial Department.
Gazette.
Editors' Table.

Exd. A. Raitt.

No. 1985 M., 78 November 1896.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—the following paper:—

From Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Fort St. George, 2nd November 1896, No. 2047-S.

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Enclosure.

Rules for combating Bubonic Plague ("Mahammari") in Municipalities.

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The following is a description of the disease known as Bubonic plague:—

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(*c*) It is the object of these rules, therefore, to ensure (1) that the earliest possible information of every attack of plague should be conveyed to the authorities, so that the plague microbes may be at once prevented from being conveyed into situations in which they might spread the infection; (2) that the microbes should be at once completely destroyed; and (3) that medical assistance may be provided for those who, in spite of precautions, are attacked by the disease. They accordingly follow these three divisions.

sanitation which would favour the propagation of plague (such as accumulations of rubbish or stagnant sewage, absence of perflation of groups of dwellings and ventilation of individual buildings) and should report their action to the medical officer appointed under rule (2).

(9) They should further warn the inhabitants of the circle to adopt the precautions against plague prescribed in the extract from Surgeon-Lieutenant-Colonel King's "simple sanitary rules" which is printed as an appendix to these rules, and should distribute copies of this, which the Chairman will keep ready-printed in the vernacular, gratis and as widely as possible.

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1. Each house must be thoroughly cleansed, that is, all manure, dirty water, washings of cattle stalls and collection of dirt of any description, must be completely removed.

2. Where the earth remains damp and foul after such removal, it should be dug up till dry and clean earth is reached.

3. The old earth should be taken far from the town and may be used as manure for the fields; new earth from a clean place should be laid down.

4. The interior and exterior of houses should be whitewashed. If persons cannot afford to do the outside, the inside at least should be whitewashed.

5. Bundles of clothing and other materials hanging from the beams, or occupying in any other way the rooms in which persons sleep, should be removed.

6. Doors and windows should at all possible hours be left open, so that free ventilation be obtained.

7. If private latrines are used, they must be kept free from fœcal matter by removal at least twice daily.

8. The drains leading from houses should be cleansed twice daily.

9. Cesspools and pits for receipt of urine of cattle should be emptied daily.

B.—The Person.

1. The body and clothing should be kept scrupulously clean. If delicate, persons should use warm, not cold, baths.

2. The food should be plain, nourishing and of good quality.

3. All vegetables, or leaves, or fruits, likely to cause diarrhœa, should be abandoned.

4. All forms of drinking to excess, debauchery, late hours and exposure to wet and cold should be avoided.

5. Cold cooked food should never be used. Care should be taken not to allow flies to settle upon food. Vegetables and leaves should never be eaten otherwise than after cooking. Before being cooked, they should be well washed in water that has been purified by boiling. Salt should be freely used with the diet; but, on the other hand, it must not be used in such unusual amounts as to excite uneasiness or looseness of the bowels.

6. An inferior quality of water should not be kept in the house; only the cleanest available should be employed.

7. Water for drinking purposes and for washing the mouth or eating and drinking vessels, and milk, should be boiled before use.

The Bubonic Plague Rules -

[5]
700 -6-4-96.

LOCAL AND MUNICIPAL DEPARTMENT.

Papers to be read in Proceedings:—

38

Again G.O., dated — 189 , No.

Current No. 2788 of 1896, dated 16th October '96 from the Sanitary Commissioner

Current No. 2977 of 1896, dated 2nd November '96 from the — do —

Read

Order. No 1985 Mdl 18-11-96

The rules proposed by the Sanitary Commissioner in the second letter read above are approved with the following al-terations:-

(a) Rule 2. The proposal to place both the preventive and observation staffs under the Medical officer referred to in this rule does not commend itself to Gov-ernment. The last sentence of this rule will accordingly be altered thus:-"The preventive staff referred to in Rule 12 below shall be under the Medical officer ..... spot, while the observation staff mentioned in Rule 6 shall be direct-ly under the Chairman."

(b) Rule 8. Following the alteration made in Rule 2 above, the word "Chairman" will be substituted for the words "Medi-cal officer appointed under Rule 2 " at the end of this rule.

2. The Rules as thus amended will be circulated to all municipal councils and Collectors for remarks, which should be submitted not later than the ~~1st March~~ 23rd 1897, and the following notification will be published in the Fort St. George gazette. Meanwhile the Rules will be

Note It is submitted that rule 27 as proposed by the Sanitary Commissioner may be adopted without alteration as it is in accordance with the remarks of the Hon.

Yes - Issd

SR

The 'prés' 3 mts: from date of rect 9/3, does it not? If so issue

SR

strictly in all municipalities
be observed as departmental instructions.

Notification

The following draft Rules for the prevention of the bubonic plague in mu-nicipalities framed under Section 250(m) of Act IV of 1884 are published under Section 256 (1). Any objection or suggestion that may be made in respect of these Rules by any persons interested therein will be considered on or after the 1st March 1897:-

(Here enter the draft rules in Current No.2977 M, as amended by Govt)

(From orders)

V.R. 17/11/96

17/11/96

Note

The Hon. says the rules must issue as departmental instructions. It is presumed that he does not object to their being issued subsequently as rules having the force of law.

To put them off till 1st March 97 wd. be useless as the plague wd. have done its worst that time if it comes at all. But as it is just possible that it may appear late, there is no harm in legalizing them

17/

To

All Chairmen of municipal councils
,, Collectors of districts
The Surgeon General.
,, Sanitary Board
,, Sanitary Commissioner.
,, Sanitary Engineer.
,, Accountant General.
,, Judicial department.
Gazetted 20/11/96
,, Editor's Table.
Dupe 17/11/96

Bubonic Plague Rules.

LOCAL AND MUNICIPAL DEPARTMENT.

Current Nos 2788 & 2977 M.

From

The Sanitary Commissioner

FOR ORDERS.

Before the order passed on C. No. 2788/M of 96 was sent to the Press, information was received from the Sanitary Commissioner's office that he was preparing a set of draft rules for the prevention of the bubonic plague to be substituted for the amendments to the cholera rules proposed by him in his letter above referred to, and would submit them to Government shortly. With a few differences the rules are practically the same as those contained in G.O.No.1536/M, dated 9th September 1896 with the necessary modifications. Draft rules 17, 18 & 20 however are quite new.

The issuing of the order was therefore deferred. With the second Cur. read above, Dr. King submits the draft ruls above referred to.

A

2. In rule 2 Dr.King proposes to keep both the preventive and observation staffs under the medical officer, while under the corresponding rule - No.4 - in the G.O., above quoted, the preventive staff alone is to be under the medical officer while the observation staff is to be under the

Chairman.

Chairman. After this G.O. was issued however, Dr. King suggested that this rule should be amended so as to place both the staffs under the medical officer, but this proposal has been negatived by Government. (G.O. No. 1898/M dated 10th November 1896). It is therefore submitted that Rule 2 should be amended so as to correspond to rule 4 of the cholera rules.

3. In rule 5 the words "to which these rules apply" are unnecessary, as the rules are to apply to all municipalities.

4. In consequence of the amendment to rule 2 suggested above, rule 8 should be amended by the substitution of the word "Chairman" for the words "medical officer appointed under rule 2" ~~at~~ at the end of the rule.

5. In rule 14 Dr. King proposes that only articles of clothing which are ~~proved~~ proved to the satisfaction of the medical officer to be of great value should be returned after disinfection, while ~~in~~ under the corresponding rule, no. 16 of the cholera rules, ~~under~~ all articles of clothing and bedding may if so desired ~~to~~ be returned after disinfection. Dr. King has given no reasons for the alteration, which does not seem to be necessary or desirable.

6. The new rules proposed viz. 17, 18 & 20 do not seem to be open to any objection.

7. It is submitted that with the modifications suggested above, the draft rules now submitted may be approved, C.No. 2977/M being also read with C.No. 2788/M ~~of~~ at the head of the Proceedings already passed by Government.

F.R 13/11/96

H.H Please see notes above. Rule

13/11 BS

They do not apply to Madras. No harm in leaving the words.

8/12 BS

8/12 13/11

Rule 9 requires a verbal transposition

BS 8/12

Rule 14 is right. Bubonic plague is most highly contagious, while Cholera thro' infections is not contagious - at any rate in anything like the same degree.

S.K 13/11 BS

should simply say that the provision made under the cadjan rules shall be held applicable under these rules also - Inorganic provision seems needed -

The rules must issue and departmental instructions

BS 14/11/96

27 lepries Rules. to set aside R1000 per every 25,000 inhabits - the money to be taken for any provision made for sanitary works of a permanent character.

A good many Rules have already to make a similar provision under the Cholera Rules.

This will effectually swamp all permanent sanitary works in most Rules.

The provision for this Epidemic seems unnecessarily large having regard to the contingency of its appearing in this P.S. which appears comparatively remote. I think if R250 per every R2500 be set aside & earmarked it will do for the

present as a fund to start measures. If plague actually does appear in a City. other works wd. necessarily be laid under contribution at once.

S.K
13/10/96

FOR ORDERS.

Bubonic Plague Rules

[5]
5—27-5-95.

LOCAL AND MUNICIPAL DEPARTMENT.

Papers to be read in Proceedings:—

Again G.O., dated 189 , No.

Current No. 2758a of 1896, dated 16th October from the Sanitary Commissioner

Current No. 2977m of 1896, dated 2nd November from the

C.S.
P.S.

Order.

The rules proposed by the Sanitary Commissioner for the prevention of bubonic plague are approved and will be circulated to all municipal Councils and Collectors for remarks, which should be submitted not later than the 1st January 1897, and the following notification will be published in the Fort St. George Gazette. Meanwhile observed in all Municipalities
the rules will be ~~followed~~ as departmental instructions:-

Notification.

The following draft rules for the prevention of combating bubonic plague in Municipalities, framed under S. 250 (m) of Act IV of 1884 are published under S. 256 (1). Any objection or suggestions that may

be made in respect of these rules by any persons interested therein will be considered on or after the 1st January 1897:—

(H.E. draft rules.)

a-L. H. AEA
27/12/96 27.12.96.

(Forwarded)

V.R.
27/12/96

1980th
18/12/96

Jan 98.

To

All Chairmen of Mul. Councils
" Collectors.
The Surgeon-General
" Sanitary Commissioner.
" Sanitary Engineer.
" Accountant-General.
" Judicial Department
Gazette
Editor Table.

Urgent.

18

OFFICE OF SANITARY COMMISSIONER,

No. 2047/S

Fort St. George, 2nd November 1896.

Despd 3

From

SURGEON LIEUT.-COL. W. G. KING, M.B., C.M., D.P.H.,

SANITARY COMMISSIONER FOR MADRAS,

To

THE Chief Secretary
to Government
Local & municipal Deptt.

Enclosure.

SIR,

Jan 1898

With reference to this office letter No. 1925/S dated 14/10/96, I have the honor to state that on reconsideration I am of opinion that the issue of a mere list of corrections so as to adapt the procedure already approved in cases of Cholera for dealing with an outbreak of plague is liable to lead to unnecessary confusion. My object was to prevent municipalities feeling they were called upon to deal with a multitude of regulations, by showing that those already existing for Cholera could be readily adapted for the emergency. It however seems to me that instead of issuing a list of corrections, the simpler method and one more likely to be appreciated

appreciate it is to adapt the rules *in extenso*. I now submit such proposals, and trust Government will be pleased to approve of this arrangement.

I have the honor to be
Sir
Your most obedt servt
W. King.
Surgn. Lieut-Col.
Sanitary Commissioner
for Madras.

Rules for combating Bubonic Plague (Mahammari) in Municipalities.

289

Note.

The following is a description of the disease known as Bubonic plague :—

(a) After date of acquiring infection a period of a few hours to three or, in exceptional cases, even ten days may elapse. There occurs a gradually increasing feeling of lassitude, the colour of the skin may change till a yellowish tint is acquired; at times there is much restlessness and drowsiness; frontal head-ache of a severe character attended with darting pains in the back, loins and abdomen are frequent. High fever is ushered in with shivering, and after two or three days of — usually continuous fever glandular swellings may appear in the groins, arm pits, or neck or in all three positions. On appearance of the swellings the fever may diminish slightly. The disease may then abate accompanied by disappearance of the swellings or their breaking down by suppuration. But if the disease continues, the patient may vomit blood and blood may be discharged from the nose, the mouth, the bowels, and mixed with urine; the swellings may become gangrenous and hœmorrhage may occur from their sites; death may be ushered in by convulsions, delirium, insensibility &c.

(b) The prime cause of the disease is believed

believed to be a microbe found in the blood and especially in the neighbourhood of the enlarged glands. Its mode of dissemination has not been fully ascertained, but there is good reason to believe its propagation is favored by foul soil, and that not only the bloody discharges but the excretions, more especially the fœcal, demand special care as to disinfection. The relation of infection to water is open to doubt, but certain facts have been observed that point to this being a possible medium. The clinging of the infective agent to clothing and rooms is more certain. Foul soil, crowded and narrow streets, and badly ventilated dwellings are specially favouring causes. Rats, snakes and cats being liable to infection may act as conveyers of the disease.

(c) It is the object of these Rules therefore to ensure (1) that the earliest possible information of every attack of Plague should be conveyed to the authorities, so that the Plague microbes may be at once prevented from being conveyed into situations in which they might spread the infection; (2) that the microbes should be at once completely destroyed; and (3) that Medical assistance may be provided for those who, in spite of precautions, are attacked by the disease. They accordingly follow these three divisions -

Rules (5)

Rules

38r

(1) These rules shall be applicable to all Municipalities in the Madras Presidency except Madras town;-

(2) Municipal Councils shall be responsible for the general carrying out of the scheme, and District Medical and Sanitary Officers for the necessary medical arrangements both in their Head Quarters and elsewhere, except in Municipalities where there are Civil Surgeons. In these, the Civil Surgeons shall be responsible. The preventive and observation staffs referred to in Rules 12 and 6, respectively, shall be under the Medical Officer designated by the District Medical and Sanitary Officer or the Civil Surgeon as the case may be, to carry out the necessary arrangements or, in the absence of such designation, under the Senior Medical Officer on the spot.

(3) For the purpose of these Rules, every Municipality

municipality to which they apply shall be divided into "circles" which should as far as possible, follow ward divisions so that they may be readily comprehended. In municipalities, where there are wards containing less than 1200 houses and a population of less than 5000 persons each, two or more wards may be comprised in one circle. Three circles shall ordinarily form a division, and in no case shall a division contain more than four circles. Chairmen will at once map out their towns into "circles" and "divisions," and after approval by the Collector record the maps in their offices, and send a copy to the Senior Medical Officer of the Municipality.

(4) For each division, the Chairman shall at once procure and retain in the municipal stores not less than the following apparatus and disinfectants, and will be responsible that these stores are always maintained and in good condition:-

12 portable tin canisters for disinfectants.
4 lb perchloride of mercury.
4 lb commercial hydrochloric acid.
60 lb carbolic acid.
600 lb of sawdust and 600 lb of unslaked lime.

(Note:- The prices of these articles are approximately as follow:-

	Rs. A. P.
one tin canister	8. 0
one ounce perchloride of mercury	0. 3. 0
one ounce commercial hydrochloric acid	0. 2. 0
one lb carbolic acid	0. 4. 0
one lb saw dust one lb unslaked lime	0. 1. 9

I. Observation

(5) Should it appear to the Collector of the district that Plague imminently threatens to attack any municipality to which these rules apply, he shall warn the Chairman of the Council and the District Medical and Sanitary Officer and the Senior Medical Officer of the town accordingly.

(6) Upon receipt of such warning or otherwise receiving information, the

the Chairman shall immediately appoint in each circle of the town an observation staff consisting of an Inspector, a hem and a toti, and in each division a Divisional Inspector and an orderly, or such smaller establishment as the Collector may, under the circumstances of the particular occasion, consider sufficient. The orderly should be allowed a jutka or pony to enable him to carry without delay such orders to circle Inspectors as may be given. The Chairman shall, without delay, report to the Collector the date on which these appointments were made.

(Note:- The salaries and allowances of this staff should not ordinarily exceed the following rates:-

Circle Inspector	Rs 15
-Do- hem	" 8
-Do- toti	" 7
Divisional Inspector	" 35
Jutka or horse allowance	" 15
Orderly	" 8
Jutka or pony allowance to -Do-	" 7)

7) This staff may consist of competent temporary hands if available and

5 of N

and competent. Otherwise it should be drawn from the existing sanitary establishment of the Municipality, whose local knowledge will be valuable. In the latter case, the vacancies so caused should be filled by temporary hands who should be paid at the rates sanctioned for that establishment.

(8) It will be the duty of the members of the observation staff to constantly and systematically patrol the whole of their circle in order to gain intelligence of the first case of Plague in it, so that immediate action may be taken. The members of the observation staff should also be employed in preserving with the aid of the ordinary conservancy establishment all defects in sanitation which would favour the propagation of plague (such as accumulations of decaying rubbish or stagnant sewage, absence of perflation of groups of dwellings and ventilation of individual buildings) and should report their action to the Medical Officer appointed under rule (2)

They

(9) They should further warn the inhabitants of the circle to adopt the precautions against plague prescribed in the extract from Surgeon Lieut Col Kings Simple Sanitary Rules which is printed as an appendix to these Rules, and should distribute copies of this which the Chairman will keep ready printed in the vernacular, grates, and as widely as possible.

(10) The Chairman and councillors and municipal servants of all ranks should assist the Observation staff in every way possible, and the police in every way that is compatible with their other duties, both in getting information of the first attack and in removing sanitary defects in the circle.

(11) II – Prevention of Infection

On receipt of information under the above system of the first attack of plague, the Chairman shall at once employ in the circle in which it has occurred (but not in other circles) three peons and three lotas or such smaller establishment as the Collector may, under the circumstances of the particular case, consider sufficient, and shall report to the Collector and the District Medical and Sanitary Officer the date on which he did so.

Note – The salaries of the peons and lotas appointed under this rule should not, respectively, exceed Rs 8 and Rs 7 each per mensem.)

(12) This staff, like the observation staff may consist of temporary hands if available and competent. Otherwise, it should be selected from the ordinary existing municipal establishment, the vacancies caused in the latter case being filled by temporary men on the sanctioned rates, and it should be continued with the observation staff of the circle so that the whole may thenceforth form "a preventive staff" to carry out the duties set forth below.

(13) The preventive staff shall visit every house in which plague has occurred and shall use the greatest care in seeing that all sputa, vomit, fluid and solid

6 8

solid excreta are at once collected in separate vessels, mixed with carbolic sawdust*, paddy husk, or other combustible matter, and where necessary with kerosene oil, and thoroughly, completely, and immediately burnt on or near the premises. The burning shall, when possible, be carried out in the presence of the Divisional or Sanitary Inspector, but in the absence of both, it may be carried out in the presence of the peon, the divisional Inspector, Sanitary Inspector or peon, as the case may be, being responsible that it is thoroughly done. The Chairman shall delegate to the Senior Medical Officer of the town, and to such others as may have to act under this Rule, his powers under Section 231(1) of Act IV of 1884 of entering and inspecting houses.

* one part of carbolic acid to ten parts of sawdust.

(14) Rags, clothes, and bedding stained with vomit or excreta or blood passed from any part of the body, or discharges from the nose, mouth, open sores, boils or wounds should similarly be burnt upon the spot under the same precautions, the danger of keeping such articles being fully explained to the owners and full compensation in money or kind being offered in the case of the really poor. But, where the owners or other persons concerned so desire, articles of clothing proved to the satisfaction of the Medical Officer appointed under Rule (2) to be of great value, may be disinfected in such manner as he may direct. In each such instance, the ~~person protected~~ Officer by a certificate signed by him shall define the method of disinfection employed and certify to its having been conducted with care.

(15) Floors and furniture stained with vomit or excreta or blood or any discharge, should be disinfected by being thoroughly sprinkled with a solution of perchloride

perchloride of mercury made up as shown in the margin.

1/2 oz Perchloride of mercury
1 oz Hydrochloric acid
3 gallons (one small Chatty full) of water with a pinch of red ink powder to colour it to prevent accidents.

The burning of tar and sulphur in houses and streets should be discontinued as it is inefficient as a disinfectant, but street drains outside the houses attacked and the drains of these houses where possible should be flushed with the above solution (Note - Wooden buckets or earthen pots should alone be used for carrying about this solution, as it destroys metal vessels and the packets of the solid perchloride should be labelled "Poison" in English and the vernacular and only entrusted to the Inspectors themselves.)

(16) The greatest courtesy and consideration should be used by the preventive staff to all classes in carrying out these instructions, as the exercise of extreme tact is essential to the success of the scheme.

(17) Special measures should be taken to ensure free ventilation of the room in which the patient is under treatment.

(18) Removal to isolation hospitals provided for under Section 233 of Act IV of 1864 should be freely exercised. If the patient be treated in his own house, however, the utmost care should be taken to strictly limit the number of persons entering the room or house to those absolutely necessary for the patient's welfare. Disinfectants for washing the hands of persons touching the patient should be available. Native food vessels used by the patient should be best disinfected by heating, till they cannot be touched directly over fire.

(19) After a patient has recovered, the house, and especially the room which he occupied during the attack, should be thoroughly disinfected. The floors should be dug up wherever stained with plague matter and the earth burnt, or, if this cannot be easily done, the floors should be burnt over. The floor, the walls, the

the house drains and the furniture should also be liberally sprayed and washed with the solution above described. The walls should subsequently be brushed with a dry broom, and be whitewashed with fresh slaked lime in the proportion of one part of lime to five of water.

(Note— It is most desirable that the excreta of a patient for at least ten days after he has recovered from an attack should be carefully collected, disinfected, and carried away. These probably still contain plague microbes. For this purpose, a Dindigul bullock barrie costing Rs 50 and air-tight iron excreta drums costing Rs 2-8- each may be provided. The purchase of these will, however, be left to the option of the Councils).

(20) Rats, cats and snakes suffer from the disease. If found alive in infected localities these animals should be got rid of as quickly as possible by killing them, as a matter of prevention. Where found dead, their bodies should invariably be burnt.

(21) The Chairman shall provide the medical officer responsible for working the rules with a permanent advance of Rs 50 per division which shall be recouped from time to time by bills supported by vouchers where possible.

(22) The preventive staff shall continue to be maintained in an affected circle for ten days after the last attack of plague in it, and the observation staff in all circles or groups of circles as the Collector may approve for twenty-one days after the last attack in the town. During this time, they should be employed in remedying sanitary defects.

III- Medical Aid

(23) There shall be a head-quarters in each division at which a medical subordinate shall reside, who shall be supplied with medicines and medical comforts from the municipal hospital for the treatment of those attacked, and who shall be available for attendance gratis on the sick in their own houses.

This

This shall also be the head-quarters of the Division Inspector and of the preventive staff on night duty.

(24). In one place at least in each town, there shall be isolation huts with separate accommodation for males and females for the treatment of those who desire it or who are brought there. These shall be in charge of a medical subordinate with the necessary staff, and supplied with equipment, medicines and medical comforts. This subordinate shall be deputed to no other duty. He shall reside with his staff on the spot, and shall be adequately housed.

(25) Charges for medical treatment under these Rules shall be met from the allotment in the budget under Grant III, Hospitals and Dispensaries.

(26). The head-quarters of the divisions and the sites for the isolation hospitals shall be at once selected, and shall be marked on the maps referred to in Rule No. 3 above.

(27). In order to make provision for meeting the charges under the portions of this scheme relating to observation and prevention, the Council of every municipality to which the scheme applies shall be required to allot in every budget under "Epidemic charges" a sum which shall be in the proportion of Rs 1,000 to every 25,000 inhabitants in the municipality — provided such provision has not already been made under G.O No. 1536 Dn of the 9th September 1896 when such funds shall also be applicable to the purpose of these rules. This shall be called the "Epidemic reserve", and shall not be spent upon any object but the carrying of this scheme into execution.

(28). The provision of this reserve should not be allowed to disturb the existing percentages to the total municipal income of the expenditure upon communications education, Sanitation &c., or to swell the total of the allotment made for sanitary purposes under Grants I, III and IV taken together, but should be set aside from funds which are at present annually expended upon sanitary works of a permanent nature.

(29). Municipal Councils are hereby authorized to employ establishments on the scales above laid down as the necessity for them arises, and to defray the charges from the "epidemic reserve" in anticipation of the sanction of Government, but this sanction should be obtained without delay.

(30). The medical officer responsible for working these Rules shall, within seven days

days of the final withdrawal of the special staff, forward a report on the epidemic and the operation of the Rules through the Chairman of the Municipality to the Collector for the orders of Government. In cases where the medical officer in question is subordinate to the District Medical and Sanitary Officer or the Civil Surgeon, such report shall be forwarded through those officers. In every case, such communications shall be submitted to Government through the Sanitary Commissioner.

Extract from Surgeon Lieutenant Colonel King's "Simple Sanitary Rules"

Precautions to be observed on the approach of Plague.

A. — Habitations

1 Each house must be thoroughly cleansed, that is, all manure, dirty water, washings of Cattle stalls and collection of dirt of any description — must be completely removed.

2. Where the earth remains damp and foul after such removal, it should be dug up till dry and clean earth is reached.

3. The old earth should be taken far from the town and may be used as manure for the fields; new earth from a clean place should be laid down.

4 The interior and exterior of houses should be whitewashed. If persons cannot afford to do the outside the inside at least should be whitewashed.

5. Bundles of clothing and other materials — hanging from the beams or occupying in any other way the rooms in which persons sleep, should be removed.

6. Doors and windows should at all possible hours be left open, so that free Ventilation be obtained.

7. If private latrines are used, they must be

Kept

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6. Doors and windows should at all possible hours be left open, so that free ventilation be obtained.

7. If private latrines are used, they must be

Kept

kept free from faecal matter by removal at least twice daily.
8. The drains leading from houses should be cleansed twice daily.
9. Cess-pools and pits for receipt of urine of Cattle should be emptied daily.

B.— The Person.

1. The body and clothing should be kept scrupulously clean. If delicate, persons should use warm, not Cold, baths.
2. The food should be plain, nourishing and of good quality
3 all vegetables, or leaves, or fruits, likely to cause diarrhoea, should be abandoned.
4 All forms of drinking to excess, debauchery, late hours and exposure to wet and cold should be avoided.
5 Cold cooked food should never be used. Care should be taken not to allow flies to settle upon food. Vegetables and leaves should never be eaten otherwise than after cooking. Before being cooked, they should be well washed in water that has been purified by boiling. Salt should be freely used with the diet; but, on the other hand, it must not be used in such unusual amounts as to excite uneasiness or looseness of the bowels.
6. An inferior quality of water should not be kept in the house; only the cleanest available should be

be employed.
7. Water for drinking purposes and for washing the mouth or eating and drinking vessels and milk, should be boiled before use.

BACK PAPERS.

G.O.	No	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

Urgent

V.E

Local & Munl. (1896) Department.

CURRENT No. 1977m

V.E / Rec / Please put with 3 Copies of Circular / SA 3/11/96

From

The Sanitary Commissioner for Madras.

Order

Put on type at once

8/11/96

No. 2047/S

Dated 2nd November 1896.

Received

Registered 4/11/96

Enclosures one.

Spare copies

Ans 1988m 7/11/96

SUBJECT.

Forwards Rules for combating Bubonic Plague (Quarantine) in Municipalities, for approval of Government.

Abstract

No. 1925/S

OFFICE OF SANITARY COMMISSIONER,

Fort St. George, 4th Nov 1896.

Local & Municipal Dept. Cr 2788m

From

SURGEON LIEUT.-COL. W. G. KING, M.B., C.M., D.P.H.,

SANITARY COMMISSIONER FOR MADRAS,

To

THE

1 abstract

Chief Secretary to Government, Local & Municipal Dept.

Enclosure.

SIR,

I have the honor to invite the attention of Government to the fact that it would be advisable to take advantage of the recently issued G.O. No 1536m dated 9th Sep 1896 as to the organization for cholera prevention, by making it applicable also to plague. I submit herewith copy of a circular letter to Municipalities, which I have thought advisable to issue pending Government approval - to save time. If Government approve of my action, I would request that the orders be issued accordingly with as little delay as feasible directing that the rules be made applicable by adoption of the corrections herewith forwarded

2

2. I may add for the information of Government that, as is the case with certain other infectious diseases, plague has shewn a disposition to recrudescence and increased activity at the end of certain cyclical periods, and that this factor may now be considered in operation. It would, therefore, be a mistake to conclude, should plague be temporarily stamped out in Bombay, that it may not make itself felt elsewhere in India during the next two years.

I have the honor to be
Sir
Your most obed[t] Servant
W R King
Surgn: Lt Col.
Sanitary Commissioner

Epidemic Urgent

No 1892/S

Office of Sanitary Commr
Fort St George 13th Octr 1896

From
Surgeon Lieut Col W G King MB, CIE, DPH
Sanitary Commissioner, Madras

To
All Chairmen of
Municipal Councils

Sir,

With reference to the recent issue of G O No 1536 M dated 9th Septr 1896 and this Office Circular No 1761/S dated 25th Septr 1896, I have the honour to point out that with very little modification, the rules therein laid down would serve the purpose of plague prevention. I, therefore, advise that, should plague become imminent in your Municipality, you should be prepared for action by now passing a Resolution ~~them~~ to adopt them.

2. I forward with this a statement of modifications suggested. It is not pretended that these modifications do more than cover certain possibilities. For example, the state of our knowledge does not, up to date, justify the belief that as in the case of cholera the bacillus can propagate in water, or that water can form a medium for its conveyance nor that flies can convey it. The bacillus being found in the blood, it is probably the blood stained discharges we have most to fear. At any rate, to soiled clothing and absence of ventilation in the room where a patient is suffering from the disease, has been hitherto

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hitherto ascribed the chief medium of spread. Nevertheless, the suggestions as to precautions regarding specifically contaminated ~~food~~ articles owing to contact with contaminated soil or water, thus &c are allowed to remain, under the belief that, in any case, general safeguard of health and consequent resistance to attacks is enhanced. Advancing knowledge may in reality prove that these precautions were necessary, Until therefore Bacteriologists are able to give more information than now available, the rules as modified will form a safe guide.

I have the honour to be,
Sir,
Your Most Obed^t Servant-

H E King Lt Col
Surgeon
Sanitary Commissioner

To
All Collectors
All District Surgeons & Civil Surgeons.

Rules in
Proposed modification of G.O. No 1536 Dated 9th September 1896 to suit the requirements ~~of plague~~ of possible invasion of the Madras Presidency by plague

Omit paras 1, 2, 3 and 4, and state in the form of a note:-

"These rules shall be applicable to all Municipalities in the Madras Presidency except Madras Town."

Rule 4. Instead of the "preventive staff" say the "preventive and observation staffs" referred to in Rules 14 and 8, respectively" and omit the final words "while the observation staff ------ Chairman".

Rule 10. After the words "gain intelligence of the first case of" add "plague" and omit "or severe diarrhœa". Instead of the words "favour the multiplication of the cholera microbe" say "propagation of the plague". After "stagnant sewage" add "absence of perflation of groups of dwellings and ventilation of individual buildings".

Rule 11. After "Simple Sanitary Rules" add "which with the exception of Rules 8 & 9 is equally applicable to plague"

Rule 13. After the words "first attack of cholera" add the word "plague".

Rule 15. After the word "choleraic" add "or plague".

Rule 16. After the words "stained with vomit or excreta" add "or blood passed from any part of the body or other discharges from open sores, boils or wounds". After "returned to them" add "In the case of plague-infected clothing and bedding, only where great value is

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is proved should disinfection be pursued instead of destruction by fire, and this solely on special approval by the Senior Medical Officer."

After 18 add Rule 18A.

"Special measures should be taken to ensure free ventilation of the room in which the patient is under treatment."

Rule 18B. "Removal to isolation hospitals provided for under Section 232 should be freely exercised in the case of plague patients. If the patient be treated in his own house, however the utmost care should be taken to strictly limit the number of persons entering the room or house to those necessary for the patients welfare. Disinfectants for washing the hands of persons touching the patient should be available Native food vessels used by the patient would be best disinfected by heating till they cannot be touched directly over fire."

Rule 19. In the last sentence after "The floor" add, "the walls". After the last sintence add "The walls should subsequently be brushed with a dry broom, and be whitewashed with fresh slaked lime in the proportion of one part of lime to five of water."

In Note attached to Rule 19 after the word "collected" add, "disinfected"

Rule 19A. "Rats, cats and snakes suffer from the disease. If found alive in infected localities these animals should be got rid of as quickly as possible by killing them, as a matter of prevention. Where found dead their bodies should invariably be burnt.

Under the extract from "Simple Sanitary Rules" B-The Person, place Rules 9 & 10 in square brackets and say in a footnote "Rules 8 & 9 need not be included when under Rule 11 this extract is published for general information. as to plague.

Addr.

The rules proposed by the Sany. Comnr. for the prevention of bubonic plague are approved & will be issued

BACK PAPERS.

G.O.	No	Department.	Date.
Go	1536	Mr Chas	9-9-96

FURTHER PAPERS.

G.O.	No.	Department.	Date.

2,000—6·1896

The Bombay Plague Rules.—

Local & Munl. (1896) Department.

CURRENT No. 1788th

From

The Sanitary Commissioner for Madras.

No. 1925/S

Dated 16th October 1896.

Received 16 OCT 96

Registered

Enclosures One. 2

Spare copies

For Orders.

The modified rules suggested by the Sanitary Commissioner should, if they are to have the force of law, be issued under section 250 of Act IV of 1884, and this cannot be done at once, as under section 286(1) a draft of the proposed rules should first be published for general criticism and can be passed finally only after objections and suggestions have been received and considered. There is, however, no objection to the councils being requested in the meanwhile to follow these rules, if approved by Government, as departmental instructions.

V.R. 24/10/96

Submitted. Next departmental instructions may at once issue leading the taking of such steps as are necessary for the issue of the rules under Sec 250. when ~~adopted~~ published

23/10

2,000—6-2-96.

Abstract

SUBJECT.

Suggesting certain modifications in the rules laid down in G.O. No 1536-Ge., dated 9th September 1896 to suit the requirements of Bubonic Plague prevention

I think this may be done.
Attn. 10-96.
26/10/96

BACK PAPERS.

G.O.	No.	Department.	Date.
		3rd	

FURTHER PAPERS.

G.O.	No.	Department.	Date.

[L. & M. 1,000—25. 10-96.]

Local & Munl. (1896) Department.

CURRENT No. 2977 M

Order

From The Sanitary Commissioner

No. 2047/S.

Dated 2.11.96.

Received 3.11.96.

Registered

Enclosures one

Spare copies

SUBJECT.

Forwarding draft rules for the prevention and combating bubonic plague (mahammari) in municipalities.

Vill 5

Sanctd

while the observation staff in rule 6 shall be directly the Chairman

Please mention the number and date of this serial in your reply.

RULES.

(1) These rules shall be applicable to all municipalities in the Madras Presidency except Madras town.

(2) Municipal councils shall be responsible for the general carrying out of the scheme, and District Medical and Sanitary Officers for the necessary medical arrangements both in their head-quarters and elsewhere, except in municipalities where there are Civil Surgeons. In these, the Civil Surgeons shall be responsible. The preventive and observation staffs referred to in Rules 12 and 6, respectively, shall be under the medical officer designated by the District Medical and Sanitary Officer, or the Civil Surgeon as the case may be, to carry out the necessary arrangements or, in the absence of such designation, under the senior medical officer on the spot.

(3) For the purpose of these rules, every municipality to which they apply shall be divided into "circles" which should, as far as possible, follow ward divisions so that they may be readily comprehended. In municipalities where there are wards containing less than 1,200 houses and a population of less than 5,000 persons each, two or more wards may be comprised in one circle. Three circles shall ordinarily form a division, and in no case shall a division contain more than four circles. Chairmen will at once map out their towns into "circles" and "divisions," and after approval by the Collector record the maps in their offices and send a copy to the senior medical officer of the municipality.

(4) For each division, the Chairman shall at once procure and retain in the municipal stores not less than the following apparatus and disinfectants, and will be responsible that these stores are always maintained and in good condition :—

12 portable tin canisters for disinfectants.
9 lb. perchloride of mercury.
9 lb. commercial hydrochloric acid.
60 lb. carbolic acid.
600 lb. of sawdust and 600 lb. of unslaked lime.

[*Note.*—The prices of these articles are approximately as follow :—

	Rs.	A.	P.
One tin canister	1	8	0
One ounce perchloride of mercury	0	3	0
One ounce commercial hydrochloric acid	0	2	0
One lb. carbolic acid	0	4	0
One lb. sawdust / One lb. unslaked lime	0	1	9]

I.—Observation.

(5) Should it appear to the Collector of the district that plague imminently threatens to attack any municipality to which these rules apply, he shall warn the Chairman of the council and the District Medical and Sanitary Officer and the senior medical officer of the town accordingly.

(6) Upon receipt of such warning or otherwise receiving information, the Chairman shall immediately appoint in each circle of the town an observation staff consisting of an inspector, a peon and a toti, and in each division a divisional inspector and an orderly, or such smaller establishment as the Collector may, under the circumstances of the particular occasion, consider sufficient. The orderly should be allowed a jutka or pony to enable him to carry without delay such orders to circle inspectors as may be given. The Chairman shall, without delay, report to the Collector the date on which these appointments were made.

[*Note.*—The salaries and allowances of this staff should not ordinarily exceed the following rates :—

	Rs.
Circle inspector	15
„ peon	8
„ toti	7
Divisional inspector	35
Jutka or horse allowance	15
Orderly	8
Jutka or pony allowance to orderly	7]

(7) This staff may consist of competent temporary hands if available and competent. Otherwise, it should be drawn from the existing sanitary establishment of the municipality, whose local knowledge will be valuable. In the latter case, the vacancies so caused should be filled by temporary hands, who should be paid at the rates sanctioned for that establishment.

(8) It will be the duty of the members of the observation staff to constantly and systematically patrol the whole of their circle in order to gain intelligence of the first case of plague in it, so that immediate action may be taken. The members of the observation staff should also be employed in removing, with the aid of the ordinary conservancy establishment, all defects in

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Please send proof early.
The rules have to appear
in the next Gazette

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18/11

sijned 30/11 & 1/12/96

4-8-11

[R.O. / 10]

5,000—5 12-10.

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