Local & Munl. (189) Department.

MISCELLANEOUS.

G.O., No. 1261 P ✓

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[Despatch Abstract.]

Magne Regulations

Recording letter from the Govt. of N.W.P. Provinces and Oudh forwarding copies of —— published under the E. D. Act, 1897.

BACK PAPERS.

G.O.	No.	Department.	Date.
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FURTHER PAPERS.

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PLAGUE REGULATIONS,

NORTH-WESTERN PROVINCES AND OUDH.

NAINI TAL:

NORTH-WESTERN PROVINCES AND OUDH GOVERNMENT PRESS—CAMP BRANCH.

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ACT No. III OF 1897.

PASSED BY THE GOVERNOR-GENERAL OF INDIA IN COUNCIL.

(*Received the assent of the Governor-General on the 4th February* 1897.)

An Act to provide for the better prevention of the spread of Dangerous Epidemic Disease.

WHEREAS it is expedient to provide for the better prevention of the spread of dangerous epidemic disease; It is hereby enacted as follows:—

Short title, extent, and commencement.

1. (1) This Act may be called the Epidemic Diseases Act, 1897.

(2) It extends to the whole of British India (inclusive of Upper Burma, British Baluchistan, the Santal Parganas, and the Pargana of Spiti); and

(3) It shall come into force at once.

Power to take special measures and prescribe regulations as to dangerous epidemic disease.

2. (1) When at any time the Governor-General in Council is satisfied that India or any part thereof is visited by, or threatened with, an outbreak of any dangerous epidemic disease, the Governor-General in Council, if he thinks that the ordinary provisions of the law for the time being in force are insufficient for the purpose, may take or require or empower any person to take such measures, and, by public notice, prescribe such temporary regulations to be observed by the public or by any person or class of persons, as he shall deem necessary to prevent the outbreak of such disease or the spread thereof, and may determine in what manner and by whom any expenses incurred (including compensation, if any) shall be defrayed.

(2) In particular and without prejudice to the generality of the foregoing provisions, the Governor-General in Council may take measures and prescribe regulations for—

(*a*) the inspection of any ship or vessel leaving, or arriving at, any port in British India and such detention thereof, or of any person intending to sail therein or arriving thereby, as may be necessary; and

(*b*) the inspection of persons travelling by railway or otherwise and the segregation, in hospital, temporary accommodation, or otherwise, of persons suspected by the inspecting officer of being infected with any such disease.

(3) The Governor-General in Council may, by general or special order, direct that all or any of the powers conferred by this Act may also be exercised by any Local Government with respect to the territories administered by it.

Penalty.

3. Any person disobeying any regulation or order made under this Act shall be deemed to have committed an offence punishable under section 188 of the Indian Penal Code. XLV of 1860.

Protection to persons acting under Act.

4. No suit or other legal proceeding shall lie against any person for anything done or in good faith intended to be done under this Act.

Government of India, Home Department, Notification No. 302, *dated 4th February* 1897, *published on page* 102 *of the* Gazette of India *of the 6th February* 1897.

WHEREAS certain parts of India are visited by, and others threatened with, an outbreak of dangerous epidemic disease known as bubonic plague, the Governor-General in Council, in exercise of the powers conferred by section 2, sub-section (3), of the Epidemic Diseases Act, 1897, is pleased to direct that the powers conferred by the said Act may be exercised by Local Governments with regard to their respective territories as follows :—

(a) all the said powers by the Governors of Fort St. George and Bombay in Council, the Lieutenant-Governor of Bengal, and Chief Commissioner of Burma;

(b) the powers conferred by section 2, sub-section (1), and sub-section (2), clause *(b)*, by the Lieutenant-Governor of the North-Western Provinces and Chief Commissioner of Oudh, the Lieutenant-Governor of the Panjáb, and the Chief Commissioner of the Central Provinces; and

(c) the powers conferred by section 2, sub-section (2), clause *(b)*, by the Chief Commissioners of Assam, Coorg, and British Baluchistan.

Rules issued by the Government of the North-Western Provinces and Oudh under the Epidemic Diseases Act, as amended up to 5th May 1898.

[THE following are rules generally applicable. Special rules relating to the Hardwár Union Municipality have been separately issued *(vide* Appendix A*)*.]

PART I.—RULES RELATING TO VILLAGES AND SMALL TOWNS.

Notification, Sanitation Department, No. 212/XVI—404B, dated the 26th March 1897.

I.—DUTIES OF PROPRIETORS OF LAND.

Duties of zamíndárs.

1. Every taluqdár, zamíndár, or other proprietor of land shall use his best endeavours to secure full compliance with the following provisions as to the immediate reporting to the police of the occurrence of each case of plague in his property; as to the segregation of the sick and their attendants; as to the disinfection of the houses of persons who have suffered from plague; and as to the disposal, in accordance with the customs of their religion, of the bodies of those who have died.

II.—DUTIES OF THE POLICE.

Maintenance of lists and reports.

2. (1) The officer in charge of every police station shall forthwith bring upon a list (A) the names of all villages in his circle the inhabitants or any portion of the inhabitants of which are ascertained to have trade relations or other connection with the Bombay Presidency or other* places in which bubonic plague is prevalent.

*G. O. No. 384, dated the 5th June 1897.

(2) Every village policeman shall enquire and report without delay the name of every person in his village who has arrived from the direction of Bombay, or other place in which bubonic plague is prevalent, since the 1st of January 1898; he will also report all fresh arrivals as they occur. The names so reported will be entered on a list (B).

NOTE.—See also rules 89 and 89A, Note vi.

†G. O. No. 645, dated the 21st October 1897.

(3) Every village policeman shall also report any excessive mortality among rats or monkeys† that may come to his notice.

Reports of deaths.

3. In the case of every village entered in list A, reports of all deaths shall be made daily, as in the case of cholera epidemics; and the officer in charge of the police station, on receiving report of a death, shall carefully enquire from the person making the report whether the deceased person had symptoms of bubonic plague as described in annexure I.‡

NOTE.—It is essential that the utmost watchfulness should be exercised with the view of detecting persons who have come from infected areas and of at once discovering the *first* case of plague which may occur in any village or town. The immediate adoption of the measures prescribed is the only chance of preventing the disease from spreading (G. O. No. 196/XVI—404B, dated 5th March 1898).

4. Similar enquiry shall be made in the event of a report being received of the death of any person whose name is entered in list B or of any person in that household.

Enquiries.

5. Whenever the deaths reported from any village (whether on list A or B or not) are more frequent than usual, and especially sudden deaths attributed to fever, the officer in charge of the police station shall make enquiries with a view to ascertaining whether the symptoms of bubonic plague existed.

‡ Page 13.

6. On ascertaining from a village policeman or other source of information that a death in a village was preceded by symptoms such as those described in annexure I, the officer in charge of the police station will either go himself or depute a competent subordinate to make an enquiry, any action taken being recorded in the station diary.

7. If the officer making the enquiry is of opinion that the death was due to bubonic plague, and finds that no other persons in the house in which the death occurred are ill, he shall direct the relatives or friends of the deceased to dispose of the body (if this has not already been done) and to disinfect the house, clothes, and bedding of the deceased, as laid down in annexure I, reporting at the same time the result of his enquiry in the manner provided in rule 10.

Procedure to be adopted.

8. (1) If he also finds that, in a house in which a person has died of bubonic plague, any person is ill with symptoms of the disease, he shall, in the absence of the tahsíldár and in anticipation of orders from the Civil Surgeon or Magistrate, see that all the precautions specified in annexure I are rigorously observed. He will take similar action on learning of the occurrence of a case of bubonic plague at any wayside railway station in his circle.

(2) If, in the opinion of the headman and two other respectable residents of the village, a person in any other house (*i.e.*, in any house in which a death from plague has not occurred) is ill with bubonic plague, the precautions specified in annexure I should also be adopted in that case.

9. In carrying out these instructions the police officer shall work as much as possible through the headman of the village and the landlord, and, so long as the prescribed instructions are obeyed, allow the people themselves to carry them out in accordance with their customs and practices.

10. The officer in charge of the police station shall report immediately to the District Superintendent of Police, the Magistrate of the district, the nearest medical subordinate, and the Civil Surgeon any case of bubonic plague or suspicious case brought to his notice. The Civil Surgeon will inform the Inspector-General of Civil Hospitals and the Sanitary Commissioner by telegram.

Reports.

III.—Duties of the Revenue Staff.

11. Every patwári shall report to the registrar kánúngo and the tahsíldár the death of any person in his village in cases where the symptoms of bubonic plague, as described in annexure I, were present.

Reports.

12. On receipt of such report, the tahsíldár shall satisfy himself that the necessary action, described in the preceding rules, has been taken by the police. If possible, the tahsíldár shall go himself to the spot or depute his naib or ask a relief officer to assist in enforcing the sanitary precautions.

13. The tahsíldár shall communicate the information forthwith to the District or Sub-Divisional Magistrate.

14. (Cancelled.)

IV.—Duties of the Medical Staff.

15. The nearest medical officer to receive information of cases of bubonic plague from the officer in charge of a police station may be the hospital assistant of a branch dispensary. The hospital assistant, on receiving a report of a case, shall (if possible) at once visit the spot and see that the necessary sanitary measures are taken. He shall communicate the result forthwith to the Civil Surgeon.

Visit to spot and report by hospital assistant.

16. In villages in which a branch dispensary is situated, hospital assistants shall themselves watch all arrivals and report sickness, with a description of the symptoms, to the Civil Surgeon of the district.

17. Civil Surgeons will arrange to proceed, as soon as possible, to places from which cases are reported or to depute a qualified subordinate to undertake the duty in their place. On arrival, the Civil Surgeon (or qualified subordinate) shall be guided in his action by the instructions conveyed in rules 31 to 42, so far as they are applicable to the circumstances of the case.

Civil Surgeons.

18. Should the Civil Surgeon consider it necessary that the inhabitants of a village or *part of a village in which bubonic plague appears* should temporarily be located in *chappars* or other structures in groves or in the open at a distance from the village in the manner indicated in rule 39, he may make a report to that effect to the Magistrate of the district, and the latter may direct the inhabitants to vacate their houses accordingly. The houses shall in this case be not again occupied till they are thoroughly disinfected.

Evacuation of houses.

*Notification No. $\frac{138}{\text{XVI—404B}}$, of 17th February 1898.

NOTE.—It is best to have the whole village in which a case of plague occurs evacuated until disinfected; but this may not always be possible and the officers must do the best they can, beginning with the evacuation of the house, widening the circle to the block, and, if necessary, to the whole village (G. O. No. $\frac{20A}{\text{XVI—404B}}$, addressed to Commissioner, Meerut Division).

19. Should plague appear in a village, the headmen of surrounding villages should be advised to have no communication with the infected village until the disease has completely disappeared.

Neighbouring villages.

NOTE 1.—It is advisable to continue daily inspection of villages situated in the neighbourhood of an infected locality for *one month* after the occurrence of the last case (G. O. No. $\frac{147}{\text{XVI—404B}}$, dated 22nd February 1898).

NOTE 2.—Resolution No. $\frac{104}{\text{XVI—404B}}$, dated 4th February 1898, published in the Government Gazette of 5th February 1898, shows (paragraphs 8—10) the preparations which should be made and the organization which should be applied in rural tracts at a moment's notice when the necessity for it has been established (G. O. No. $\frac{147}{\text{XVI—404B}}$, dated 22nd February 1898) (*vide* Appendix C).

V.—Duties of the Public.

20. Every person to whom an order is given by any officer empowered to act under the preceding rules with regard to his segregation, the disinfection of his house or personal property, or with regard to any other matter falling under these rules shall duly obey that order.

Obedience to orders.

PART II.—RULES RELATING TO MUNICIPALITIES AND CANTONMENTS.

21. The foregoing rules, with the exception of rule 1, shall be observed, so far as possible, in municipalities and cantonments, provided that no police officer in a municipality or cantonment shall act under rules 6, 7, and 8 without having previously reported the facts to, and obtained the written orders of, the executive or sanitary authority in such municipality or cantonment. The police officer shall show the written orders to the head of the house if required to do so.

Applicability of preceding rules.

22. The following special rules apply to every municipality constituted under Act No. XV of 1873 or Act No. XV of 1883 and to every cantonment.

Special rules.

NOTE.—Towns should be dealt with on necessity arising in the manner indicated in Resolution No. $\frac{104}{\text{XVI—404B}}$, dated 4th February 1898, published in the Government Gazette of 5th February 1898 (*vide* Appendix C).

The town should be divided into convenient blocks, consisting of one or more *muhallas*, each block being placed in charge of a responsible officer, to whom all reports concerning it would be made. The nature of the immediate action to be taken on the occurrence of a case of plague or of a suspicious case in a town will naturally depend on the circumstances of the case, the diagnosis of the Civil Surgeon (if the illness is not manifestly plague), and the advice given by the medical and sanitary authorities. If, for instance, a traveller is found immediately on arrival at a place to be suffering from plague or from an illness which cannot with certainty be diagnosed as plague, it may be sufficient to provide for the segregation and disinfection of the traveller and of his friends. If, on the other hand, a case believed to be plague comes to light in a town without the source of infection being traced, thus giving rise to a suspicion that other cases may exist, the ordinary procedure would be—

(1) to immediately take the prescribed measures for the isolation of the patient and his relatives, and for the evacuation and disinfection of the house occupied by them and, if necessary, of the adjoining houses;

(2) to report immediately the case by telegraph to the Government, the Commissioner, the Inspector-General of Civil Hospitals, and the Sanitary Commissioner;

(3) to determine whether application should be made to the Government for authority to adopt one or more of the following measures:—

(a) to direct the evacuation, isolation, and disinfection of a quarter of a town under rule 39, and the establishment of camps of observation for the accommodation of the inhabitants of the block or blocks determined to be infected *(vide* Appendix A);

(b) to introduce into the town or into a portion of it the organization for house to house search;

(c) to apply to the town special rules requiring all cases of illness to be reported and notice to be given six hours previous to the removal of any corpse from a house *(vide* Appendix A).

If it is decided to make such an application, the Commissioner should, if possible, be previously consulted, and the application should be made to Government by telegraph, full details following by post, with a sketch map of the locality. Meanwhile, in anticipation of sanction, all necessary preparations should be made and an estimate formed of the additional staff which would be required (G. O. No. $\frac{147}{\text{XVI—404B}}$, dated the 22nd February 1898).

23. The words "Health Officer" used in the following rules include a duly authorized Deputy or Assistant Health Officer, a Medical Officer entrusted with sanitary duties, and, in a municipality where there is no resident Sanitary or Health Officer, the Magistrate exercising executive control in the municipality.

Definition of "Health Officer."

24. In every municipality and cantonment a committee shall be appointed by the Magistrate or cantonment authority for the purpose of assisting the Health Officer in performing his duties under these rules. The committee should consist of two members, one a Hindu and one a Muhammadan, for each ward of a municipality or definite portion of a cantonment; and their most important duties will be to accompany the Health Officer on his rounds of inspection, to explain the necessity of the sanitary measures, to assist in causing these to be carried out, and to bring to notice any complaints that may be made or abuses that they may discover.

Committee of townsmen.

NOTE.—In addition to accompanying the Health Officer, the Committee should sit on a fixed day and hour once a week to hear applications or discuss any question brought before them relative to the plague administration. See also rule 32.

25. In any municipality or cantonment the Magistrate of the district or any Magistrate authorized by him in this behalf may issue general orders that by a certain specified date certain sanitary precautions of a simple nature, such as the limewashing of houses, the cleaning of latrines, the removal of filth and rubbish, shall be carried out, and the persons to whom the order is addressed shall comply.

Adoption of sanitary precautions.

26. Every occupier of a "factory" shall, on employing in his factory any person who has come from the Bombay Presidency, or other place in which bubonic plague is prevalent, immediately give notice in writing of the fact of such employment to the Magistrate of the district, and shall report to the Magistrate the name and address of the person employed.

Factories.

"The word 'factory' used in this rule means any premises wherein is carried on any process for, or incidental to, making, altering, repairing, ornamenting, finishing, or otherwise adapting for use or sale any article or part of an article, and wherein steam, water, or other mechanical power is used in aid of any such process."

27. If in any house a person becomes ill, or dies, of bubonic plague, the owner of such house, or, if the owner be non-resident, the occupier, and every head of a family resident therein, shall forthwith report the occurrence of such illness or death at the nearest police station.

Reports of deaths from plague.

28. If there is, or has been, resident in any house a person who has come since the 1st January 1898 from Bombay or other place in which bubonic plague is prevalent, the owner of such house or, if the owner be non-resident, the occupier, and every head of a family resident therein, shall report at the nearest police station (1) the illness of any person in such house, or (2) the death of any person in such house, immediately such illness is apparent or death occurs.

Reports of illness or death from houses occupied by persons coming from infected quarters.

29. Any medical practitioner who attends in any house a case which he has reason to believe to be a case of bubonic plague shall forthwith report such illness at the nearest police station.

Reports by medical practitioners.

30. On receiving a report of illness or death from bubonic plague, the officer in charge of the police station shall immediately report the matter to the District Superintendent of Police, the District or City Magistrate, and the Health Officer or Sanitary Officer of the municipality or cantonment. Should Assistant Health or Sanitary Officers be appointed for any *muhalla* or section of the town, the police officer may be directed to report to him instead of the Health Officer. Beyond reporting the fact of illness or death no police officer shall take any action under the rules in this part, except under a written order of the executive or sanitary authority, which he shall be bound to show if required by the head of the house.

Reports by police.

31. (1) A person suffering from bubonic plague shall not be removed from the house in which he is at the time lying unless it be for the purpose of removing him to a hospital until after the expiry of six hours from the time a notice of such intended removal shall have been delivered at the nearest police station by, or on behalf of, the friends of the sick person or of the owners or occupiers of the house, unless the Health Officer or other sanitary or executive authority has permitted earlier removal.

Removal of persons suffering from plague and of corpses.

(2) The dead body of a person who has died of bubonic plague shall not be removed from the house in which the death occurred until after the expiry of six hours from the time a notice of such intended removal shall have been delivered at the nearest police station by, or on behalf of, the friends of the deceased or of the owners or occupiers of the house, unless the Health Officer or other sanitary or executive authority has permitted earlier removal, or unless a mortuary chamber or hut is established near a cemetery or burning ghát to which the dead body may be removed pending inspection.

(3) It shall be optional to the person giving the notice to deliver a written notice at the police station, and the station clerk shall record on the notice the time of its receipt and shall sign the same.

(4) The friends of the deceased shall be permitted to dispose of the corpse by cremation or burial in accordance with their religious practices, but they shall obey the directions of the Health Officer or other sanitary or executive authority as to the time, route, and method of removing the corpse to the burial or cremation place. In the event of the failure or refusal of relatives or friends of the deceased to dispose of the body, the Health Officer shall dispose of it in accordance with the religion of the deceased.

Disposal of corpses.

*G. O. No. 384 / XVI—404B, dated 5th June 1897.

Inspection of houses and disinfection by owners.

32. The owner and occupier of a house and the head of any family resident therein,* and travellers and others frequenting the town or place, shall comply with any direction that may be issued by the Health Officer or other sanitary or executive authority with regard to the disinfection and cleansing of a house, the disinfection or destruction of bedding and clothing and articles of a similar nature, the improvement of the sanitary condition of the premises, and with regard to other sanitary matters ; and shall permit the Health Officer (who should be accompanied, whenever possible, by a member of the committee appointed under rule 24) to enter his house or premises for the purpose of inspection. Provided that, when an apartment is occupied by a female who according to the custom of the country does not appear in public, the Health Officer shall not enter such an apartment without giving notice and affording time to such female to withdraw. In such inspections the Health or Sanitary Officer shall always be accompanied by a male member of the family.

Disinfection of houses by Health Officer.

33. The Health Officer shall, if he considers it necessary, himself take measures for the disinfection of a house and for the other matters referred to in the preceding rule. Should the Health Officer think it necessary and practicable to burn or otherwise destroy any non-masonry and inflammable structure, he will report the case to the Magistrate of the district and act on his orders. The Magistrate of the district, or, in his absence, the Magistrate in charge of his duties, may order the burning or destruction of any hut or other temporary structure if disinfection cannot be satisfactorily effected otherwise, awarding compensation to persons who are so poor as to be unable to replace at their own expense the structure that has been burnt or destroyed.

NOTE.—It is a wise precaution, when cases of plague have occurred in a town, to disinfect, not only the infected house and the houses in the infected block, but also the houses in the rest of the town so far as possible (G. O. No. 147 / XVI—404B, dated 22nd February 1898). See also rule 33A.

†G. O. No. 781 / XVI—404B, dated 27th December 1897.

†33A. When a house is being disinfected under rule 33, the owner and occupier shall give such assistance as may be required by the Health Officer, and shall open every room in the house for purposes of disinfection. The owner and occupier shall not remove from the house or conceal any article to prevent its disinfection.

Examination of persons believed to be infected with plague.

34. The owner and occupier of any house shall permit the Health Officer to enter his premises and examine any person whom such Health Officer has reason to believe to be infected with bubonic plague. If the person be a female who, according to the custom of the country, does not appear in public, the examination shall be made through a female doctor, female hospital assistant, or other female agency.

Isolation of persons suffering from plague.

35. (1) If the Health Officer is satisfied that a person is suffering from bubonic plague in any residence, and if, in the opinion of the Health Officer, the residence of the sick person is so situated and possesses such accommodation that the sick person can be properly isolated therein or in the immediate vicinity thereof, such sick person shall not be removed from his residence against the will of the family.

(2) Any resident of a municipality may apply at any time to the Health Officer to inspect his house and to grant (free of charge) a certificate to the effect that the house is so situated and possesses such accommodation that one or more persons suffering from plague can be properly isolated therein or in the immediate vicinity thereof.

NOTE.—The cases in which houses in the residential quarter of a town can be safely licensed are exceptional. Health Officers must act with circumspection in dealing with applications under rule 35(2). No certificates may be granted by a Health Officer under that rule without the assent of the Civil Surgeon of the District and the District Magistrate. (G. O. No. 101 / XVI—404B, dated 3rd February 1898, and G. O. No. 402 / XVI—404B, dated 5th May 1898.)

(3) If the sick person's residence does not permit of satisfactory isolation being effected in it, the Health Officer shall, if he thinks it necessary, require the removal of such sick person either to a suitably situated house or temporary hut licensed as a private hospital for the accommodation of the particular individual or of his family or to a hospital licensed for the sole use of particular castes or classes of the community or to a hospital established for the use of the public. The house or building licensed as a hospital should be located as near the residence of the sick person as the Health Officer considers safe.

NOTE 1.—The Government will, whenever necessary, construct segregation huts or hospitals or help private persons to construct them. In designing these huts or hospitals, particular care will be taken that the customs of the country regarding the maintenance of *parda* shall be strictly observed, and that those members of the family who wish to accompany the sick person shall be comfortably accommodated, submitting themselves merely to the sanitary precautions required by the rules (Resolution No. 211 / XVI—404B, dated the 26th March 1897).

NOTE 2.—For instructions regarding the method of construction of observation sheds, temporary hospitals, and segregation huts, see G. O. No. 234 / XVI—404B, of 5th April 1897, and G. O. No. 342 / XVI—404B, dated 22nd May 1897. Public hospitals have been established by municipal boards on the prescribed plan and are maintained in good order.

NOTE 3.—Suitable houses are to be found in many towns situated in enclosed gardens in the suburbs, and these can be licensed by the Health Officer on application being made to him to that end. The inhabitants of municipalities should be invited to take action in this direction, either immediately or at any rate on the occurrence of cases of plague in the town. Every facility should be afforded to them by Magistrates and Civil Surgeons (G. O. No. 273 / XVI—404B, dated the 16th April 1897).

NOTE 4.—*Private hospitals for particular classes or castes.*—Sites in the vicinity of public hospitals should be selected so as to admit of an efficient system for guarding the whole, and arrangements should be made which will ensure the immediate construction of private hospitals on necessity arising. In many places three such sites would probably suffice—one for Muhammadans, one for low caste Hindus, and one for the better classes of Hindus. In all efficient arrangements should be made for the accommodation and privacy of females. These sites need not be close together, but should be in the same neighbourhood. In addition to the large wards for the different castes, room should be provided for the erection of as many private hospitals or wards as may be wanted. In other words, the sites should admit of indefinite hospital expansion, and each class or caste should be encouraged and assisted, should plague break out, in providing the accommodation they want for themselves, their families, and their friends.

No hesitation should be felt in licensing, as private hospitals, buildings in the outskirts of a town situated in open spaces and admitting of being isolated. But care should be taken that buildings are not too scattered to prevent their being properly guarded by a cordon, and no building situated above and near the intake of a water supply should be accepted as suitable. A list of the suburban houses which a Health Officer proposes to license should be submitted to the District Magistrate for an expression of his opinion: if in any case the Magistrate disagrees, the point should be referred for decision to the Sanitary Commissioner (G. O. No. 101 / XVI—404B, dated 3rd February 1898).

(4) If the Health Officer decides that a person suffering from bubonic plague shall be removed to a private or public hospital, the friends and servants of the person shall be allowed to accompany him, subject to necessary sanitary precautions. The sick person or his friends shall be allowed to employ their own medical attendants and to receive visits from maulvis, priests, or other religious instructors subject to the sanitary control of the Health Officer and shall be under no obligation to submit to European medical treatment. Separate suitable accommodation shall be provided for females, and, in the case of a female who, by the custom of the country, does not appear in public, *parda* shall be strictly preserved both in removal to the private or public hospital and during stay there.

(5) Should it be necessary to place the family or any of its members under segregation, this will be effected in their own house if, in the Health Officer's opinion, this be possible. If, in the Health Officer's opinion, this be not possible, then the segregation will be effected in a suitable place, which may be chosen by the family and approved by the Health Officer, or in the general segregation camp. In any case strict attention will be paid to the maintenance of the *parda* and the convenience of the family.

A member of the family, with the necessary servants, or caretakers, may remain in, or near, the house while under disinfection.

NOTE.—Segregation of a whole family may not always be necessary. It may depend on the number of members in a family or the extent to which they have been in contact with a person suffering from plague. Thus in a family of three members, if one were attacked by plague, it might be necessary to segregate the other two. If there were six members, of whom two only had been in attendance on the sick person, the segregation of those two only might suffice. But if the whole family, or any portion thereof, whom it may not be strictly necessary to segregate, desire to accompany the sick person, they are to be freely permitted to do so.

The advantages of inoculation with protective serum should be urged on people where plague has appeared, and home segregation may be more freely permitted when the friends and attendants of the sick submit to inoculation; but compulsory inoculation should not be enforced (see Appendix E).

If the results of inoculation with protective serum prove its efficacy, it may be possible to dispense, to a greater or less extent, with evacuation of infected houses or localities, and to carry out disinfection operations without removing the people from their homes.

Notification No. 138/XVI—404B, dated the 18th February 1898.

35A. If, in the opinion of the Health Officer, there is reason to believe that there is danger of contagion or infection to the inhabitants of the houses adjacent to a house in which a case of plague has occurred, he may direct the inhabitants of such houses to take up their abode in a suitable camp and to remain there until their houses and the vicinity are declared free from danger of infection.

Evacuation of adjoining houses.

36. If in any case a person removed to a public or private hospital is accompanied by friends or attendants, the Health Officer may require so many of them as are not in immediate attendance on the patient to live in the immediate neighbourhood of the hospital in segregation huts or tents provided for the purpose and to remain in such place until they receive permission from the Health Officer to depart.

Segregation of friends or attendants accompanying a sick person to hospital.

37. If a person is attacked with bubonic plague while so segregated, the Health Officer shall remove such person to a public or private hospital and may treat his friends and attendants as provided in the preceding rule.

38. Upon the death of a sick person from bubonic plague, the Health Officer shall for ten days detain under observation persons who have been in attendance upon him, in segregation huts, tents, or suitable structures established for the purpose in the neighbourhood if segregation in the house or enclosure be not feasible, provided that this rule shall not apply to any medical practitioner, *hakim*, or *baid* who may at any time attend upon a sick person or to corpse bearers, mourners, and friends who have not been in attendance on the deceased.

Segregation of attendants of deceased patient.

39. If bubonic plague has become prevalent in a portion of a municipality or cantonment, the Health Officer or Sanitary Commissioner may, with the sanction of Government, direct the inhabitants of any street, *muhalla*, or other locality to evacuate their houses, to remove to a temporary settlement at a distance from the infected quarter. Each householder shall be permitted to make suitable arrangements for the care of his house and property during his absence, and the Government will arrange for the watch and ward of the empty houses. After evacuation the Health Officers shall arrange for the thorough disinfection and cleansing of the empty premises, and shall not permit the inhabitants to return until the premises are considered to be free from infection.

Evacuation of infected localities.

NOTE.—When cases of plague have occurred in a town, the inhabitants *other than those of the infected block* should be freely encouraged to leave the town, either going to other places, or, if they prefer to stay in the neighbourhood, settling in camps formed by themselves on suitable sites in the vicinity. No compulsion should, however, be exercised so long as the quarter or blocks they live in

remain uninfected. In addition to the usual measures for the inspection of travellers by railway, roads should be watched to prevent the removal from the town of persons suffering from bubonic plague (G. O. No. 147/XVI—404B, dated 22nd February 1898).

40. A person dealt with under the foregoing rules shall comply with any directions that may be given to him by the Health Officer with regard to his removal to, and residence in, an observation shed, public or private hospital, or place of segregation, and with respect to disinfecting or burning of bedding, clothing, and articles of a similar nature, or with respect to any other sanitary matter. He shall not depart from any such place without the permission of the Health Officer.

Obedience to orders.

NOTE.—It is of importance that the disinclination of the poorer classes to disclose cases of plague should by all reasonable means be reduced, and in the case of the destruction of bedding, clothing, and similar articles the authorities may be reasonably liberal in admitting payment of compensation when the loss would fall upon people in very poor circumstances to whom it would be a great hardship to bear it (G. O. No. 231/XVI—404B-28, dated 5th April 1897).

41. If the place of burial be one set apart by Government as suitable for the interment of corpses of persons who have died of plague or an ordinary burial place distant from habitations or sources of water supply, it shall be sufficient to bury the body six feet deep. If the place of burial be a graveyard in which, by reason of its proximity to habitations or water supply, special precautions are necessary, the Health Officer may, in addition, require the disinfection of the grave by placing a layer of chloride of lime in the grave. In this case two feet of earth shall be interposed between the lime and the corpse so that lime shall not come in contact with the corpse. The coffin and cloth used to cover the corpse, when not interred with the corpse, shall be disinfected by the relatives under directions of the Health Officer, such directions being in accordance with the religious observances and customs of the family. In cases where cremation is the custom, the body shall be completely burned at the usual burning ghát or other isolated locality in accordance with custom, the cloths brought in contact with the body being either burnt according to custom or disinfected.

Disposal of corpses.

42. All police officers shall give to the Health Officer such assistance as he may consider necessary in carrying out these rules.

Notification No. 194/XVI—404B, dated the 23rd March 1897.

43. (1) Any goods originally consigned from Bombay or other place in which bubonic plague is prevalent, and believed to have been packed in such place, may, before admission into a municipality or cantonment in these provinces, be detained for examination by the municipal or cantonment authority at an octroi post, at the nearest railway station, or such place on the outskirts of municipal or cantonment limits as may be appointed by it for the purpose.

Detention and examination of goods from infected centres.

(2) Any case in which such goods are packed may be opened by the municipal or cantonment authority for the purpose of examination, and if, in the opinion of the Health Officer or of an officer deputed by him for the purpose, the materials used for packing, such as rags, straw, grass, paper, &c., are likely to convey infection, they may be destroyed.

(3) Immediately on the detention of such goods, written notice shall be given to the consignee, in order that he may attend to witness the examination, and to take delivery of the goods subsequently. No examination of goods shall be made except in the presence of the consignee or his authorized agent.

NOTE.—The power of detaining and examining goods should not be exercised in the case of articles forwarded through the Post Office (G. O. No. 290/XVI—404B, dated the 22nd April 1897).

Notification No. 339/XVI—404B-458, dated the 18th May 1897.

44. (1) The Magistrate of the district may cause to be disinfected or, with the concurrence of the Health Officer, destroyed any collection of rags in rag pickers' houses, rag stores, paper mills, or elsewhere.

Disinfection of rags.

(2) Any place in which rags are collected shall be open to the inspection of the Magistrate of the district, the Health Officer, and any official appointed by the Magistrate of the district for the purpose.

(3) To effect disinfection, rags should be soaked in a solution of corrosive sublimate (1 in 1,000) or carbolic acid (1 in 40), and then be well exposed to the sun for some hours.

(4) The owner of a collection of rags shall comply with any order issued by the Magistrate of the district under clause (1).

ANNEXURE I.

Memorandum by the Sanitary Commissioner for the use of Police Officers and others in case of the occurrence of plague in villages or smaller towns.

(See rules 3, 6, 7, 8, 11 and 36.)

1. The symptoms of plague are fever of recent commencement, violent headache, severe pain in the back and limbs, and lassitude. The glands in the groin, or in the armpit or neck, are generally swollen and tender. Cough and pain in the lungs are frequently observed, and delirium often comes on early in the disease. Death often occurs in two or three days.

Symptoms of plague.

2. The great majority of people attacked by plague die of the disease. The main object therefore should be to keep as far away as possible from people infected with plague.

3. If plague exists in a village, the inhabitants of all the surrounding villages should abstain from all dealings with that village till the plague ceases. They should neither go into the infected village nor allow any person from the infected village to come into their village.

4. In like manner in an infected village a family free from the disease should not go near a house in which the disease exists.

5. The best way of preventing the plague from spreading is to segregate the sick person till he recovers or dies; and, as the plague takes ten days to incubate, the attendants on the sick person should be kept apart for at least ten days.

6. (1) If the person who is suffering from bubonic plague is living in a large, roomy house in which he can occupy a separate room, and if he and his attendants can be kept separate from others in that house, then he should be allowed to remain there.

Method of segregation of a person suffering from plague and of his attendants.

NOTE.—It may be considered certain that no one afflicted with plague in an ordinary village hut can be properly segregated in that hut (G. O. No. $\frac{20A}{XVI-404B}$, addressed to Commissioner, Meerut Division).

(2) If the person who is suffering from bubonic plague be living in a hut or such a small house that he cannot be kept separate from others in that house, then he should be removed at once to a small *chappar* hut to be constructed of grass screens and erected well away from habitations. The site should, if possible, be shady and near a well. This well should not be used by other people if there are more than one well in the village. The sick person's relatives and friends may accompany and remain with him provided that they remain apart and abstain from communication with other people in the village. The village authorities should see that arrangements are made for the supply of food, fuel, &c. Ample accommodation should be provided separately for males, females, and families when the house is temporarily abandoned.

7. In all cases the chief zamíndárs or their agent, the patwári, the village headman, and chaukídár should take steps to see that these orders are carried out without interference with the religious or social customs of the family.

8. A *chappar* hut after occupation by a person suffering from plague should be burnt, and this should also be done to the *charpai* upon which the person is carried to, or which he uses in, the hut. The well should, if possible, be completely cleaned out and disinfected.

NOTE.—The materials of a hut in which a case of plague has occurred should be burnt *in situ*. The site of an infected hut is dangerous; it is advisable to cover it over with thorny bushes to prevent its re-occupation (G. O. No. $\frac{147}{XVI-404B}$, dated 22nd February 1898).

Method of disinfection of houses in which a death from plague has occurred.

9. If the house be a small hut of small value, and this can be done safely, it is best to burn the hut; but in the case of better houses the following measures should be adopted:—

(*a*) The floor of the rooms used by the sick person should, if of earth, be dug out to a depth of two inches and removed to a spot well away from habitations.

(*b*) Half a *sér* of sulphur should be burnt in the room, the doors and windows being closed during the operation. *Where possible, the sulphur employed for burning in huts and rooms should first be well moistened with methylated spirit. A large, wide-mouthed, metal vessel containing at least a *sér* of water should be placed over a slow charcoal fire in the room and the water be allowed to slowly boil away at the same time that the sulphur is burning. The object is to keep the air moist. Sulphur is recommended for the disinfection of huts and houses because it is cheap and generally procurable. But it should be remembered that a very slight covering protects germs of disease from its action, so that the other measures of disinfection, especially the thorough limewashing of roofs, floors, and walls, should be very thoroughly and carefully carried out.

*G. O. No. 414, dated the 17th June 1897.

(*c*) The roof, floor, and walls should be thoroughly limewashed.

(*d*) All the drains should be washed down with the best disinfectant available at the nearest dispensary or thána, which will be supplied without payment.

(*e*) All doors and windows should be then thrown open and the house vacated for fourteen days.

Method of disinfection of clothes and bedding.

10. Upon the recovery or the death of a person suffering from plague, the clothes and bedding of the sick person and his attendants should be thoroughly boiled and then spread out in the sun and wind for 48 hours. Clothing and bedding of small value should be burnt.

Disposal of bodies.

11. The corpse of a person known or suspected to have died from plague should be disposed of by the friends in accordance with the usual customs. In case of cremation the body should be completely burnt in an isolated place.

In case of burial the body is to be buried at least six feet deep. The place of burial should be well away from habitations and sources of water supply.

PART III.—RULES RELATING TO RAILWAYS.

I.—Procedure at Jhánsi, Saháranpur, and Gháziabad.

A.—Inspection of Passengers.

Definition.

*45. In the following rules the words "Medical Officer" mean the Commissioned Medical Officer, Military Assistant Surgeon, or officer of the rank of Civil Surgeon stationed at Jhánsi, Saháranpur, and Gháziabad, and at any other place which may be subsequently notified, for the purpose of carrying out these regulations.

Detention of trains.

46. Every train coming from the direction of Bombay in the case of Jhánsi, and of the Panjáb in the case of Saháranpur and Gháziabad, shall be detained at those stations so long as may be necessary for the medical examination of the passengers. The railway authorities shall detain the train so long as the Medical Officer may consider necessary for the purpose.

Note.—See also rule 50A.

Alighting of passengers.

47. On the arrival of the train at these stations, a passenger shall not alight from the train without the permission of a railway, police, or medical official.

Medical inspection.

48. Every passenger shall, on being requested to do so by any railway, police, or medical official, alight from the train, and proceed for the purpose of medical inspection to any spot that may be indicated by such official.

49. A passenger shall not depart from the spot so indicated without the permission of the Medical Officer.

Of females.

50. The examination of females shall be effected under the orders of the Medical Officer by a female medical practitioner or female medical subordinate.

G. O. No. 90, dated the 26th February 1897.

50A. All passengers from the Bombay Presidency shall alight at the Gháziabad railway station for medical examination in accordance, so far as they are applicable, with the foregoing rules.

B.—Segregation of Passengers.

Removal of suspected persons.

51. If, on inspection and examination of a passenger, the Medical Officer has reasonable ground for suspecting that he or she is infected with bubonic plague, the Medical Officer shall remove such person to the observation shed erected in the vicinity of the railway station, and shall arrange for the residence of such person in the observation shed for so long as he (the Medical Officer) may consider necessary.

Detention of persons believed to be suffering from plague.

52. If, on inspection and after due observation, the Medical Officer is satisfied that a passenger is suffering from bubonic plague, the Medical Officer shall immediately remove such person to the temporary hospital established for the purpose, where the patient shall remain so long as he (the Medical Officer) may consider necessary.

Segregation of friends and attendants.

53. If in any case a person removed to a temporary hospital is accompanied by friends or attendants, the Medical Officer may require so many of them as are not in immediate attendance on the patient to live in the immediate neighbourhood of the temporary hospital in segregation

*This and the following rules in Part III have been renumbered. The former numbers were 38 to 82. Some of the rules have been amended in conformity with the corresponding rules in Part II.

huts or tents provided for the purpose, and to remain in such place until they receive permission from the Medical Officer to depart.

Removal to hospitals.

54. If a person is attacked with bubonic plague while so segregated, the Medical Officer shall remove such person to the temporary hospital and may treat his friends and attendants as provided in the preceding rule.

Detention of attendants on deceased.

55. Upon the death of a sick person the Medical Officer shall for ten days detain under observation persons who have been in attendance on him in segregation huts, tents, or suitable structures established for the purpose in the neighbourhood, provided that this rule shall not apply to any medical practitioner, *hakim*, or *baid*, who may at any time attend upon a sick person, or to corpse bearers, mourners, and friends who have not been in attendance on the deceased.

Obedience to orders.

56. A person dealt with under the foregoing rules shall comply with any directions that may be given to him by the Medical Officer with regard to his removal to, and residence in, an observation shed, temporary hospital, or place of segregation, and with respect to the disinfecting or burning of bedding, clothing, and articles of a similar nature, or with respect to any other sanitary matter: he shall not depart from any such place of detention without the permission of the Medical Officer.

Disinfection of clothes, &c.

57. If necessary, the Medical Officer shall himself arrange for the disinfection or destruction of clothes, &c. In cases where it is considered necessary that the clothes or bedding, &c., of a traveller should be burnt, the Medical Officer may, if the person is poor or for other sufficient reason, arrange for providing other articles in their place at the expense of Government.

Report of cases.

58. The Medical Officer shall immediately report by telegraph to the Civil Surgeon, the Magistrate of the district, and the Medical Inspector the case of any person removed under his order to an observation shed, temporary hospital, or place of segregation, and the occurrence of any death, or the discovery of a dead body, in a train or on railway premises.

C.—Disposal of corpses.

Disposal of corpses.

59. In the event of a death occurring in a case where the existence of bubonic plague was known or suspected, or of a corpse being found in a train, if the place of burial be one set apart by Government as suitable for the interment of corpses of persons who have died of plague, or an ordinary burial place distant from habitations or sources of water supply, it shall be sufficient to bury the body six feet deep. If the place of a burial be a graveyard in which, by reason of its proximity to habitations or water supply, special precautions are necessary, the Medical Officer may, in addition, require the disinfection of the grave by placing a layer of chloride of lime in the grave. In this case two feet of earth shall be interposed between the lime and the corpse, so that lime shall not come in contact with the corpse. The coffin and cloth used to cover the corpse, when not interred with the corpse, shall be disinfected by the relatives under directions of the Medical Officer, such directions being in accordance with the religious observances and customs of the family. In cases where cremation is the custom, the body shall be completely burned at the usual burning ghát or other isolated locality in accordance with custom, the cloths brought in contact with the body being either burnt according to custom or disinfected.

D.—Relations of Medical, Police, and Railway Officials.

60. In carrying out the foregoing instructions, the Medical Officer shall keep in communication with the Civil Surgeon, and the latter shall give the Medical Officer assistance in all cases in which he may require it.

Duties of railway and police officials.

61. The railway police and railway authorities shall assist the Medical Officer in carrying out these rules.

II.—Procedure at Stations where Assistant Surgeons or Hospital Assistants are posted.

A.—Inspection of Passengers.

Hospital assistants.

62. An Assistant Surgeon or Hospital Assistant has been placed at the railway stations noted on the margin, whose sole duty is to watch the trains coming from the direction of places infected with bubonic plague, and to observe the passengers who alight or change trains at the stations.

Agra Cantonment.
Ajudhia Ghat.*
Allahabad.
Benares.
Cawnpore Junction.
Gorakhpur.*
Kotdwara.
Lucknow Junction.
Mau.†
Meerut City.‡
Moghal Sarai.
Muttra.

* G. O. No. 394 / XVI—404B, dated 4th May 1898.

† G. O. No. 342 / XVI—404B, dated 14th April 1898.

‡ G. O. No. 87, dated the 26th February 1897.

Railway authorities to allow time for inspection.

63. The railway authorities shall allow sufficient time for the observation *(a)* of passengers who alight, and *(b)* of passengers who change carriages for the purpose of proceeding by other trains; and shall make such arrangements as may be necessary for the purpose.

Removal of suspected persons.

64. If the Assistant Surgeon or Hospital Assistant suspects a passenger to be suffering from bubonic plague, he shall immediately arrange for the removal of such person to the observation shed in the vicinity of the railway station, and for his detention and treatment therein pending the arrival of the Civil Surgeon. He shall report his action forthwith to the Civil Surgeon and the Magistrate of the district.

B.—Segregation of Passengers.

Procedure of Civil Surgeon.

65. On receiving a report under the preceding rule, the Civil Surgeon (or the officer in charge of his duties) shall at once proceed to the observation shed, and shall arrange, if, in his opinion, the circumstances of the case require it, for the detention of the person infected or suspected of being infected with bubonic plague and for the removal, if necessary, of such person from the observation shed to the temporary hospital.

Segregation of friends.

66. If in any case a person removed to a temporary hospital is accompanied by friends or attendants, the Civil Surgeon may require so many of them as are not in immediate attendance on the patient to live in the immediate neighbourhood of the temporary hospital in segregation huts or tents provided for the purpose, and to remain in such place until they receive permission from the Civil Surgeon to depart.

Removal to hospital.

67. If a person is attacked with bubonic plague while so segregated, the Civil Surgeon shall remove such person to the temporary hospital, and may treat his friends and attendants as provided in the preceding rule.

Segregation of attendants on deceased.

68. Upon the death of a sick person the Civil Surgeon shall for ten days detain under observation all persons who have been in attendance on him in segregation huts, tents, or suitable structures established for the purpose in the neighbourhood, provided that this rule shall not apply to any medical practitioner, *hakim*, or *baid*, who may at any time attend upon a sick person, or to corpse bearers, mourners, and friends who have not been in attendance on the deceased.

69. A person dealt with under the foregoing rules shall comply with any direction that may be given to him by any officer empowered under these rules with regard to his removal to, and residence in, an observation shed, temporary hospital, or place of segregation, and with respect to the disinfection or burning of bedding, clothing, and articles of a similar nature or with respect to any other sanitary matter: he shall not depart from any such place of detention without the permission of the Civil Surgeon.

Obedience to orders.

70. If necessary, the Civil Surgeon shall himself arrange for the disinfection or destruction of clothes, &c. In cases where it is considered necessary that the clothes or bedding, &c., of a traveller should be burnt, the Medical Officer may, if the person is poor or for other sufficient reason, arrange for providing other articles in their place at the expense of Government.

Disinfection of clothes, &c., by Civil Surgeon.

71. The Civil Surgeon shall immediately report to the Magistrate of the district the case of any person removed under his order to a temporary hospital or place of segregation and the occurrence of any death in the case of a person believed to be infected with bubonic plague.

Report.

C.—Disposal of corpses.

72. In the event of a death occurring from bubonic plague, or of a corpse being found in the train, the Civil Surgeon will be guided by rule 41.

D.—Duty of Railway Police and Railway Authorities.

73. The railway police and railway authorities shall assist the Civil Surgeon or other official in carrying out these rules.

III.—Procedure at Stations other than those dealt with under I and II.

[At Haldwani, Hardwár, Roorkee, and Lhaksar special arrangements have been made; separate rules have been issued regulating the inspections at Haldwani.]

74. At all stations the Station Master and other railway officials should watch persons who alight from the trains, more especially those who have travelled from the direction of Bombay or other places where plague is prevalent, with the view of detecting cases of bubonic plague.

Observation of persons by railway officials.

75. At the stations noted in the margin officers of the [illegible] detention therein until he can be inspected by a Medical Officer. Any person desiring to accompany the sufferer shall be permitted to do so. The Station Master shall immediately report the matter to the nearest Civil Surgeon, the nearest District Magistrate, the Medical Inspector, and the Sanitary Commissioner.

Removal of [illegible]

Gonda.	Sitapur.
Hardoi.	Sháhjahánpur.
Hardwár.	Tundla.
Háthras.	Unao.
Jaunpur.	

THE following is added to the list of railway stations shown in the margin of rule 75 of the amended Plague Rules:—

Meerut Cantonment.

W. H. L. IMPEY,
Secy. to Govt., N.-W. P. and Oudh.

G. O. No. 581 XVI—404B, dated 27th June 1898.

76. At other wayside stations such persons, if booked through, may be permitted to proceed to the nearest station at which a temporary hospital has been provided, the Station Master telegraphing to such station the details of the case, the name of the sick person, and the number of the carriage. If such persons alight at the wayside station, they should be removed by the railway or police officials to some isolated place, and the fact should be reported forthwith by the Station Master to the officer in charge of the nearest police station as well as to the authorities mentioned in the preceding rule.

Procedure at wayside stations.

77. The Civil Surgeon, on receiving a report under rule 75 or 76, will proceed to the spot (or depute a competent subordinate) to take action, so far as may be necessary or possible, in accordance with the provisions of rules 65 to 72; the railway police and railway authorities shall give him all assistance required.

Civil Surgeon.

78. A person dealt with under the foregoing rules shall comply with any direction that may be given to him by any officer empowered under these rules with regard to his removal to, or his detention in, an observation shed, temporary hospital, or place of segregation, and with respect to the disinfection or burning of bedding, clothing, and articles of a similar nature, or with respect to any other sanitary matter: he shall not depart from any such place of detention without the permission of the Civil Surgeon.

Obedience to orders.

IV.—Duties of Medical Inspectors.

79. The following officers have been placed on special duty as travelling Inspectors in connection with these regulations within the limits of the North-Western Provinces and Oudh:—

Appointment of travelling inspectors.

Rank of Officer.	Headquarters.	*Circle of Inspection.*	
		Principal railway stations.	Extent of railway.
Assistant Surgeon...	Ghaziabad ...	Bareilly, Meerut ...	1. [illegible] be- [illegible] li-
			2.
			3. Rohi Luc Bare
Civil Medical Officer.	Cawnpore ...	Agra, Cawnpore, Lucknow, Muttra.	1. East In ziabad
			2. Bombay- Railway and Agra — Central Cawnpore, M.
			3. Indian Midland Railway betwe Cawnpore, Lalitpur, and Agra, an from Jhánsi to Manikpur.
			4. Oudh and Rohilkhand Railway between Cawnpore and Lucknow.
Assistant Surgeon...	Allahabad ...	Allahabad, Benares, Moghal Sarai.	1. East Indian Railway between Allahabad and Buxar; also between Allahabad and Manikpur.
			2. Oudh and Rohilkhand Railway between Moghal Sarai and Lucknow; also Rae Bareli and Bahramghát Sections.
			3. Bengal and North-Western Railway.

80. Each Medical Inspector shall travel frequently over the lines of railway included in his circle, and shall make surprise visits at least once a week to the principal stations. He shall examine the method adopted for inspection of passengers, and the arrangements made for the provision of observation sheds, temporary hospitals, and segregation huts or tents. He will ascertain that all orders are being properly carried out, and that the prescribed duties are being performed.

Duties of Inspectors.

81. A Medical Inspector shall keep a register showing dates of visits (with time of arrival and departure) to each station, a copy of which shall be forwarded weekly to the Sanitary Commissioner.

Maintenance of registers.

82. The Medical Inspector will receive from all subordinates and from the railway authorities telegraphic information of the occurrence of a case, or suspected case, of bubonic plague, or of the discovery of a dead body in the train or on railway premises.

Reports of cases.

83. The Medical Inspectors will be directly subordinate to the Sanitary Commissioner. They should communicate freely and without delay with Civil Surgeons on all points requiring action, and should report to them any defects in the arrangements or shortcomings on the part of subordinates, forwarding at the same time a copy of the report to the Sanitary Commissioner for information.

V.—General Rules.

84. No certificate as to the nature of an illness or the cause of a death shall be given in any case dealt with under these rules by any medical officer of lower rank than Assistant Surgeon.

Grant of certificates.

85. The railway police shall arrange for the immediate removal on a *charpai* of any dead body found at, or in the vicinity of, a railway station, and at places where a Civil Surgeon is stationed, for its detention, together with those accompanying it, until it has been inspected by a Medical Officer.

Removal of corpses from trains, &c.

At stations where a temporary hospital has been erected, the body shall be taken to the hospital; at other places it shall be placed in an isolated place at a suitable distance from the station. The matter shall be immediately reported by the railway police to the District Magistrate and Civil Surgeon for orders.

On receipt of information the Civil Surgeon (or officer in charge of his duties) shall (unless the case occurs at Jhánsi, Saháranpur, or Gháziabad, where special Medical Officers are posted) at once proceed to the spot, the Magistrate deputing a responsible official to accompany him and to carry out his directions.

G. O. No. 63, dated the 18th February 1897.

86. At places where there is no Civil Surgeon, in the case of bodies not claimed by friends, the railway police will be guided by paragraph 344, section X, of the Police Regulations and Orders, and by the instructions in annexure I*: if there are friends accompanying the body, they shall, under the direction of the railway police, dispose of the corpse in the manner indicated in annexure I. The names and addresses of such friends shall be taken by the railway police, and shall be forwarded immediately to the Magistrate of the district in which the body was found, as well as to the Magistrate of the district in which they live, it being specially reported whether they came from the direction of Bombay (or other place in which bubonic plague is prevalent) or not. At stations where there are no railway police, the railway authorities shall report the finding of a dead body immediately to the nearest district police station (as well as to the nearest railway

* Page 13.

police station), and the officer in charge of the district police station or his subordinate shall at once proceed to the spot and take action as prescribed above for the railway police.

"X. 344. The railway police will be responsible for the burial or cremation in a proper and decent manner, in accordance with the nationality and religion of the deceased, of the bodies of all persons dying within railway limits and not claimed by friends. The property of such persons will be forwarded to the Magistrate of the district. Cost of disposal of the body will be paid by the Magistrate of the district."

87. In cases where death from plague is indicated, the Civil Surgeon will permit the immediate cremation or burial of the corpse in the manner prescribed in rule 41 and will arrange for the isolation, if necessary, of those accompanying it, as provided in rule 38, together with such other measures as may be considered necessary by him.

Disposal of corpses.

88. The railway authorities shall telegraph intelligence of the occurrence of every case of plague or suspected plague to the Sanitary Commissioner, Lucknow, as is at present done with regard to cholera cases. The Sanitary Commissioner will immediately inform the Government of any reported case of plague, whether occurring on the railway line or elsewhere.

Telegraphic reports.

G. O. No. 90, dated the 26th February 1897.

Jhánsi.
Saháranpur.
Gháziabad.

89. Every passenger who alights at the stations noted on the margin, having come from a place in the Bombay Presidency,* or from a place in any other part of India in which bubonic plague is prevalent, shall give his name and address to the railway or police or medical or other official on duty at the railway station for the inspection or examination of passengers. It shall be the duty of such official to demand and record the names and addresses of such passengers as aforesaid. The officer who records the names and addresses shall forward them for information and for entry in list B *(vide* rule 2) to the Magistrate of the district to which the traveller is proceeding.

Record of addresses.

* Notification No. 315/XVI—404B, dated 7th April 1898.

Agra Cantonment.
Ajudhia Ghát.
Allahabad.
Benares.
Cawnpore Junction.
Gorakhpur.
Kotdwara.
Lucknow Junction.
Mau.
Meerut City.
Moghal Sarai.
Muttra.

Note 1.—This duty has been imposed upon the special police officers posted at Jhánsi, Saháranpur, and Gháziabad (under the orders of the Medical Officers on duty), and at the remaining stations on the railway police (in communication with the hospital assistants) (G. O. No. 91, dated 26th February 1897).

Note 2.—Arrangements have been made for punch-marking with a special mark the tickets of passengers leaving the Bombay Presidency by rail and the tickets of passengers from infected districts in other parts of India.

Notification No. 119/XVI—404B-810, dated 9th February 1898.

89A. Every passenger who alights at any railway station in the North-Western Provinces on the Indian Midland Railway or on the portion of the East Indian Railway noted on the margin, having come from a place in the Bombay Presidency,† or from a place in any other part of India in which bubonic plague is prevalent, shall give his name and address to the police officer on duty at the railway station for the inspection or examination of passengers.

Main Line, Buxar to Tundla Junction (inclusive of these places), Agra Branch, Jubbulpore Line.

† Notification No. 335/XVI—404B, dated 12th April 1898.

Note.—The following instructions have been issued for the guidance of the special police officers employed on the Indian Midland Railway and portions of the East Indian Railway. One or more literate police officers enlisted under Act V of 1861 are posted at each railway station situated within the above area to carry out the duties indicated. A small inspecting staff is also employed to travel up and down the line to supervise the working of the system and to see that the rules are not made a cover for oppression (G. O. No. 117/XVI—404B, dated 9th February 1898).

i.—The following instructions cover—

(1) the Indian Midland Railway, including the lands lying within the Native States in the Central India Agency and in the Dholpur State in Rájputána;

(2) the East Indian Railway from Buxar to Jubbulpore, and from Allahabad to Agra (inclusive of these places).

ii.—When a passenger with a punch-marked ticket * alights at any railway station, his name and address shall be taken by the special police officer appointed for the purpose.

* *I.e.*, a ticket punched with a special mark on the borders of the Bombay Presidency or at other places where plague is prevalent.

iii.—If the passenger is proceeding to a place in British India, the police officer shall at once forward the name and address to the Magistrate of the district in which the place is situated and to the officer in charge of the police station in whose circle the place is situated.

iv.—If the passenger is proceeding to a place in a Native State, the police officer shall at once forward the name and address to the Political Officer of the State in which the place is situated.

v.—If at any railway station a passenger whose name and address have been taken under clause (ii) re-books within 48 hours, the number of the fresh ticket obtained by him and his name should be telegraphed down the line by the special police officer to the police officer at the place for which the fresh ticket has been supplied, and on alighting at the station, the passenger should be treated as a passenger holding a punch-marked ticket. Every endeavour should be made by the police to identify passengers re-booking.

vi.—In the North-Western Provinces, on the arrival in any village or town of a passenger whose name and address have been received under clause (iii), the name will be entered in list B prescribed by rule 2(2).

G. O. No. 129, dated the 4th March 1897.

90. When any through carriage from the Bombay Presidency is detached from a train at any railway station in the North-Western Provinces and Oudh, it shall be disinfected or ventilated in the following manner as soon as possible and before it is again brought into use :—

Disinfection of railway carriages from Bombay.

"Third and intermediate class carriages—

The interior woodwork of the carriages, especially the floors and seats, should be thoroughly washed with a solution of perchloride of mercury (1 in 1,000) or with a carbolic acid solution (a wineglassful to a gallon) : the doors and windows should be opened, and the vehicle exposed to the air.

"First and second class carriages—

The floors and woodwork should be treated as above, the cushions being also brushed and thoroughly cleaned."

91. [Most railway companies have provided sufficiently for the disinfection of infected railway carriages by their own rules, but the following rules have been issued by the Government for observance within the limits of the North-Western Provinces and Oudh :—]

G. O. No $\frac{136}{\text{XVI—404B-164}}$, dated the 8th March 1897.

(i) For observance by the Bombay-Baroda and Central India Railway Company :—

(1) When a case of bubonic plague has been detected in a railway carriage, the carriage shall be disinfected in the manner provided in the rules dealing with ordinary contagious diseases.

Disinfection of infected railway carriages.

(2) In addition, carbolic acid powder shall be sprinkled on the floors and seats, or the interior woodwork of the carriages shall be thoroughly washed with a solution of perchloride of mercury (1 in 1,000) or with a carbolic acid solution (a wineglassful to a gallon).

(3) The doors and windows shall then be thrown open, and the carriage kept in a siding, unused, for two days.

(4) A sufficient supply of disinfectants shall be kept at all stations.

G. O. Nos. $\frac{185\text{-}186}{\text{XVI—404B}}$, dated the 22nd March 1897.

(ii) By the East Indian and Bengal and North-Western Railway Companies :—

When a case of bubonic plague has been detected in a railway carriage, the carriage shall, after disinfection, be kept in a siding, unused, for two days.

NAINI TAL :
The 5th May 1898.

W. H. L. IMPEY,
Secy. to Govt., N.-W. P. and Oudh.

APPENDIX A.

Supplementary Rules under the Epidemic Diseases Act (III of 1897) *applicable, with the sanction of Government, to towns in which plague is prevalent* (vide *note to rule* 22).

I.—MEASURES CONCERNING THE INFECTED AREAS.

THE areas determined by the Magistrate and the Health Officer from time to time to be infected shall be isolated, a cordon shall be placed round them, and no person shall be allowed to enter them without permission.

2. The inhabitants of such infected blocks shall remove to the camps established for their occupation. Any person wishing to leave the camps shall remain for twelve days under medical observation and shall, before leaving, obtain a written permission to do so from the Health Officer or Magistrate. Information of the departure of such persons shall be sent to the Magistrates of districts to which they are proceeding. Provision for watch and ward of the evacuated quarter and for the custody of the property of persons who have removed from it shall be made in accordance with rule 39 of Notification No. $\frac{212}{\text{XVI—404B}}$, of 26th March 1897.

N.B.—The accommodation in the camps has been provided with due regard to the convenience of families and the privacy of females.

3. Subject to the provisions of rule 2, the inhabitants of the infected blocks shall reside in the camps for one month or until the block of which they were residents is declared to be safe for re-occupation.

4. Residents in the camp shall be liable to medical examination daily, females being inspected by female medical officers.

5. Residents in the camp shall be permitted during the day to visit all parts of the Municipality other than the areas declared to be infected, but should cook their meals and sleep in the camp.

6. After the evacuation of an infected block, the houses, &c., shall be thoroughly cleansed and disinfected, the owners and occupiers being allowed to be present at the time.

7. Facilities shall be given in the camps for persons to open shops and carry on their trades so far as they may be consistent with the object of these rules.

8. Hospitals and segregation huts for the accommodation and reception of persons suffering from plague and for their friends and attendants shall be provided in accordance with G. O. No. $\frac{234}{\text{XVI—404B-283}}$, of 5th April 1897.

9. Free access shall be given in the camps and hospitals to *baids*, *hakims*, and *pandas*, and religious instructors, who shall be free to treat and communicate with those who desire to consult them.

II.—MEASURES REGARDING VISITORS AND PILGRIMS COMING TO THE TOWN FROM INFECTED AREAS.

10. All pilgrims and visitors from the Bombay Presidency or other places infected with plague, coming to the town by rail or road, shall reside in the camp provided for the purpose, where provision has been made for their accommodation. They shall be permitted during the day to visit the town, shrines, and bathing *ghâts*, but must cook their food and sleep in the camp at night. Such visitors shall be liable to medical inspection from time to time.

III.—General.

11. The provisions of rule 31(2) of the rules published in Notification No. $\frac{212}{XVI-404B}$, dated 26th March 1897, shall, until further notice, apply to *all* deaths occurring in the Municipality :—

"*Rule* 31(2).—The dead body of a person who has died of bubonic plague shall not be removed from the house in which the death occurred until after the expiry of six hours from the time a notice of such intended removal shall have been delivered at the nearest police station by or on behalf of the friend of the deceased or of the owners or occupiers of the house, unless the Health Officer or other sanitary or executive authority has permitted earlier removal or unless a mortuary chamber or hut is established near a cemetery or burning *ghát*, to which the dead body may be removed pending inspection."

Note.—The object of this rule is to provide, where necessary, for the inspection of corpses by a medical officer, the only effective means of detecting concealed cases of disease. It should be notified that a body may be removed directly after death without inspection by a medical officer if an authorized medical officer has visited the patient shortly before death and can give a certificate of the cause of death. It is not necessary that the medical officer should have attended the deceased professionally, and no fees will be charged for such a visit. The inspection of corpses of females should of course be conducted by female agency.

In doubtful cases, especially at the first commencement of a suspected outbreak, specimens should be obtained in the manner laid down in the directions attached (Appendix B) and sent to the Government Bacteriologist for examination. But this procedure should not be insisted on after the character of the disease has been determined.

12. The owner of every house in the Municipality, or, if the owner be non-resident, the occupier, and every head of a family resident therein, shall report at the nearest police station the illness of any person in such house immediately such illness is apparent.

APPENDIX B.

Directions for sending specimens for examination for the bacillus of Bubonic Plague.

(See rule 11, Appendix A.)

The gland should be cut into and a small portion of the contents taken out. This should be spread on a piece of glass in as thin a layer as possible. This smear or layer should then be allowed to dry in the sunlight. It is most important that the smear or layer should be thin. The best way to do this is to place a small drop between two pieces of glass. This will then run out into a thin layer. The two pieces of glass should then be pulled apart. Then each will be found covered with a thin layer, which should at once be allowed to dry. When dry, the pieces of glass should be wrapped in paper and sent to the Chemical Examiner, Agra, for examination.

Pieces of ordinary window glass may be used for the above purpose. If possible, they should be cut into pieces three inches long by one inch wide, the central portion of which should be smeared with the gland substance. Cover slips are more suitable if available.

On no account should films of blood or gland substance be sent in an undried state between two pieces of glass, or between a glass slide and a cover slip.

Specimens made as above described from glands give more satisfactory results than specimens made from blood.

In carrying out the above process, it is only necessary to make a minute cut into the gland. It is neither necessary nor advisable to take out the gland, and as only so small a cut has to be made into the corpse, there can be no grounds for the relatives to raise objections.

E. H. HANKIN,
Govt. Analyst, N.-W. P. and Oudh.

The 22nd September 1897.

APPENDIX C.

(Vide rules Nos. 19 and 22.)

Extracts from papers regarding the organization established in villages for the detection of cases of Plague.

No. $\frac{20A}{XVI-404B}$, dated the 8th January 1898.

From—W. H. L. IMPEY, ESQ., *Secy. to Govt., N.-W. Provinces and Oudh,*

To—Commissioner, Meerut Division.

* * * * * * * *

2. The plan which the Lieutenant-Governor and Chief Commissioner has decided to adopt is that which proved successful in distributing relief during the recent famine, *viz.*, to place a sufficient number of European officers at the disposal of the Commissioner and to divide the tract concerned into convenient charges for each of these officers. I am to request you to at once determine the area of country to which suspicion of infection attaches, taking Hardwár as the centre of operations. Your determination of the area should be so wide as to exclude the possibility that any infected village will escape. Your delimitation should include, not only villages in the Meerut Division, but also those in the adjacent districts of the Rohilkhand Division which may appear to be within the zone of infection. The search parties recently at work will no doubt be able to afford you valuable assistance in determining this area.

3. Having determined the area to be dealt with, this must be divided into plague sub-divisions of a size suitable for the charge of a single officer. * * * Each sub-divisional officer should have attached to him—

(1) an assistant of the stamp of tahsíldár or selected naib tahsíldár;

(2) a selected Sub-Inspector of Police; and

(3) an Assistant Surgeon or a selected hospital assistant.

Some clerical establishment and orderlies will also be required. Each sub-divisional officer will be allowed a permanent advance of Rs. 500, out of which he will keep his circle and sub-circle officers in funds, submitting detailed bills when recouping his permanent advance. It may be noted that the cost of constructing segregation huts, cleaning up, &c., should be borne by the landlords and villagers themselves so far as it may be possible to effect this.

4. Each plague sub-division must be sub-divided into circles, and these again into sub-circles if necessary. Over each circle an officer of the standing of naib tahsíldár on a pay of Rs. 50 per mensem, with a *chaprási* on Rs. 5 per mensem, must be appointed, to be employed on plague work only. He may, if desired, be a selected *kanúngo*, but in that case he must be relieved of all other work. The size of each circle should not be greater than will admit of each village being visited at furthest once in three days by the circle officer. If the disease spreads, each circle may be divided into sub-circles in the charge of a selected *patwári* on Rs. 10—15 per mensem.

5. The organization above described having been effected, the officers will set to work to examine every house and every inmate of every house in every village and hamlet in the circle, care being taken that native customs are respected and that no woman who observes *parda* is inspected by a man. The examination having once been made and the sub-divisional officer being satisfied that plague does not exist in the village, effective arrangements must be made for obtaining immediate information of cases of illness and of deaths. It will be unnecessary to repeat the examination unless a village was subsequently believed to be infected.

The services of the landlords' agents, the *lambardárs*, and *patwáris*, will be utilized as they were in the organization of village gratuitous relief. If the village inspection brings to light any suspicious cases, the procedure for dealing with them is laid down in Parts I and II of the rules issued under the Epidemic Diseases Act and in Annexure I to these rules. * * * *

* * * * * * * * *

8. The circle officer (or sub-circle officer) will send every evening to the sub-divisional officer a statement showing—

(1) the number of villages or hamlets visited by him during the day;

(2) the number of houses examined;

(3) the number of persons found with suspicious symptoms;

(4) the number of persons ill with plague;

(5) the number of persons (other than those shown in columns 3 and 4) segregated;

(6) the number of deaths during the day;

} in each village or hamlet visited.

The sub-divisional officer will transmit a daily abstract of these reports for his sub-division to the Collector and to the chief local medical officer having medical charge of the plague operations. The *chaukidár* of each village should be required to report every death or case of serious illness in his village to the sub-divisional or circle officer, as well as to the officer in charge of the police station. * * *

After determining the extent of the suspected area and the number of circles into which it should be divided, you will be able to allot the required officers to each circle and to report by telegraph whether the present establishment requires to be strengthened in any way.

* * * * * * * * *

Extract from Resolution No. $\frac{104}{XVI-404B}$, *Sanitation Department, dated the 4th February* 1898.

10. The object of the organization indicated above is to provide for the close watching of the villages concerned, the observation of all cases of sickness, whether fatal or not, the immediate detection of a case of plague, and the enforcement of the measures sanctioned by Government when cases of plague have occurred in a village. In villages situated in the tracts under observation the names of all the inhabitants are recorded by the *patwáris*, and each inhabitant will be inspected by the sub-divisional or circle officer and their medical subordinates (or by the female assistant when necessary) at frequent periods, the village being visited by the sub-divisional or circle officer once in every three days in the area where the death rate is highest, and once in every week elsewhere. The leading men of the village will accompany in their rounds the inspecting officers, who will satisfy themselves that no one is suffering from plague or from suspicious symptoms in the village visited. Should a suspicious case of illness or a suspicious death occur, the precautionary measures already made known in every village and town, and prescribed for adoption pending the arrival of the medical officer, will be at once taken, and intimation will be conveyed to the medical officer attached to the circle, who will forthwith proceed to the spot in order to determine whether it is a case of plague necessitating the treatment of the village or a portion of it as infected. In case a village is treated, either wholly or in part, as infected, it will be placed under special officers, who will follow the procedure laid down for such cases in the general rules.

APPENDIX D.

Memorandum on Disinfection, by Surgeon-Lieutenant-Colonel S. J. Thomson, C.I.E., D.P.H. (Camb.), *Sanitary Commissioner, North-Western Provinces and Oudh,—dated the 7th December* 1897.

In the event of plague appearing in any town or locality, it is necessary that, before any one is permitted to leave the infected block or quarter of the town or locality, his or her clothes, bundles, and person should be effectually disinfected. At the present time in these provinces the procedure adopted is as follows :—

I.—Method of disinfection of clothes and personal effects at camps of observation where time is not an object.

Any one wishing to leave the infected area is removed to an observation camp. On arrival the clothes, bedding, &c., are soaked for three hours in a solution of 1 to 1,000 of perchloride of mercury with 2 per 1,000 of hydrochloric acid and then dried in the sun. Articles which cannot be so treated are sponged over with the same solution, boiled, or soaked in a solution of carbolic acid. Metal vessels are exposed to fire. Silks are spread in the sun for eight hours and turned over several times. Rags, old *razais*, and dirty articles of small value are burnt. The people desiring to leave the locality are made to bathe regularly and are detained in the observation camp for ten days. If at the end of this time they, on medical examination, are found to be still healthy, the process of disinfection of clothes, &c., is repeated and they are allowed to depart.

This procedure is possible under the conditions now obtaining in these provinces, but involves too long a detention of people to be practicable in all cases.

II.—Method of disinfection of clothes, &c., of travellers.

The following system is ordered by the Bombay Government to be adopted :—

"The first point is to prevent any sick person leaving an infected town. Railway individual inspection of departing as well as arriving passengers should be rigorous, and no one with any suspicion of fever should be allowed to leave. Next, no one should be allowed to go or come by railway without disinfection of themselves and clothes and bundles. The railway can probably supply a strong boiler with a sufficiently large hole to take a traveller's bundle ; steam pressure not less than 20lbs. and temperature about 250°. The bundle to be opened out and then loosely tied together and steamed for 20 minutes. An old locomotive can be connected with this boiler to supply steam. There should be a long shed within a screened enclosure, divided into compartments near the steam disinfector—one for women, and another, quite apart, for men. In each compartment is a bathing tub with Jeye's Fluid or carbolic acid of weak strength, say about 1 in 100, also a coarse sheet for women. The woman divests herself of garments and wraps herself after her bath in the sheet. Her garments are meanwhile taken by the female attendant and dipped for ten minutes in Jeye's Fluid or crude carbolic acid, strength not less than 1 in 20, dried and given back to the woman. The man generally bathes and then dips his own garments, or the garments can be steamed. A European or Eurasian male and female must be always present, for everything depends on the work being thorough. No one should be allowed to take a ticket without the disinfection pass of that day's date. Bundles can also be stamped with a 'D' and figure for date."

The following procedure is recommended by the Venice Convention :—

"1. Personal effects, rags, infected bandages, papers, and other articles without value should be destroyed by fire.

"2. Under-clothing, bedding, wearing apparel, mattresses, carpets, &c., which are contaminated or suspected, should be disinfected in stoves at normal pressure, or at a pressure of from one and a half to two degrees, with or without the presence of steam.

"Before a stove is passed as efficient for the purposes of disinfection, it should be subjected to a test, with the aid of a signal thermometer, showing the moment when the temperature in the middle of a mattress rises to at least 100° (centigrade).

"To ensure that the disinfection is effective, this temperature must be maintained for from 10 to 15 minutes.

"3. Disinfecting solutions :—

(a) Solution of corrosive sublimate of 1 part in 1,000, with the addition of 10 grammes of chloride of soda. The solution should be coloured with aniline dye or indigo. It should not be placed in metal vessels.

(b) A 5 per cent. solution of pure crystallized carbolic acid, or 5 per cent. of crude commercial carbolic acid in a warm solution of soft soap.

(c) Fresh slaked lime.*

"4. Special instructions to be observed in the employment of disinfecting solutions :—

"The linen, clothing, and articles soiled by the excreta of patients should be soaked in the solution of corrosive sublimate. The solution of pure carbolic acid, and the solution of soap and carbolic acid, are equally suited to the purpose. The articles should remain in the solution for at least six hours.

"Articles which cannot be subjected to the temperature of the stove (100° centigrade) without injury, such as leather goods, wooden articles stuck together with glue, felt, velvet, silk, &c., should be washed with the solution of corrosive sublimate ; coins can be disinfected with the solution of soap and carbolic acid.

"Persons engaged in nursing the sick should wash their hands and faces with the solution of corrosive sublimate, or with one of the carbolic solutions.

"The carbolic solutions will be useful more particularly for disinfecting articles, such as metals, instruments, &c., which can neither be subjected to a temperature of 100° centigrade nor placed in contact with corrosive sublimate.

"Slaked lime is particularly recommended for disinfecting excreta. Expectorated matter should be burnt."

Where the same is possible, His Honor the Lieutenant-Governor considers the system of detention for ten days in an observation camp, with disinfection as described, both on admission and departure, to be the safest plan. But for systematic and rapid disinfection on railways, where passengers can only be detained for a short time, the best procedure seems to be disinfection by boiling and steam, the temperature to be 250° and the pressure 20lbs. The person of the traveller should be at the same time disinfected in the manner prescribed by the Bombay Government. Where clothing, &c., are likely to be injured by subjection to boiling and steam, alternative methods by soaking in a solution of perchloride of mercury, carbolic acid, or exposure to a strong sun for eight hours, must be adopted according to the requirements of individual cases and in accordance with the instructions laid down by the Venice Convention.

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* To get very strong slaked lime, take lime of good quality, slack it by moistening it gradually with half its weight of water. When the operation is completed, put the powder in a carefully corked receptacle, and place it in a dry spot. As each kilogramme of lime absorbs 500 grains of water in order to become slack, it acquires a volume of 2 litres 200 grains, and it is sufficient to dilute it with double its volume of water, say 4 kilogrammes 400 grains, to obtain a whitewash which will be of about 20 per cent. strength.

III.—Method of disinfection of houses and their contents.

The following procedure should be adopted for the disinfection of a house or hut in which plague has occurred :—

The property is to be removed from the house in the presence of the owner. All worn out mats, *chappars*, rags, and destructible matters of little value should be burnt, after such things have been valued by a committee of native gentlemen.

Furniture, clothes, curtains, &c., should be mopped over with or soaked in the perchloride of mercury solution or dealt with in one or other of the various ways detailed in the first part of this memorandum. Grain should be spread out and turned over and exposed to a strong sun for eight hours. Godowns should be disinfected, and rat and mice holes stopped up with cement before the grain is replaced.

Sulphur should be then burnt in the closed house in the proportion of half a *sér* to every 1,000 cubic feet. The sulphur should be moistened with methylated spirit and a *dekchi* of water kept boiling in the room in which the sulphur is burning. After an interval of some hours the house should be opened and the whole of the roof, walls, and (if it be *pakká)* the floor should be mopped or washed over with a solution of perchloride of mercury 1 in 1,000 and coloured with aniline blue. To the solution hydrochloric acid in the proportion of 2 parts per 1,000 should be added. Not an inch of surface should be left undisinfected, and cornices and cracks, &c., in the walls and roofs should be carefully sprayed with the same solution. If the floor be of earth, it should be dug out to the depth of four inches and the removed material carried away and suitably disposed of. Where the hut has a thatched roof or a thatched verandah, these should be burnt. Subsequently the interior of the house or hut should be limewashed with freshly slaked lime, and not re-occupied for one month.

Subordinates engaged in disinfection operations should be warned to always wear shoes when on duty, and to frequently wash their hands in the perchloride of mercury or carbolic acid solutions, especially if they have abrasions or wounds on the same.

It seems to be very important, when once plague has appeared in a town, to put on strong gangs of men for disinfection purposes at once, and not to confine operations to the house in which disease has actually occurred. In this part of the country the roof of an apparently isolated house is often only separated from that of the next house by a low wall, and the inhabitants communicate freely with one another in this way. The best procedure is to start work primarily in the house known to be infected, and at the same time disinfect all houses round this, and then those outside these, until the entire block of buildings, or a large area having the infected house for a centre, has been thoroughly disinfected. The operations must be under the charge of thoroughly reliable and painstaking men, as it is only where the procedure has been thorough and complete that success can be looked for.

APPENDIX E.

Inoculation with M. Haffkine's *Protective Serum.*

[*Vide note to rule* 35 (5).]

The advantages of inoculation with protective serum should be urged on people in places where plague is prevalent; but if they are unwilling to adopt this remedy, no compulsion should be employed. A supply of plague prophylactic is maintained at the Laboratory of the Chemical Examiner to the Government, North-Western Provinces and Oudh, Agra. Application for the serum (when required) should be made by Medical Officers to the Chemical Examiner, Agra, who will supply the same, together with the printed instructions as to its use, and certain forms (to be filled up).

Instructions for the use of the Plague Prophylactic.

1. Parcels to be opened and unpacked carefully. Any bottle found open, cracked, or with the sealing wax broken, is to be sent back to the Laboratory without being used. Prolonged exposure of the prophylactic to daylight is to be avoided.

2. The prophylactic is to be given by injection under the skin. For this purpose a hypodermic syringe of a suitable size is to be disinfected, in the beginning, by keeping it filled with a 5 per cent. solution of carbolic acid for 24 hours. After that, if the syringe is not used for other purposes, it will be sufficient to keep it filled for one hour before commencing operations. After the completion of each series of injections the syringe is to be washed out with the same antiseptic solution. The needle is cleaned outside with a wet cotton pad soaked with carbolic lotion. Syringes may be obtained from the Plague Research Laboratory, Bombay.

3. Each bottle before being opened is to be shaken, and the contents well mixed up each time before being absorbed into the syringe.

4. For opening a bottle a pair of dissecting forceps is used, the branches being heated beforehand in a spirit lamp, and guarded from contact with any other unsterilized object.

5. While opening a bottle, the mouth of it is passed several times through the flame of a lamp, and the sealing wax melted. The cork is then withdrawn with the sterilized forceps, both branches of which are shoved in between the cork and the neck of the bottle, on two opposite sides of the cork simultaneously. After the bottle is opened any contact between its mouth and other unsterilized objects is to be avoided ; and if contact inadvertently occurs, the mouth is to be heated again in the flame for disinfecting it. The contents, or a part of them, are absorbed into the syringe. For this purpose the bottle is kept as nearly horizontal as possible.

6. For an adult man, in average state of health, the *standard dose* is $2\frac{1}{2}$ cubic centimeters (15 minims counting for 1 C. C.). This is to be injected under the skin of the back of the upper arm, preferably the left one, avoiding as carefully as possible the muscles or the big vessels. For a woman the dose is 2 C. C. : for weakly persons the initial injection is tried with a reduced dose. A child of 10 gets 1 C. C. ; of 3 years from 0·1 to 0·3 C. C. The symptoms commence, as a rule, three to five hours after inoculation, and consist chiefly of swelling and pain at the seat of inoculation, and of a rise of temperature. The pain is felt particularly on movement of the part. The fever is accompanied by general discomfort usual to this condition. No treatment of the symptoms is required, beyond applying ice for the relief of headache, if any felt, and taking some rest. General symptoms subside after 24 to 36 hours ; the pain at the seat of inoculation lasts for three or four days, disappearing gradually ; a painless induration remains there for some time longer. It is desirable to produce a rise of temperature of at least 102°F. If the reaction is less marked, the operation may be repeated three or four days later, with the same or an increased dose.

according to the result of the first inoculation. There is no harm in leaving a longer interval between the two inoculations, or in dividing the doses in several parts to be given at an interval of a few days. In case the supply of prophylactic is accompanied by a direction of doubling or trebling the *standard* doses, this should be attended to; please, therefore, note the instructions on the label of each bottle.

7. No changes in diet or occupation are necessary, beyond, if possible, taking some rest.

8. The proyhylactic material is harmless, and can be thrown about without danger; but it is liable to get infected. A bottle, once opened, is therefore *not to be corked again*, but used up at once, or the rest of the contents thrown away. While a bottle is open, it should be guarded from insects flying or walking into it, or dust falling in. The empty bottles, the boxes, and, if possible, also the cotton in which they were packed, are to be returned to the Chemical Examiner, Agra.

9. In sealed up bottles, and when kept in dark and sufficiently cool places, the prophylactic is likely to retain its power indefinitely.

10. It is requested that a detailed account of all operations done, and of any observations made, be communicated at the earliest convenience to the Plague Research Laboratory, Bombay, through the Sanitary Commissioner, North-Western Provinces and Oudh, the *inoculation forms* supplied being filled up at the time of inoculation, and the occurrence of plague in families of the inoculated being noted, as soon as the information is obtained, in the *observation sheets*.

No.

Name in full— Sex— Age—
Caste—
Occupation or title—
Birthplace—
Present address—
General health—
Date of inoculation and dose—
Remarks—

_____189 .

_____

_____ years, has been inoculated against the plague,

on _____.

The inoculation causes fever and pain at the seat of inoculation, which last for a few days.

Occurrences of Plague in houses inhabited by persons inoculated against the Plague.

Full address.	Names, sexes, and ages of the *uninoculated* persons who were living in the same house on the date of attack. ——— Name, sex, age of the attacked, if he is amongst the *uninoculated*; date of onset of disease, symptoms, issue.	
	Names, sexes, and ages of the *inoculated* persons who were living in the house on the date of attack, with the dates of their inoculation. ——— Name, sex, age of the attacked, if he is amongst the *inoculated*; date of onset of disease, symptoms, issue.	

No. 799 of 1898.
XVI-2048.

From

THE UNDER SECRETARY TO GOVERNMENT,
N.-W. PROVINCES AND OUDH,

To

The Secretary to the Government of Madras,
Local and Municipal Department.

Dated Naini Tal 28th September 1898.

Sir,

Sanitation Department.

In compliance with the request contained in your letter No.1012P, dated the 5th September 1898, I am directed to forward six copies of the regulations issued by this Government under the Epidemic Diseases Act as amended up to date.

I have the honor to be,
Sir,
Your most obedient servant,

H. R. C Harley

Under Secy. to Govt. N.W.P. and Oudh.

P. No. 930.—1-4-98. 3,000.—P.D.

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N.B.—
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