

PLAGUE

SOP FOR CONTACT TRACING

Outbreak Response Unit, Division of Public Health Surveillance and Response
Centre for Emerging Zoonotic and Parasitic Diseases
National Institute for Communicable Diseases (NICD)
24-hour hotline number: 082-883-9920

Standard Operating Procedure for tracing of contacts

Plague is a zoonotic disease caused by a bacterium *Yersinia pestis*. Where plague is endemic, it is usually found in rodents and is spread by fleas from rodent to rodent, or to other mammals. Humans may acquire plague from persons with pneumonic plague through droplet transmission or from direct contact with infected rodents or through the bite of an infected flea. Pneumonic plague is highly transmissible, and follow up of persons who have been in contact with suspected or confirmed plague is essential, in order to prevent a widescale outbreak

Steps following identification of a case of suspected or confirmed plague include

1. Assessment of risk of transmission

- a. Clinical form of plague and transmissibility of *Yersinia pestis*
The transmissibility of *Yersinia pestis* depends upon the clinical presentation of the patient. Plague is transmitted through droplet transmission of the organism by persons who have pulmonary infection, and who are coughing. These persons include primarily those with pneumonic plague. Persons with septicaemic plague, and bubonic plague are not infectious UNLESS they are coughing. However, contact tracing and management should be conducted for persons with all forms of plague
- b. Definition of a contact
A contact is someone who has shared the same airspace with a person diagnosed with plague, within a radius of 2 meters. This includes all household contacts, all HCW that have dealt directly with the patient, and HCW and other patients who have been in the same room as the patient, airline travellers who have been in the same plane, and sat within 2 rows behind and in front of the patient (as a rule of thumb), airline crew working in the same section as the patient, and community contacts.
- c. Identification of opportunities for transmission and appropriate authorities to participate in contact tracing
From the moment when a person/ persons is identified as having suspected plague, contact tracing should commence. A conscientious HCW should obtain a detailed history of the movements of the patient/s and dates, including details on modes of travel (flight numbers, airline names, bus companies, taxi routes, ships etc) from the moment of onset of symptoms (usually fever) until the present moment. Where possible, the patient or his/her relative should be asked to identify names and contact details of the contacts. Patient movements should be formally documented, along with contact names and telephonic contact details, along with an estimate of the number of potential contacts in each time period.

2. Co-ordination of contact tracing

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Given the severity of plague, the relatively easy transmissibility, and the social and economic implications of an outbreak, the team of experts convened by the National Department of Health have agreed that the National Institute for Communicable Diseases team (Outbreak Response Unit with/without the Emergency Operations Centre) will co-ordinate contact tracing, together with the relevant provincial authorities. The NICD will

- a. Ensure that a detailed travel history is obtained from the patient/s including the movements of the patient/s and dates, details on modes of travel (flight numbers, airline names, bus companies, taxi routes, ships etc), social and occupational gatherings, from the moment of onset of symptoms (usually fever) until the present moment and identification of areas of possible transmission
- b. Conduct rapid training of persons involved in contract tracing in the use of personal protective equipment, infection prevention and control measures, and management of contacts
- c. Allocate responsibility to named individuals within provinces who will conduct contact tracing within specific areas, and report on their findings
- d. Maintain a line list of contacts, and ensuring adequate quality and duration of follow-up of contacts
- e. Ensuring appropriate management and diagnostic testing of contacts who become symptomatic during follow-up including identification of focal HCW to review suspected patients.
- f. It was agreed that the 11 tertiary facilities that were identified for EBV case management will be used should admission or assessment of contacts be required. These will be called the 'Infectious Disease focal points'. They are as follows:
 - i. In Gauteng, the ID physicians Drs Evan Should and Sarah Stacey, and
 - ii. In Cape Town, Prof Marc Mendelson and Dr Tom Boyles will be the contact persons. Named physicians will be identified in the remaining provinces.

3. IPC and safety of HCW doing contact tracing

- a. As the majority of contacts are not likely to have plague, and no pre-exposure prophylaxis is necessary for persons doing contact tracing. \
- b. Should direct contact with the patient be required, this should be conducted in the open air or a well ventilated space. If this is not possible, the persons conducting the follow up should wear N95 respirators
- c. In the event that direct contact was made with a contact who was later established to be symptomatic, the HCWs doing follow-up should receive appropriate antibiotic post-exposure prophylaxis.

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4. Management of contacts

- d. On receipt of contact list, persons doing contact tracing should initially attempt telephonic contact. If this fails, persons doing contact tracing should attempt to obtain alternative contact numbers, or trace persons through collateral contacts. A convenient meeting point should be arranged with the contact. If these measures fail, a home visit should be conducted.
- e. Contacts should be informed that they have been identified as a contact of the named index patient who has suspected/confirmed plague, and asked to confirm this.
- f. The following information should be obtained from each contact
 - i. Name, date of birth, place of residence, telephone/ cel number; name and number of alternate contact.
 - ii. Dates of exposure to index case (from...to), nature of contact (household, HCW, community).
- g. Contacts should be asked if they are experiencing any symptoms including fever, cough, enlarged lymph nodes. If contacts are symptomatic, they should be referred immediately to the Infectious Disease focal point. The contact should be informed to wear a mask/cover his/her cough. Transport should be arranged if necessary. The NICD should be informed immediately.
- h. If contacts are not symptomatic, they should be given information on plague orally, and referred to websites, and/or given pamphlets (if possible). The contact should be told the following:
 - i. The risks of getting plague should be explained – that plague is transmitted through droplet transmission, that the risk is small, but present
 - ii. The incubation period is 2-8 days with a maximum range of 14 days
 - iii. Symptoms to watch out for are fever, cough, swollen glands, chest pain
 - iv. If any of these symptoms appear within 14 days after the last date of contact with the patient, the contact should telephone the HCW
 - v. The HCW should give the contact his/her telephone number, and an alternate contact number
 - vi. The contact does not need to be quarantined, nor to change their activities for the 14 day period.
- i. All asymptomatic contacts should be given antibiotic post exposure prophylaxis as follows: ciprofloxacin 500mg po bd x 7 days or doxycycline 100mg bd x 7 days. HCW should be sure to stress the importance of completion of the antibiotic course.

5. Tracing of air-travel contacts

- a. Port Health will be responsible for obtaining names and contact details of passengers from airlines.

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- b. Port Health will hand names/contact details to NICD, who will allocate contact tracing responsibilities to provincial authorities.
- c. Should contact details of air-travel contacts be inadequate to reach them, NICD should identify strategies to reach these contacts. For example, it may be necessary to use public service announcements or media releases, and/or the use of social media to invite persons who were on particular flights to make contact with the NICD using the NICD hotline number.

6. Tracing of HCW contacts

- j. The Infection Prevention and Control nurse at the facilities where the patient/s were seen will be responsible for collating a list of staff members and other patients who were exposed to the patient.
- k. The IPC will also identify HCW who have reported ill at work, and follow up with each of these HCW to establish what these symptoms are, and if the HCW should undergo investigations for suspected plague;
- l. The IPC will communicate with and assess each contact as in point 4 above, and ensure completion of follow-up for the 14 day period for each contact
- m. The IPC will report back daily to NICD on their findings

7. Tracing of family, household, workplace and community contacts

- n. The relevant provincial CDC will be responsible for collating a list of family, household, workplace and community contacts who were exposed to the patient.
- o. The CDC will communicate with and assess each contact as in point 4 above, and ensure completion of follow-up for the 14 day period for each contact
- p. The CDC should prioritise family and household contacts
- q. The CDC should report daily to the NICD on their findings
- r. The NICD and CDC and province should together assess the need for
 - i. additional HCW personnel to support contact tracing
 - ii. additional measures to identify contacts including the use of public service announcements or media releases, and/or the use of social media to invite persons who were at particular events and who are symptomatic to make contact with the NICD using the NICD hotline number

8. Tracing of laboratory contacts

- s. The NICD will alert the laboratory manager of the lab where the specimens from the suspected/confirmed patient were sent to.
- t. The laboratory manager/pathologist will collate a list of staff members who were exposed to the patient/s' specimens, and especially will follow up those staff members who have reported in sick and are absent from work.

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- u. The laboratory manager will ensure that staff who have been exposed are followed up according to point 4 above.
- v. The laboratory manager will report back daily to NICD on their findings.

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CONTACT TRACING JOB CARD - PLAGUE

NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

Role: Co-ordination of contact tracing

The NICD will

- Ensure that a detailed travel history is obtained from the patient/s including the movements of the patient/s and dates, details on modes of travel (flight numbers, airline names, bus companies, taxi routes, ships etc), social and occupational gatherings, from the moment of onset of symptoms (usually fever)
- Conduct rapid training of persons involved in contract tracing in the use of personal protective equipment, infection prevention and control measures, and management of contacts
- Allocate responsibility to named individuals within provinces who will conduct contact tracing within specific areas, and report on their findings
- Determine if additional means (public service announcement, social media etc) are necessary to identify contacts
- Maintain a line list of contacts, and ensuring adequate quality and duration of follow-up of contacts
- Ensuring appropriate management and diagnostic testing of contacts who become symptomatic during follow-up including identification of focal HCW to review suspected patients.

Who is a contact?

- A contact is someone who has shared the same airspace with a person diagnosed with plague, within a radius of 2 meters.
- This includes
 - all household contacts,
 - all HCW that have dealt directly with the patient, and
 - HCW and other patients who have been in the same room as the patient,
 - airline travellers who have been in the same plane, and sat within 2 rows behind and in front of the patient (as a rule of thumb),
 - airline crew working in the same section as the patient, and
 - community contacts

PROVINCIAL CDC

Role: ID and follow-up of family, household, community, airline and occupational contacts

- Will receive name and contact details of persons who had contact with plague patient from NICD
- Will visit and manage contacts as in Box 'How to manage contacts'
- Will prioritise family and household contacts
- Will determine with province if additional HCW are required to assist with follow-up
- Will report findings daily to NICD

PORT HEALTH

Role: ID of air travel contacts

- Will receive name and flight details of patient with suspected/confirmed plague
- Will obtain names and contact details of passengers 2 rows in front/two rows behind index patient from airlines
- Will hand list to NICD
- Will identify port health officials who are contacts, and will manage as in Box 'How to manage contacts'
- Will report daily to NICD

HOW TO MANAGE CONTACTS:

- **Make telephonic contact: 1) confirm that the contact was exposed to the index case; 2) set up a meeting with the contact**
- **Meet with the contact**
- **Obtain information on CONTACT LIST for each contact**
- **Ask if the contact is symptomatic with fever, cough or swollen glands**
- **If symptomatic arrange review by ID focal point**
- **If not symptomatic, provide plague pamphlet and answer contacts questions**
- **Request contact to call you, if s/he develops symptoms within 14 days.**
- **Provide your phone number.**
- **Send CONTACT LIST to NICD**
- **Report back daily to NICD**

INFECTION PREVENTION AND CONTROL NURSE

Role: ID and follow-up of HCW who were exposed to patient/s

- Will receive name and dates of index patient/s were at their facility.
- Will implement appropriate IPC if the patient is still at the facility
- Will identify staff who were exposed to patient/s
- Will visit and manage contacts as in Box 'How to manage contacts'
- Will report findings daily to NICD

LABORATORY MANAGER

Role: ID and follow-up of laboratory workers who were exposed to patient specimens

- Will receive name and dates of index patient whose specimens were processed by their lab.
- Will identify staff who were exposed to patient specimens, and
- Will visit and manage contacts as in Box 'How to manage contacts'
- Will report findings daily to NICD

Safety of HCW doing contact tracing

- No pre-exposure prophylaxis as very contacts will have disease.
- Meet the contact in the open air or a well ventilated space. If not possible, wear N95 respirators
- If a contact is symptomatic, take antibiotic post-exposure prophylaxis.