

# Typhus

Last updated: 19 September 2016

**Public health priority:** High  
**PHU response time:** Respond to confirmed cases within 1 day of notification  
Enter confirmed cases on NCIMS within 1 working day  
**Case management:** Determine the likely source of infection  
Isolate until de-lousing has occurred, if required  
**Contact management:** Contacts should be placed under surveillance for 15 days after application of an insecticide with residual effect

## 1. Reason for surveillance

- To identify cases, and to prevent further transmission
- To monitor the epidemiology to inform the development of better prevention strategies.

## 2. Case definition

### Confirmed case

A person with clinical typhus and serologically positive tests for *Rickettsia prowazekii* antibody.

## 3. Notification criteria and procedure

Typhus is to be notified by:

- Hospital CEOs on diagnosis (ideal reporting by telephone on same day of diagnosis)
- Laboratories on diagnosis (ideal reporting by telephone on same day of diagnosis).

Only confirmed cases should be entered onto NCIMS.

## 4. The disease

### Infectious Agent

The rickettsia *Rickettsia prowazekii*.

### Mode of transmission

Typhus is transmitted to humans by infected lice.

### Timeline

The typical incubation period is 7 to 14 days, commonly 12 days. Typhus is not directly transmitted from person to person. Cases are infective to lice during the febrile illness and possibly for 2 to 3 days after the temperature returns to normal.

### Clinical presentation

The usual clinical presentation has a variable onset, often with fever, headache, chills, prostration and general pains. A macular eruption appears on the fifth to sixth day, initially on the upper trunk, followed by spread to the whole body, sparing the face, palms and soles. Toxaemia is usually pronounced. Case-fatality rate increases with increasing age and can reach 40 per cent.

## 5. Managing single notifications

### Response time

#### ***Investigation***

On same day of notification of a case begin follow-up investigation.

#### ***Data entry***

Within 1 working day of notification enter confirmed cases on NCIMS.

#### ***Response procedure***

The response to a notification will normally be carried out in collaboration with the case's health carers. Regardless of who does the follow-up, PHU staff should ensure that action has been taken to:

- Confirm the onset date and symptoms of the illness
- Confirm results of relevant pathology tests, or recommend the tests be done
- Find out if the case or relevant care-giver has been told what the diagnosis is before beginning the interview
- Seek the doctor's permission to contact the case or relevant care-giver
- Review case and contact management.

### Case management

#### ***Investigation and treatment***

Attempt to identify the source of infection, such as a location visited and exposures during any recent overseas travel or poor living conditions or any environment where exposure to body lice is likely. Isolate the patient until de-lousing has occurred, if required.

Tetracyclines or chloramphenicol are recommended therapies.

#### ***Education***

The case or relevant care-giver should be informed about the nature of the infection and the mode of transmission and the reason for and duration of isolation. Provide the Typhus fact sheet.

#### ***Isolation and restriction***

Isolation is required until the case, clothing, living quarters and household contacts are shown to be lice free.

#### ***Environmental evaluation***

The actual or probable source of infection must be determined and preventive measures undertaken. Delousing of clothing, bedding and living quarters is necessary.

### Contact management

#### ***Identification of contacts***

A person exposed to an infected case or environment before de-lousing, particularly in households and institutions.

#### ***Investigation and treatment***

Assess for louse infestation and de-louse where necessary.

#### ***Education***

Advise susceptible contacts (or parents/guardians) of the risk of infection. Provide the Typhus fact sheet.

#### ***Isolation and restriction***

Louse-infested susceptible persons exposed to typhus fever should be placed under surveillance (i.e. contacted daily by the PHU for evidence of illness) for 15 days after application of an insecticide with residual effect.