Leprosy

Epidemiology in New Zealand

All cases of leprosy in New Zealand have occurred in individuals who have contracted the disease overseas.

More detailed epidemiological information is available on the Institute of Environmental Science and Research (ESR) surveillance website at www.surv.esr.cri.nz

Case definition

Clinical description

A chronic bacterial disease characterised mainly by the involvement of skin and peripheral nerves. Clinical forms represent a spectrum reflecting the cellular immune response to *Mycobacterium leprae*. Anaesthetic skin lesions and nerve enlargements are characteristic of the disease. The disease includes:

- **tuberculoid leprosy (TT):** a few anaesthetic skin lesions and peripheral nerve abnormalities
- **borderline leprosy (BB):** skin lesions characteristic of both TT and LL forms
- **lepromatous leprosy (LL):** widespread erythematous papules and nodules with facial and aural infiltration, often accompanied by both individual peripheral nerve abnormalities and a symmetrical peripheral neuropathy.

Note: The World Health Organization classifies leprosy as multibacillary or paucibacillary based on the number of skin lesions and the presence or absence of bacteria found in skin smears. This classification determines the duration of multi-drug chemotherapy.

Laboratory test for diagnosis

**Laboratory confirmation requires** at least one of the following:

- demonstration of acid-fast bacilli in biopsy tissue or slit-skin smears
- a biopsy with characteristic pathological changes.

Case classification

- **Under investigation:** A case that has been notified, but information is not yet available to classify it as probable or confirmed.
- **Probable:** A clinically compatible syndrome that lacks laboratory confirmation.
- **Confirmed**: A clinically compatible syndrome that is laboratory confirmed.
- **Not a case**: A case that has been investigated and subsequently found not to meet the case definition.

### Spread of infection

#### Incubation period

Very lengthy, ranging from 9 months to more than 20 years with an average of 4 years for tuberculoid leprosy and 8 years for lepromatous leprosy.

#### Mode of transmission

Humans are the only significant reservoir. Infection probably spreads predominantly from nasal secretions of the case to the skin and respiratory tract of another person. Other respiratory secretions and open-skin lesions may also transmit infection. Transmission requires close contact. Although the bacillus can survive up to 7 days in dried nasal secretions, indirect transmission is thought unlikely. Transplacental transmission is probably responsible for cases under 1 year of age.

#### Period of communicability

Most cases treated with multi-drug regimens cease to be infectious within 1 day.

### Notification procedure

Attending medical practitioners or laboratories must immediately notify the local medical officer of health of suspected cases. Notification should not await confirmation.

### Management of case

#### Investigation

Obtain a history of travel and possible contacts. Ensure laboratory confirmation has been attempted.

#### Restriction

Nil.

#### Treatment

Cases should be under the care of an infectious diseases physician.

#### Counselling

Advise the case and their caregivers of the nature of the disease and its mode of transmission. Open skin lesions should be covered.
Management of contacts

Definition
All people who have been in close contact with a case of leprosy (especially lepromatous leprosy) over a prolonged period.

Investigation, restriction and prophylaxis
Nil.

Counselling
Advise contacts to have an initial examination and periodic subsequent examinations by a medical practitioner to detect early signs of disease. Advise all contacts of the incubation period and typical symptoms of leprosy. Encourage them to seek early medical attention if symptoms develop.

Other control measures

Identification of source
Check family and travel history.

Disinfection
Nil.

Health education
Nil.

Reporting
Ensure complete case information is entered into EpiSurv.

On receiving a notification, medical officers of health should immediately notify the Director of Public Health at the Ministry of Health.

References and further information