

Leprosy in Far North Queensland: almost gone, but not to be forgotten

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People with leprosy, a chronic granulomatous disease caused by *Mycobacterium leprae*, classically present with hypopigmented or erythematous, anaesthetic skin lesions (Box 1) or thickened peripheral nerves. Leprosy can be cured with antibiotics, but severe deformity and long term disability are common if therapy is delayed.

Leprosy is now very rarely acquired in Australia, but it is still diagnosed; Indigenous Australians in remote locations bear the greatest burden of disease.^{1,2} Historically, its incidence has been highest in the Northern Territory, but cases are also diagnosed in Far North Queensland (FNQ), a region that adjoins Papua New Guinea (PNG), where leprosy remains endemic.³

Since 1985, Torres Strait Islander Australians and PNG nationals have been able to move freely across the border to pursue traditional activities in the Torres Strait Protected Zone. This arrangement acknowledges the importance of their shared cultural history, but also means that FNQ clinicians may encounter conditions that are rare in temperate Australia. The potential public health implications are also clear.⁴

To evaluate the epidemiology of leprosy in FNQ, we retrospectively reviewed all laboratory-confirmed cases diagnosed in the

1 Skin lesion on the thigh of a patient diagnosed with leprosy in Far North Queensland*



* The coppery, hypoaesthetic patch had been present for several months; biopsy confirmed multi-bacillary leprosy. ♦

2 Demographic characteristics of people diagnosed with leprosy in Far North Queensland, 1989–2018

Notification	Age (years)	Sex	Country of birth	Indigenous status
1989	20	Female	Australia	Torres Strait Islander
1989	48	Male	Australia	Non-Indigenous
1989	46	Female	United Kingdom	Non-Indigenous
1989	21	Male	Australia	Non-Indigenous
1989	24	Male	Australia	Non-Indigenous
1989	17	Male	Australia	Non-Indigenous
1993	6	Male	Australia	Torres Strait Islander
1994	13	Male	Papua New Guinea	Non-Indigenous
1994	11	Male	Australia	Torres Strait Islander
1995	30	Male	Australia	Torres Strait Islander
1997	16	Female	Australia	Torres Strait Islander
1997	33	Male	Vietnam	Non-Indigenous
2002	33	Male	Laos	Non-Indigenous
2003	20	Male	Australia	Torres Strait Islander
2009	28	Female	Australia	Torres Strait Islander
2009	13	Female	Papua New Guinea	Torres Strait Islander
2017	35	Male	Papua New Guinea	Torres Strait Islander
2017	53	Male	Papua New Guinea	Non-Indigenous
2017	48	Male	Philippines	Non-Indigenous
2018	36	Male	Bhutan	Non-Indigenous

region during 1989–2018. The Far North Queensland Human Research and Ethics Committee provided ethics approval for the study (reference, HREC/18/QCH/107).

Twenty cases of leprosy were identified in the Queensland Health Notifiable Conditions Register (Box 2). The median age of the patients was 26 years (interquartile range, 16–36 years); 11 patients had been born in Australia, including seven of nine Torres Strait Islanders (but no Aboriginal Australians). Apart from 1989 (six cases) and 2017 (three cases), no more than two cases had been notified in a single year. The most recent Australian-born patient was a 28-year old Torres Strait Islander woman diagnosed in 2009; she had had close contact with a person with leprosy born in PNG.

The low numbers of cases of locally acquired leprosy in FNQ reflect improved access to treatment and less household overcrowding, factors that reduce *M. leprae* transmission. However, while there has been no case of locally acquired leprosy since 2009, two PNG-born Torres Strait Islanders were diagnosed with the disease in the past decade. The continuous flow of people between Australia and PNG makes ongoing vigilance essential.

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Leprosy remains a significant problem in PNG. In 2015, 388 new cases were notified, and the annual number has changed little over the past decade.³ Australia will provide an estimated \$608 million in development assistance to PNG during 2019–20,⁵ some of which will be used to strengthen its struggling public health system, and non-government organisations involved in containing leprosy will also receive funding.⁶ However, more could be done. Leprosy is a disabling and infectious condition that can be rapidly cured. Public health

programs have dramatically reduced the burden of infectious diseases in Australia. More support for similar programs in PNG will not only help our nearest neighbours, but also reduce the risk that infectious diseases almost forgotten by Australians will re-appear.

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