

Nontuberculous mycobacterium

2015

Case definition (1 January 2012 onwards)

Isolation or detection by NAAT of any nontuberculous mycobacteria* from any site **OR**

Detection of acid fast bacilli (AFB) by histology.

*Excludes *Mycobacterium leprae*

Data for this report were extracted from the Notifiable Diseases System on 16 June 2016 by notification date. Nontuberculous mycobacteria notification data are available in the Queensland Health Weekly Notifiable Conditions Report [here](#).

Notifications of nontuberculous mycobacteria in Queensland

There were 1,222 cases of nontuberculous mycobacteria notified in 2015, with a notification rate of 25.9 cases per 100,000 population. Notifications have been increasing approximately 17 per cent per year over the previous 4 years (Figure 1).

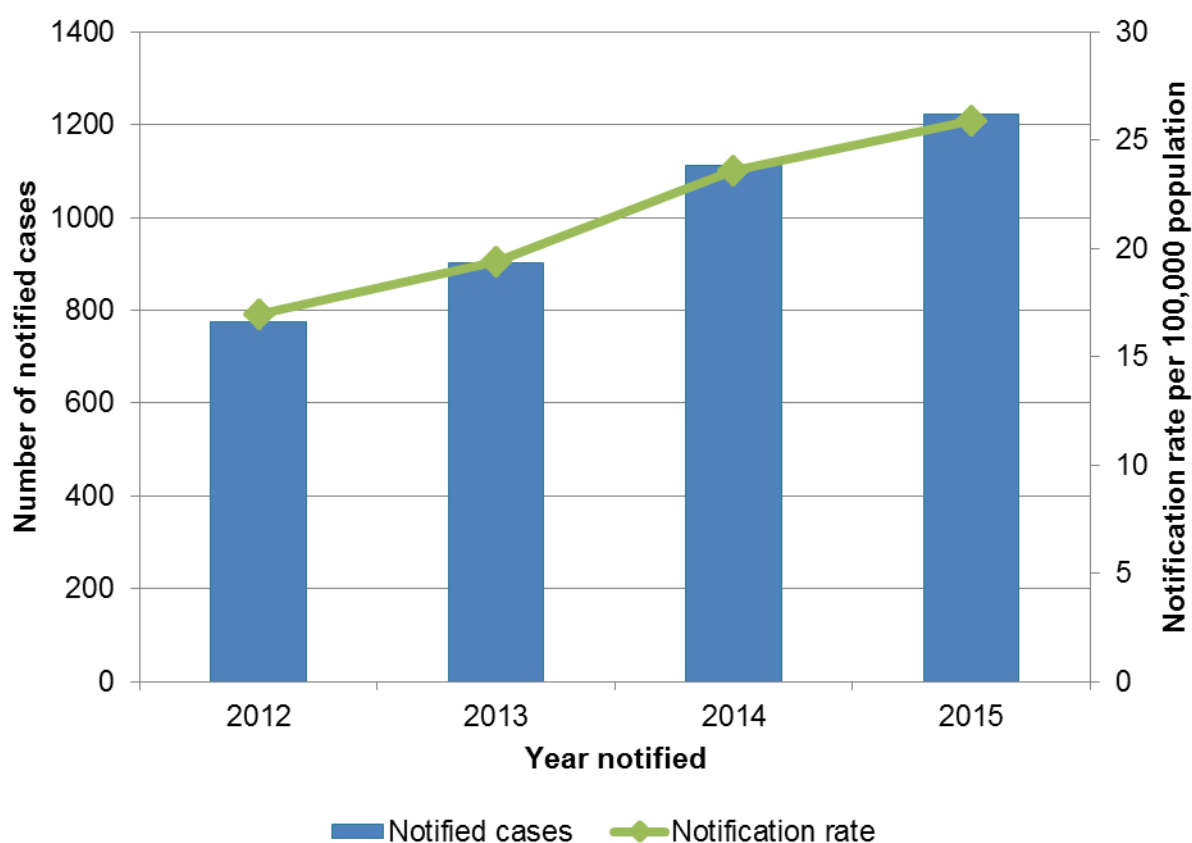


Figure 1: Number of notified cases and notification rate* of nontuberculous mycobacteria and site of disease, Queensland, 2012-2015

*Notification rates calculated using Queensland Estimated Resident Population 2012-2014

Demographic information

There were 598 male cases (49 per cent) and 624 female cases (51 per cent). The age range of cases was nine months to 95 years, with a median age of 66 years. The most frequently notified age group was the 65-69 year old group (Figure 2).

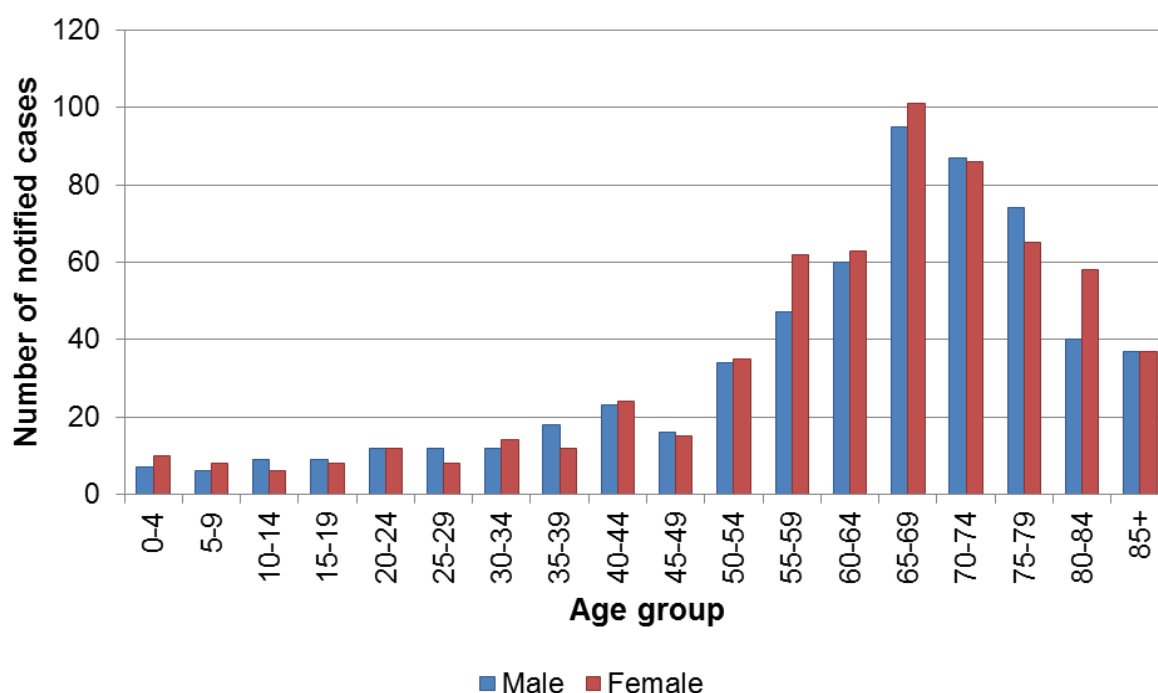


Figure 2: Number of notified cases of nontuberculous mycobacteria by sex and age group, Queensland, 2015

Forty-five per cent of notified cases resided in the Metro North and Metro South Hospital and Health Service (HHS) areas, with the highest notification rate was in Central West HHS which had a notification rate of 72.4 cases per 100,000 population though the number of cases reported was small (5 cases) (Table 1).

Table 1: Number of cases and notification rate per 100,000 population of nontuberculous mycobacterium cases by hospital and health service of residence, 2015

HHS of residence	Number of notified cases (%)	Notification rate per 100,000 population
Cairns and Hinterland	69 (6%)	27.9
Central Queensland	54 (4%)	23.8
Central West	9 (1%)	72.4
Darling Downs	69 (6%)	24.9
Gold Coast	114 (9%)	20.3
Mackay	31 (3%)	17.0
Metro North	269 (22%)	28.6
Metro South	275 (23%)	25.3
North West	7 (1%)	21.5
South West	4 (0%)	15.0
Sunshine Coast	76 (6%)	19.8
Torres and Cape	10 (8%)	39.2
Townsville	93 (3%)	38.5
West Moreton	42 (3%)	15.9
Wide Bay	100 (8%)	47.2
Total	1222 (100%)	25.9

Laboratory testing

Ninety-seven per cent of notifications were based on a positive culture or nucleic acid test result, with only three per cent of notifications based on a positive AFB result only; however it is suspected that cases diagnosed by AFB only are substantially underreported. Speciation was conducted on specimens for 953 cases (78 per cent), with the most common species identified being *M. intracellulare* (35 per cent), *M. avium* (9 per cent) and *M. abscessus* (9 per cent) (Table 2). Cases with pulmonary specimen types (including sputum, bronchial washings/brushings/lavage) account for 1,026 cases (84 per cent), 7 cases had urine specimens (1 per cent) and 189 cases listed other specimen types (swab, tissue, blood, aspirate, fluid etc). It is possible that some tissue specimens may have been lung tissue which could have resulted in a larger proportion of cases with pulmonary involvement.

Table 2: Nontuberculous mycobacterium cases by species and specimen type, 2015

Species	Pulmonary	Urine	Other	Total
<i>M. intracellulare</i>	411 (40%)	-	18 (10%)	429 (35%)
<i>M. avium</i>	92 (9%)	-	14 (7%)	106 (9%)
<i>M. abscessus</i>	71 (7%)	-	33 (17%)	104 (9%)
<i>M. fortuitum</i>	39 (4%)	2 (29%)	50 (26%)	91 (7%)
<i>M. chelonae</i>	36 (4%)	-	13 (7%)	49 (4%)
<i>M. avium complex</i>	31 (3%)	-	4 (2%)	35 (3%)
<i>M. gordonae</i>	28 (3%)	1 (14%)	5 (3%)	34 (3%)
<i>M. kansasii</i>	17 (2%)	-	-	17 (1%)
<i>M. lentiflavum</i>	10 (1%)	-	3 (2%)	13 (1%)
<i>M. haemophilum</i>	1 (0%)	-	9 (5%)	10 (1%)
<i>M. interjectum</i>	10 (1%)	-	-	10 (1%)
<i>M. marinum</i>	-	-	8 (4%)	8 (1%)
<i>M. asiaticum</i>	6 (0%)	-	-	6 (0%)
<i>M. paraffinicum</i>	6 (0%)	-	-	6 (0%)
<i>M. scrofulaceum</i>	5 (0%)	-	-	5 (0%)
<i>M. simiae</i>	5 (0%)	-	-	5 (0%)
<i>M. triplex</i>	5 (0%)	-	-	5 (0%)
<i>M. mucogenium</i>	2 (0%)	-	1 (1%)	3 (0%)
<i>M. xenopi</i>	2 (0%)	-	1 (1%)	3 (0%)
<i>M. goodii</i>	-	-	2 (1%)	2 (0%)
<i>M. kumamotoense</i>	1 (0%)	1 (14%)	-	2 (0%)
<i>M. agri</i>	1 (0%)	-	-	1 (0%)
<i>M. neoaurum</i>	-	-	1 (1%)	1 (0%)
<i>M. perigrinum</i>	-	-	1 (1%)	1 (0%)
<i>M. phocaicum</i>	1 (0%)	-	-	1 (0%)
<i>M. shimoidei</i>	1 (0%)	-	-	1 (0%)
<i>M. smegmatis</i>	-	-	1 (1%)	1 (0%)
<i>M. stomatepiae</i>	-	-	1 (1%)	1 (0%)
<i>M. szulgai</i>	-	-	1 (1%)	1 (0%)
<i>M. ulcerans</i>	-	-	1 (1%)	1 (0%)
<i>M. wolinskyi</i>	-	-	1 (1%)	1 (0%)
<i>Mycobacterium</i> (unspeciated)	245 (24%)	3 (43%)	21 (11%)	269
Total	1026 (100%)	7 (100%)	189 (100%)	1222 (100%)