

2.5 Tuberculosis

Summary

Number of cases in 2016: 318

Number of cases in 2015: 294

In 2016, 318 cases of tuberculosis (TB) were notified in Ireland, corresponding to a crude incidence rate (CIR) of 6.9 per 100,000 population*, remaining stable in comparison to the CIR of 6.4 reported for 2015 (n=294). A summary of the epidemiology of TB in Ireland during 2016 is shown in table 1 while the number of cases and crude incidence rates from 2007-2016 with three-year moving averages are shown in figure 1.

The highest crude incidence rate was reported by HSE-E (8.4/100,000) while the lowest rate was reported by HSE-NW (1.9/100,000).

Cases ranged in age from two months to 89 years, with a median age of 41 years. The highest age-specific rate (ASIR) in 2016 occurred among those aged 25-34 years (10.6) followed by those aged 65 years and older (10.5). The rate among males (8.5) was higher than that among females (5.4). Rates among males were higher than females for all age groups except the 0-14 and 55-64 year age groups. The highest ASIR among males (13.2) was observed in those

aged 65 years and older while the highest ASIR among females was observed in those aged 55-64 years. The male to female ratio (1.6:1) reported in 2016 was consistent with that reported in previous years.

Geographic origin

The proportion of TB cases born outside Ireland increased to 50.3% during 2016, compared to 43.2% reported in 2015. Correspondingly the crude rate in the foreign-born population increased from 16.6 per 100,000 population in 2015 to 20.9 per 100,000 population in 2016. The crude rate in the indigenous population remained stable at 3.9 per 100,000, the same as reported in 2015. There was a notable difference in age between cases born in Ireland and foreign born cases, with a median age of 54 years and 33 years respectively.

Site of infection

Pulmonary TB was reported in 211 (66.4%) cases and 97 (30.5%) had exclusively extrapulmonary disease. Site of infection was not reported for the remaining 10 cases. There were no cases of TB meningitis reported during 2016.

Microbiology

Culture results were available for 246 (77.4%) cases. Of the 246, 237 (96.3%) cases were culture confirmed and nine (3.7%) were culture negative. Species identification showed *M. tuberculosis* in 97.9% (232 cases), *M. bovis* in 1.3% (3

*All rates reported are calculated per 100,000 population using the 2011 Census

Table 1: Summary of the epidemiology of TB in Ireland, 2016

Parameter	2016		
	Number of cases	CIR	% of total cases
Total number of cases	318	6.9	n/a
Cases in indigenous population	145	3.9	45.6
Cases in foreign-born persons	160	20.9	50.3
Culture positive cases	237	5.2	74.5
Pulmonary cases	211	4.6	66.4
Smear positive pulmonary cases	85	1.9	26.7
TB meningitis cases	0	0.00	0.0
Multi-drug resistant cases	5	0.11	1.6
Extensively drug resistant cases	1	0.02	0.3
Mono-resistant to isoniazid	10	0.2	3.1
Deaths attributable to TB	7	0.2	2.2

cases) and *M. africanum* in 0.8% (2 cases). Of the 211 cases with a pulmonary component, 170 (80.6%) were reported as culture confirmed, and 85 (40.3%) were reported as smear positive.

Drug sensitivity

Information on antibiotic sensitivity testing was available for 230 (97.0%) of the 237 culture confirmed cases. Resistance was documented in 32 (13.5% and 10% of total cases) cases that reported antibiotic sensitivity, five of which were MDR-TB (1.6% of total cases) and one additional case was XDR-TB. Mono-resistance to isoniazid was recorded in 10 cases, to streptomycin in six, to pyrazinamide in four cases and rifampicin in one case. Five further cases reported non-MDR polyresistance (to isoniazid and an additional drug other than rifampicin).

HIV status

Information on HIV status was reported for 131 (41.2%) cases in 2016, an increase compared to 40.8% with HIV status reported in 2015. Of the cases with HIV status reported, four (3.1%) were HIV positive and 127 (96.9%) were HIV negative.

Outbreaks

During 2016, five outbreaks of TB were reported to HPSC, with 19 reported cases of active TB and 15 hospitalisations. No LTBI cases were reported for any of the 2016 outbreaks.

Two outbreaks were reported by HSE-W and one outbreak each was reported by HSE-E, -NW and -S. There were three general outbreaks, two of which occurred in a community setting with six and three cases of active TB respectively. The remaining general outbreak occurred in a multi-occupancy private residence with three associated cases of active TB. There were also two family outbreaks, comprising three and four cases each. One family outbreak occurred in a private house and one occurred across an extended family.

The number of outbreaks reported during 2016 remained stable compared to 2015. Figure 2 shows a summary of reported TB outbreaks from 2007 to 2016 by year of outbreak, number of active TB cases and number of persons with LTBI. Please note that numbers of LTBI for outbreaks reported during 2016 are provisional and may increase as outbreak investigations continue.

Further details on the epidemiology of TB cases reported in 2016 will be available in the HPSC Report on the Epidemiology of TB in Ireland, 2016 (www.hpsc.ie/a-z/vaccinepreventable/tuberculosis/epidemiology/annualreports).

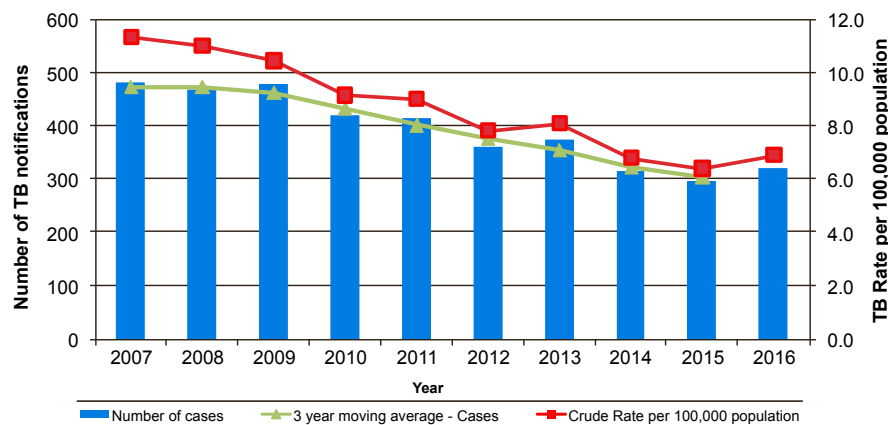


Figure 1: Notified cases of TB in Ireland with crude rates per 100,000 population, 2007 to 2016 and 3-year moving averages, 2007-2015

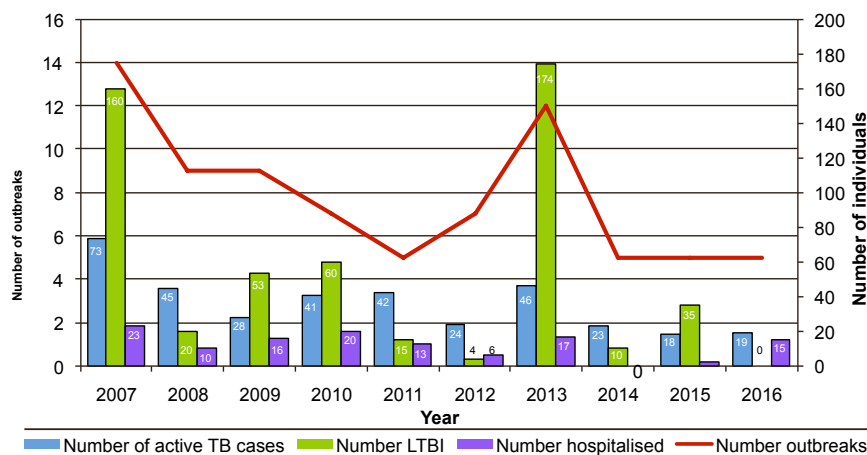


Figure 2: TB outbreak summary by year, 2007-2016