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Annual Epidemiological Report

August 2018

Leptospirosis in Ireland, 2017

Key Facts

2017:

- 20 cases of leptospirosis were notified in 2017
- crude incidence rate (CIR) of 0.4 per 100,000 population.
- a decrease compared to 26 cases (CIR 0.5) notified in 2016

Suggested citation: HSE Health Protection Surveillance Centre. Leptospirosis 2017 Annual Epidemiological Report. Dublin: HSE HPSC; 2018

Background

Leptospirosis is an infection frequently found both in domestic and wild animals which can spread to humans. The majority of people have a flu-like illness, with a persistent and severe headache. A few people can develop meningitis and occasionally it can develop into the severe form (Weil's Disease) with liver and kidney failure. This can be fatal in a small proportion of cases.

Leptospirosis in Ireland is usually picked up from rats, although a milder form can be caught from cattle or dogs. Infected urine or contaminated water can be found in sewers, ditches, ponds, canals and slow-flowing rivers and river banks. Rat urine may also contaminate animal feed stuffs on farms. High risk water includes stagnant, dirty-looking or obviously polluted fresh water found in ditches, drains, ponds, lakes or rivers. Sea water poses less risk.

People at greatest risk of acquiring leptospirosis include those who fish, swim or use water for other recreational purposes. This includes people who engage in outdoor pursuits that brings them in contact with at-risk water such as canoeing, hiking, pot-holing or golfing. Occupations at risk include veterinary surgeons, farmers, meat inspectors, butchers, abattoir and sewer workers.

Methods

Leptospirosis is a notifiable disease in Ireland under the Infectious Disease Regulations and cases should be notified to the Medical Officer of Health. The case definition is outlined on the HPSC website.

Notifications are reported using the Computerised Infectious Disease Reporting system (CIDR) which is described here.

Further information on the process of reporting notifiable infectious diseases is available here.

All crude incidence rates were calculated using the 2016 Census unless otherwise specified.

Epidemiology

During 2017, 20 cases of leptospirosis were notified in Ireland, corresponding to a crude incidence rate (CIR) of 0.4 per 100,000 population. This represents a slight decrease compared to 26 cases (CIR 0.5) notified in 2015 (Figure 1). The EU crude incidence rate was 0.2 per 100,000 in 2016, the latest year for which data was available. Among the countries that reported leptospirosis notifications to the European Centre for Disease Prevention and Control (ECDC) in 2016, Ireland reported the fifth highest incidence rate after the Netherlands, Lithuania, Slovenia and Portugal.

The age range of cases was 16-66 years (mean age=36 years, median age=33 years). Cases in the younger age groups are more likely to be associated with recreational exposure and history of foreign travel while older cases are mainly indigenous and associated with occupational exposure. Figure 1 illustrates the annual trend by travel history. The leptospirosis notification dataset is typically dominated by adult males, and this year was no exception with male cases accounting for 85.0% of cases (Table 1).

Figure 1: Number of leptospirosis notifications in Ireland by country of infection and year

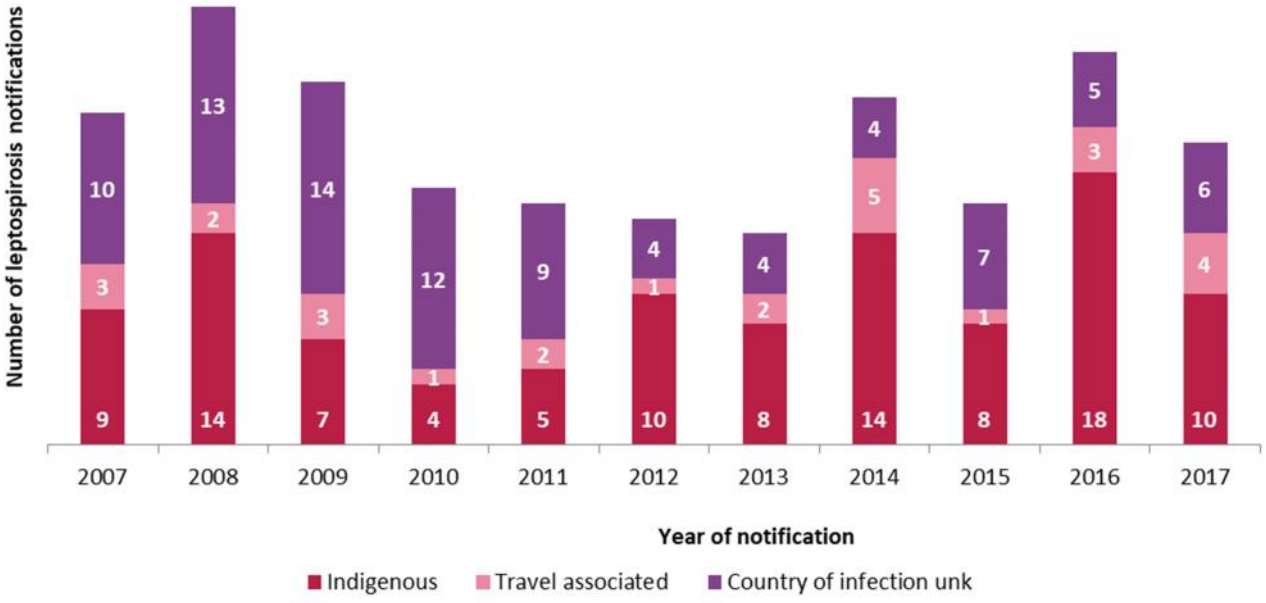
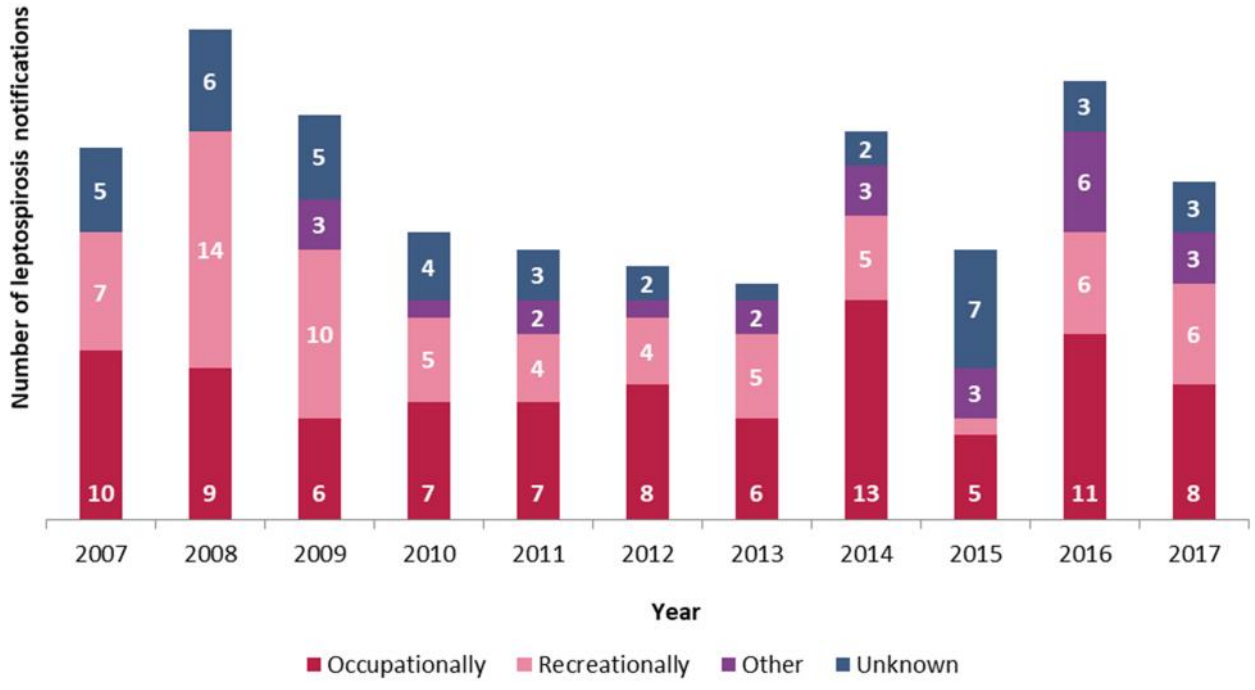


Table 1: Number of leptospirosis notifications in Ireland by age group

Age group	Female	Male	Total
15-19 yrs	1	2	3
20-24 yrs	2	2	4
25-34 yrs		4	4
35-44 yrs		2	2
45-54 yrs		4	4
55-64 yrs		2	2
65+ yrs		1	1
Total	**3**	**17**	**20**

Of the 17 cases with details of potential exposures reported, eight cases (47.1%) were believed to have acquired their illness occupationally. Of the occupationally exposed cases, six had animal contact (three of whom were farmers) and two had exposure to contaminated environments. Six cases (35.3%) were reported as being associated with recreational activities, including river water exposure. Two cases (11.8%) reported residential exposure and one case reported accidental exposure to potentially contaminated environments. Exposure details were not reported for the remaining three cases. Figure 2 shows the trend in notifications by exposure group and year. Among the 19 cases for which hospital admission status was reported, 18 (90%) required hospitalisation.

Figure 2: Number of leptospirosis notifications in Ireland by exposure group and year



Public health implications

Activities that continue to be associated with leptospirosis risk in Ireland include farming and recreational activities such as water sports. In recent years, travel to Asia and other tropical destinations has emerged as a risk factor for leptospirosis.

Further information available on HPSC website

http://www.hpsc.ie/a-z/zoonotic/leptospirosis/

Acknowledgements

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