Seirbhís Sláinte Níos Fearr á Forbairt | Building a Better Health Service

hpsc

Annual Epidemiological Report

October 2019

Leptospirosis in Ireland, 2018

Key Facts

2018:

- 19 cases of leptospirosis were notified in 2018
- crude incidence rate (CIR) of 0.4 per 100,000 population.
- remains stable compared to 20 cases (CIR 0.4) notified in 2017

Suggested citation: HSE Health Protection Surveillance Centre. Leptospirosis 2018 Annual Epidemiological Report. Dublin: HSE HPSC; 2019

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 acquired from contact with rats or items contaminated with rat urine. A milder form can also be acquired from contact with cattle or dogs. Infected urine or water contaminated with urine 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.

Crude incidence rates (CIRs) were calculated using the 2011 Census population for the years 2009-2013 and the 2016 Census population for the years 2014-2018. All CIRs are per 100,000 population unless otherwise specified.

Epidemiology

During 2018, 19 cases of leptospirosis were notified in Ireland, corresponding to a crude incidence rate (CIR) of 0.4 per 100,000 population. This remains stable compared to 20 cases (CIR 0.4) notified in 2017 (Figure 1). In 2018, the crude incidence rate was 0.2 per 100,000 in the European Union. Among the countries that reported leptospirosis notifications to the European Centre for Disease Prevention and Control (ECDC) in 2018, Ireland reported the fifth highest incidence rate after the Slovenia, Portugal, Estonia and Malta.

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). The age range of cases was 26-74 years (mean age = 46 years, median age = 42 years). Cases in the younger age groups are more likely to be associated with recreational exposure and history of foreign travel while infection in the older cases is mainly acquired in Ireland and associated with occupational exposure. In 2018, all five travel associated cases reported travel to Thailand. Figure 1 illustrates the annual trend by travel history.

Figure 1: Annual number of leptospirosis notifications in Ireland by country of infection

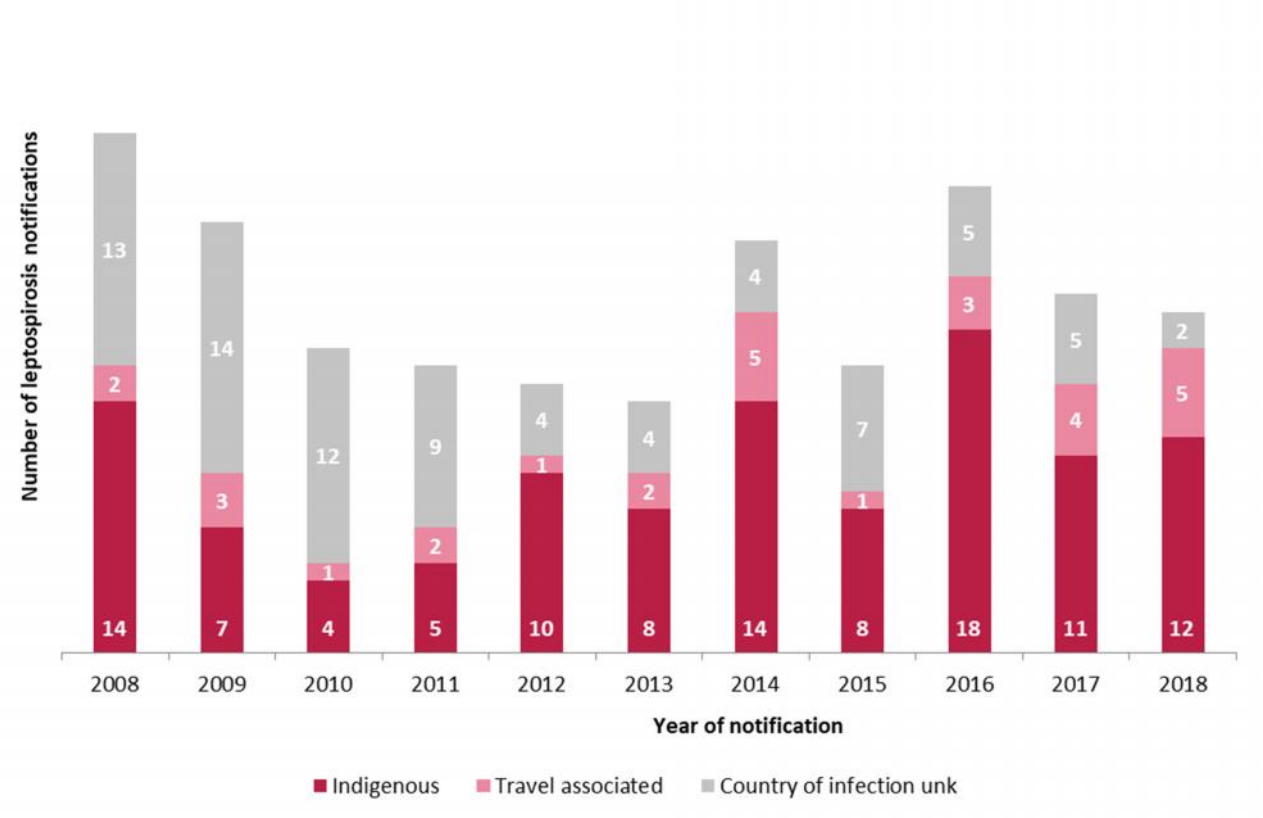
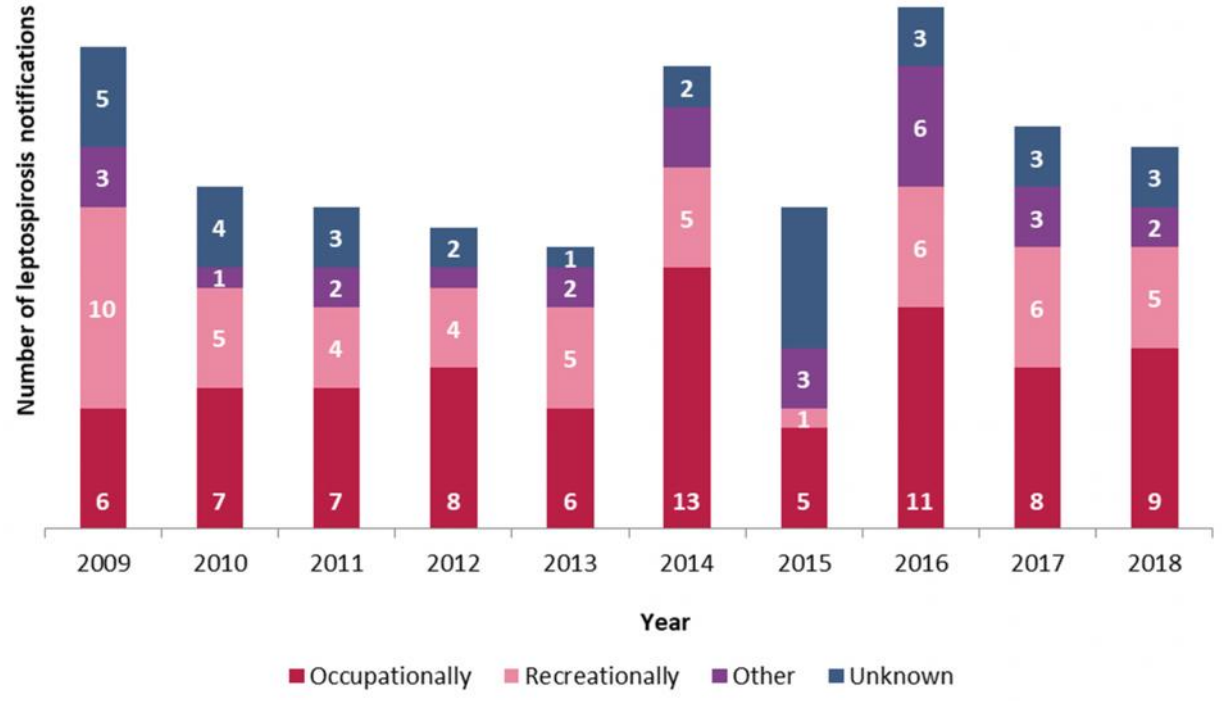


Table 1: Number of leptospirosis notifications in Ireland by age group and sex, 2018

Age group	Female	Male	Total
25-34 yrs	1	5	**6**
35-44 yrs	1	5	**6**
45-54 yrs	-	1	**1**
55-64 yrs	-	3	**3**
65+ yrs	-	3	**3**
Total	**2**	**17**	**19**

Of the 16 cases with details of potential exposures reported, nine cases (53%) were believed to have acquired their illness occupationally. Of the occupationally exposed cases, five were farmers or farm owners. Four occupationally exposed cases reported animal contact and two reported exposure to contaminated environments. Five cases (31%) were reported as being associated with recreational activities, including river water exposure. The remaining two cases reported animal contact through residential and other modes of exposure. Of the three cases without exposure details, one reported recent travel to Thailand. Figure 2 shows the annual trend in notifications by exposure group. Among the 18 cases for which hospital admission status was reported, 15 (83%) required hospitalisation.

Figure 2: Annual number of leptospirosis notifications in Ireland by exposure group



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

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

Acknowledgements

Sincere thanks are extended to all those who participated in the collection of data used in this report. This includes the notifying physicians, public health doctors, surveillance scientists, microbiologists, nurses, laboratory staff and administrative staff.

Report prepared by:

Sarah Jackson