3.7 Less common gastroenteric infections

Listeriosis

Eight cases of human listeriosis were notified in 2013, lower that the 11 cases reported in 2012. This equates to a crude incidence rate of 0.17 (95% CI 0.05-0.30) per 100,000, below the EU average of 0.41 per 100,000 in 2012.

Among these, there were three neonatal cases. This is the same as the number of pregnancy-associated cases reported in 2012 (Figure 1). One infant was stillborn.

The number of adult/juvenile cases was lower than last year, but similar to the numbers reported in the previous five years. Three of the five cases were male. Four developed bloodstream infection, while the fifth developed meningitis. One case with a predisposing condition died, but not as a result of their listeriosis; the outcome was unknown or not specified for the remaining four adult cases. Four of the five adult cases were more than 65 years of age, with the fifth being in the 55-64 years age group. Additionally, all were receiving treatment for serious underlying illnesses.

Since 2007, the National *Salmonella, Shigella* and *Listeria* Reference Laboratory in Galway has offered a national service for typing of *Listeria* strains. In 2013, isolates from six of the eight notified cases were referred. The serotypes for these six cases are listed in table 1 below.

Listeria in Ireland remains a hazard for the elderly, persons with underlying illness, and other vulnerable groups such as pregnant women and neonates.

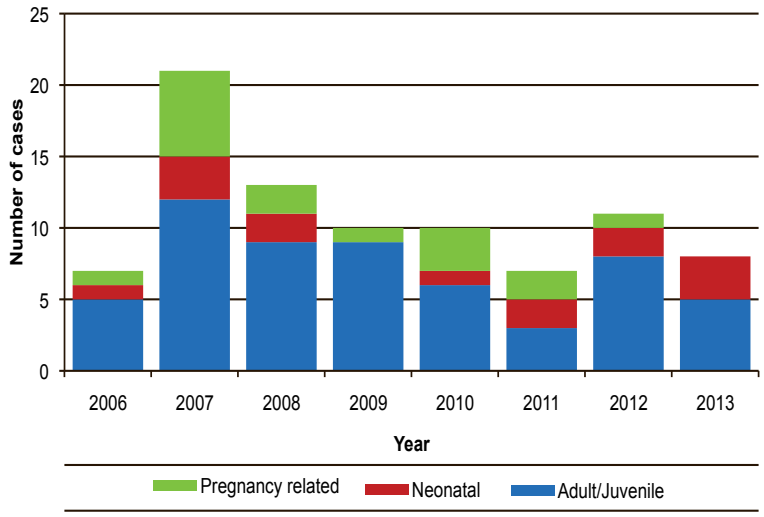

Figure 1: Number listeriosis notifications by case type, Ireland 2006-2013

Table 1. Listeriosis notifications by case type and serotype, Ireland 2013 -typing data provided courtesy of Prof Martin Cormican and staff at the NSSLRL

Type	Serotype 1/2a	Serotype 1/2b	Serotype 4b	Not referred for serotyping	Total
Adult or juvenile	0	0	4	1	**5**
Pregnancy-related	0	0	0	0	**0**
Neonatal	0	0	2	1	**3**
Total	**0**	**0**	**6**	**2**	**8**

Giardiasis

In 2013, there were 44 cases of giardiasis notified; almost 20% lower than the 54 cases notified in 2012. This equates to a crude incidence rate of 0.96 (95% CI 0.68-1.24) per 100,000.

Cases ranged in age from 1 month-70 years (median age=29 years) with only 10 cases reported in children under 15 years of age. According to CDC, *Giardia* infects nearly 2% of adults and 6% to 8% of children in developed countries worldwide so it is likely that there is a high degree of underreporting of the illness in Ireland.[1] Similar numbers of females (n=21) and males (n=23) were affected. Hospitalization rates were low with five cases admitted out of 44 (11%).

The number of cases for which travel status was reported has improved markedly over the last six years from 11% of cases in 2006 to 66% of cases this year (Figure 2). Twenty-two cases (50% of all cases; 76% of those with known travel status) were reported as being associated with foreign travel: the countries of infection reported were India (n=10), Ethiopia (n=2), Poland (n=2), and there was one case each reported associated with travel to Mexico, Pakistan, Mozambique, Russia, Nigeria, China, Israel and Sudan. Seven cases were reported as being acquired in Ireland, and for the remaining 15 cases, country of infection was unknown or not specified.

Two travel-related family outbreaks of giardiasis were notified in 2013, one associated with travel to Poland and the second with travel to India.

Giardiasis in Ireland is mainly identified among adults, unlike countries such as the United States, Australia and the United Kingdom where children are mainly affected. And if the travel histories of those with known *Country of infection* are representative of all reported giardiasis cases in Ireland, then as many as three-quarters may be related to foreign travel. Among these cases, Asia and Africa figure most prominently as reported travel destinations.

Yersiniosis

In 2013, there were four cases of yersiniosis (two females and two males), three of whom were less than five years of age. All were reported as being infected with *Y. enterocolitica*. The reported incidence of yersiniosis in Ireland is low relative to the EU as a whole, and to Northern Europe in particular.

Yersiniosis is commonly associated with consumption of pork products however, in Spring 2011, an outbreak was reported in Norway associated with salad leaves. [1]

[1] E MacDonald et al. 2011. *Yersinia enterocolitica* O:9 infections associated with bagged salad mix in Norway, February to April 2011. Eurosurveillance, Volume 16, Issue 19, 12 May 2011

Foodborne intoxications

Notifications of foodborne intoxications in Ireland are uncommon.

There was one case of infant botulism notified in 2013. The causative organism was identified as *C. butyricum* producing the botulism neurotoxin E .This is second case of infant botulism in Ireland believed to be due to exposure to turtles or to turtle feed, the first being in 2011.[2, 3]

There was one case of *Clostridium perfringens* (type A) food-borne disease in an elderly man.

In 2013, there were no cases or outbreaks of staphylococcal food poisoning or *Bacillus cereus* food-borne infection/intoxication notified.

1. CDC. 2012 Giardia -Epidemiology & Risk Factors. Available at http://www.cdc.gov/parasites/giardia/epi.html
2. HPSC. 2013. Reptiles and the risk of Infectious Diseases. Available at http://www.hpsc.ie/A-Z/Zoonotic/ReptilesandRisksofInfectiousDiseases/
3. Shelley E. B. *et al.* 2014. Infant botulism due to C. *butyricum* type E toxin: a novel environmental association with pet terrapins. Accepted for publication.

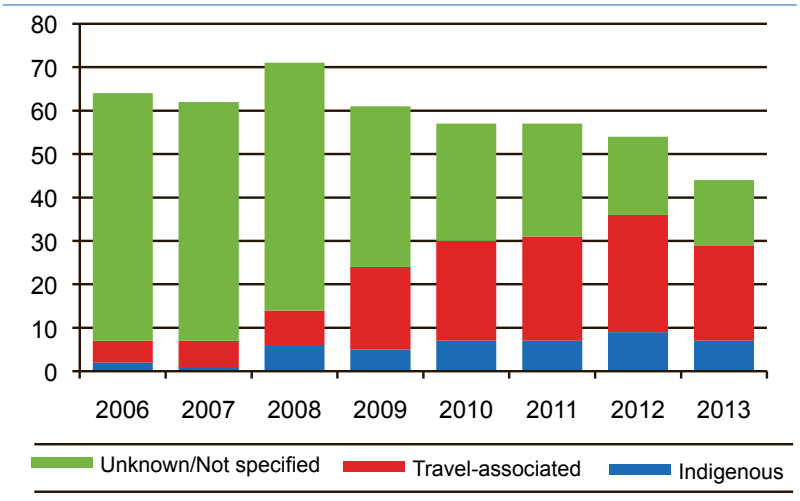

Figure 2: Number Giardiasis Notifications by Travel Status, Ireland 2006-2013

Note: Travel status is inferred from Country of Infection variable on CIDR