

3.8 Shigellosis

Summary

Number of cases, 2010: 60
 Number of cases, 2009: 70
 Crude incidence rate, 2010: 1.42/100,000

In the last decade, the number of cases of shigellosis in Ireland has been low in comparison to the number of cases notified in the early 1990s (Figure 1). Shigellosis, however, remains a common cause of gastrointestinal illness in developing countries, and many cases notified in Ireland are now identified as being travel-associated.

While person-to-person spread is an important transmission route between children, risks also remain from food, with at least four general outbreaks having been reported in Scandinavia in 2009 associated with imported fresh produce.¹⁻⁵ Transmission between men

who had sex with men (MSM) has been reported in Canada.⁶

Sixty cases of shigellosis were notified in Ireland in 2010 (CIR 1.42 per 100,000), all of which were laboratory confirmed. This compares to 70 cases in 2009 and 75 in 2008 (Figure 1). Of 45 cases where hospitalisation status was recorded, 12 (27%) were reported as hospital in-patients.

Cases ranged in age from 8 months to 76 years (median age=32 years). Like 2009, more males (n=35) than females (n=25) were notified. This differs to the previous three years when there were more females than males reported each year. The increase in male cases was particularly notable in the 15-44 year age group (Figure 2).

Information on travel history is very valuable when

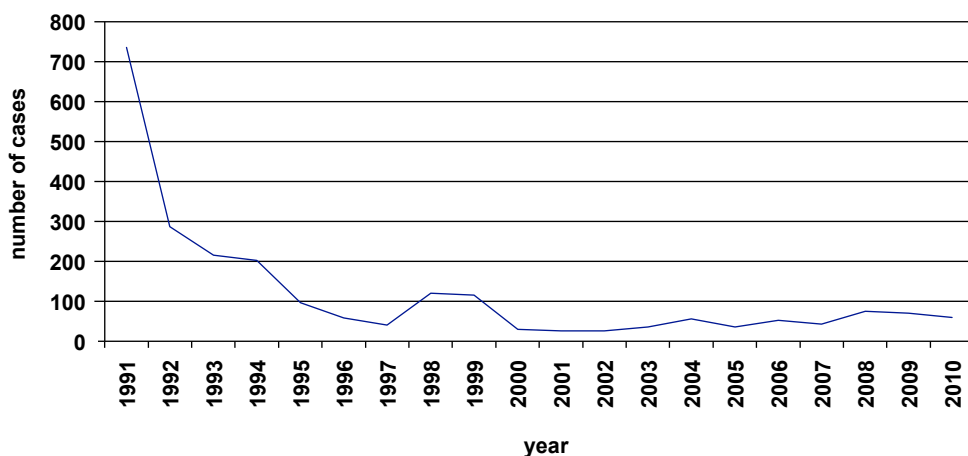


Figure 1. Annual number of notifications shigellosis, Ireland 1991-2010

Table 1. Number of notifications shigellosis by species and country of infection, Ireland 2010

	Ireland	Africa	Asia	Other	Not known/ not reported	Total
<i>S. boydii</i>	2	0	0	0	0	2
<i>S. dysenteriae</i>	0	0	0	0	0	0
<i>S. flexneri</i>	9	0	3	2	7	21
<i>S. sonnei</i>	9	4	8	4	7	32
Species not specified/not known	0	2	2	0	1	5
Total	20 (33%)	6 (10%)	13 (22%)	6 (10%)	15 (25%)	60

(Data source: CIDR)

reviewing surveillance data for possible indigenous clusters, and data on country of infection in the national dataset is improving being available this year for 75% of shigellosis notifications. 25 cases (42%) were reported associated with foreign travel (Table 1). The countries of infection reported were India (n=7), Spain (n=4), Egypt (n=3), with one case associated each with travel to Cameroon, Nigeria, Zambia, Bangladesh, Indonesia, Jordan, Kazakhstan, Nepal, Pakistan, Costa Rica and Haiti. Twenty infections (33%) were reported as being acquired in Ireland, while no country of infection information was provided for 15 (25%) cases. Unsurprisingly, travel-associated cases were more common in summer and later in the year, while indigenous case numbers remained similar year round (Figure 3).

Shigella sonnei was the most common species reported (53%), followed by *S. flexneri* (35%). There were also two *S. boydii* (3%), and five confirmed cases (8%) for which the species was not reported. The species distribution of cases by country of infection is reported in Table 1.

Table 2. Species/serotypes of *Shigella* isolates referred to NSSLRL in 2010 (Data courtesy of Prof. Martin Cormican and staff at NSSLRL)

Strain	Number of isolates
<i>Shigella boydii</i>	3
<i>Shigella flexneri</i> 1a	1
<i>Shigella flexneri</i> 1b	3
<i>Shigella flexneri</i> 1c	1
<i>Shigella flexneri</i> 2a	2
<i>Shigella flexneri</i> 3a	3
<i>Shigella flexneri</i> 3b	2
<i>Shigella flexneri</i> 4c	3
<i>Shigella flexneri</i> 6	3
<i>Shigella sonnei</i>	17
<i>Shigella</i> unidentifiable	1
(blank)	1
Total	40

[Data source: NSSLRL]

More detailed typing of *Shigella* isolates can provide useful information on the relatedness of strains which can be used by public health personnel to outline/provide evidence for links between cases during investigations of case clusters. The National *Salmonella*, *Shigella* and *Listeria* Reference Laboratory (NSSLRL) in University College Hospital, Galway can provide laboratory services for speciation, serotyping, antimicrobial resistance profiling, and where appropriate, Pulsed Field Gel Electrophoresis (PFGE) of *Shigella* isolates.

In 2010, 40 human *Shigella* isolates were referred to the NSSLRL, two-thirds of the isolates from all confirmed cases. The species/serotype distribution of these isolates is reported in Table 2.

There were three shigellosis outbreaks notified in 2010, details of which are provided in Table 3.

Although foreign travel is a major risk factor for shigellosis among Irish residents, indigenous risks are likely to be through person-to-person spread (in some instances from persons who have contracted shigellosis

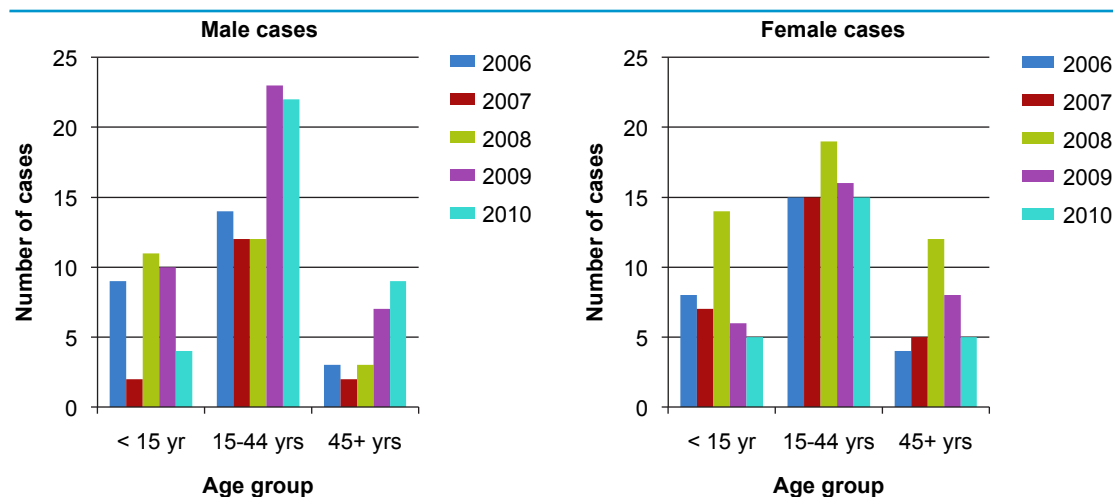


Figure 2. Age-sex distribution shigellosis notifications, Ireland 2010 relative to 2006-2009

abroad), and from food as demonstrated by the Scandinavian outbreaks associated with imported foods in recent years.

References

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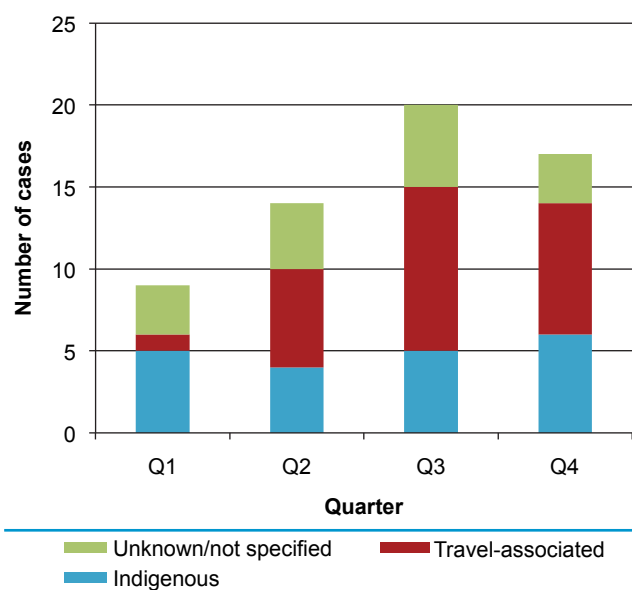


Figure 3. Number shigellosis notifications by travel and quarter of notification, Ireland 2010

Note: For the purposes of this figure, shigellosis notifications were categorised as indigenous if the country of infection was reported on CIDR as Ireland, whereas notifications where a country of infection other than Ireland was reported were categorised as travel-associated.

Table 3. Shigellosis outbreaks, Ireland 2010

Month	HSE-area	Transmission Route	Location	Type	Number ill
Apr	E	Person-to-person	Community	General	6
Aug	MW	Waterborne	Private house	Family	3
Sep	S	Unknown	Private house	Family	4