

3.8 Shigellosis

Summary

Number of cases 2012: 29
 Crude incidence rate 2012: 0.63/100,000
 Number of cases 2011: 42

In the last twenty years, 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.^{6,7}

Twenty-nine cases of shigellosis were notified in Ireland in 2012 (CIR 0.63 per 100,000, 95% CI 0.40-0.86), all of which were laboratory confirmed. This compares to 42 cases in 2011 and 60 cases in 2010 (Figure 1). Of 25 cases where hospitalisation status was recorded, five (20%) were reported as hospital in-patients. Cases ranged in age from two to 70 years (median age=33 years). Like 2009 to 2011, more males (n=18) than females (n=11) were notified (Figure 2).

Information on travel history is very valuable when reviewing surveillance data for possible indigenous clusters, and data on country of infection in the national dataset continues to improve, being available for 86% of shigellosis notifications this year. Sixteen cases were reported associated with foreign travel (Table 1).

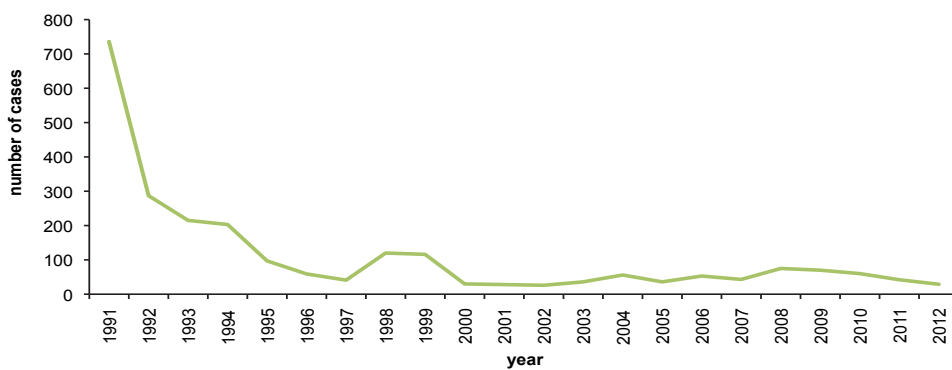


Figure 1: Annual number of notifications shigellosis, Ireland 1991-2012

Table 1: Number of notifications shigellosis by species and country of infection, Ireland 2012

Organism	Carribbean	Africa	Asia	Other Europe	Ireland	Not specified	Total
<i>Shigella dysenteriae</i>	0	0	2	0	0	0	2
<i>Shigella flexneri</i>	0	2	1	0	3	1	7
<i>Shigella sonnei</i>	1	2	6	2	6	3	20
Total	1	4	9	2	9	4	29

(Data source: CIDR)

The countries of infection reported were India (n=7), Morocco (n=2), Spain (n=2) with one case associated each with travel to Pakistan, Tanzania, Nigeria, Dominican Republic and Nepal. Nine infections were reported as being acquired in Ireland, while no country of infection information was available for four cases.

Shigella sonnei was the most common species reported (n=20), followed by *S. flexneri* (n=7), with two *S. dysenteriae* reported. The species distribution of cases by country of infection is reported in Table 1.

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 2012, 20 human *Shigella* isolates were referred to the NSRL, 69% of the isolates from all notified cases. The species/serotype of these cases are reported in Table 2.

There was one shigellosis outbreak notified in 2012, a family outbreak with three persons ill, caused by *Shigella flexneri*. The mode of transmission was reported as person-to-person.

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

Table 2: Species/serotypes of *Shigella* isolates referred to NSSLRL in 2012 (Data courtesy of Martin Cormican, Niall de Lappe and Jean O Connor at NSSLRL)

Serotype	Number by serotype
<i>Shigella dysenteriae</i>	2
<i>Shigella flexneri</i> 2a	1
<i>Shigella flexneri</i> 3a	1
<i>Shigella flexneri</i> 4a	1
<i>Shigella flexneri</i> 6	3
<i>Shigella sonnei</i>	12
Total	20

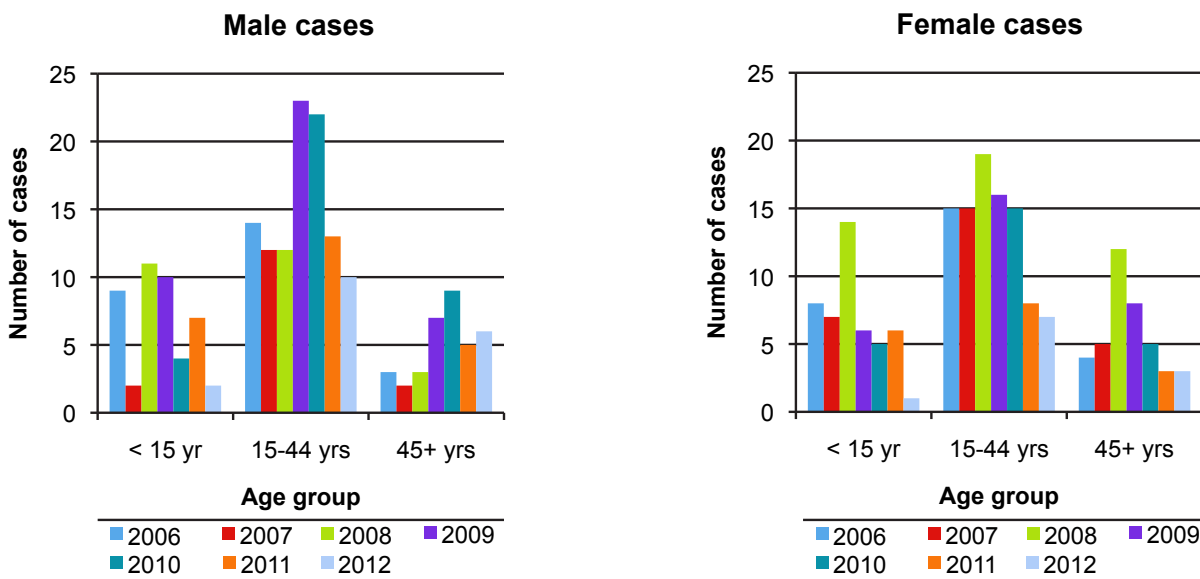


Figure 2: Age-sex distribution shigellosis notifications, Ireland 2012 relative to 2006-2011

References

1. *Shigella sonnei* infections in Norway associated with sugar peas, May – June 2009. B T Heier , K Nygard, G Kapperud, B A Lindstedt, G S Johannessen, H Blekkan
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19243>
2. Imported fresh sugar peas as suspected source of an outbreak of *Shigella sonnei* in Denmark, April – May 2009. L Müller, T Jensen, R F Petersen, K Mølbak, S Ethelberg
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19241>
3. Lewis HC, Ethelberg S, Olsen KE, Nielsen EM, Lisby M, Madsen SB, et al. Outbreaks of *Shigella sonnei* infections in Denmark and Australia linked to consumption of imported raw baby corn. *Epidemiol Infect* 2009;137(3):326-34.
4. Lewis HC, Kirk M, Ethelberg S, Stafford R, Olsen KE, Nielsen EM, Lisby M, Madsen SB, Mølbak K. Outbreaks of shigellosis in Denmark and Australia associated with imported baby corn, August 2007 – final summary. *Euro Surveill.* 2007;12(40):pii=3279. Available from:
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=3279>
5. M Löfdahl, S Ivarsson, S Andersson, J Långmark, L Plym-Forshell 2009. An outbreak of *Shigella dysenteriae* in Sweden, May–June 2009, with sugar snaps as the suspected source. *Eurosurveillance* 14:28
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19268>
6. Gournis, E. 2010. SHIGELLOSIS, CHANGING EPIDEMIOLOGY - CANADA: (ONTARIO) REQUEST FOR INFORMATION. http://www.promedmail.org/pls/apex/f?p=2400:1001:687576564639::NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1010,81401
7. HPA. 2011. Outbreak of UK acquired *Shigella flexneri* in men who have sex with men. Volume 5 No 40; 7 October 2011
<http://www.hpa.org.uk/hpr/archives/2011/news4011.htm#shgflx>