



Public Health
England

Protecting and improving the nation's health

Travel-associated *Shigella* spp. infection in England, Wales and Northern Ireland: 2014

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

Public Health England

Wellington House

133-155 Waterloo Road

London SE1 8UG

Tel: 020 7654 8000

www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk)

Facebook: www.facebook.com/PublicHealthEngland

Prepared by Travel and Migrant Health.

For queries relating to this document, please contact: tmhs@phe.gov.uk

© Crown copyright 2017.

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence visit: www.nationalarchives.gov.uk/doc/open-government-licence/version/3/ or email: psi@nationalarchives.gsi.gov.uk. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published: February 2017.

PHE publications gateway number: 2016648.



Contents

About Public Health England	2
General trend	4
Travel-associated cases	5
Age and sex	5
Geographical distribution	5
Travel history	6
Data sources	9
References	10

General trend

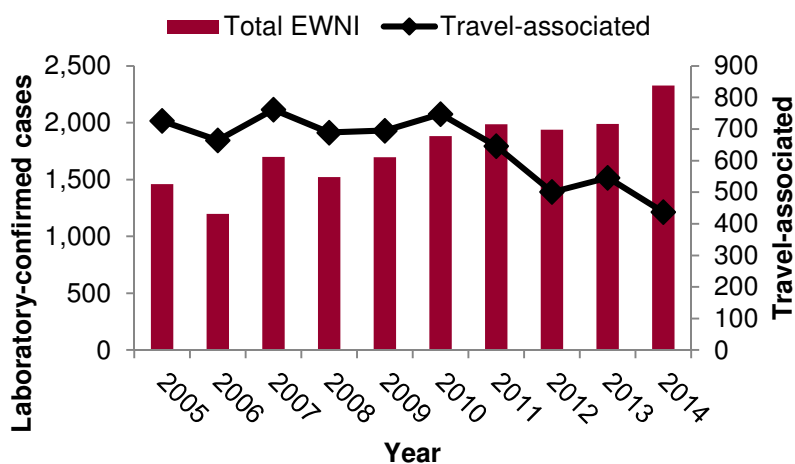
In 2014, 2,327 cases of *Shigella* infection were reported in England, Wales and Northern Ireland (EWNl), compared to 1,991 reported in 2013 [Table1]. The majority of infections in EWNl were caused by *Shigella sonnei* and *S. flexneri* which are common in the UK, but *S. boydii* and *S. dysenteriae* are more often associated with foreign travel. Cases of *Shigella* infection have increased by 20% since 2012, while travel-associated cases of *Shigella* infection have decreased by 12% (however see caveat below regarding travel history reporting). An increase in *Shigella flexneri* and *S. sonnei* occurring in men who have sex with men in the UK is a possible explanation for this trend (1). The proportion of *Shigella* infections that are travel-associated has been generally decreasing since 2005. [Figure 1].

Table 1. Laboratory-confirmed cases of *Shigella* spp, England, Wales and Northern Ireland: 2005 to 2014.

Year	England and Wales	Northern Ireland	Total for EWNl	Of which travel-associated*
2005	1,453	7	1,460	726 (50%)
2006	1,190	9	1,199	665 (55%)
2007	1,684	16	1,700	762 (45%)
2008	1,506	16	1,522	689 (45%)
2009	1,685	13	1,698	695 (41%)
2010	1,879	5	1,884	748 (40%)
2011	1,979	8	1,987	646 (33%)
2012	1,931	9	1,940	501 (26%)
2013	1,987	4	1,991	546 (27%)
2014	2,306	21	2,327	437 (19%)

* See source of data below for travel-associated infections for England, Wales and Northern Ireland

Figure 1. Laboratory-confirmed cases of *Shigella* spp, England, Wales and Northern Ireland: 2005 to 2014

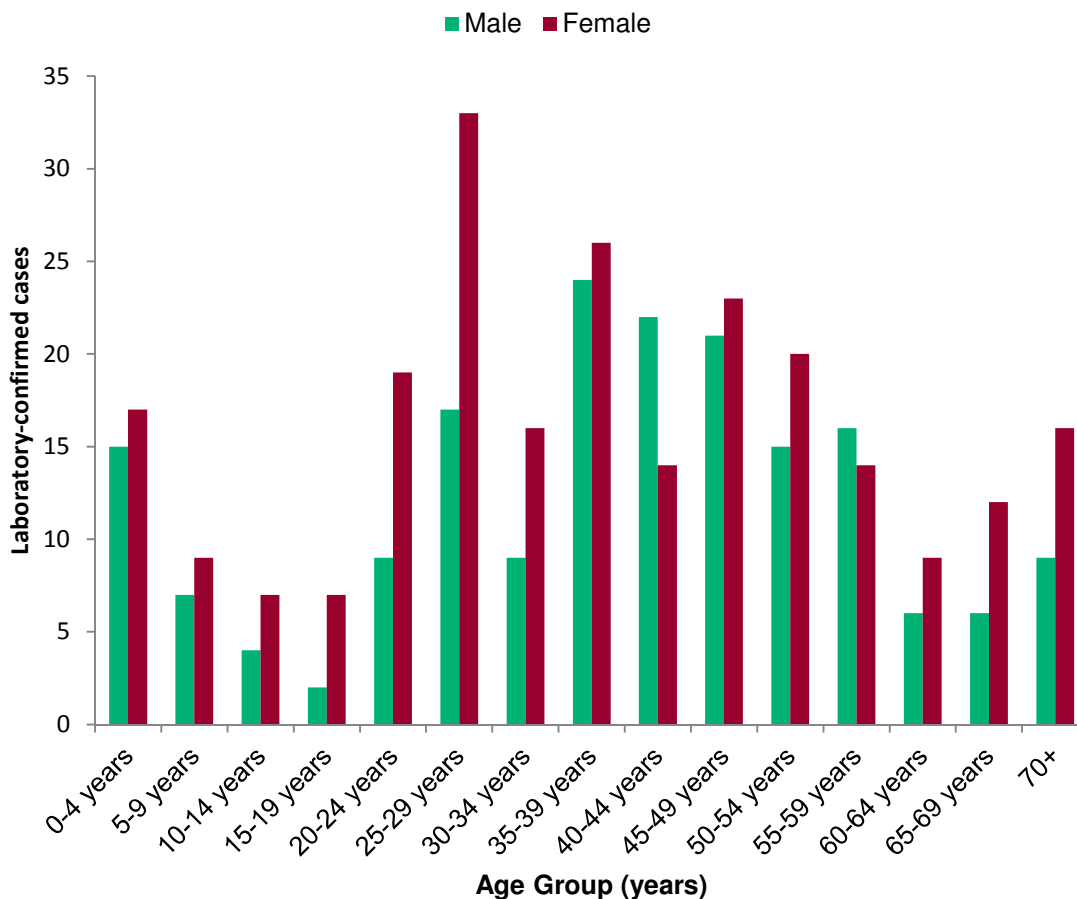


Travel-associated cases

Age and sex

In 2014, 424/437 travel-associated cases of *Shigella* spp. in EWNl had known information about age and sex [Figure 2], of which 55% were female. The median age for all cases was 39 years (range 1 to 84 years). The majority of cases occurred in adults with 15% (63/424) in those aged 16 years and under.

Figure 2. Travel-associated laboratory-confirmed cases of *Shigella* spp. by age and sex, England, Wales and Northern Ireland: 2014 (N=424).



Geographical distribution

The South East PHE Centre reported the highest proportion (21%) of travel-associated cases of *Shigella* infections in 2014 [Table 2]. All regions except the North West and

Northern Ireland saw a decrease in cases reported in 2014 compared to 2013, although numbers are small so should be interpreted with caution.

Table 2. Travel-associated laboratory-confirmed cases of *Shigella* spp. by geographical distribution, England, Wales and Northern Ireland: 2013 and 2014.

Geographical area	2014	2013	% change between 2013 and 2014
South East	92	103	-11%
London	81	131	-38%
North West	71	45	58%
Yorkshire and Humber	55	56	-2%
South West	47	81	-42%
East of England	30	41	-27%
West Midlands	21	43	-51%
East Midlands	15	21	-29%
Northern Ireland	9	-	-
North East	8	23	-65%
Wales	8	2	300%
Grand total	437	546	-20%

Travel history

The top 10 countries of travel for cases of *Shigella* infection in 2014 compared to 2013 are listed in Table 3, together with regions of travel for the remaining cases. India and Egypt are the most commonly reported countries of travel for *Shigella* infection acquired abroad. However, cases associated with travel to both these countries decreased in 2014 compared to 2013. As can be seen from the table, most travel-associated cases of *Shigella* spp. are associated with travel to regions and countries of the world where hygiene and sanitation facilities are not as robust as in the UK. This is particularly true for *Shigella dysenteriae* and *Shigella boydii*; *Shigella sonnei* and *Shigella flexneri* are more common worldwide [Table 4]. Any trends should be interpreted with caution as travel history reporting is incomplete (see *note in [data sources section](#) below). Between 2005 and 2014, on average travel history reporting for cases of *Shigella* infection was 31%.

Table 3. Travel-associated laboratory-confirmed cases of *Shigella* spp. by country and world region of travel, England, Wales and Northern Ireland: 2013 and 2014.

Country/region of travel†	2014	2013	% change between 2013 and 2014
India	83	107	-22%
Egypt	51	93	-45%
Pakistan	42	61	-31%
Morocco	22	29	-24%
Spain	8	8	0%
Thailand	7	3	133%
Ethiopia	6	4	50%
Madagascar	6	2	200%
Tanzania	6	9	-33%
Other Sub Saharan and Southern Africa	47	56	-16%
Other Europe	19	18	6%
Caribbean	16	8	100%
Other South East Asia and the Far East	13	12	8%
South America	11	10	10%
Other North Africa and the Middle East	10	36	-72%
Africa unspecified	9	18	-50%
Other Indian subcontinent	7	11	-36%
Central America	6	16	-63%
Asia unspecified	4	6	-33%
Pacific	1	3	-67%
North America	6	5	20%
Country not stated	58	33	76%

N= number of countries.

†Totals may not match those stated in Table 1, where two or more countries of travel were stated for a case, each listed country was counted individually.

Table 4. Travel-associated laboratory-confirmed cases of *Shigella* spp. by country or world region of travel and *Shigella* species, England, Wales and Northern Ireland: 2014.

Country/region of travel†	<i>S. boydi</i>	<i>S. dysenteriae</i>	<i>S. flexneri</i>	<i>S. sonnei</i>	<i>S. sp</i>	Total
India	8	3	39	32	1	83
Egypt	2	4	6	38	1	51
Pakistan	6	3	18	15	-	42
Morocco	2	1	3	15	1	22
Spain	-	-	5	3	-	8
Thailand	1	-	3	3	-	7
Ethiopia	-	-	4	2	-	6
Madagascar	1	-	2	3	-	6
Tanzania	-	-	1	5	-	6
Other Sub Saharan and Southern Africa	4	-	22	21	-	47
Other Europe	1	-	8	10	-	19
Caribbean	-	-	4	12	-	16
Other South East Asia and the Far East	-	-	4	8	1	13
South America	-	-	3	8	-	11
Other North Africa and the Middle East	-	1	5	4	-	10
Africa unspecified	-	-	5	2	2	9
Other Indian subcontinent	-	-	1	6	-	7
Central America	-	-	1	5	-	6
Asia unspecified	-	-	-	2	2	4
Pacific	-	1	-	-	-	1
North America	-	-	1	5	-	6
Country not stated	3	1	18	35	1	58

N= number of countries.

†Totals may not match those stated in Table 1, where two or more countries of travel were stated for a case, each listed country was counted individually.

Data sources

- data for the total reports of *Shigella* in England and Wales 2005 to 2013 were provided by the PHE Gastrointestinal Infections Department
- data for the total reports of *Shigella* in Northern Ireland are from the [Health and Social Care Public Health Agency \(HSC PHA\) website](#)
- travel-associated infections for England (2005 to 2014) and Wales (2005 to 2012) comprise laboratory reports sent to the PHE Centre for Infectious Disease Surveillance and Control, Colindale, through the Co-Surv system and were extracted from the Second Generation Surveillance System (SGSS) using sample specimen date
- travel-associated infections for Wales 2013 and 2014 were supplied by Public Health Wales extracted from the information bureau for infectious disease (IBID)
- travel-associated infections data for Northern Ireland were provided by HSC PHA and comprise laboratory reports extracted from Co-Surv using sample specimen date

*Notes

1. Surveillance questionnaires are not routinely completed for all *Shigella* cases. Travel history information is mainly collected from laboratory reports where it is available. Travel history on laboratory request forms is underreported for *Shigella* infections although not to the same extent as *Campylobacter* or *Cryptosporidium* infections.
2. Whole genome sequencing (WGS) was introduced for *Shigella* isolates in June 2015 and subsequent analyses using sequencing data may show different trends

References

1. Public Health England. Epidemiology of Shigella in adults in the South East, 2011 to 2015: continued increase in cases in men who have sex with men. PHE: 2016. Available online: www.gov.uk/government/publications/shigella-epidemiology-in-adults-in-south-east-from-2011-to-2015