Public Health England

Protecting and improving the nation's health

Cryptosporidium spp data 2007 to 2016

May 2018

National laboratory data for residents of England and Wales

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-leading 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 Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Prepared by: Gastrointestinal Infections Department.
For queries relating to this document, please contact: noroOBK@phe.gov.uk

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Key points for 2016

The number of *Cryptosporidium spp* reported in 2015 and 2016 exceeded the 2010-14 mean. The increase was predominately seen for *C.hominis* but reports of *C.parvum* also increased. There was no single explanation for this increase. Foreign travel was reported across both species with a marked increase in indigenous acquisition of *C. hominis.*

Reported outbreaks were predominately linked to swimming pools and petting farms.

The highest number of *Cryptosporidium spp* laboratory reports were reported in the South West of England with 803.

Wales had the highest rate of *Cryptosporidium spp* laboratory reports per 100,000 population in England and Wales with 15.1 laboratory reports per 100,000 population.

Reporting numbers were highest in children below the age of 10.

In 2016, September was the peak month for *Cryptosporidium spp* reporting.

There were no foodborne outbreaks *of Cryptosporidium spp* reported in England and Wales during 2016. However, there were 13 non-foodborne outbreaks reported; the majority of which (53.8%) were in swimming pool settings.

We would like to remind all laboratories to refer samples of *Cryptosporidium* to the *Cryptosporidium* Reference Unit (CRU) in Swansea. For more information, please visit the CRU page of the Public Health Wales website.

For health protection teams, there is guidance on the investigation of *Cryptosporidium* linked to swimming pools, available on the CRU page of the Public Health Wales website.

Cryptosporidium spp data 2007 to 2016

All data presented in this report are correct as of 3 November 2017.

1. Annual data (2007-2016)

Table 1: Annual laboratory reports of *Cryptosporidium spp* in England and Wales (2007-2016)

Year	Number of laboratory reports	Laboratory reports per 100,000 population
2007	3,073	5.7
2008	4,162	7.6
2009	4,831	8.7
2010	3,901	7.0
2011	2,990	5.3
2012	5,765	10.2
2013	3,520	6.2
2014	4,023	7.0
2015	5,222	9.0
2016	5,925	10.1

Figure 1: Annual laboratory reports *Cryptosporidium spp* in England and Wales (2007-2016)

2. Regional data (2016)

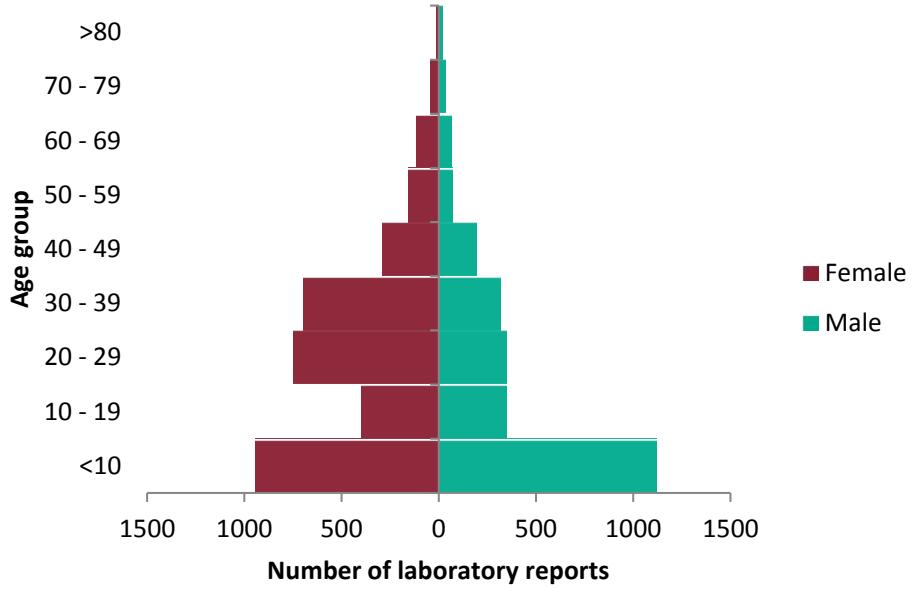
Table 2: Regional distribution of laboratory reports of *Cryptosporidium spp* in England and Wales (2016)

Country	Region	Number of laboratory reports	Laboratory reports per 100,000 population
England	East Midlands	515	10.9
	East of England	641	10.5
	London	238	2.7
	North East	305	11.6
	North West	605	8.4
	South East	598	6.6
	South West	803	14.6
	Yorkshire and The Humber	713	13.1
	West Midlands	756	13.0
Wales	Wales	469	15.1

Regional classification based on place of residence of laboratory reports and classified using NUTS1 codes.

3. Age/sex distribution (2016)

Figure 1: Age/sex distribution of laboratory reports of *Cryptosporidium spp* in England (2016)*



*Age/sex data not available for all Welsh laboratory reports, and therefore not included. There were 5 laboratory reports with unknown data recorded.

4. Seasonal variation (2016)

Figure 3: Seasonality of laboratory reports of *Cryptosporidium spp* reported in England (2016)*

*Excludes Welsh data.

5. Outbreak data (2016)

In 2016, there were no foodborne outbreaks of Cryptosporidium reported in England and Wales. However, there were 13 non-foodborne outbreaks reported.

Table 3: Non-foodborne outbreaks of *Cryptosporidium spp* reported in England and Wales

Agent	Total Affected	Laboratory confirmed	Hospitalised	Deaths	Setting	Food Description
Cryptosporidium spp.	3	3	0	0	Swimming pool	No food identified
Cryptosporidium spp.	3	3	0	0	Swimming pool	No food identified
Cryptosporidium spp.	4	3	0	0	Open/petting farm	No food identified
Cryptosporidium spp.	5	4	0	0	Other	No food identified
Cryptosporidium spp.	5	5	0	0	Other	No food identified
Cryptosporidium spp.	4	4	0	0	Swimming pool	No food identified
Cryptosporidium hominis	9	9	0	0	Swimming pool	No food identified
Cryptosporidium parvum	17	14	5	0	Commercial farm	No food identified
Cryptosporidium parvum	9	9	0	0	Open/petting farm	No food identified
Cryptosporidium spp. IBA10G2	4	4	0	0	Swimming pool	No food identified
Cryptosporidium spp. IIAA15G1R2 and IIAA17G1R1	54	37*	0	0	Open/petting farm	No food identified
Cryptosporidium hominis IBA10G2	13	13	0	0	Swimming pool	No food identified
Mixed *Cryptosporidium hominis and Cryptosporidium parvum*	8	8	0	0	Swimming pool	No food identified

*Mixed outbreak, 33 cryptosporidiosis cases and 4 VTEC O157 cases.

Data sources

Public Health England Second Generation Surveillance System (SGSS). This is a live laboratory reporting system. Therefore, numbers may fluctuate. Data provided in this report are new extractions from this system and provide updated figures to previously published reports. In 2014, PHE upgraded the laboratory reporting system. So direct comparisons between data reported from the previous system (LabBase2) and the new system (SGSS) may require cautious interpretation.

Electronic Foodborne and Non-Foodborne Gastrointestinal Outbreak Surveillance System (eFOSS).

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- the PHE Information Management Department for maintenance and quality assurance of PHE national surveillance databases for GI diseases
- PHE Local Public Health Laboratories and Food Water and Environmental Microbiology Services for providing a surveillance function for GI pathogens and testing of food and environmental samples routinely and during outbreak investigation
- PHE National Parasitology Reference Laboratory, Department of Clinical Parasitology, University College London Hospital NHS Foundation Trust for their expertise
- *Cryptosporidium* Reference Unit (CRU) in Swansea (Public Health Wales Microbiology and Health Protection) for providing the Reference Laboratory Services (especially genotyping) and expertise
- we are grateful to all colleagues who have investigated and reported outbreaks to the Electronic Foodborne and Non-Foodborne Gastrointestinal Outbreak Surveillance System (eFOSS)

PHE has a statutory obligation to collect and report outbreaks of foodborne disease. This is aligned to the requirements of the Zoonoses directive 2003/99/EC. This directive requires that EU member states investigate and report all foodborne outbreaks to the European Food Safety Authority (EFSA). Additionally, information on other zoonoses outbreaks is included in eFOSS, ie non-foodborne outbreaks (mode of transmission covering animal contact, person to person contact, and recreational water).