Public Health England

Protecting and improving the nation's health

# Norovirus 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

In 2016, laboratory reports of norovirus were consistent with reports in previous years.

Norovirus infection in England and Wales is seasonal, occurring mostly in the winter months (October to March).

Enclosed settings are particularly susceptible to outbreaks of norovirus. The virus is highly resilient; able to survive for many days in the environment and has a low infectious dose. As immunity to norovirus infection is short, typically just a few months, there is always a pool of susceptible people.

During the winter months, reports of norovirus activity are published weekly and are available here. Reports are published monthly during the summer months. These reports provide summaries of laboratory reporting, virology and reports of outbreaks in hospitals.

# Annual norovirus data 2007 to 2016

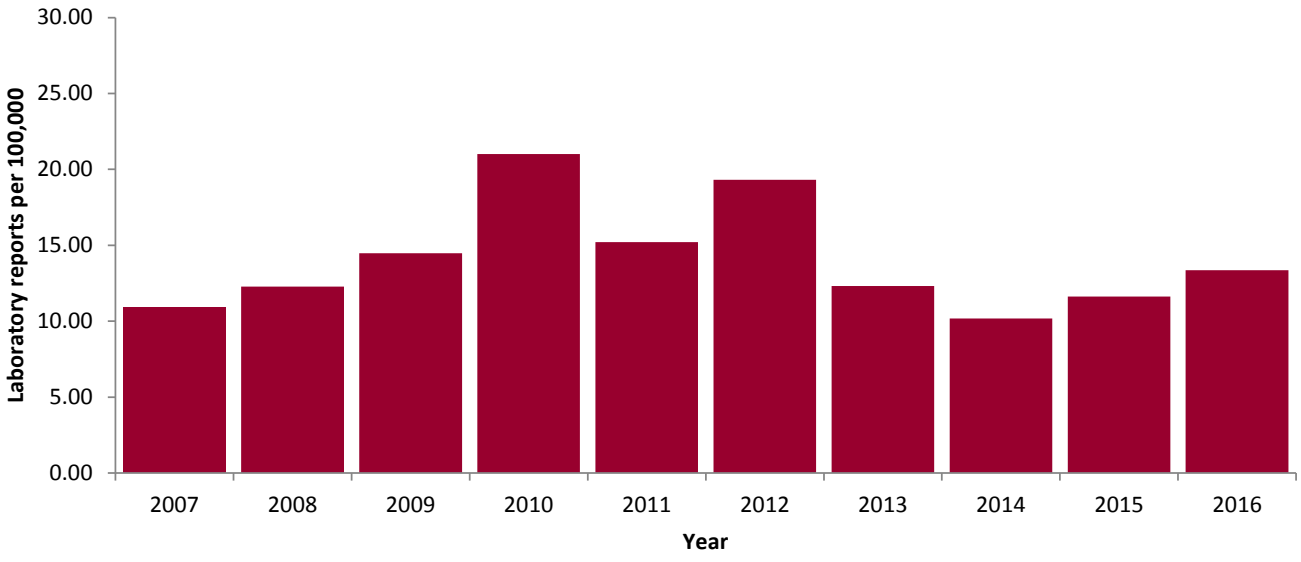
All data presented in this report are correct as of November 2017.

## 1. Annual data (2007-2016)

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

| Year | Number of laboratory reports | Laboratory reports per 100,000 population |
|---|---|---|
| 2007 | 5,945 | 10.93 |
| 2008 | 6,736 | 12.28 |
| 2009 | 7,994 | 14.47 |
| 2010 | 11,697 | 21.00 |
| 2011 | 8,547 | 15.22 |
| 2012 | 10,922 | 19.31 |
| 2013 | 7,015 | 12.32 |
| 2014 | 5,838 | 10.17 |
| 2015 | 6,723 | 11.61 |
| 2016 | 7,795 | 13.35 |

**Figure 1: Laboratory reports of norovirus (per 100,000) in England and Wales (2007-2016)**



## 2. Age/sex distribution (2016)*

**Figure 2: Age/sex distribution of norovirus laboratory reports in England and Wales (2016)**

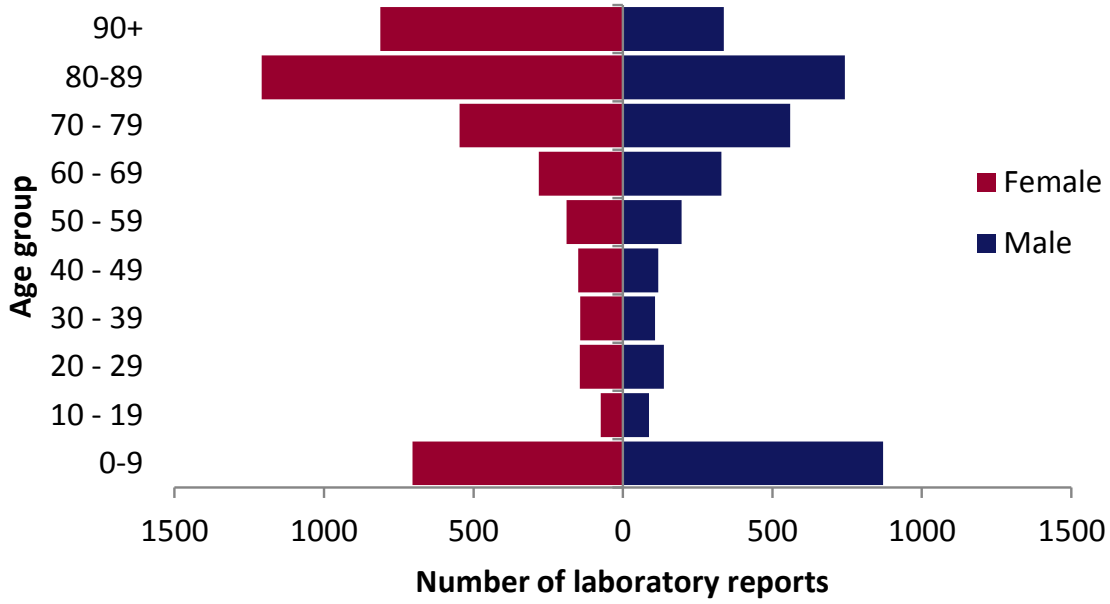
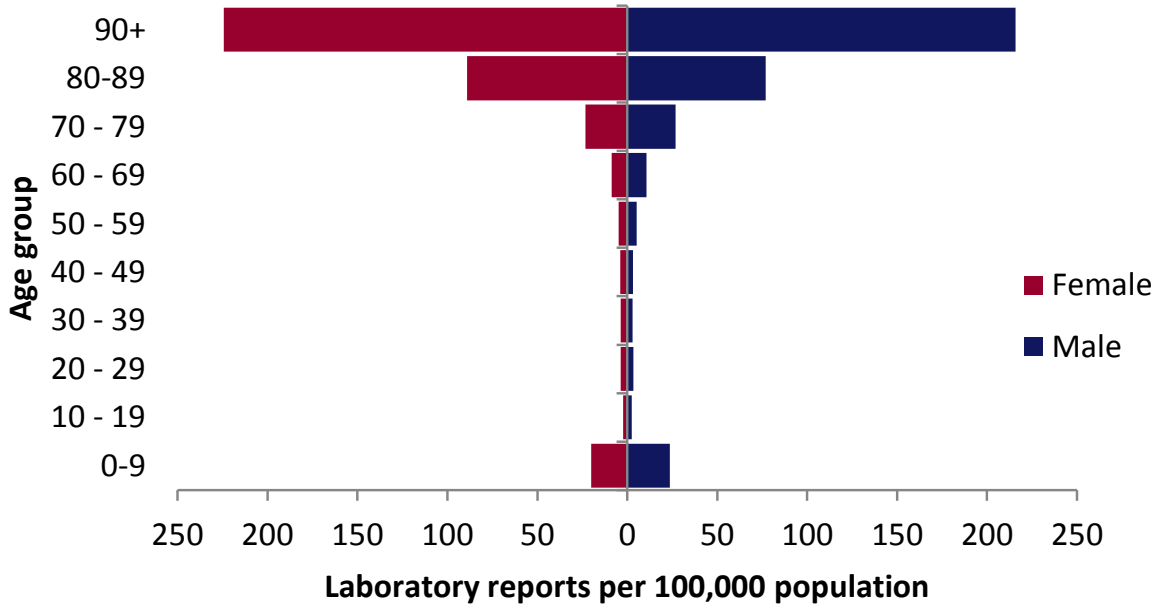



**Figure 3: Age/sex distribution of rates of norovirus laboratory reports in England and Wales (2016)**

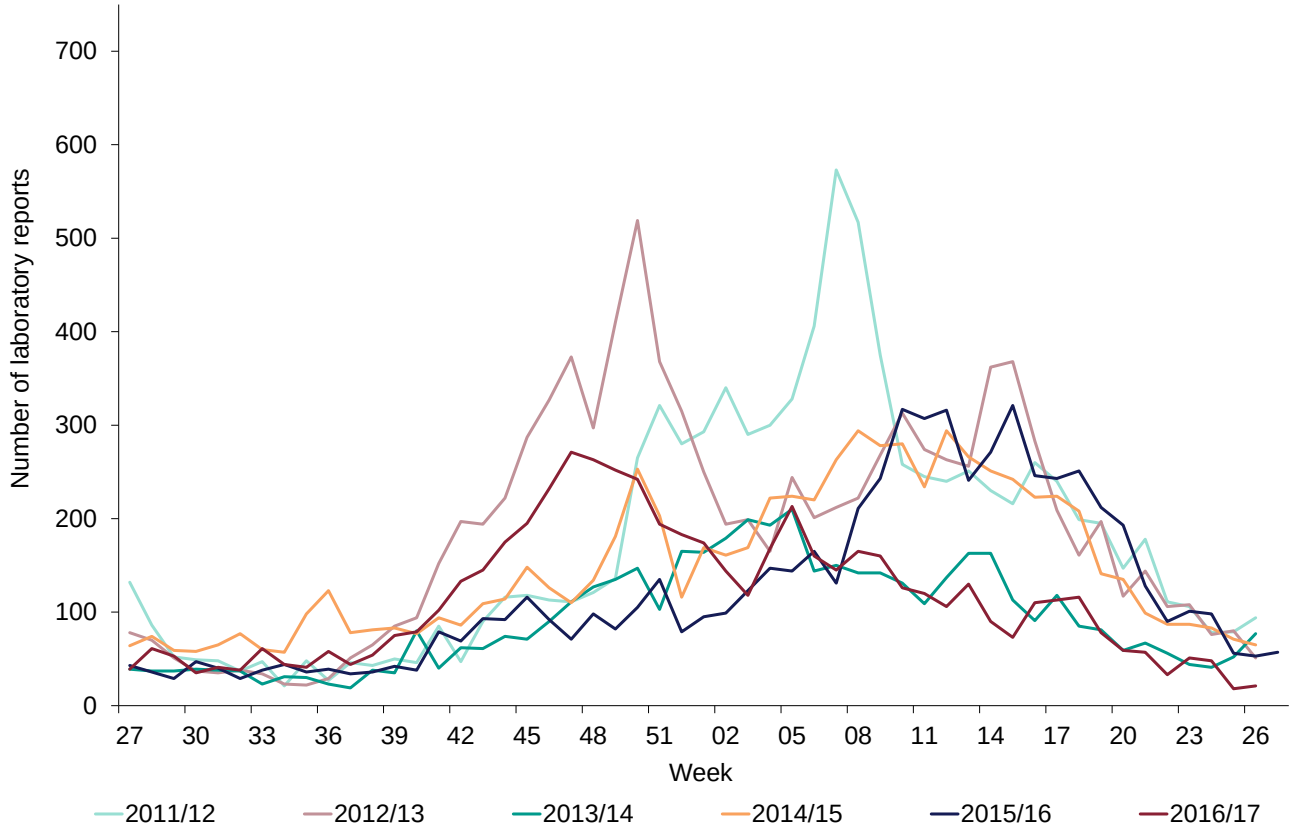



* 59 reports with unknown age and/or gender recorded.

## 3. Seasonal variation (2011/12 to 2016/17)

Each norovirus season runs from July to the following June (week 27 to week 26) in order to capture the winter peak of activity in one season.

**Figure 4: Seasonal comparison of laboratory reports of norovirus in England and Wales (2011/12 to 2016/17)**

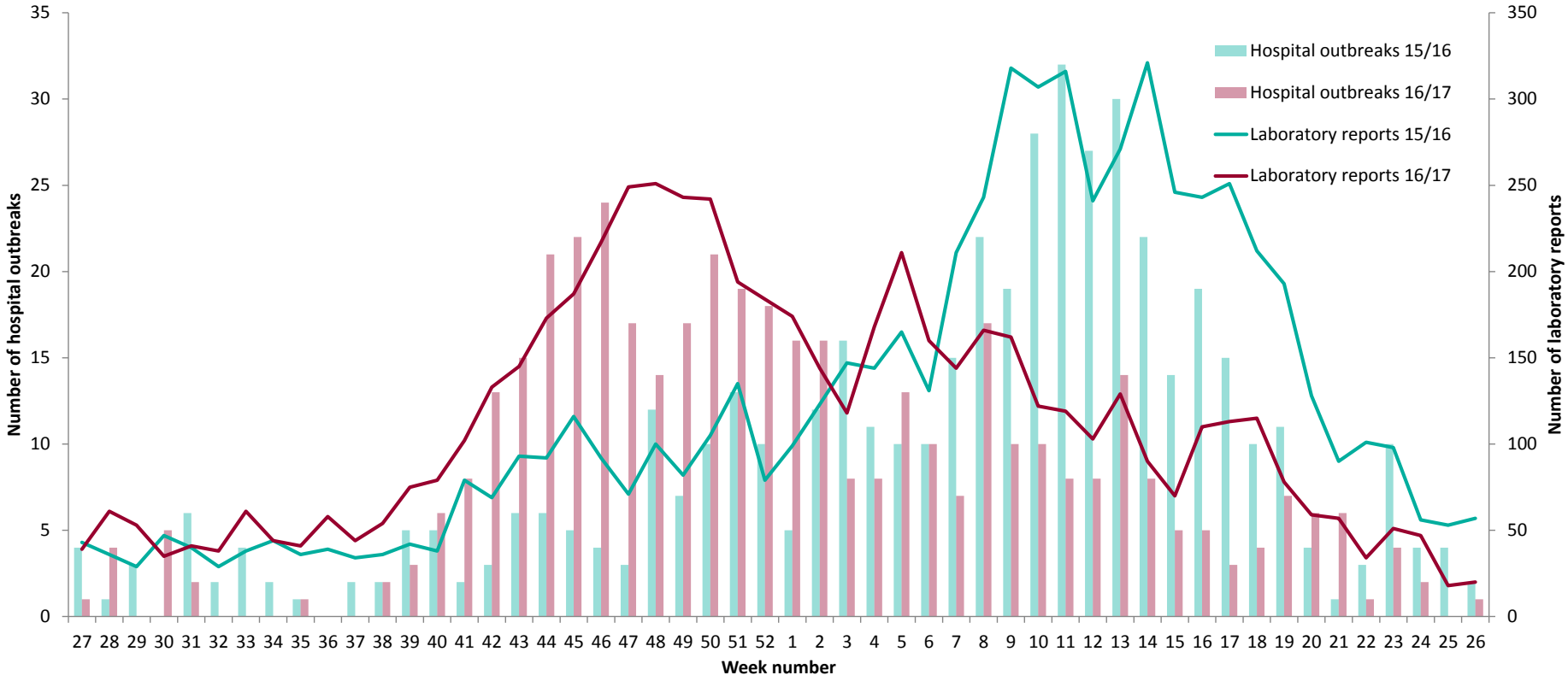



## 4. Hospital outbreaks (2015/16 and 2016/17)

The Hospital Norovirus Outbreak Reporting System (HNORS) captures data on suspected or confirmed outbreaks of norovirus in hospitals in England. The secure web-based database for entering outbreak data can be found at: bioinformatics.phe.org.uk/noroOBK/home.php

Each NHS Trust is encouraged to participate and the data are entered by infection control staff working in hospitals. In the recent norovirus season, July 2016 to June 2017, 430 outbreaks of suspected and confirmed norovirus were reported toHNORS.

## Figure 5: Number of hospital outbreaks and laboratory reports of norovirus (2015/16 and 2016/17)



# Data sources

Labbase2 (2006 to October 2014); Second Generation Surveillance System (SGSS) (November 2014 onwards). 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.

Data extracted are for England and Wales, as reported to Public Health England, and are faecal and lower gastrointestinal tract specimens only.

Hospital Norovirus Outbreak Reporting System (HNORS). Hospital norovirus outbreak reporting scheme (HNORS) data are for England only. Where there is an outbreak, a sample of individuals will be tested.

Mid-Year Population Estimates 2016. Office for National Statistics licensed under the Open Government License.

# Acknowledgements

We are grateful to:

- infection control staff in hospitals who take the time to contribute data to HNORS
- the Virus Reference Department, Public Health England, local authorities, health protection and environmental health specialists who have contributed data and reports to national surveillance systems
- the epidemiologists and information officers who have worked on the national surveillance of Gastrointestinal infectious (GI) diseases
- the PHE Information Management Department for maintenance and quality assurance of PHE national surveillance databases for GI diseases