PHE National Norovirus and Rotavirus Report

Summary of surveillance of norovirus and rotavirus

14 April 2016

This report is published weekly on the PHE website. For further information on the surveillance system mentioned in this report, please visit the Hospital Norovirus Reporting System website.

Summary

This is the last weekly report for this season. The next report will be next month on 12 May 2016.

Norovirus

- The number of laboratory reports of norovirus in this season* (since week 27 2015) is 3865. This is 35% lower than the average number for the same period in the five seasons from season 2010 and 2011 to season 2014 and 2015 (5932), and 30% lower than the same weeks last season. Reports of outbreaks of diarrhoea and vomiting in hospitals continue to be reported but at lower levels than in previous years.

Rotavirus

- The number of laboratory reports of rotavirus in this season* (since week 27 2015) is 1392. This is 85% lower than the ten season average for the same period in the seasons 2003 and 2004 to 2012 and 2013 (9545)*. Rotavirus laboratory reports are currently lower than previous years.

*In order to capture the winter peak of norovirus activity in one season, for reporting purposes, the norovirus season runs from week 27 in year 1 to week 26 in year 2, i.e. week 27 2009 to week 26 2010, July to June.

Hospital Norovirus Outbreak Reporting System (HNORS)

In the two weeks between 28/03/2016 and 10/04/2016 (weeks 13 2016 and 14 2016) the hospital norovirus outbreak reporting scheme (HNORS) recorded 24 outbreaks of norovirus, 22 of which (92%) led to ward/bay closures or restrictions to admissions and 19 of which (79%) were laboratory confirmed as a norovirus outbreak.

This season (since week 27 2015) there have been 327 outbreaks reported, 305 of which (93%) resulted in ward/bay closures and 233 (71%) were laboratory confirmed as norovirus.

Last season (week 27 2014 to week 26 2015) 858 outbreaks were reported, 808 (94 per cent) of which reported ward/bay closures or restrictions to admissions and 584 (68 per cent) were reported as laboratory confirmed norovirus outbreaks.

Table 1: The number of suspected and confirmed norovirus outbreaks in hospitals

Public Health England Centre	Outbreaks 28/03/2016 to 10/04/2016			Outbreaks reported in the last season 2014/2015 (week 27 2014 - week 26 2015)		
	Outbreaks	Ward/bay closure[ŧ]	Lab confirmed	Outbreaks	Ward/bay closure[ŧ]	Lab confirmed
Avon, Gloucestershire and Wiltshire				101	99	76
Bedfordshire, Hertfordshire and Northamptonshire				7	7	6
Cheshire and Merseyside				10	7	9
Cumbria and Lancashire				50	49	25
Devon, Cornwall and Somerset	1	1	1	164	162	114
Greater Manchester	3	3	2	22	18	10
Hampshire, Isle of Wight and Dorset	3	3	2	44	43	37
Lincolnshire, Leicestershire, Nottinghamshire and Derbyshire				40	37	36
London				5	5	1
Norfolk, Suffolk, Cambridgeshire and Essex						
North East	9	9	9	97	88	62
Sussex, Surrey and Kent				30	30	18
Thames Valley				9	5	3
West Midlands	2	2	1	172	166	98
Yorkshire and the Humber	6	4	4	107	92	89
Total	24	22	19	858	808	584

[ŧ] Note: not all outbreaks result in whole ward closure, some closures are restricted to bays only

Norovirus Laboratory Reporting

The number of laboratory reports of norovirus in this season* (since week 27 2015) is 3865. This is 35% lower than the average number for the same period in the five seasons from season 2010 and 2011 to season 2014 and 2015 (5932), and 30% lower than the same weeks last season. Data from laboratory reporting are subject to a reporting delay and the number reported in recent weeks is likely to increase as further laboratory reports are received. Norovirus is predominantly a winter pathogen; however, norovirus infections do occur in the summer months.

Figure 1: Seasonal comparison of laboratory reports of norovirus (England and Wales)

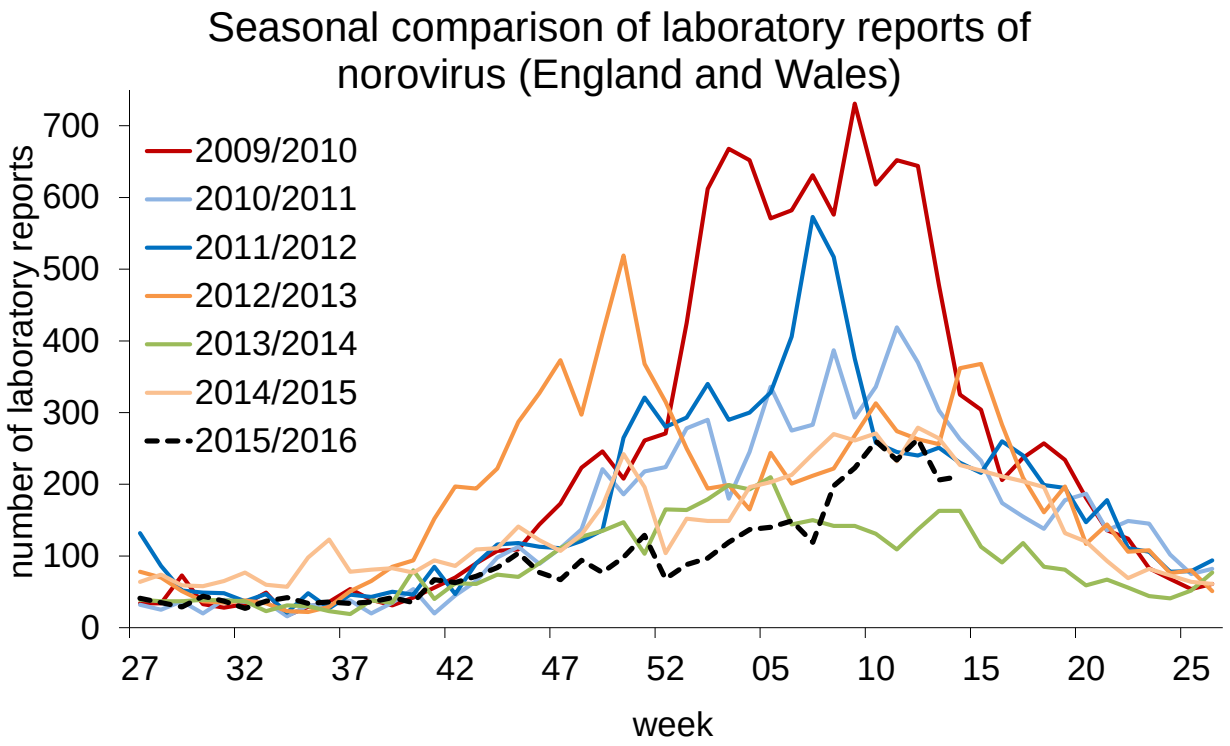


Figure 2: Laboratory and hospital outbreak reports by month of occurrence

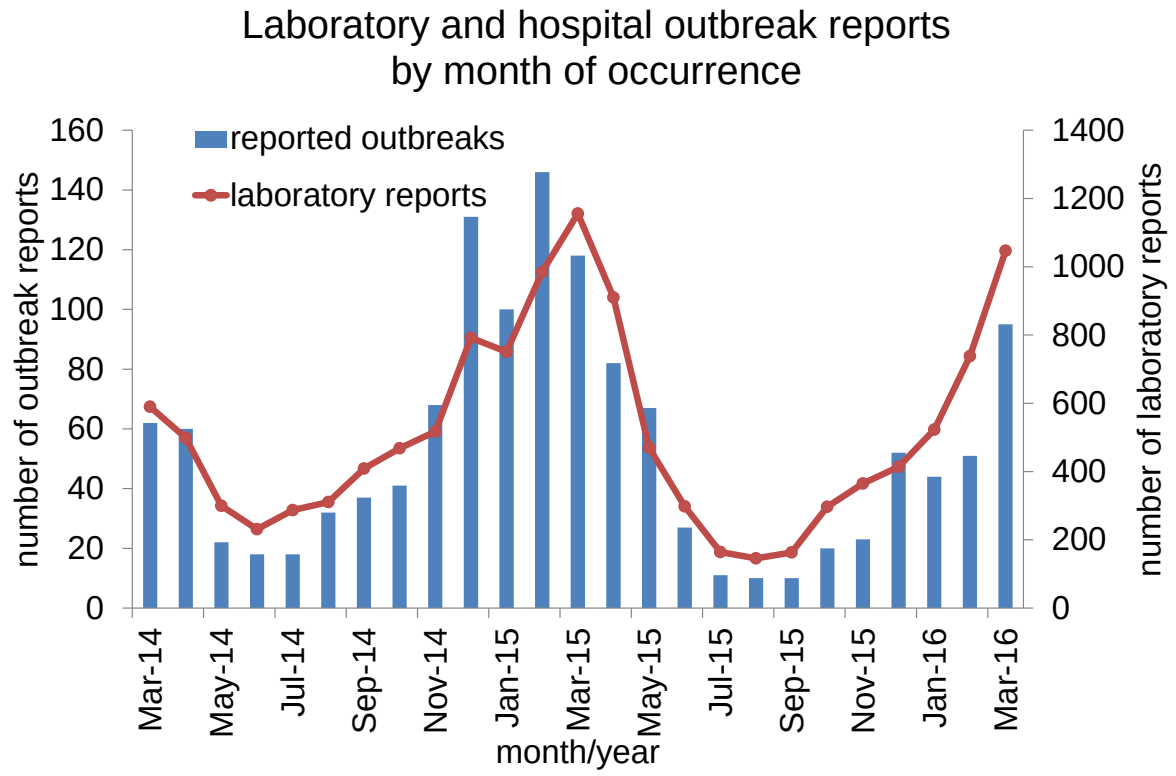


Figure 3: Cumulative number of laboratory reports of norovirus by season 2007/8-2015/16

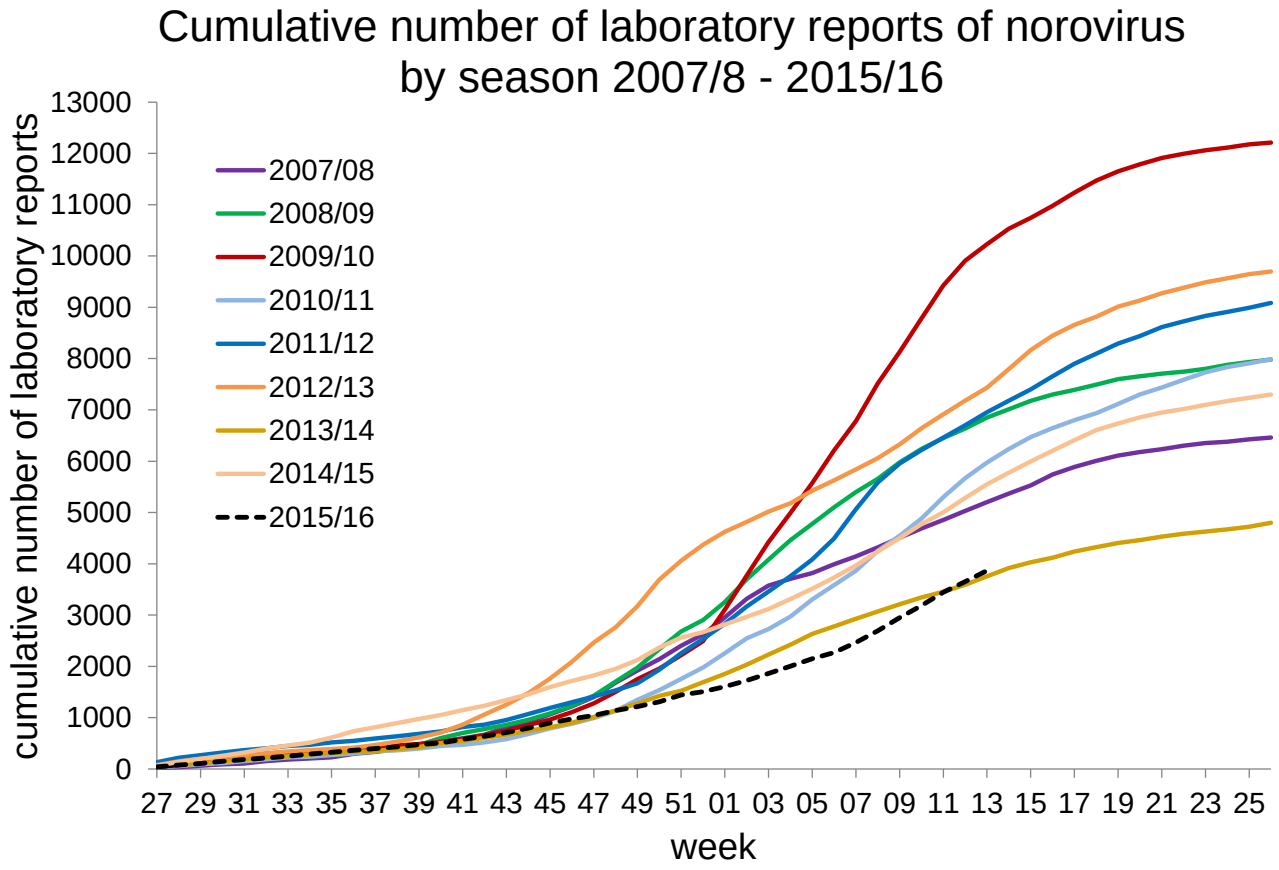
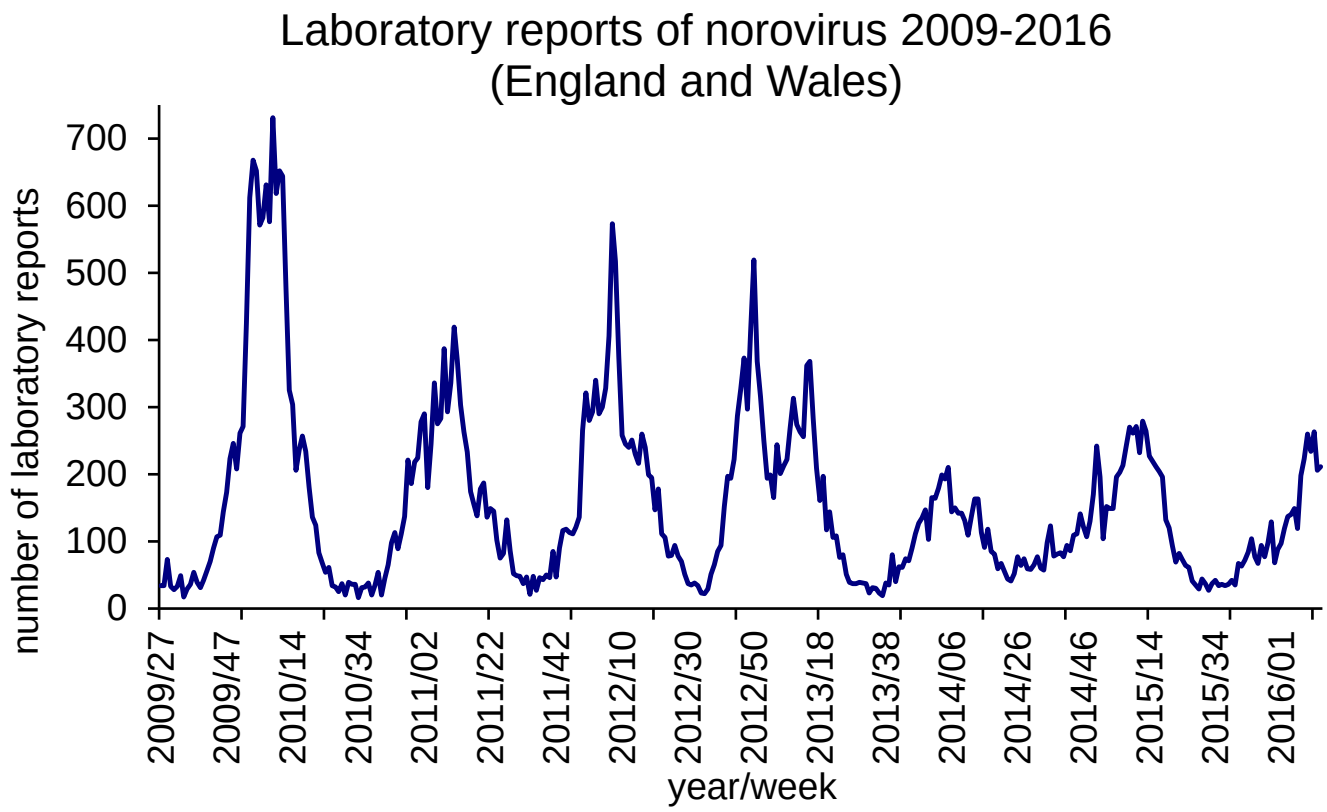


Figure 4: Laboratory reports of norovirus 2009-2016 (England and Wales)



*In order to capture the winter peak of norovirus activity in one season, for reporting purposes, the norovirus season runs from week 27 in year 1 to week 26 in year 2, i.e. week 27 2009 to week 26 2010, July to June.

Laboratory Surveillance Update – Virus Reference Department (VRD)

Date of update: **04/04/2016**
Week of update: **14-2016**

Total number of outbreaks referred to VRD (27-2015 to date): **412**
Total number of outbreaks confirmed as norovirus positive: **232**

Total number of outbreaks from healthcare settings, referred to VRD (27-2015 to date): **261**
Total number of outbreaks from healthcare settings, confirmed as norovirus positive: **104**

The reason for the varying numbers above is due a large number of retrospectively referred samples (dated from April onwards), which are still undergoing testing. As soon as the testing and analysis is complete, this is will be reflected in a future update.

Figure 5: Season-to-season comparison of norovirus-confirmed outbreaks (all settings) referred to VRD

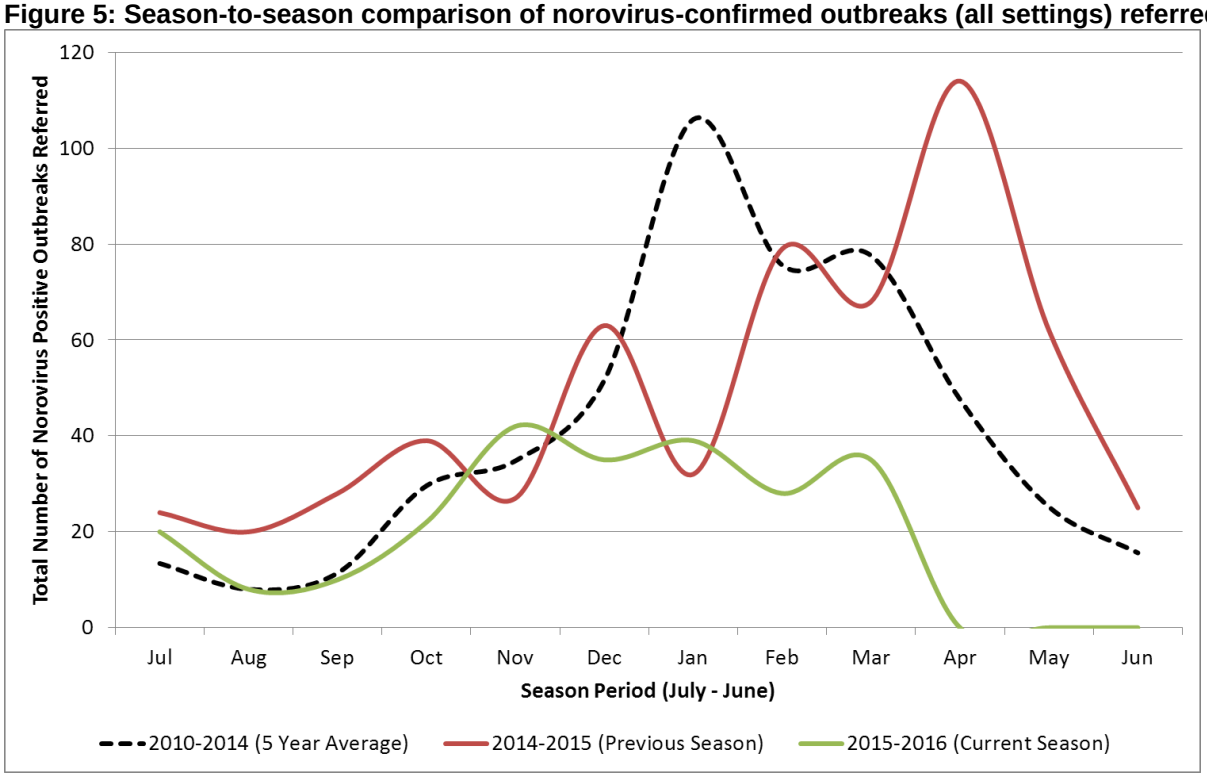
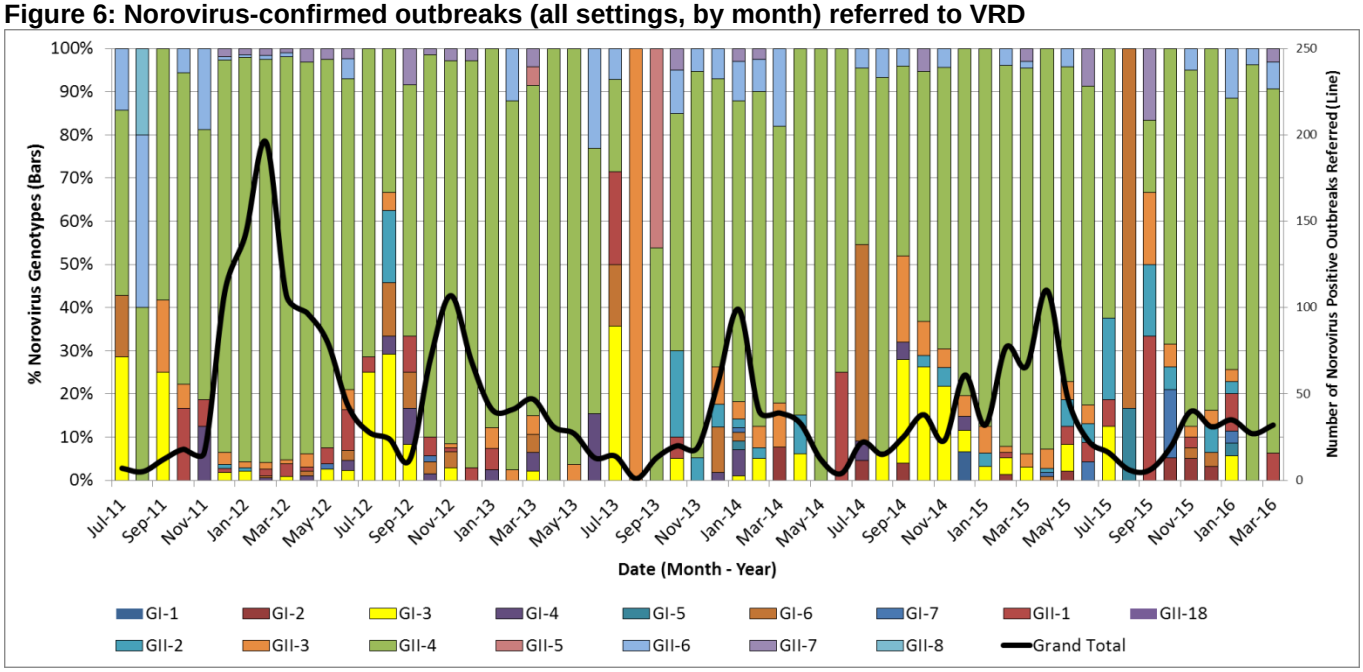
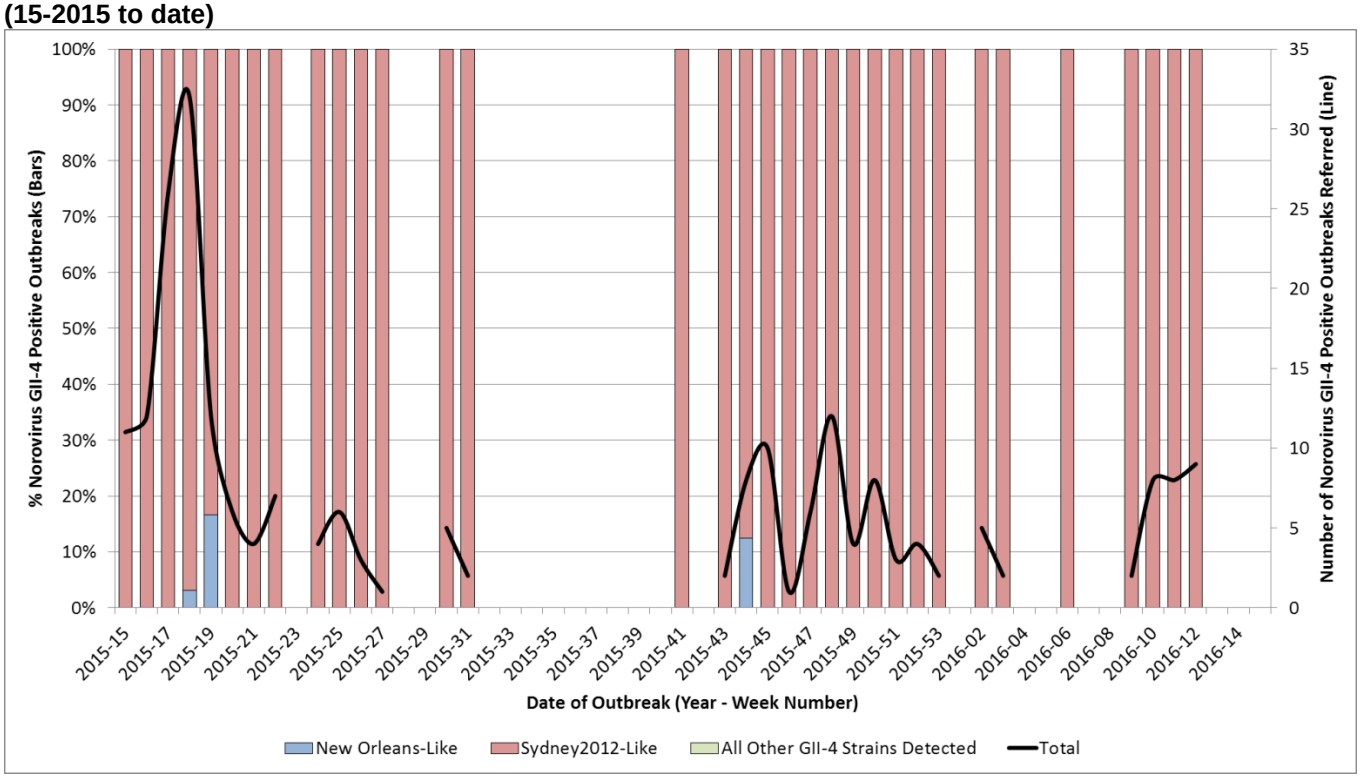


Figure 6: Norovirus-confirmed outbreaks (all settings, by month) referred to VRD



- 81.8% of norovirus-confirmed outbreaks were associated with GII-4 strains since July 2011.
- 12 different norovirus genotypes have been detected in the current season (27-2015 to date).
- The majority of norovirus-confirmed outbreaks in the current season (27-2015 to date) were associated with GII-4 (158/212, 74.5 %).

Figure 7: GII-4 norovirus strains detected (by week) among norovirus confirmed outbreaks (all settings) (15-2015 to date)



- The most commonly detected GII-4 strain between periods 15-2015 to date is Sydney 2012 and is associated with 98.2 % of GII-4 norovirus-confirmed outbreaks.
- The most commonly detected GII-4 strain in the previous season (2014-2015) was Sydney 2012

Norovirus Activity in Prisons

One outbreak of diarrhoea and vomiting has been reported in prisons in week 14 2016.

NB. Not all suspected cases are tested for norovirus. Where there is an outbreak, a sample of individuals will be tested.

For guidance on the management of outbreaks in prisons see:

https://www.gov.uk/government/publications/multi-agency-contingency-plan-for-disease-outbreaks-in-prisons

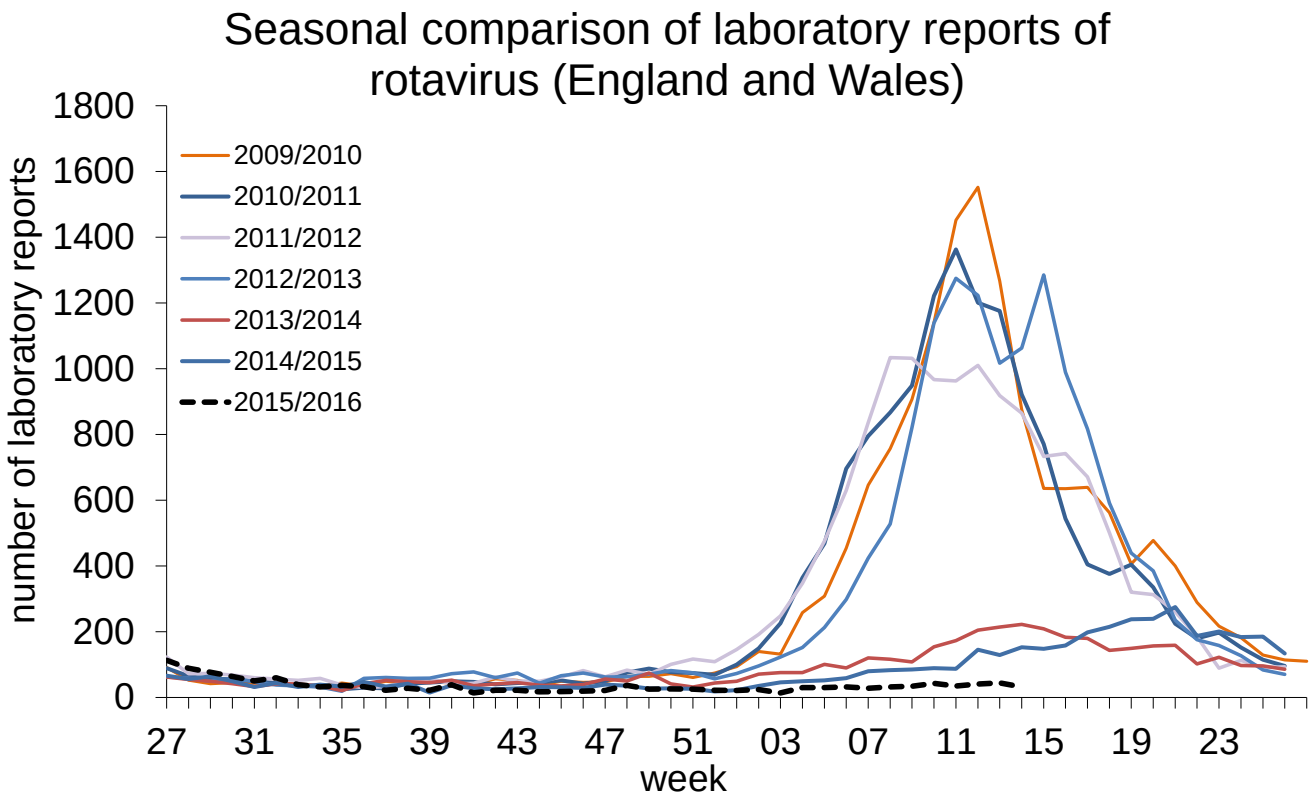
Rotavirus Laboratory Reporting

The number of laboratory reports of rotavirus in this season* (since week 27 2015) is 1392. This is 85% lower than the ten season average for the same period in the seasons 2003 and 2004 to 2012 and 2013 (9545)**. Rotavirus laboratory reports are currently lower than previous years.

Rotavirus particularly contributes to reported diarrhoea and vomiting illness in children aged under five and is often associated with outbreaks of diarrhoea and vomiting in nurseries and schools.

Data from laboratory reporting are subject to a reporting delay and the number reported in recent weeks is likely to increase as further laboratory reports are received.

Figure 8: Seasonal comparison of laboratory reports of rotavirus (England and Wales)



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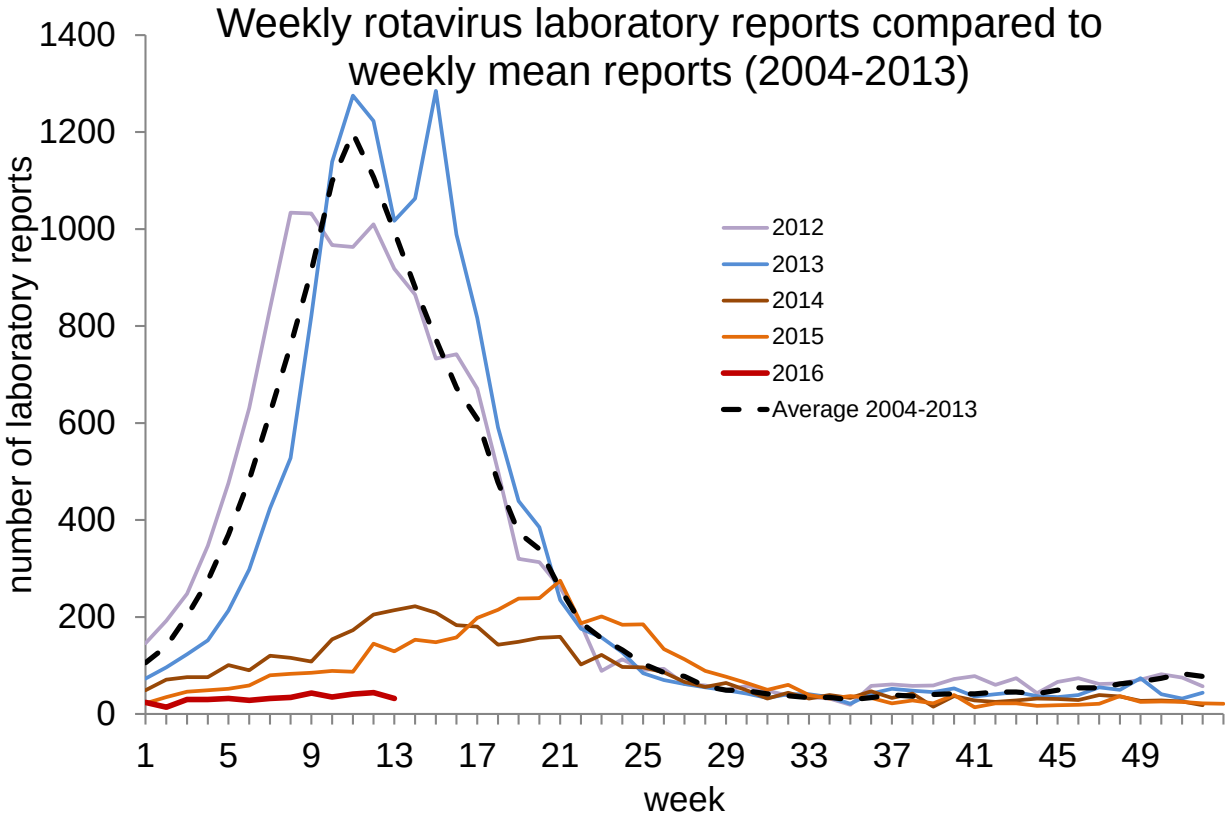
**Comparison is made with this ten year period as it is prior to the vaccine introduction.

Figure 9: Weekly rotavirus laboratory reports compared to weekly mean reports(2004-2013)



Acknowledgements

We thank all of the infection control staff in hospitals who take the time to contribute data to HNORS.

Any queries can be directed to noroOBK@phe.gov.uk