



PHE National norovirus and rotavirus Report

Summary of surveillance of norovirus and rotavirus

07 September 2016 – reporting weeks 31-34

This report is published monthly on the PHE [website](#). For further information on the surveillance system mentioned in this report, please visit the [Hospital Norovirus Reporting System website](#).

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Summary

The next report will be published next month on 13 October 2016.

Norovirus

- The number of laboratory reports of norovirus in this season* (since week 27 2016) is 333. This is 14% lower than the average number for the same period in the five seasons from season 2011 and 2012 to season 2015 and 2016 (385), and 14% higher 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 2016) is 412. This is 11% higher than the ten season average for the same period in the seasons 2003 and 2004 to 2012 and 2013 (372)**. Rotavirus laboratory reports are currently lower than previous years.

*In order to capture the winter peak of activity in one season, for reporting purposes, the norovirus and rotavirus 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.

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

Hospital Norovirus Outbreak Reporting System (HNORS)

In the four weeks between 01/08/2016 and 28/08/2016 (weeks 31 2016 to 34 2016) the hospital norovirus outbreak reporting scheme (HNORS) recorded two outbreaks of norovirus, both of which led to ward/bay closures or restrictions to admissions. Neither was laboratory confirmed as a norovirus outbreak.

This season (since week 27 2016) there have been 12 outbreaks reported, 11 of which (92%) resulted in ward/bay closures and three (25%) were laboratory confirmed as norovirus.

Last season (week 27 2015 to week 26 2016) 490 outbreaks were reported, 465 (95 per cent) of which reported ward/bay closures or restrictions to admissions and 359 (73 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 01/08/2016 to 28/08/2016			Outbreaks reported in the last season 2015/2016 (week 27 2015 - week 26 2016)		
	Outbreaks	Ward/bay closure [†]	Lab confirmed	Outbreaks	Ward/bay closure [†]	Lab confirmed
East of England				25	24	21
East Midlands	1	1		2	2	1
London				2	1	1
North East				88	81	64
North West				45	45	29
South East	1	1		51	49	36
South West				126	125	91
West Midlands				44	43	27
Yorkshire and the Humber				107	95	89
Total	2	2		490	465	359

[†] 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* (week 27 2016 to week 34 2016) is 333. This is 14% lower than the average number for the same period in the five seasons from season 2011 and 2012 to season 2015 and 2016 (385), and 14% higher 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)

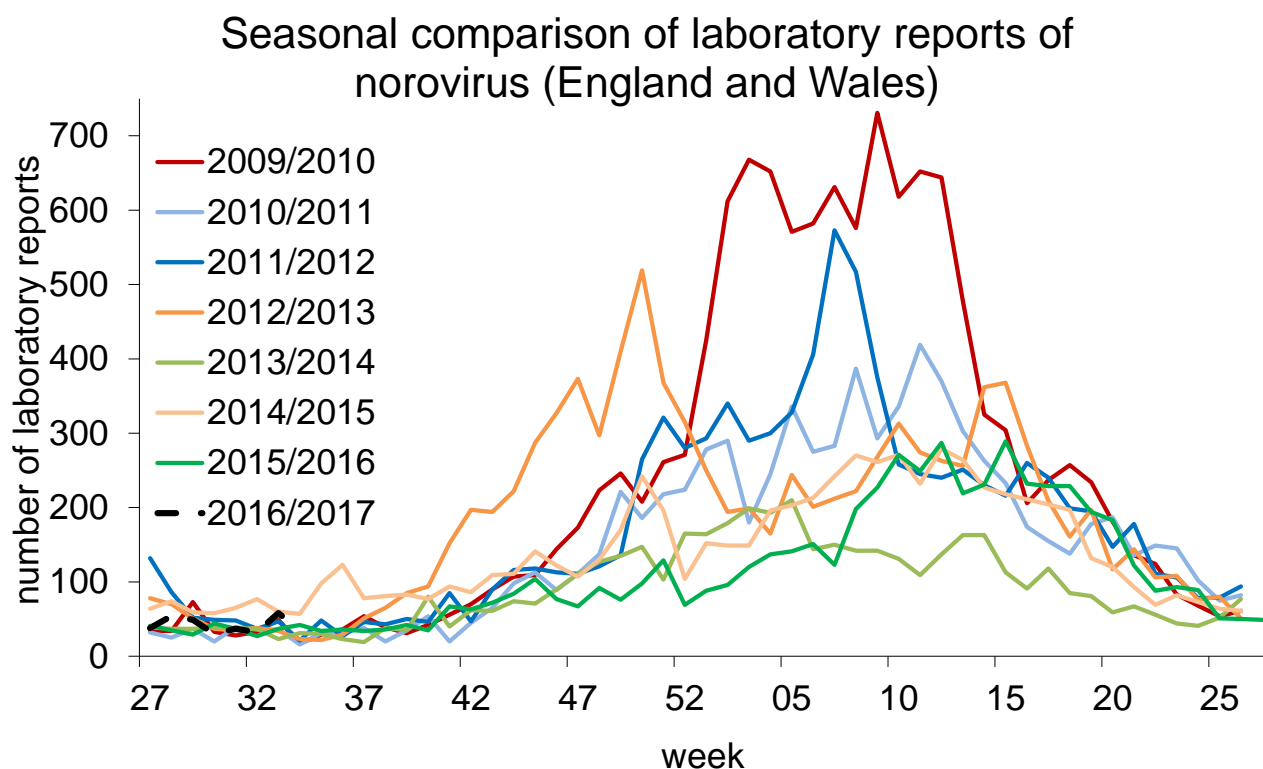


Figure 2: Laboratory and hospital outbreak reports by month of occurrence

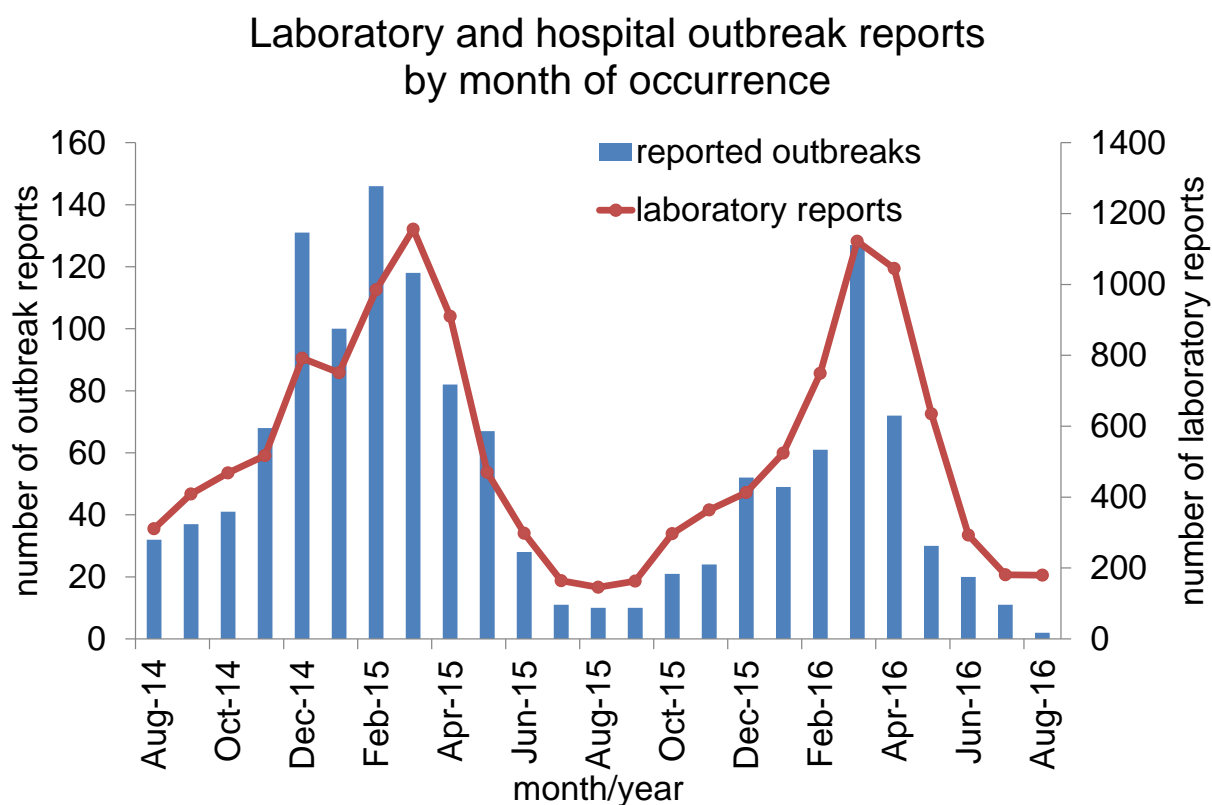


Figure 3: Cumulative number of laboratory reports of norovirus by season 2007/8-2016/17

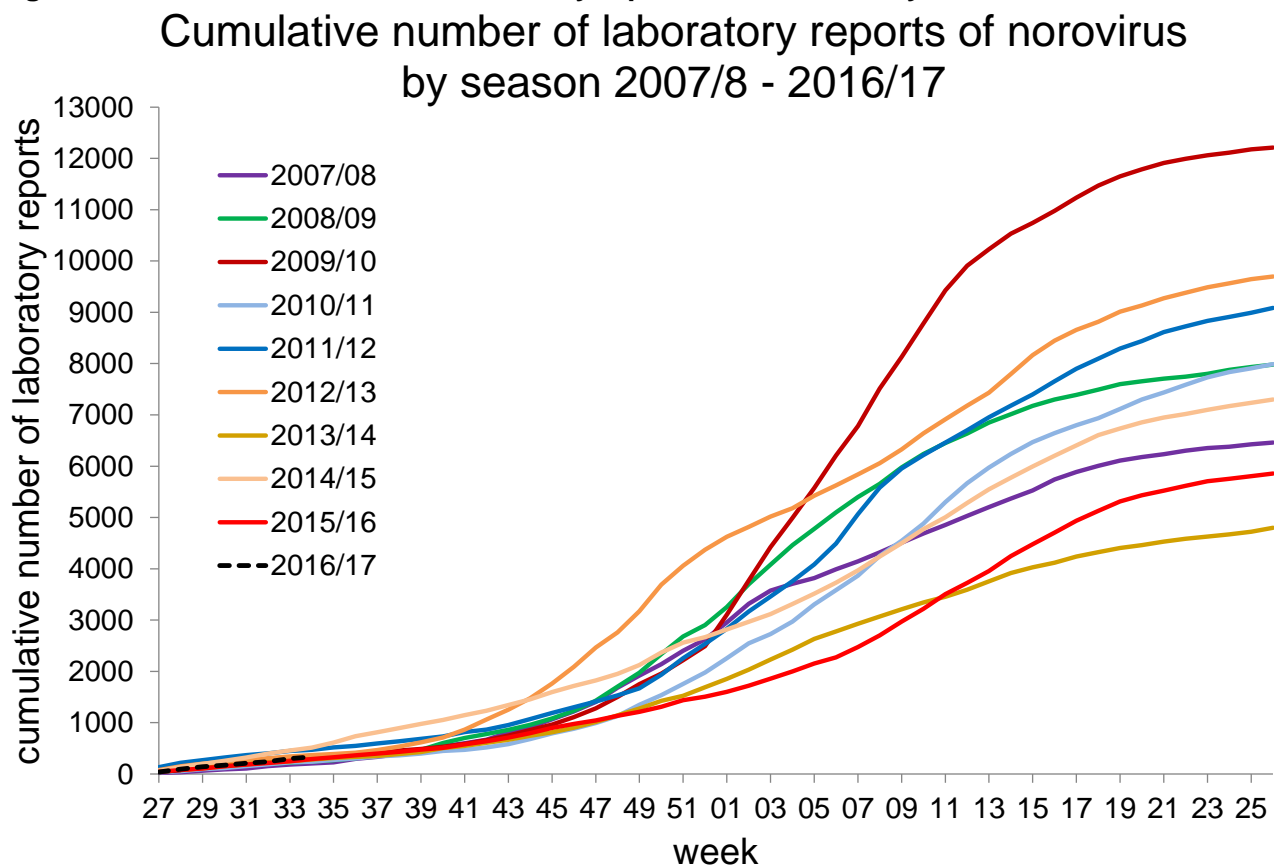
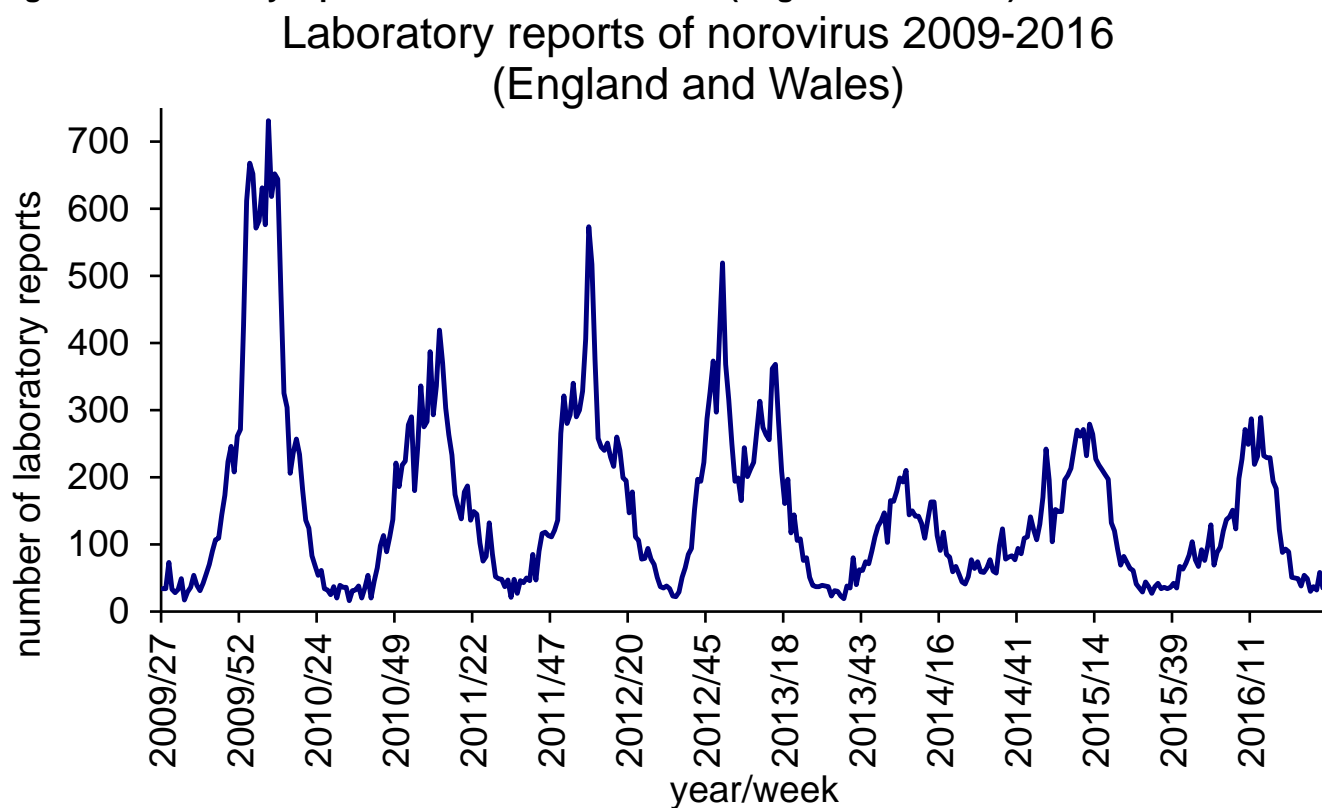


Figure 4: Laboratory reports of norovirus 2009-2016 (England and Wales)



*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: **05/09/2016**

Week of update: **36-2016**

Total number of outbreaks referred to VRD (27-2016 to date): **69**

Total number of outbreaks confirmed as norovirus positive: **35**

Total number of outbreaks from healthcare settings, referred to VRD (27-2016 to date): **49**

Total number of outbreaks from healthcare settings, confirmed as norovirus positive: **19**

Please note that the number of confirmed norovirus positive outbreaks is likely to be higher than indicated as there is a number of samples still awaiting confirmation by sequence analysis.

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

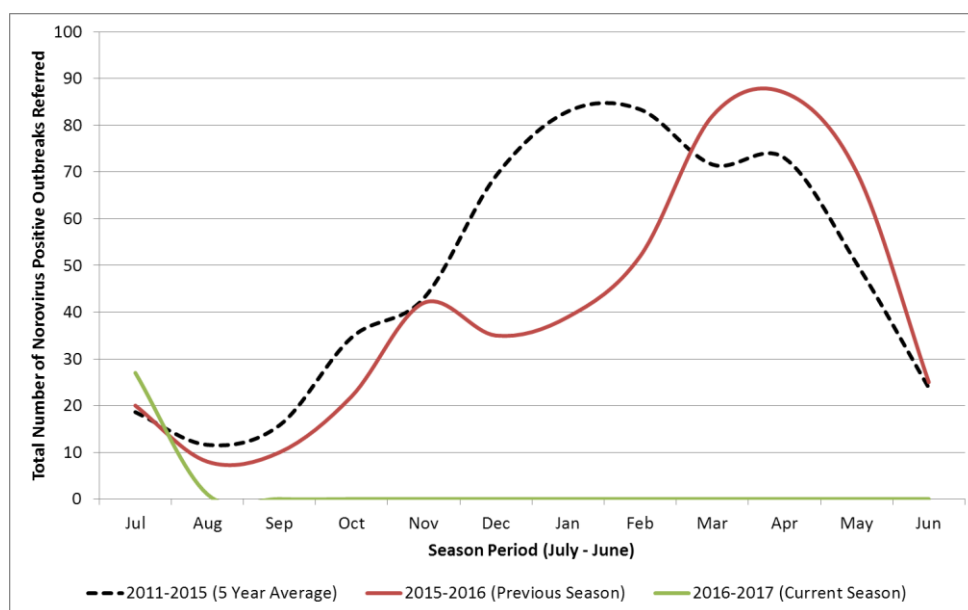
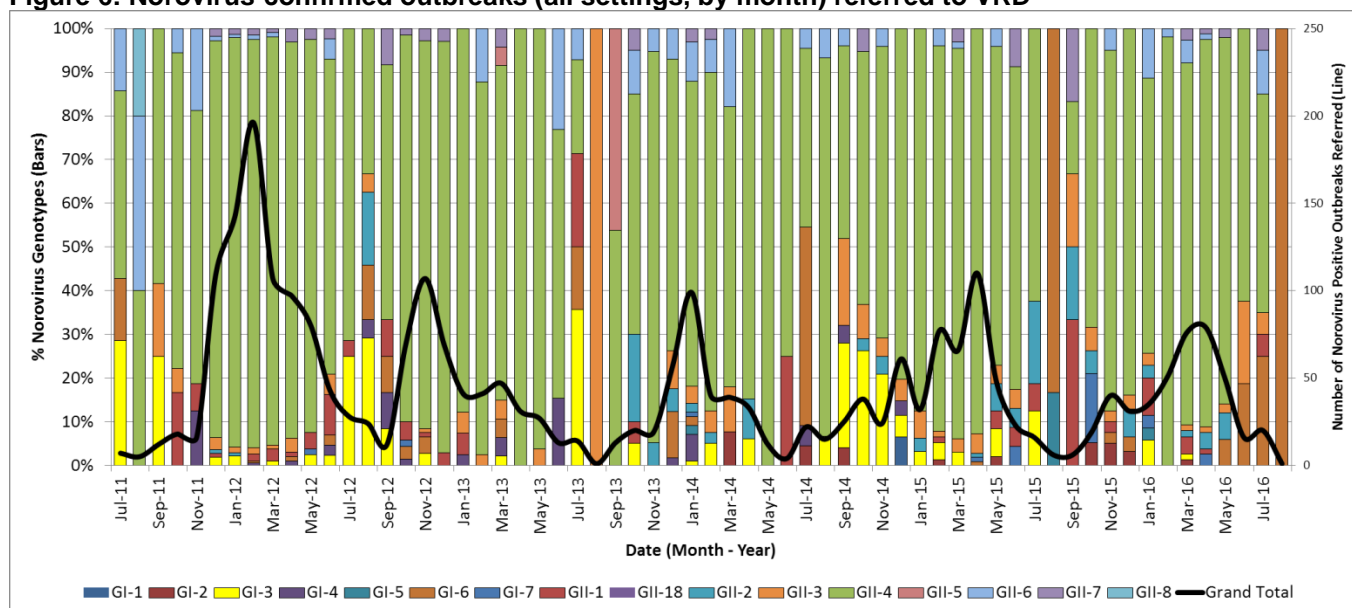
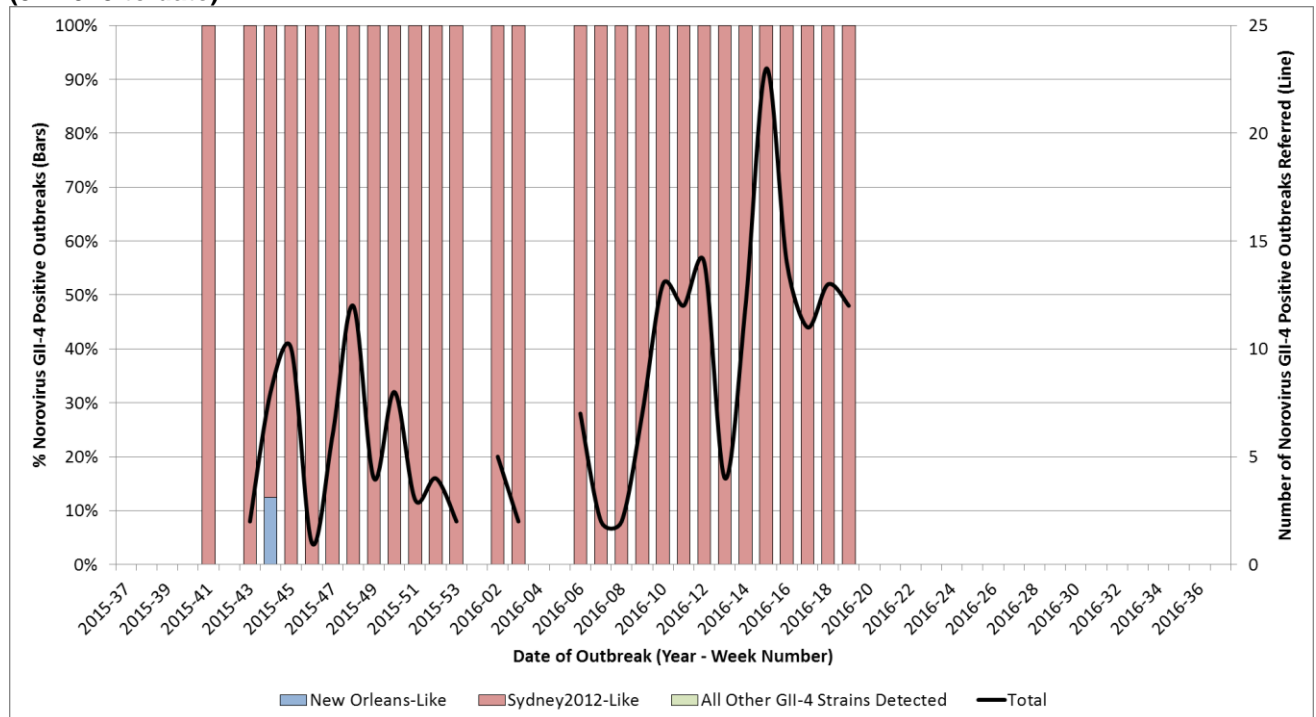


Figure 6: Norovirus-confirmed outbreaks (all settings, by month) referred to VRD



- 81.8% of norovirus-confirmed outbreaks were associated with GII-4 strains since July 2011.
- 7 different norovirus genotypes have been detected in the current season (27-2016 to date).
- The majority of norovirus-confirmed outbreaks in the current season (27-2016 to date) were associated with GII-4 (10/21, 47.6 %).

Figure 7: GII-4 norovirus strains detected (by week) among norovirus confirmed outbreaks (all settings) (37-2015 to date)



- The most commonly detected GII-4 strain between periods 37-2015 to date is Sydney 2012 and is associated with 99.5% of GII-4 norovirus-confirmed outbreaks.
- The most commonly detected GII-4 strain in the previous season (2015-2016) was Sydney 2012

Norovirus Activity in Prisons

One outbreak of diarrhoea and vomiting has been reported in prisons in weeks 31 to 34 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>

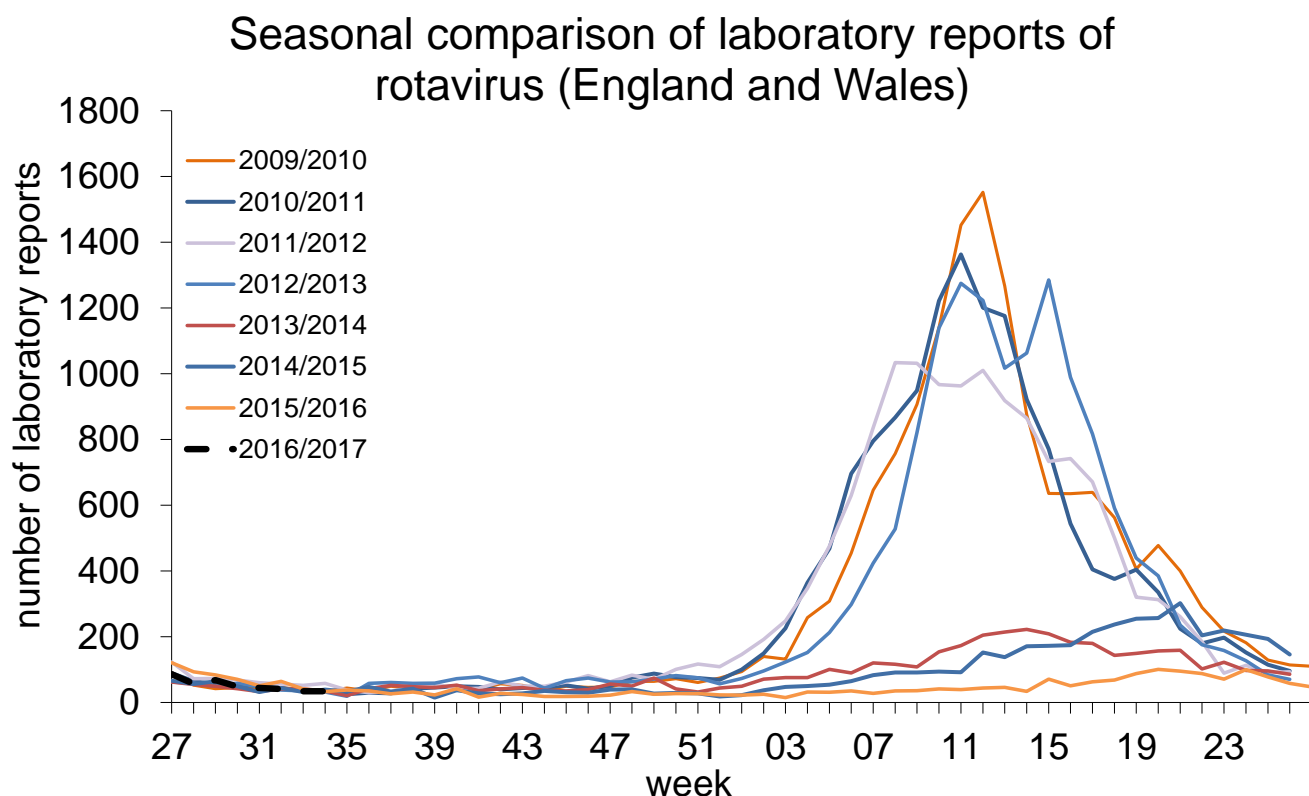
Rotavirus Laboratory Reporting

The number of laboratory reports of rotavirus in this season* (week 27 2016 to week 34 2016) is 412. This is 11% higher than the ten season average for the same period in the seasons 2003 and 2004 to 2012 and 2013 (372)**. 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.

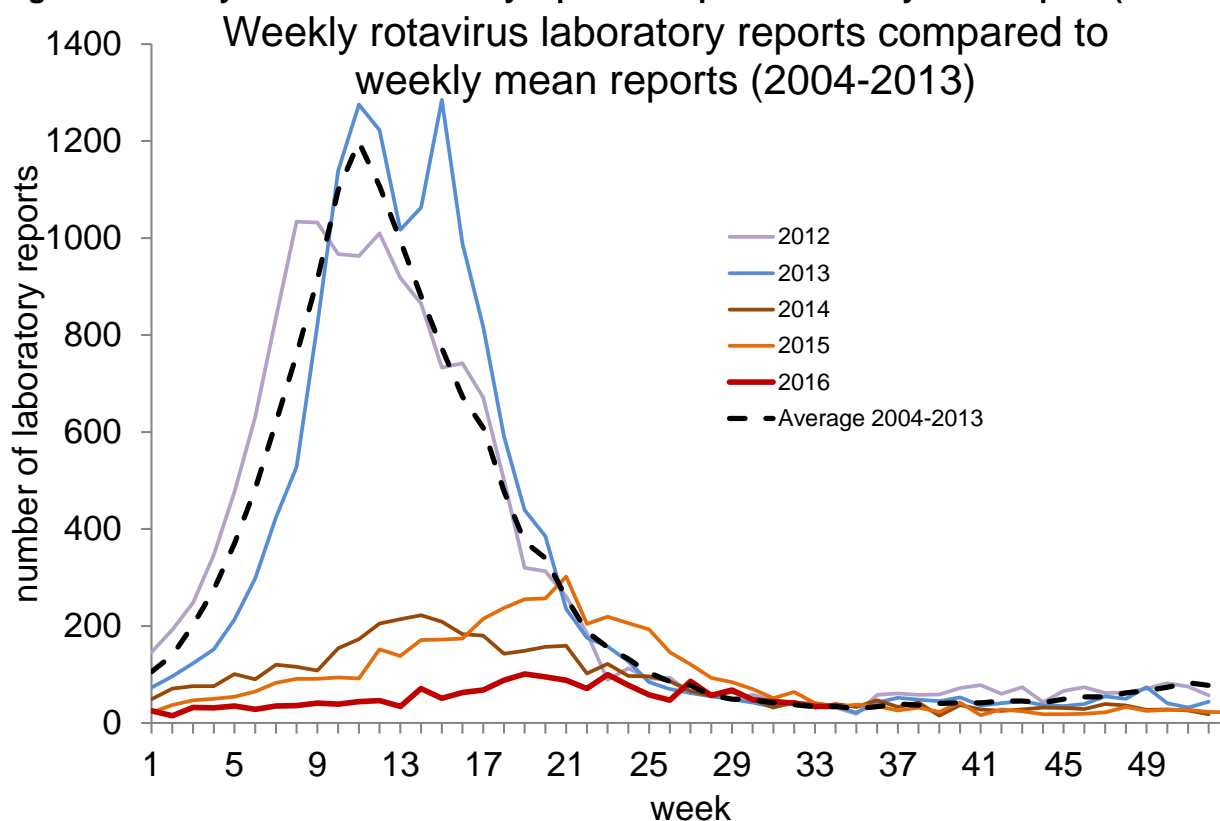
Figure 8: Seasonal comparison of laboratory reports of rotavirus (England and Wales)



*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.

**Comparison is made with this ten season 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