



# PHE National norovirus and rotavirus Report

## Summary of surveillance of norovirus and rotavirus

**08 December 2016 – data to week 47**

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](#).

Contents: | [Summary](#) | [Hospital norovirus outbreak reporting system](#) | [Laboratory reporting](#) | [Laboratory surveillance update](#) | [Activity in prisons](#) | [Rotavirus](#) | [Acknowledgements](#) |

### Summary

**The next report will be published NEXT WEEK on 15 December 2016.**

#### Norovirus

- Reports of suspected and confirmed outbreaks of norovirus in hospitals continue to be reported at similar levels to previous years.
- The number of laboratory reports of norovirus in this season\* (since week 27 2016) is 1704. This is 9% higher than the average number for the same period in the five seasons from season 2011/12 to season 2015/16 (1411), and 55% higher than the same weeks last season. (See notes on interpretation)

#### Rotavirus

- The number of laboratory reports of rotavirus in this season\* (since week 27 2016) is 938. This is 9% higher than the ten season average for the same period in the seasons 2003/04 to 2012/13 (855)\*\*. Rotavirus laboratory reports are currently at similar levels to previous years. (See notes on interpretation)

\*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 two weeks between 14/11/2016 and 27/11/2016 (weeks 46 and 47 2016) the hospital norovirus outbreak reporting scheme (HNORS) recorded 14 outbreaks of norovirus, all of which (100 per cent) led to ward/bay closures or restrictions to admissions and 7 of which (50 per cent) were laboratory confirmed as a norovirus outbreak.

This season (since week 27 2016) there have been 105 outbreaks reported, 101 of which (96 per cent) resulted in ward/bay closures and 62 (59 per cent) 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**

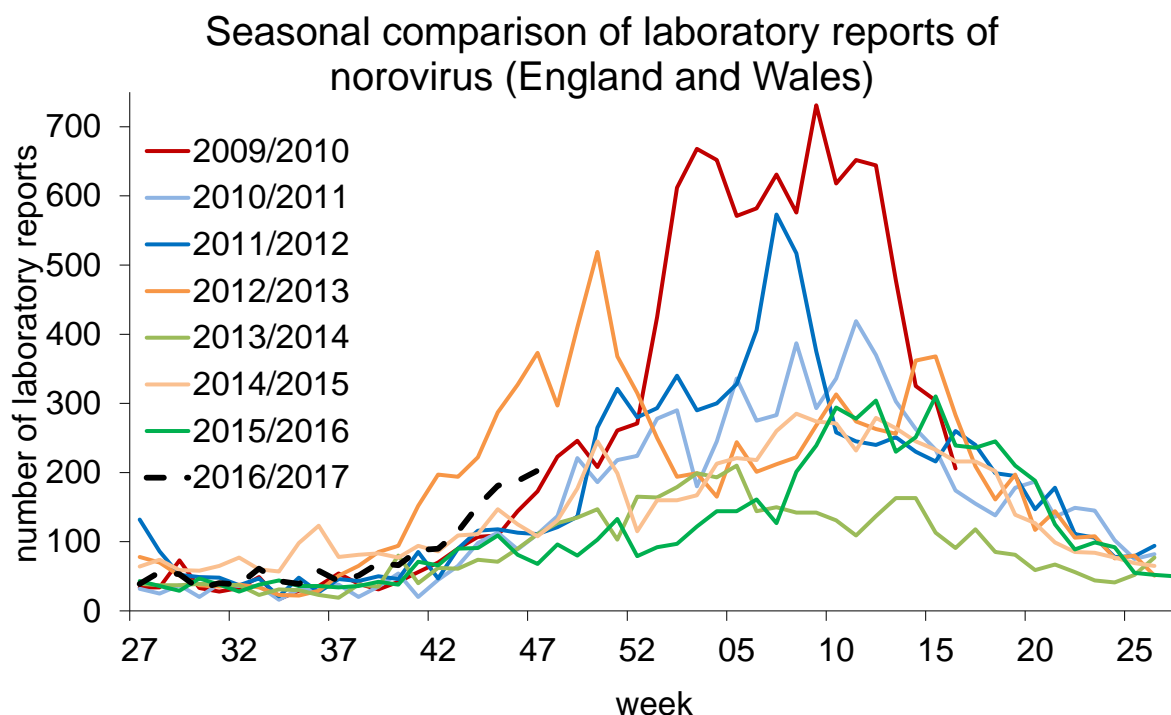
Public Health England Centre	Outbreaks 14/11/2016 to 27/11/2016			Outbreaks reported in the last season 2015/2016 (week 27 2015 - week 26 2016)		
	Outbreaks	Ward/bay closure <sup>†</sup>	Lab confirmed	Outbreaks	Ward/bay closure <sup>†</sup>	Lab confirmed
East of England	1	1	1	25	24	21
East Midlands				2	2	1
London				2	1	1
North East	1	1	1	88	81	64
North West				45	45	29
South East	3	3	1	51	49	36
South West	3	3	1	126	125	91
West Midlands	4	4	3	44	43	27
Yorkshire and the Humber	2	2		107	95	89
Total	14	14	7	490	465	359

<sup>†</sup> Note: not all outbreaks result in whole ward closure, some closures are restricted to bays only

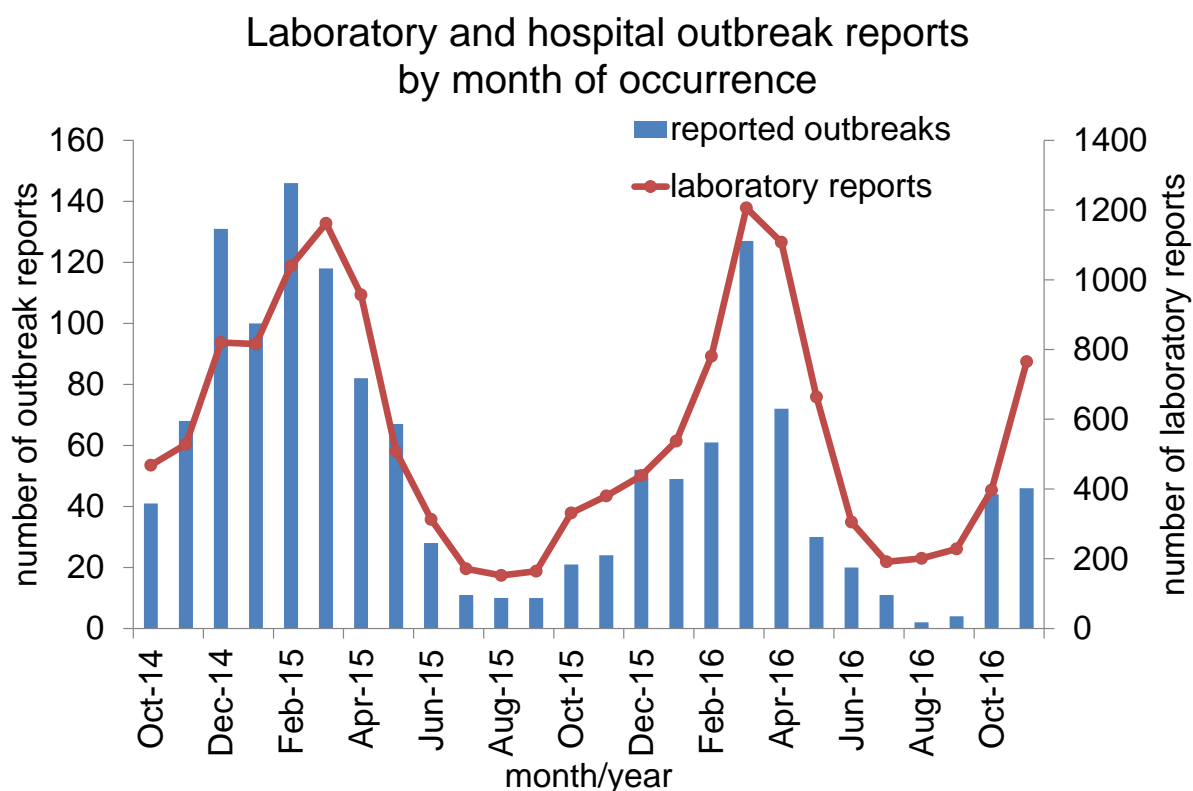
## Norovirus Laboratory Reporting

The number of laboratory reports of norovirus in this season\* (week 27 2016 to week 47 2016) is 1704. This is 9% higher than the average number for the same period in the five seasons from season 2011 and 2012 to season 2015 and 2016 (1411), and 55% 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.

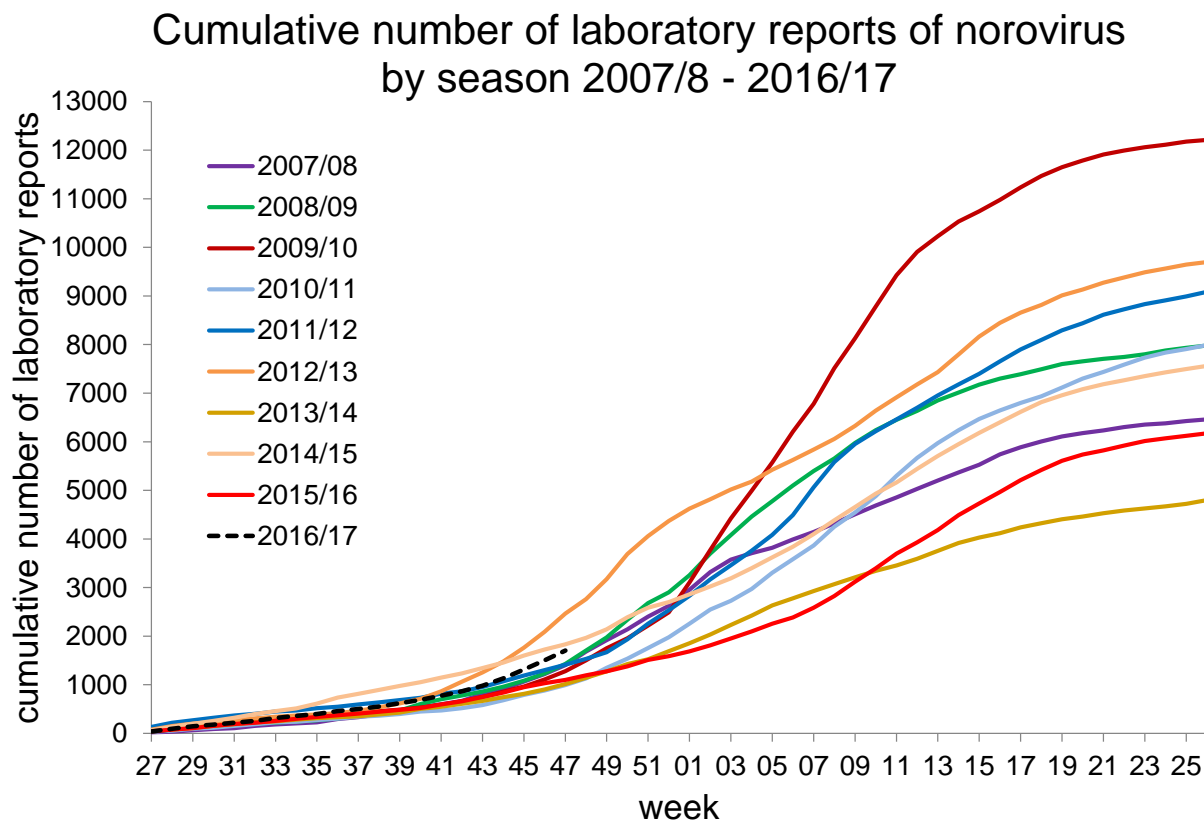
**Figure 1: Seasonal comparison of laboratory reports of norovirus (England and Wales)**



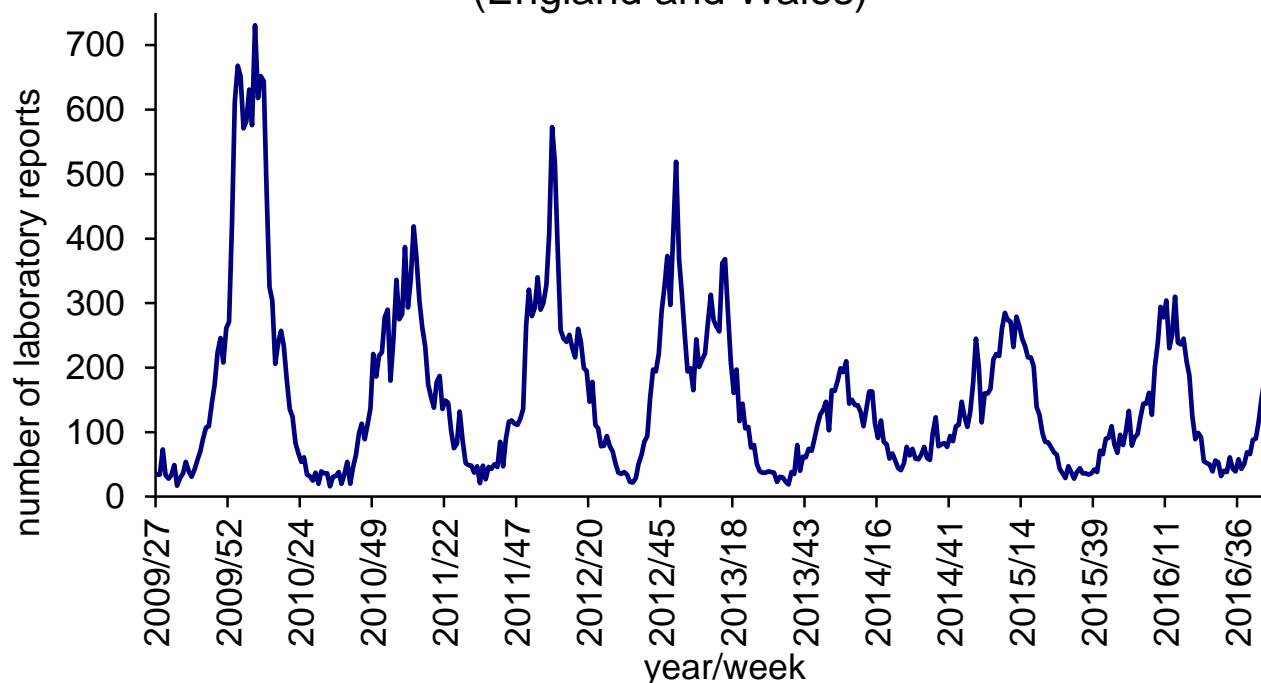
**Figure 2: Laboratory and hospital outbreak reports by month of occurrence**



**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)**  
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: **06/12/2016**

Week of update: **49-2016**

Total number of outbreaks referred to VRD (27-2016 to date): **178**

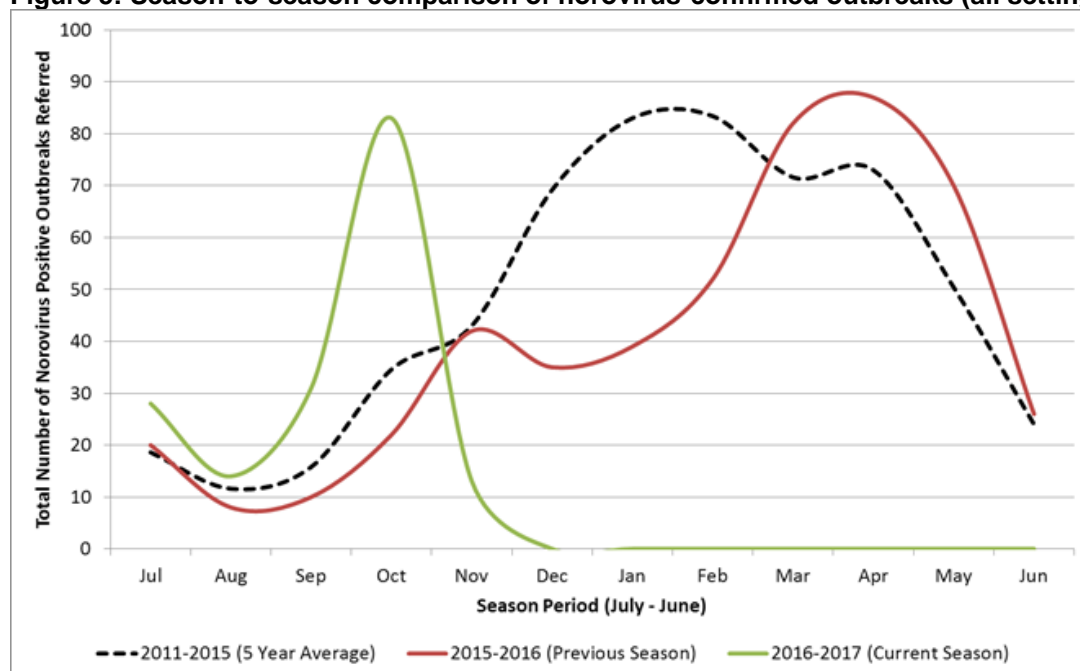
Total number of outbreaks confirmed as norovirus positive: **94**

Total number of outbreaks from healthcare settings, referred to VRD (27-2016 to date): **112**

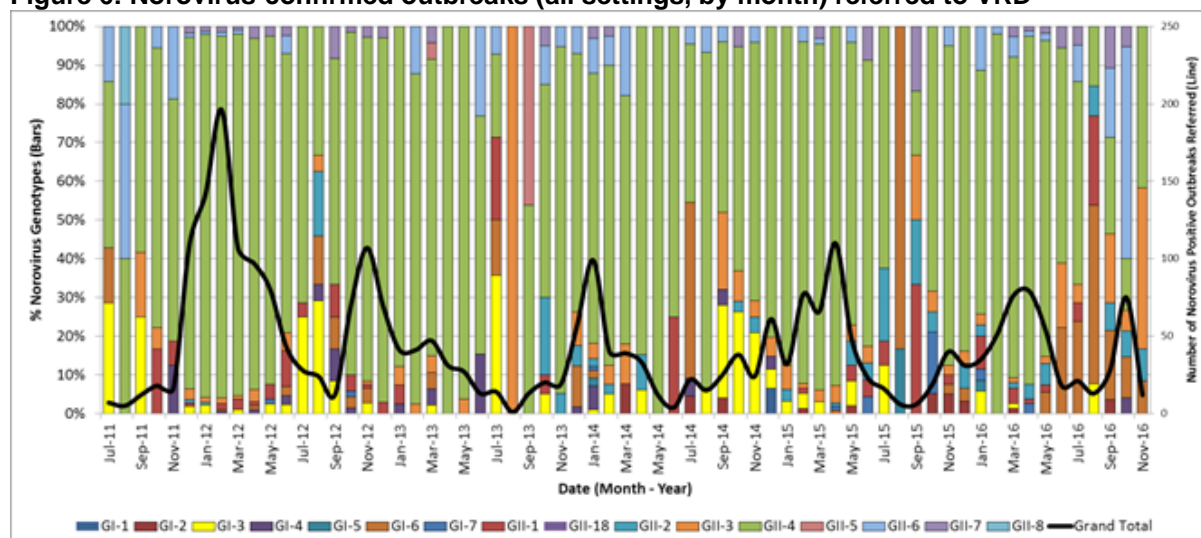
Total number of outbreaks from healthcare settings, confirmed as norovirus positive: **38**

*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**

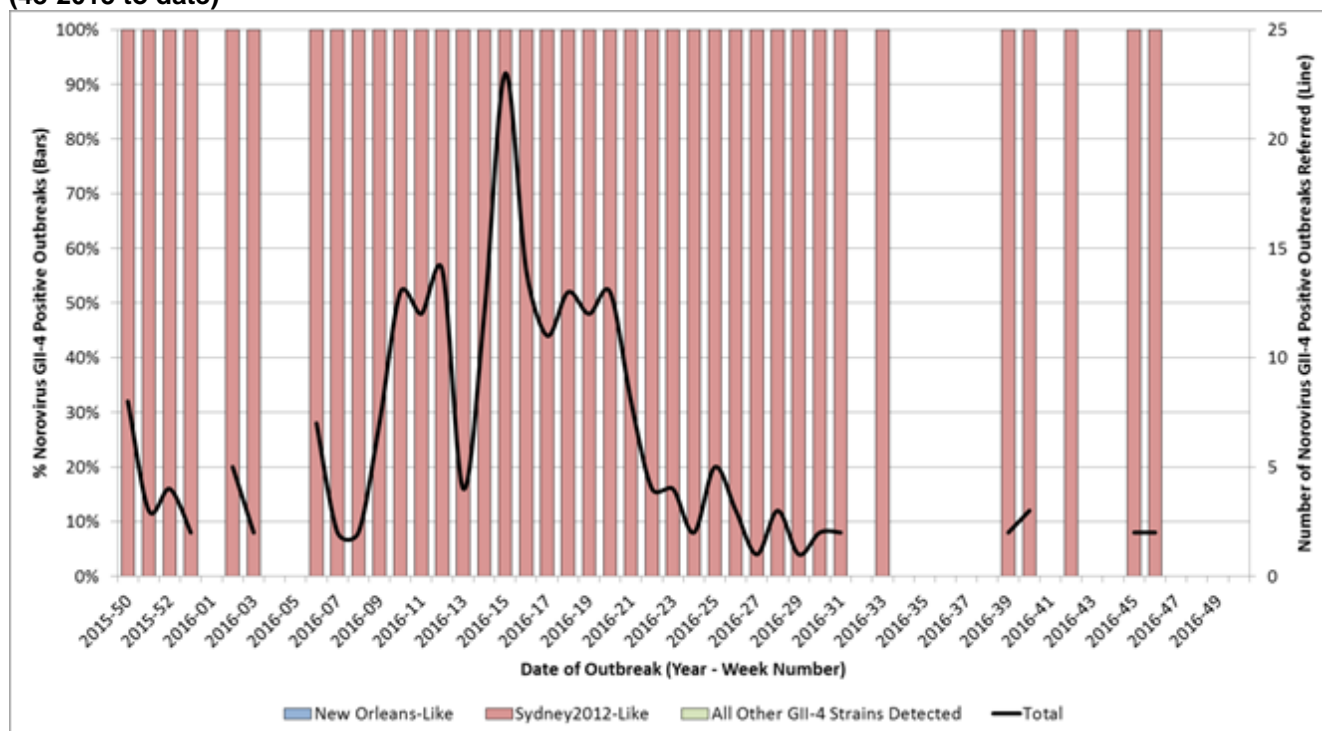


**Figure 6: Norovirus-confirmed outbreaks (all settings, by month) referred to VRD**



- 78.8 % of norovirus-confirmed outbreaks were associated with GII-4 strains since July 2011.
- 11 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 (35/149, 23.5 %).

**Figure 7: GII-4 norovirus strains detected (by week) among norovirus confirmed outbreaks (all settings) (48-2015 to date)**



- The most commonly detected GII-4 strain between periods 50-2015 to date is Sydney2012 and is associated with 99.6% of GII-4 norovirus-confirmed outbreaks.
- The most commonly detected GII-4 strain in the previous season (2015-2016) was Sydney2012.

### Norovirus Activity in Prisons

No outbreaks of diarrhoea and vomiting have been reported in prisons in week 47 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>

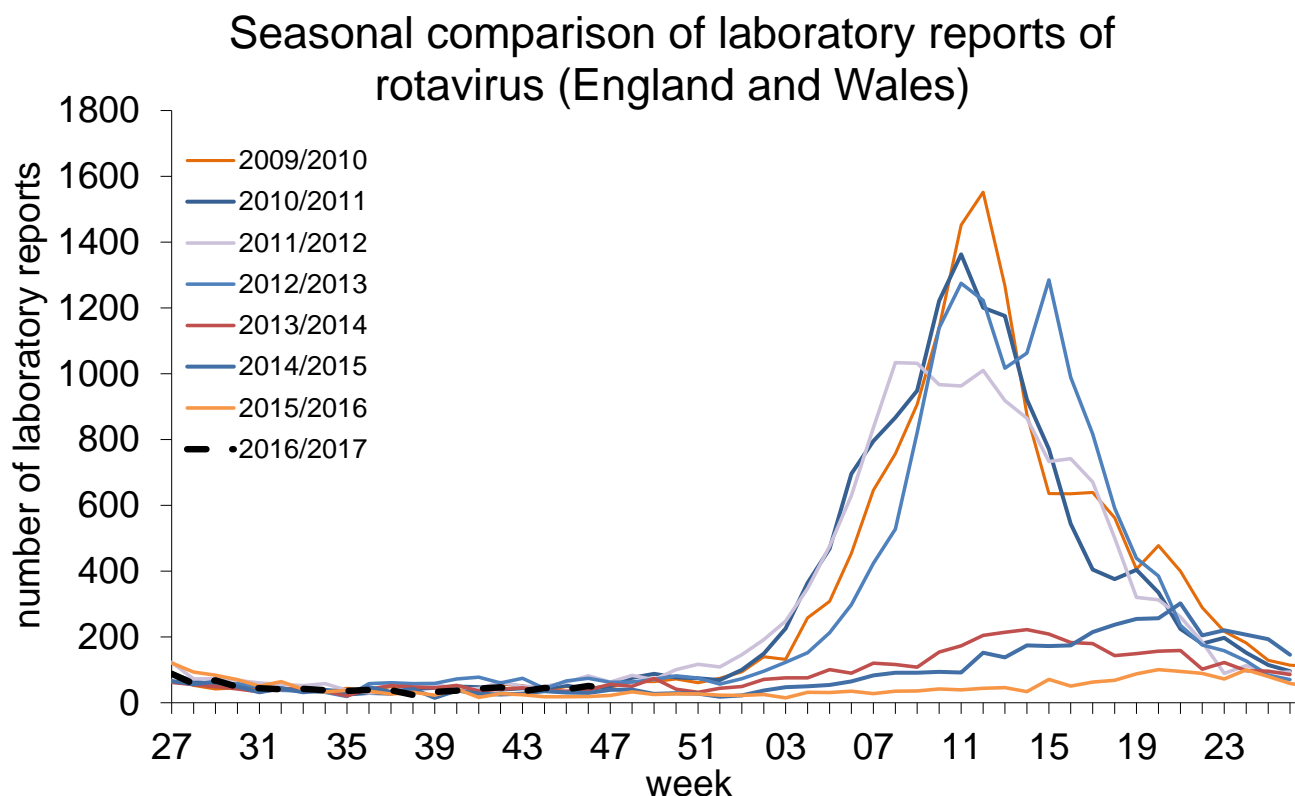
## Rotavirus Laboratory Reporting

The number of laboratory reports of rotavirus in this season\* (week 27 2016 to week 47 2016) is 938. This is 9% higher than the ten season average for the same period in the seasons 2003 and 2004 to 2012 and 2013 (855)\*\*. Rotavirus laboratory reports are currently at similar levels to 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.

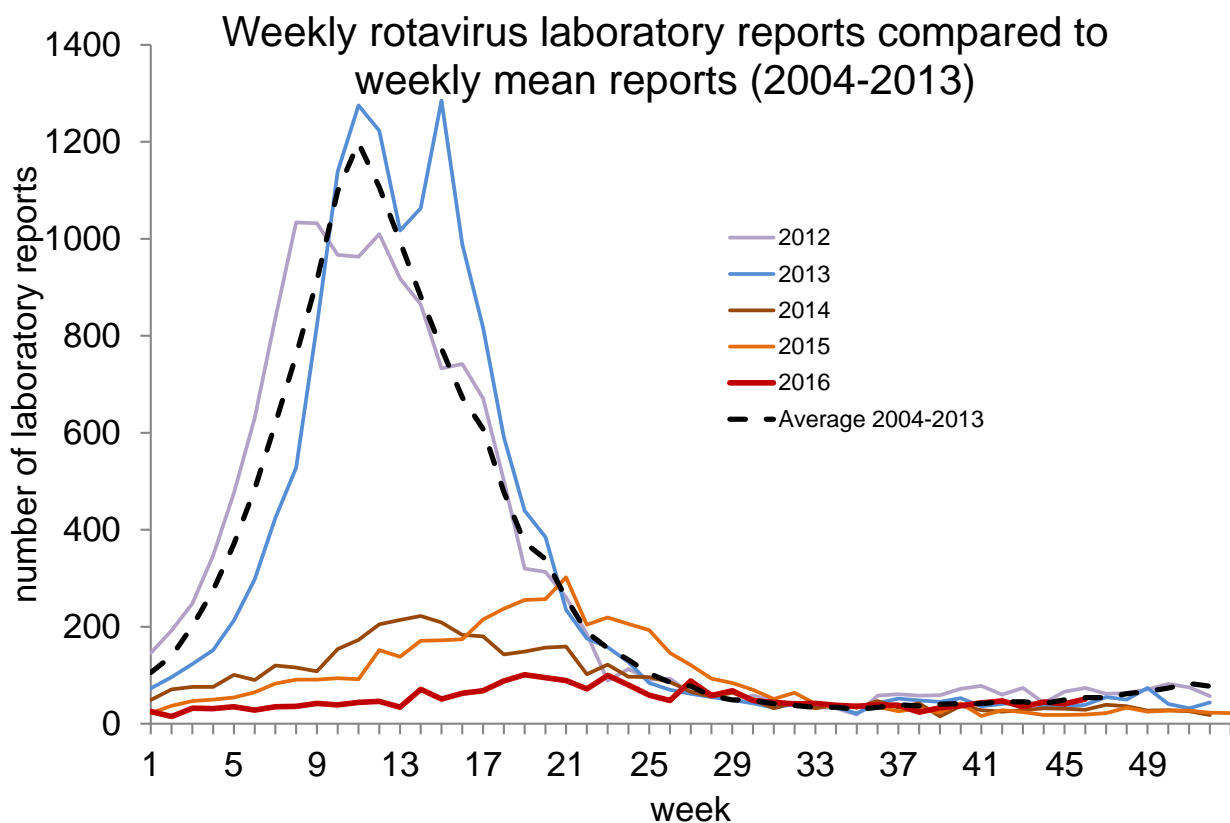
**Figure 8: Seasonal comparison of laboratory reports of rotavirus (England and Wales)**



\*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)**



#### Notes on Interpretation

Norovirus activity was low during the 2015/16 season used for comparison and this should be taken into account when interpreting the 55% increase during the reporting period for the 2016/17 season.

Any comparisons should be made against the 5 year average from Week 27 which is 1411.

At this point in the season and with the limited data, it is not possible to predict the extent or the when the peak of the season will occur.

Increased rotavirus activity at this time of the year could be reflecting activity in the non-vaccinated population.

#### 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](mailto:noroOBK@phe.gov.uk)