



# PHE National Norovirus and Rotavirus Report

## Summary of surveillance of norovirus and rotavirus

17 March 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](#).

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### Summary

The next report will be next week on 24 March 2016.

#### Norovirus

- The number of laboratory reports of norovirus in this season\* (since week 27 2015) is 2972. This is 39% lower than the average number for the same period in the five seasons from season 2010 and 2011 to season 2014 and 2015 (4909), and 34% 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 1359. This is 74% lower than the ten season average for the same period in the seasons 2003 and 2004 to 2012 and 2013 (5174)\*. 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. Data for 2009 and 2015 include week 53.

## Hospital Norovirus Outbreak Reporting System (HNORS)

In the two weeks between 29/02/2016 and 13/03/2016 (weeks 09 2016 and 10 2016) the hospital norovirus outbreak reporting scheme (HNORS) recorded twenty outbreaks of norovirus, all of which led to ward/bay closures or restrictions to admissions and fourteen of which (70%) were laboratory confirmed as a norovirus outbreak.

This season (since week 27 2015) there have been 217 outbreaks reported, 199 of which (92%) resulted in ward/bay closures and 141 (65%) 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**

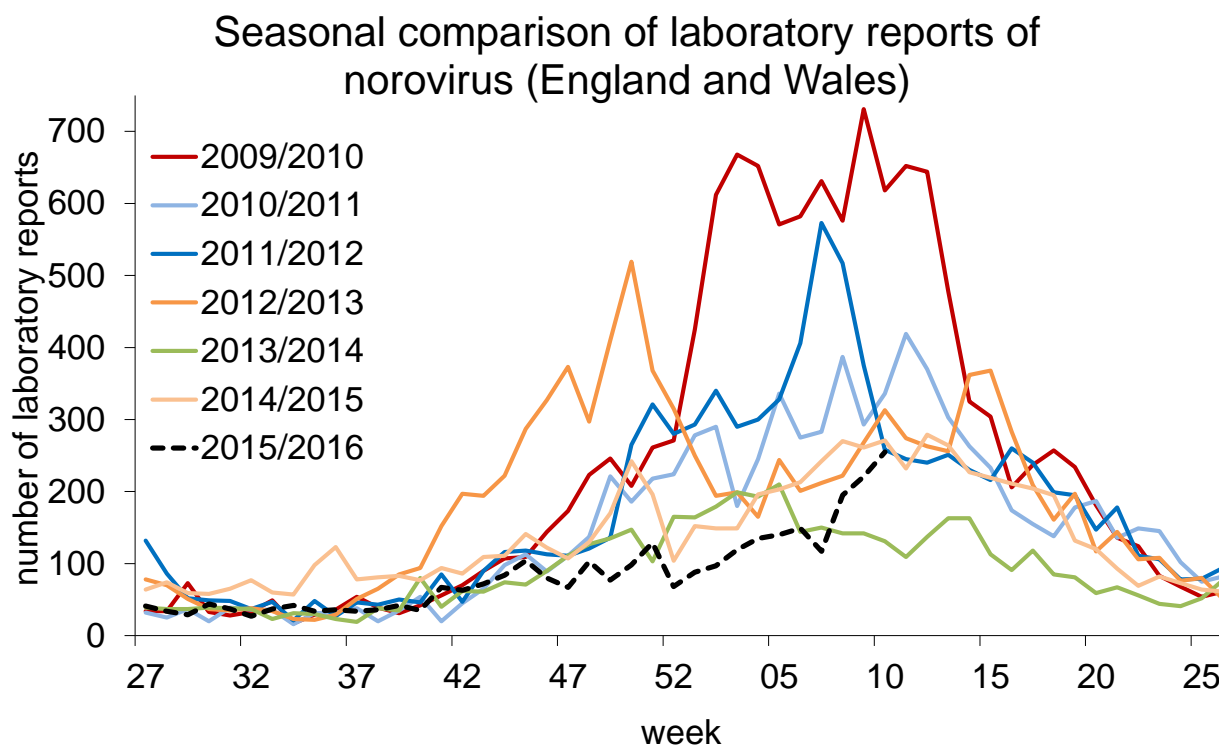
| Public Health England Centre                                 | Outbreaks<br>29/02/2016 to 13/03/2016 |                                  |               | Outbreaks reported in the last season 2014/2015<br>(week 27 2014 - week 26 2015) |                                  |               |
|--|---------------------------------------|----------------------------------|---------------|--|----------------------------------|---------------|
|  | Outbreaks                             | Ward/bay<br>closure <sup>‡</sup> | Lab confirmed | Outbreaks  | Ward/bay<br>closure <sup>‡</sup> | Lab confirmed |
| Avon, Gloucestershire and Wiltshire                          | 4                                     | 4                                | 1             | 101  | 99                               | 76            |
| Bedfordshire, Hertfordshire and Northamptonshire             |                                       |                                  |               | 7  | 7                                | 6             |
| Cheshire and Merseyside                                      |                                       |                                  |               | 10   | 7                                | 9             |
| Cumbria and Lancashire                                       | 2                                     | 2                                | 1             | 50   | 49                               | 25            |
| Devon, Cornwall and Somerset                                 | 1                                     | 1                                | 1             | 164  | 162                              | 114           |
| Greater Manchester   |                                       |                                  |               | 22   | 18                               | 10            |
| Hampshire, Isle of Wight and Dorset                          | 4                                     | 4                                | 4             | 44   | 43                               | 37            |
| Lincolnshire, Leicestershire, Nottinghamshire and Derbyshire |                                       |                                  |               | 40   | 37                               | 36            |
| London   |                                       |                                  |               | 5  | 5                                | 1             |
| Norfolk, Suffolk, Cambridgeshire and Essex                   |                                       |                                  |               |  |                                  |               |
| North East   | 5                                     | 5                                | 3             | 97   | 88                               | 62            |
| Sussex, Surrey and Kent                                      |                                       |                                  |               | 30   | 30                               | 18            |
| Thames Valley  |                                       |                                  |               | 9  | 5                                | 3             |
| West Midlands  | 2                                     | 2                                | 2             | 172  | 166                              | 98            |
| Yorkshire and the Humber                                     | 2                                     | 2                                | 2             | 107  | 92                               | 89            |
| <b>Total</b>   | <b>20</b>                             | <b>20</b>                        | <b>14</b>     | <b>858</b>   | <b>808</b>                       | <b>584</b>    |

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

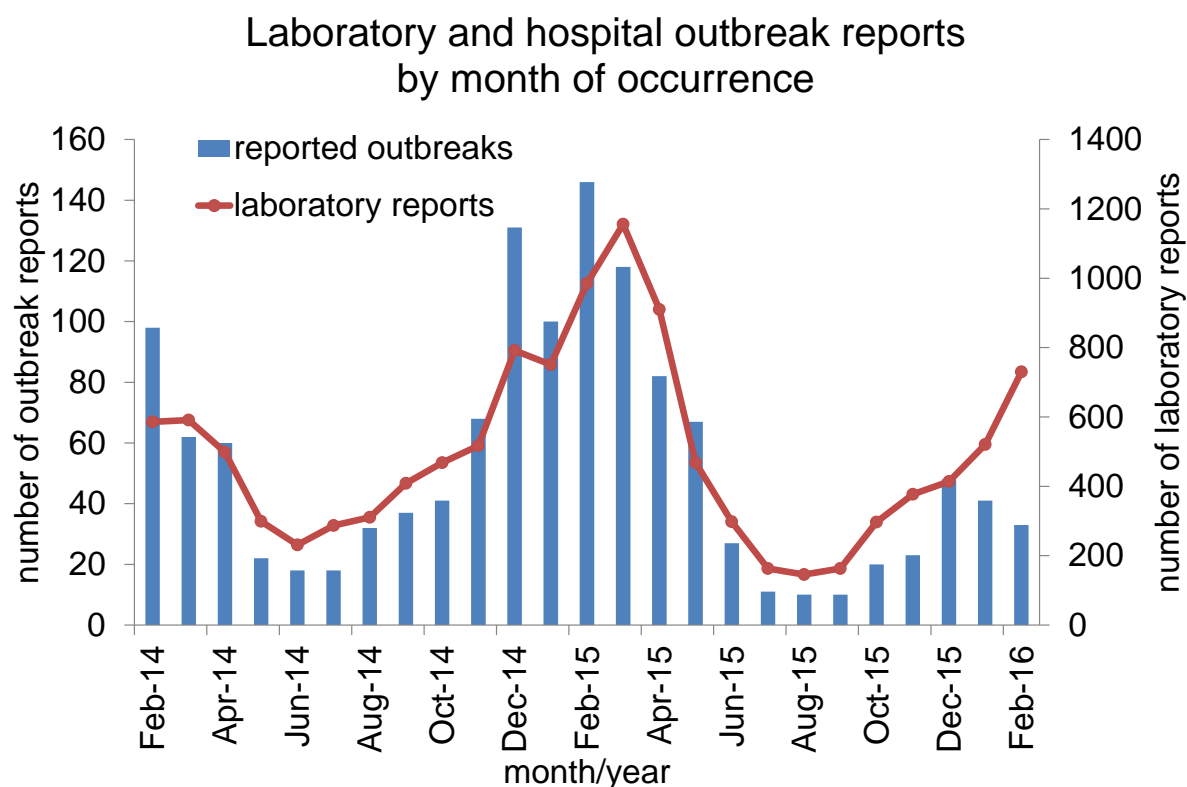
## Norovirus Laboratory Reporting

The number of laboratory reports of norovirus in this season\* (since week 27 2015) is 2972. This is 39% lower than the average number for the same period in the five seasons from season 2010 and 2011 to season 2014 and 2015 (4909), and 34% 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.

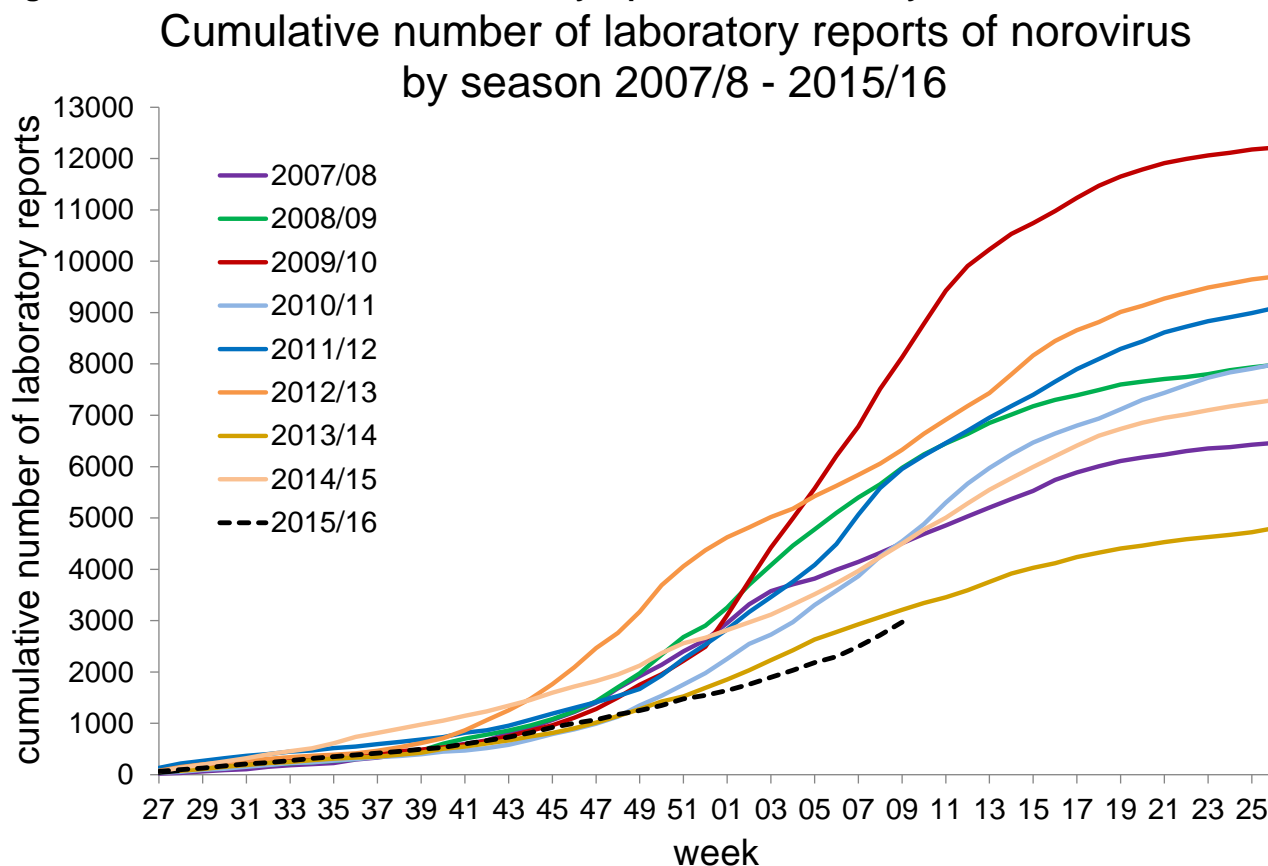
**Figure 1: Seasonal comparison of laboratory reports of norovirus (England and Wales)**



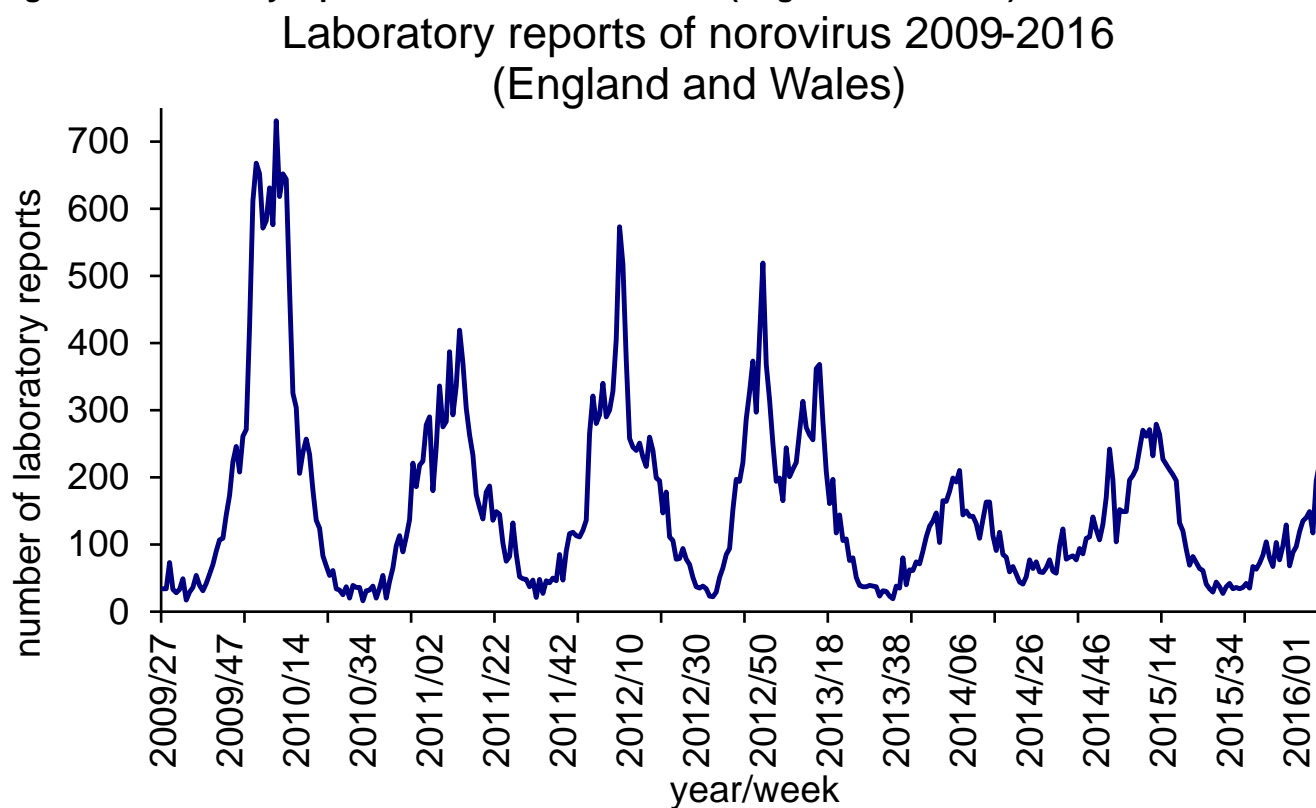
**Figure 2: Laboratory and hospital outbreak reports by month of occurrence**



**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. Data for 2009 and 2015 include week 53.

## Laboratory Surveillance Update – Virus Reference Department (VRD)

Date of update: **15/03/2016**

Week of update: **11-2016**

Total number of outbreaks referred to VRD (27-2015 to date): **361**

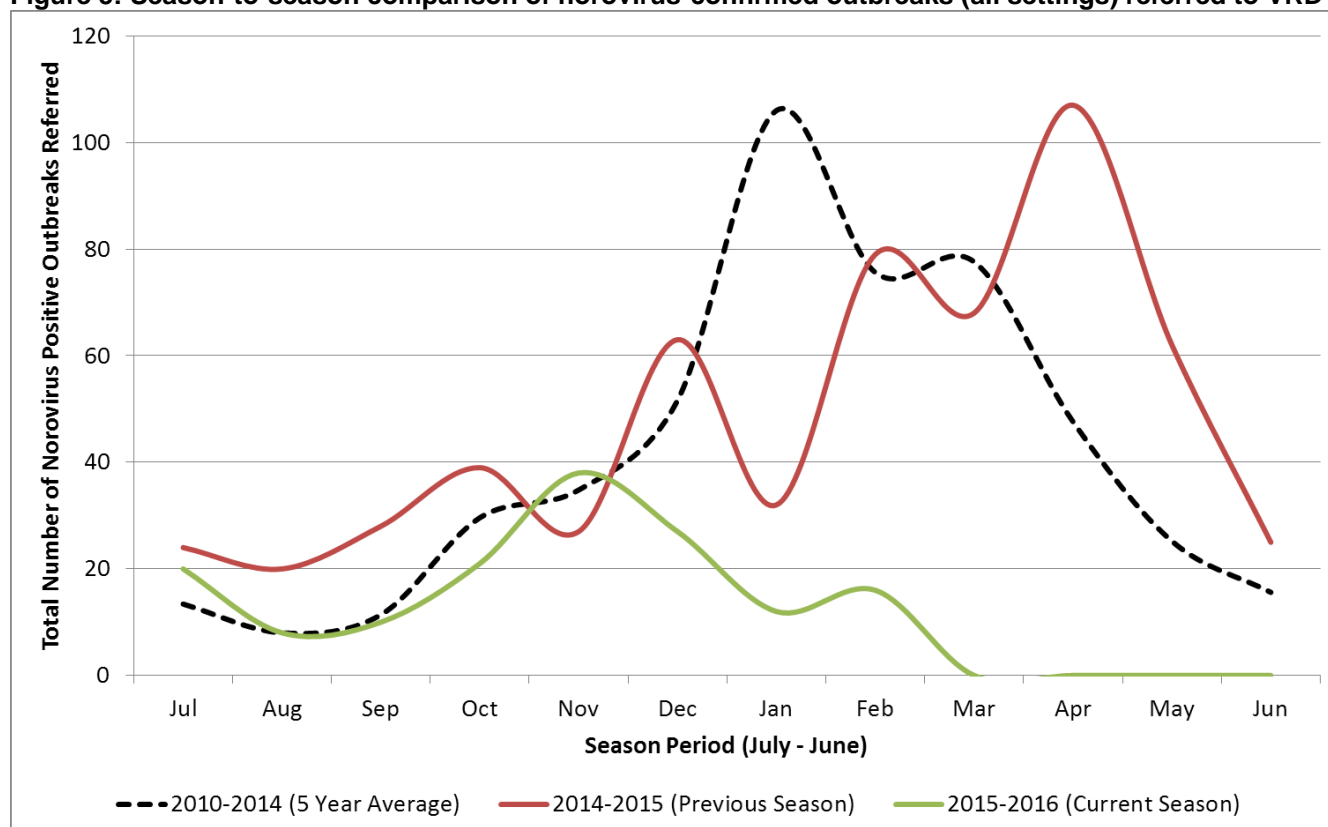
Total number of outbreaks confirmed as norovirus positive: **149**

Total number of outbreaks from healthcare settings, referred to VRD (27-2015 to date): **234**

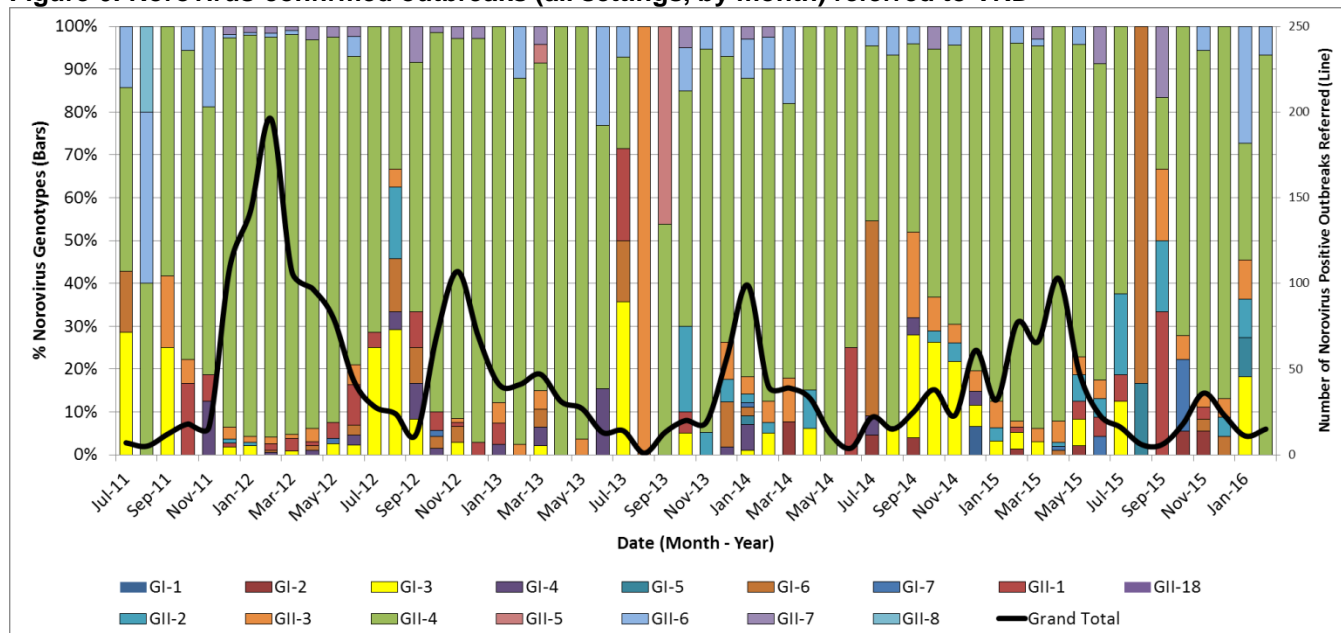
Total number of outbreaks from healthcare settings, confirmed as norovirus positive: **68**

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**

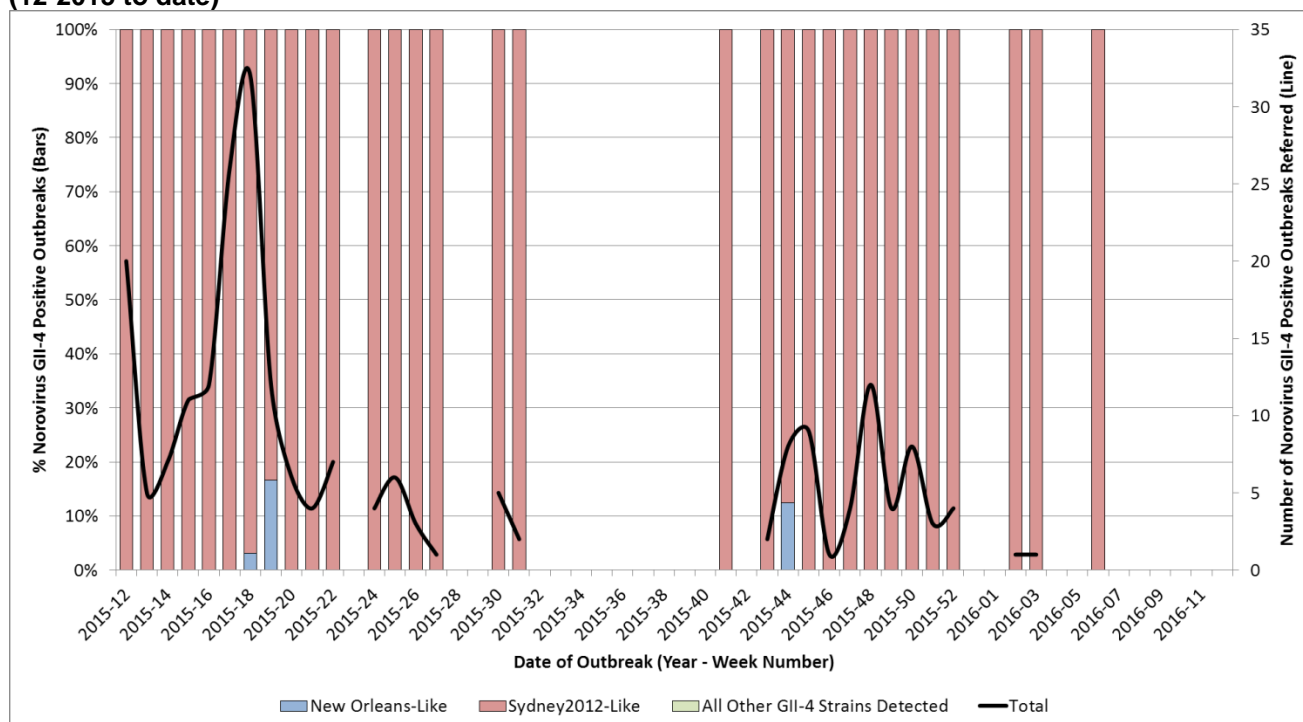


**Figure 6: Norovirus-confirmed outbreaks (all settings, by month) referred to VRD**



- 81.7% 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 (90/131, 68.7%).

**Figure 7: GII-4 norovirus strains detected (by week) among norovirus confirmed outbreaks (all settings) (12-2015 to date)**



- The most commonly detected GII-4 strain between periods 12-2015 to date is Sydney2012 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 Sydney2012

## Norovirus Activity in Prisons

One outbreak of diarrhoea and vomiting has been reported in prisons in week 10 2016.

**Table 2: The number of suspected and confirmed norovirus outbreaks in prisons**

| Region                       | Public Health England Centre  | Outbreaks reported<br>week 10 2016 |
|------------------------------|---|------------------------------------|
| North                        | Greater Manchester<br>Cumbria and Lancashire<br>Cheshire and Merseyside<br>Yorkshire and Humber<br>North East   |                                    |
| Midlands and East of England | Anglia and Essex<br>South Midlands and Hertfordshire<br>Nottinghamshire, Derbyshire, Lincolnshire and Leicestershire<br>West Midlands                           | 1                                  |
| London                       | London  |                                    |
| South                        | Thames Valley<br>Wessex (Hampshire, Isle of Wight and Dorset)<br>Avon, Gloucestershire and Wiltshire<br>Devon, Cornwall and Somerset<br>Surrey, Sussex and Kent |                                    |
| Total                        |   | 1                                  |

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>

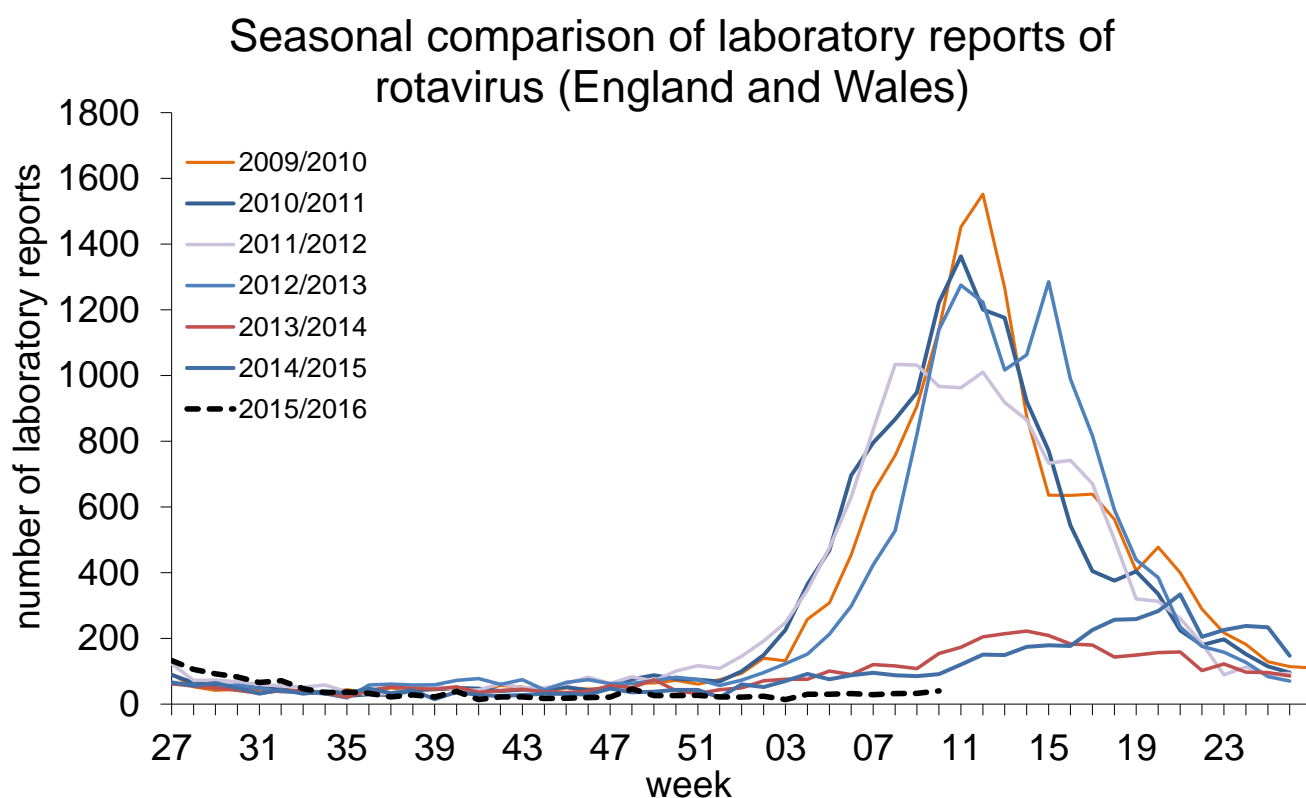
## Rotavirus Laboratory Reporting

The number of laboratory reports of rotavirus in this season\* (since week 27 2015) is 1359. This is 74% lower than the ten season average for the same period in the seasons 2003 and 2004 to 2012 and 2013 (5147)\*. 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.

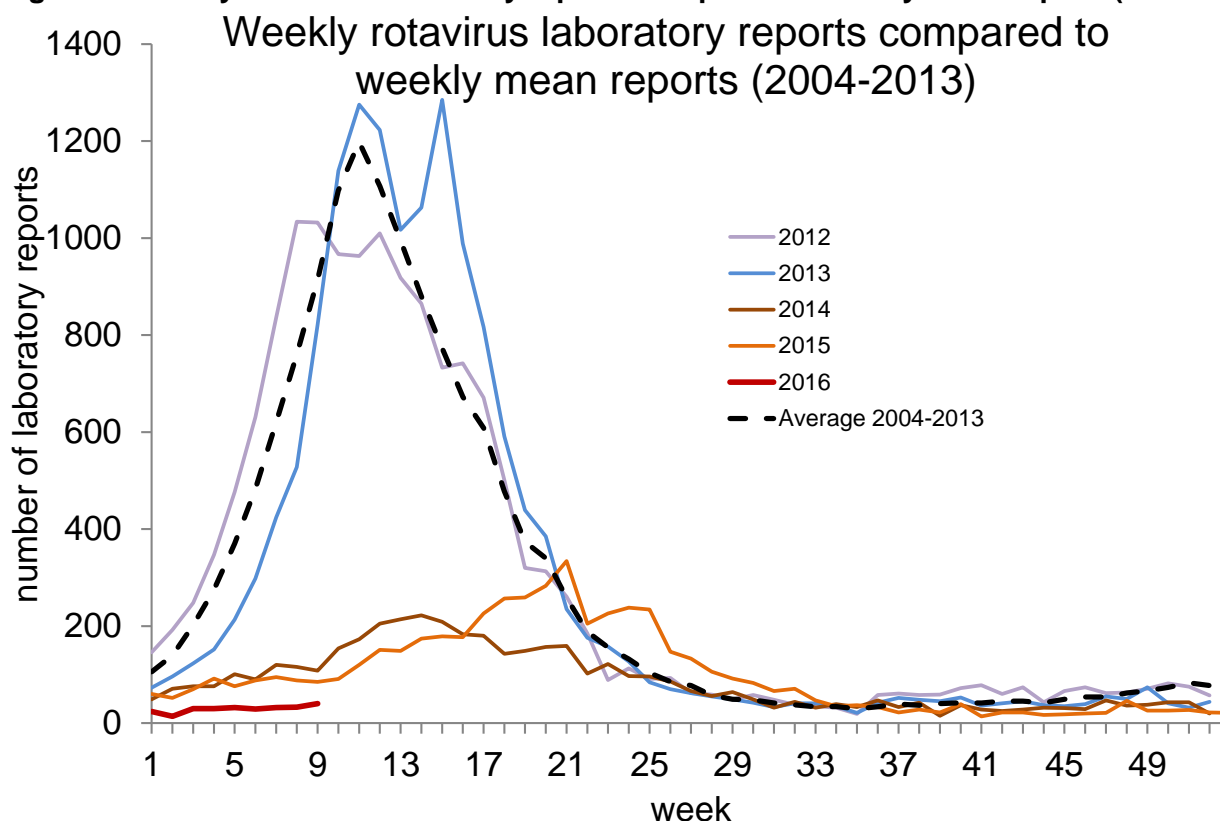
**Figure 8: Seasonal comparison of laboratory reports of rotavirus (England and Wales)**



\*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)**



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

### 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)