



Public Health  
England

Protecting and improving the nation's health

# Laboratory reports of hepatitis A and C in England and Wales, October to December 2017

Health Protection Report

Volume 12 Number 15

27 April 2018

# Laboratory reports of hepatitis A infections: October – December 2017

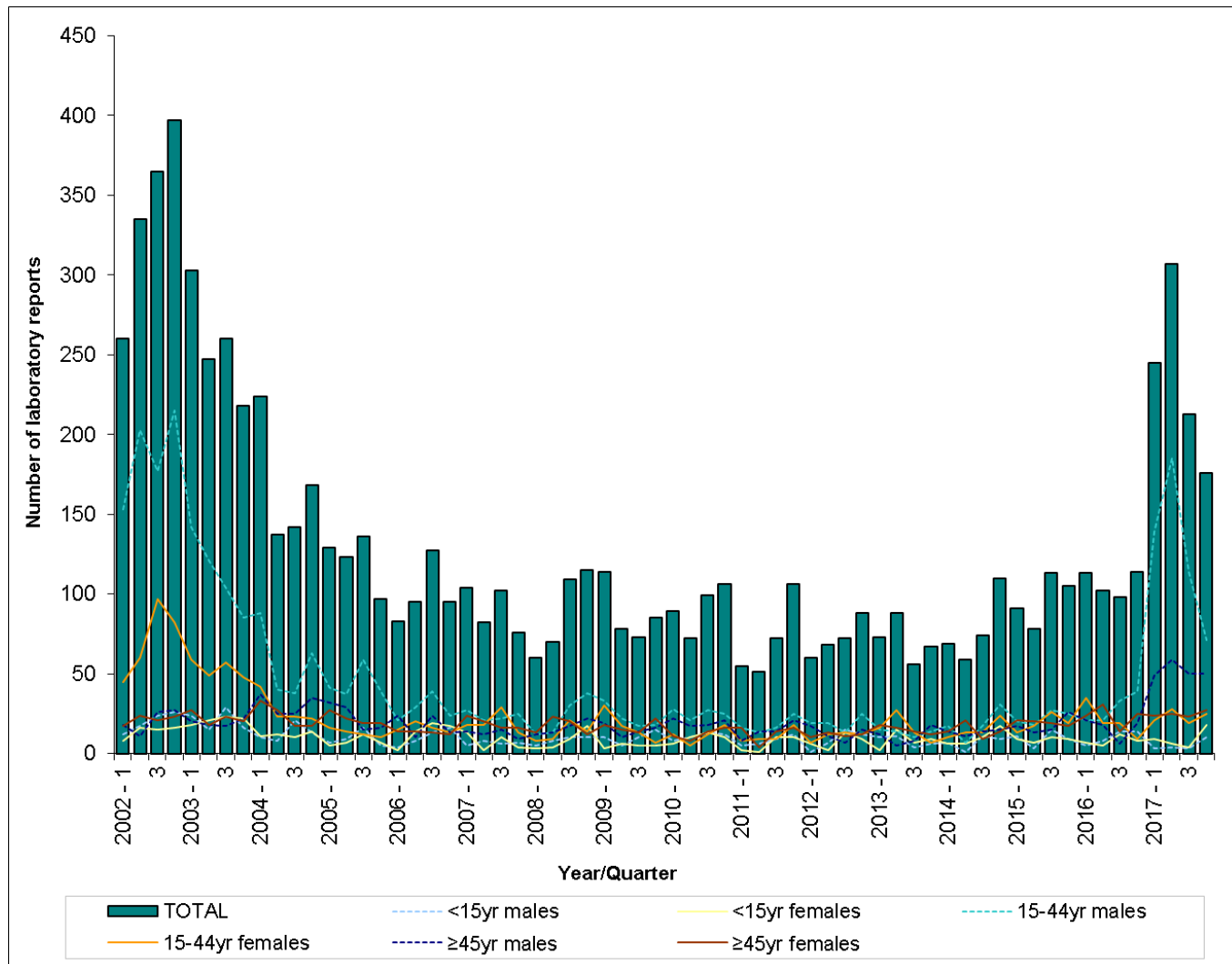
There were a total of 176 laboratory reports of hepatitis A reported to Public Health England (PHE) during the fourth quarter of 2017 (October – December). This is a 17% decrease on the reports in the third quarter of 2017 (n=212) and a 79.6% increase from the fourth quarter of 2016 (n=98), (figure 1). The increase in cases when compared to previous years is due to the outbreak of hepatitis A amongst men who have sex with men (MSM) that was first identified in 2016 (1). The decrease in cases is due to the targeted immunisation that has been implemented to control the hepatitis A outbreak mainly occurring in MSM. Of these reports, 22.7% (n=40) were reported from London PHE region followed by 21.6% (n=38) from the West Midlands region and 13.1% (n=23) from the South East region.

Age-group and sex were well reported (100% complete) (table 1). Among those aged 25-44 years there were 50 (28.4%) reports, 77 (43.8%) reports were among the 45 years old and over age group. Where known, males accounted for 60.2% (106/176) of all reports. The majority of reports in the 15-44 year's age-group were in males (64.8%). Males also accounted for the majority of reports (64.9%) in the over 45 year's age-group. Females accounted for the majority of reports in the under 15s (64.3%).

**Table 1. Laboratory reports of hepatitis A in England and Wales, October-December 2017**

Age group	Female	Male	Total
1-4 years	3	4	7
5-9 years	8	2	10
10-14 years	7	4	11
15-24 years	10	11	21
25-34 years	12	13	25
35-44 years	3	22	25
45-54 years	8	19	27
55-64 years	2	18	20
>65 years	17	13	30
<b>Total</b>	<b>70</b>	<b>106</b>	<b>176</b>

**Figure 1. Laboratory reports of hepatitis A by age and sex (England and Wales), October-December 2017**

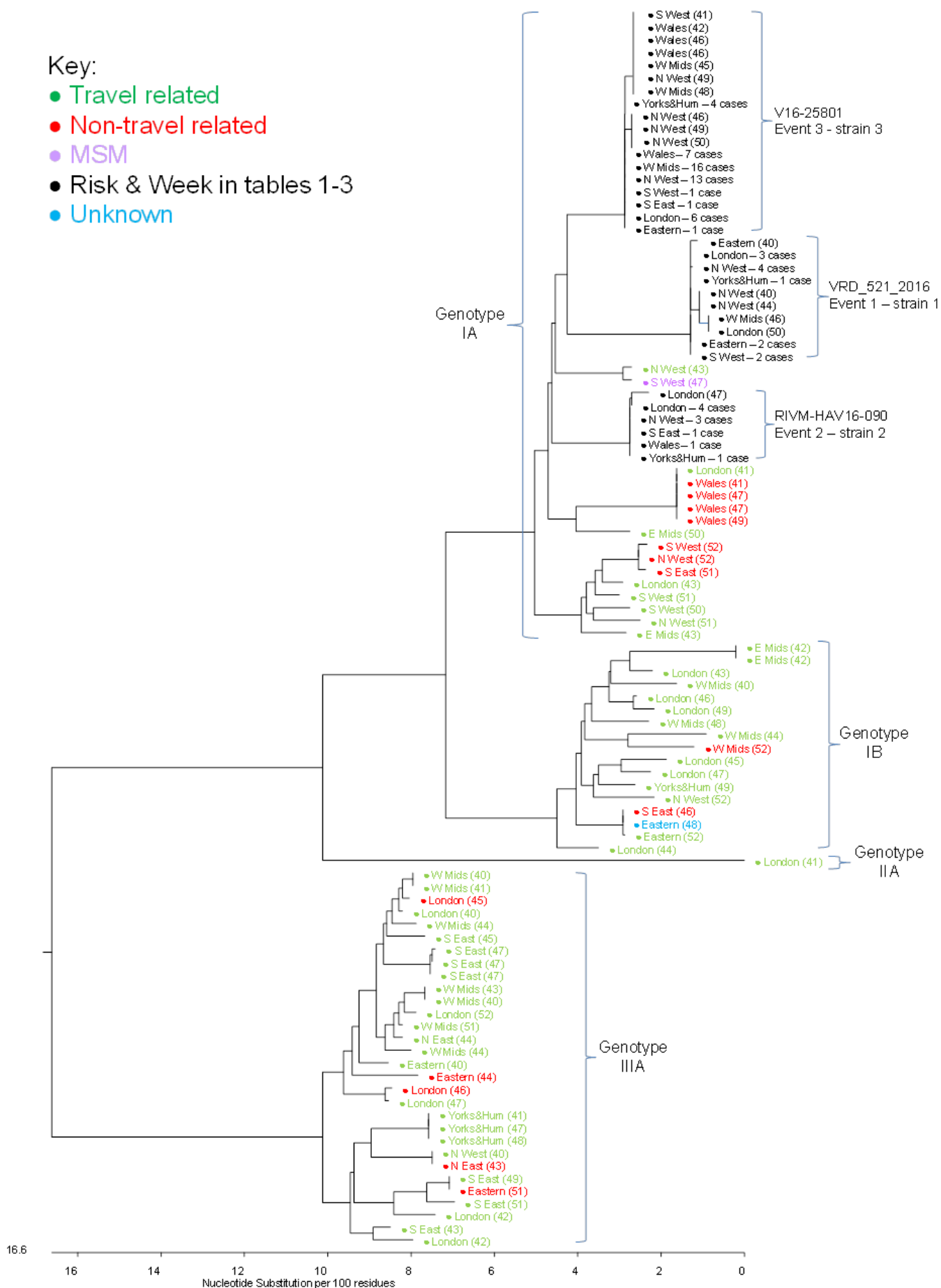


## Reference laboratory confirmation and phylogeny of hepatitis A infections

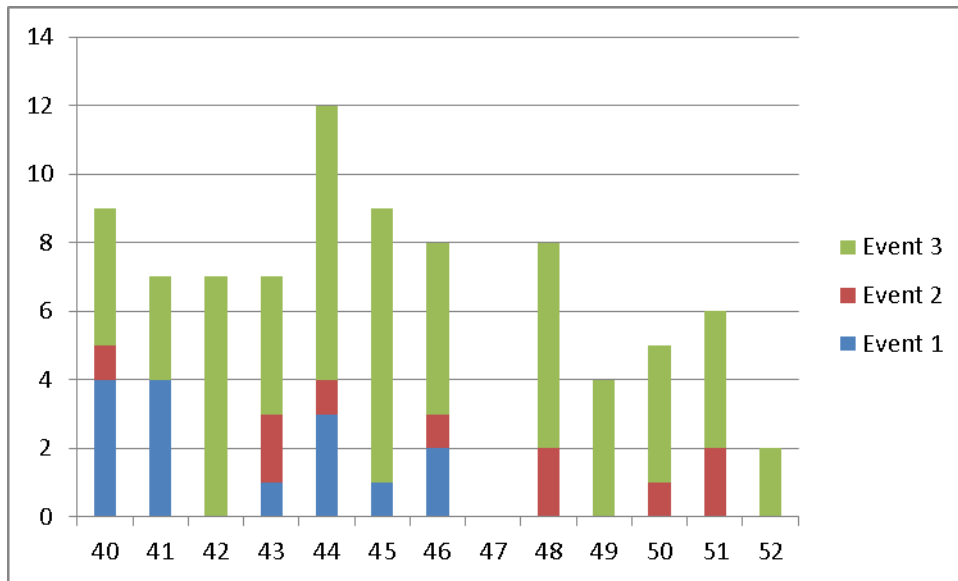
Of the 176 patients reported as having acute HAV infection during the last quarter of 2017, 137 had samples forwarded to the Virus Reference Department for confirmation. Thirty-two of the patients were not confirmed to have acute HAV infection. The remaining 105 patients were confirmed to have acute HAV infection. In addition 49 patients were confirmed to have acute HAV infection that had not been reported through the laboratory reporting system although all the English cases were recorded in HPzone with the exception of three cases.

A total of 152 patients could be genotyped over this period; 103 were genotype IA (67.8%), 17 were genotype IB (11.2%), one was genotype IIA (0.6%) and 31 were genotype IIIA (20.4%). Of these samples 58 were associated with travel (38.2%), 61 had no travel history (40.1%), 30 were MSM (19.7%) and three had no information (2%). This information is presented as a phylogenetic tree. Each sequence is represented by a dot with the patient region and the week of sampling in brackets with the exception of sequences VRD\_521\_2016 (Event 1 – strain 1), RIVM-HAV16-090 (Event 2 – strain 2) and V16-25801 (Event 3 – strain 3). These three distinct genotype IA strains associated with the hepatitis A outbreak in MSMs (1,2, 3.) were observed in large numbers in this quarter and have been represented in the tree by region and the number of cases observed; the breakdown of week, risk and region is represented in figures 3, 4 and 5.

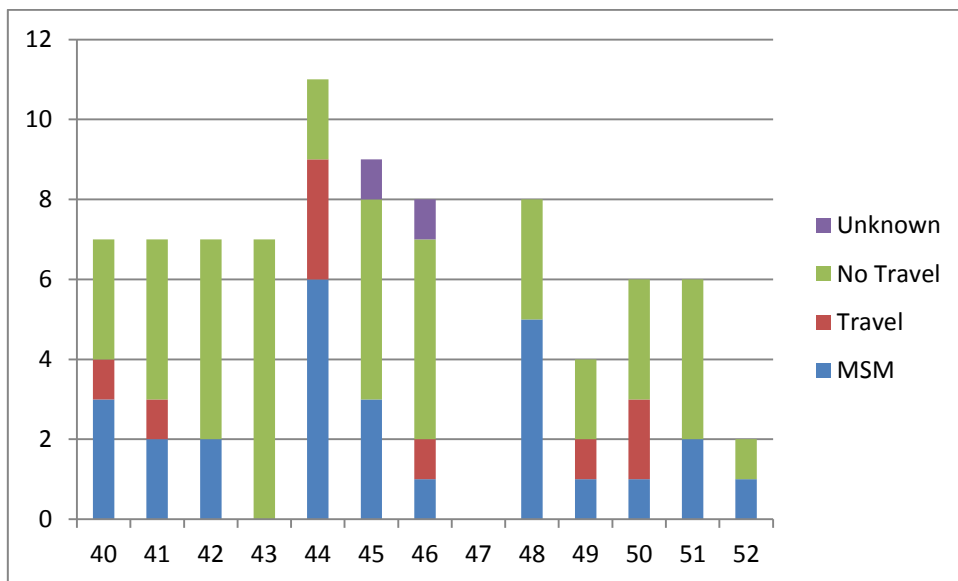
**Figure 2. Phylogenetic tree of genotype IA, IB, and IIIA sequences Octob. – December 2017**



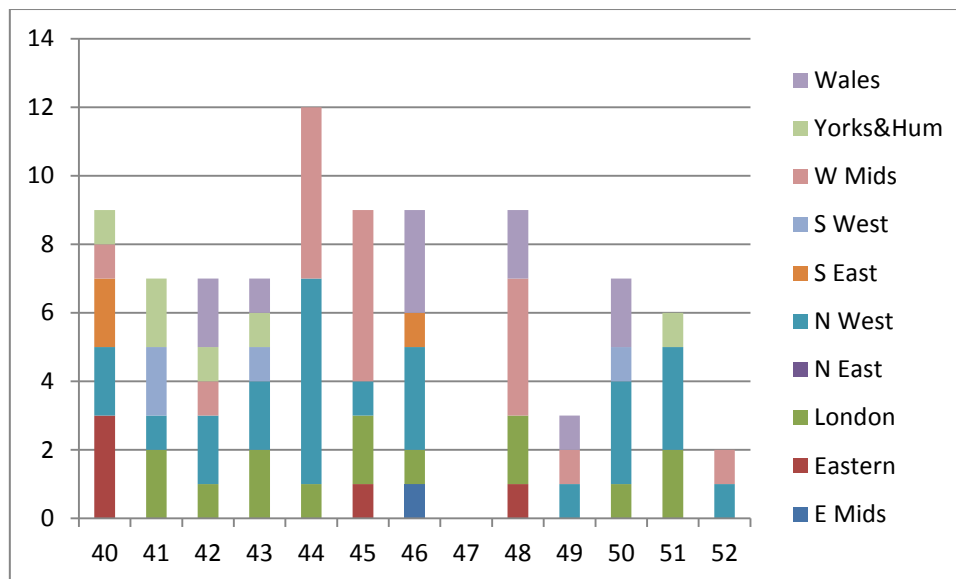
**Figure 3. Weekly distribution of Events 1, 2 and 3**



**Figure 4. Risk distribution of cases with Events 1, 2 and 3 by week**



**Figure 5. Regional distribution of cases with Events 1, 2 and 3 by week.**



## References

1. Beebeejaun K, Degala S, Balogun K, Simms I, Woodhall SC, Heinsbroek E, et al (2017). Outbreak of hepatitis A associated with men who have sex with men (MSM), England, July 2016 to January 2017. *Euro Surveill* (Feb) 2; 22(5).
2. Werber D, Michaelis K, Hausner M, Sissolak D, Wenzel J, Bitzegeio J, et al (2017). Ongoing outbreaks of hepatitis A among men who have sex with men (MSM), Berlin, November 2016 to January 2017 - linked to other German cities and European countries. *Euro Surveill* (Feb) 2; 22(5).
3. Freidl GS, Sonder GJ, Bovée LP, Friesema IH, van Rijckevorsel GG, Ruijs WL, et al (2017). Hepatitis A outbreak among men who have sex with men (MSM) predominantly linked with the EuroPride, the Netherlands, July 2016 to February 2017. *Euro Surveill* (Feb) 23; 22(8).

# Laboratory reports of hepatitis C: October to December 2017

Between October and December 2017, a total of 2540 laboratory reports of hepatitis C were reported to PHE. There was a 7.9% decrease in the number of reports compared to the third quarter of 2017 (n=2,758), and a slight increase of 1.4% on the same quarter in 2016 (n=2,504).

Age and sex were well reported (>99.5% complete), where known males accounted for 67.6% (1709/2527) of reports which is consistent with previous quarters and years [1]. Adults aged 25-44 years accounted for 52% of the total number of hepatitis C reports. By PHEC region, the highest numbers of reports were from London with 699 and the North West with 279 reports.

**Laboratory reports of hepatitis C in England and Wales, October – December 2017\***

Age group	Female	Male	Unknown	Total
1-4 years	2	3	–	5
5-9 years	3	1	–	4
10-14 years	4	–	–	4
15-24 years	25	44	–	69
25-34 years	194	370	5	569
35-44 years	222	531	5	758
45-54 years	181	417	3	601
55-64 years	120	237	–	357
>65 years	67	106	–	173
<b>Total</b>	<b>818</b>	<b>1709</b>	<b>13</b>	<b>2540</b>

\* Provisional data. Individuals aged less than one year are excluded since positive tests in this age group may reflect the presence of passively-acquired maternal antibody rather than true infection.

Laboratory reports are not reliable for differentiating acute and chronic hepatitis C infections. Laboratory reports include individuals with a positive test for hepatitis C antibody, antigen and/or detection of hepatitis C RNA.

## References

1. PHE (2017). Laboratory reports of hepatitis C in England and Wales, 2016, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/634058/hpr2617\\_hep\\_C.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/634058/hpr2617_hep_C.pdf)
2. <https://www.gov.uk/government/publications/laboratory-reports-of-hepatitis-a-and-c-2017>



# 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-class 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 are 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.

## *About Health Protection Report*

*Health Protection Report* is a national public health bulletin for England and Wales, published by Public Health England. It is PHE's principal channel for the dissemination of laboratory data relating to pathogens and infections/communicable diseases of public health significance and of reports on outbreaks, incidents and ongoing investigations.

Public Health England, Wellington House, 133-155 Waterloo Road, London SE1 8UG Tel: 020 7654 8000 [www.gov.uk/phe](http://www.gov.uk/phe)

Twitter: [@PHE\\_uk](https://twitter.com/PHE_uk) Facebook: [www.facebook.com/PublicHealthEngland](https://www.facebook.com/PublicHealthEngland)

Queries relating to this document should be directed to:

Immunisation, Hepatitis and Blood Safety Department: [immunisation@phe.gov.uk](mailto:immunisation@phe.gov.uk)

National Infection Service, PHE Colindale,  
61 Colindale Avenue, London NW9 5EQ.



© Crown copyright 2018

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](http://www.nationalarchives.gov.uk/ogl/). Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published April 2018

PHE publications

gateway number: 2018042

PHE supports the UN

Sustainable Development Goals

