



This report is published weekly on the [PHE website](#). For further information on the surveillance schemes mentioned in this report, please see the [PHE website](#) and the [related links](#) at the end of this document.

[Summary](#) | [Community surveillance](#) | [GP consultation rates](#) | [Hospitalisations](#) | [All-cause mortality](#) | [Microbiological surveillance](#) | [Vaccination](#) | [International](#) | [Acknowledgements](#) | [Related links](#)

Summary

During week 47 (ending 27 November 2016), influenza activity is at low levels and Respiratory Syncytial Virus (RSV) continues to circulate.

- [Community influenza surveillance](#)
 - Through the GP In Hours Syndromic Surveillance system, GP consultations increased further for upper and lower respiratory tract infections and remained within seasonally expected levels for influenza like illness in week 47.
 - Four new acute respiratory outbreaks have been reported in the past 7 days. Two outbreaks were from care homes, with no test results available. One outbreak was from a hospital which tested positive for RSV. The remaining outbreak was from a school with no test results available.
- [Overall weekly influenza GP consultation rates across the UK](#)
 - In week 47, the overall weekly influenza-like illness (ILI) GP consultation rate was 8.0 per 100,000 in England compared to 7.3 per 100,000 in the previous week and is below the pre-epidemic threshold. ILI rates were low in the devolved administrations.
- [Influenza-confirmed hospitalisations](#)
 - In week 47, there were 10 admissions to ICU/HDU with confirmed influenza (4 influenza A(H3N2), 5 influenza A(not subtyped) and 1 influenza B) were reported across the UK (134/156 Trusts in England) through the USISS mandatory ICU scheme.
 - In week 47, there were 16 hospitalised confirmed influenza cases (13 influenza A(H3N2) and 3 influenza A(not subtyped)) reported through the USISS sentinel hospital network (16 NHS Trusts across England).
 - No confirmed influenza admissions have been reported from the six Severe Respiratory Failure centres in the UK in week 47.
- [All-cause mortality data](#)
 - In week 47 2016, no statistically significant excess all-cause mortality by week of death was seen through the EuroMOMO algorithm in England overall and by age group and across the devolved administrations.
- [Microbiological surveillance](#)
 - Five samples tested positive for influenza (3 influenza A(H3N2) and 2 influenza A(unknown subtype)) through GP sentinel schemes across the UK, with an overall positivity of 4.3% in week 47.
 - 38 influenza positive detections were recorded through the DataMart scheme (22 influenza A(H3N2), 14 influenza A(unknown subtype) and 2 influenza B). A positivity of 2.6% was seen in week 46, with the highest positivity seen in the 65+ year olds (3.8%). This is below the all-age threshold for 2016/17 season of 8.6%.
 - Through the DataMart scheme, RSV continues to circulate with an overall positivity of 22.8% in week 47 compared to 21.3% in week 46. The highest positivity was in the <5 year olds at 51.0% in week 47.
- [Vaccination](#)
 - Up to week 47 2016, in 89.7% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2016/17 influenza vaccine in targeted groups was as follows: 42.5% in under 65 years in a clinical risk group, 40.8% in pregnant women, 66.1% in 65+ year olds. In 92.5% of GP practices reporting to Immform, the provisional proportion of children in England who had received the 2016/17 influenza vaccine was as follows: 32.9% in all 2 year olds, 34.4% in all 3 year olds and 27.6% in all 4 year olds.
 - Provisional data from the first monthly collection of influenza vaccine uptake in GP patients up to 31 October 2016 has been published. The report provides uptake at national, Area Team (AT), Clinical commissioning Group (CCG) and by Local Authority (LA) levels.
 - Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 40.4% were vaccinated by 31 October 2016, compared to 32.4% vaccinated in the previous season by 31 October 2015.
 - Provisional data from the first monthly collection of influenza vaccine uptake for children of school years 1, 2 and 3 age show the provisional proportion of children in England who received the 2016/17 influenza vaccine via school, pharmacy or GP practice by 31 October 2016 in targeted groups was as follows: 14.5% in children of school Year 1 age (5-6 years); 13.9% in children of school Year 2 age (6-7 years); 13.2% in children of school Year 3 age (7-8 years).
- [International situation](#)
 - Globally, influenza activity in temperate southern hemisphere countries is back at inter-seasonal levels. Influenza activity in the temperate zone of the northern hemisphere remains at inter-seasonal levels.

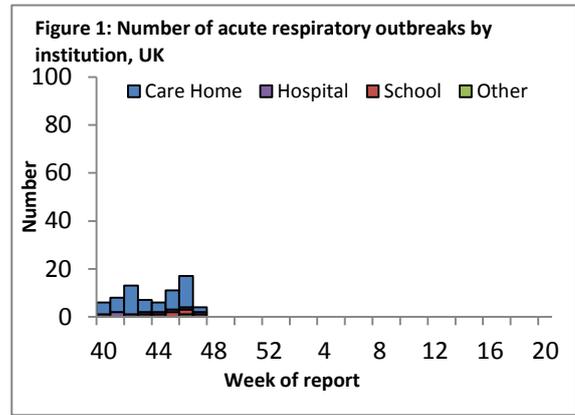
During week 47, there have been further increases in GP consultations for upper and lower respiratory tract infections. Four new acute respiratory outbreaks were reported in the past 7 days.

- PHE Real-time Syndromic Surveillance

- During week 47 there were further increases in GP consultations for upper and lower respiratory tract infections. Influenza-like illness remains stable and within seasonally expected levels.
- For further information, please see the syndromic surveillance [webpage](#).

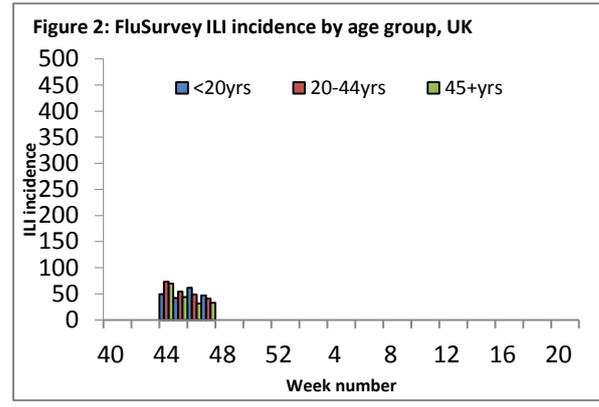
- Acute respiratory disease outbreaks

- Four new acute respiratory outbreaks have been reported in the past 7 days. Two outbreaks were from care homes with no test results available. One outbreak was from a hospital which tested positive for RSV. The remaining outbreak was from a school with no test results available.
- Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and Respscidsc@phe.gov.uk.



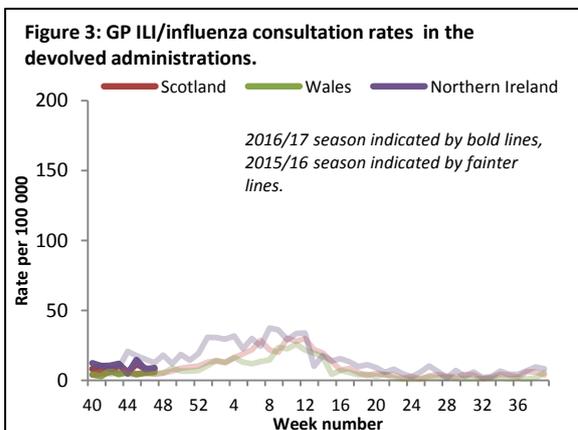
- FluSurvey

- Internet-based surveillance of influenza-like illness in the general population is undertaken through the FluSurvey. A project run jointly by PHE and the London School of Hygiene and Tropical Medicine.
- The overall ILI rate (all age groups) for week 47 was 35.2 per 1,000 (63/1,725 people reported at least 1 ILI), with the 0-19 years age group reporting a higher rate of 46.5 per 1,000.
- If you would like to become a participant of the FluSurvey project please do so by visiting the <https://flusurvey.org.uk/en/accounts/register/> website for more information.



In week 47, overall weekly influenza-like illness GP consultations remained low in England and the devolved administrations.

- Influenza/Influenza-Like-Illness (ILI)



Northern Ireland

- The Northern Ireland ILI rate remains similar at 8.8 per 100,000 in week 47 compared to 7.8 per 100,000 in week 46 (Figure 3). This remains below the baseline threshold (47.9 per 100,000).
- The highest rates were seen in the 45-64 year olds (19.9 per 100,000) and 65-74 year olds (5.7 per 100,000).

Wales

-The Welsh ILI rate is at 6.0 per 100,000 in week 47 compared to 5.5 per 100,000 in week 46 (Figure 3). This remains below the baseline threshold (10.3 per 100,000).

- The highest rates were seen in the 45-64 year olds (10.9 per 100,000) and 1-4 year olds (6.8 per 100,000).

Scotland

-The Scottish ILI rate is at 8.0 per 100,000 in week 47 compared to 8.5 per 100,000 in week 46 (Figure 3). This remains below the baseline threshold (36.1 per 100,000).

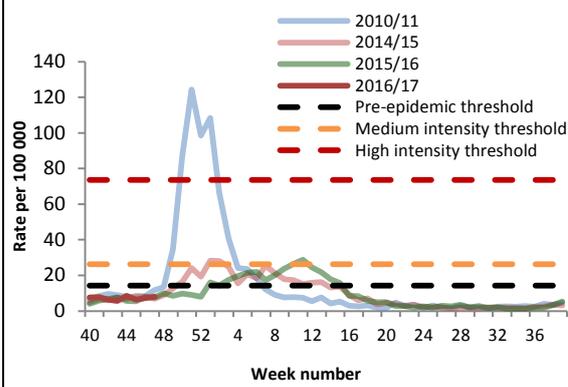
-The highest rates were seen in 15-44 year olds (9.9 per 100,000) and 45-64 year olds (9.7 per 100,000).

RCGP (England and Wales)

- The weekly ILI consultation rate through the RCGP surveillance is at 8.0 per 100,000 in week 47 compared to 7.3 per 100,000 in week 46. This is below the baseline threshold (14.3 per 100,000) (Figure 4*). By age group, the highest rates were seen in 45-64 year olds (10.8 per 100,000) and 1-4 year olds (10.0 per 100,000).

**The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe.*

Figure 4: RCGP ILI consultation rates , England and Wales



GP In Hours Syndromic Surveillance System (England)

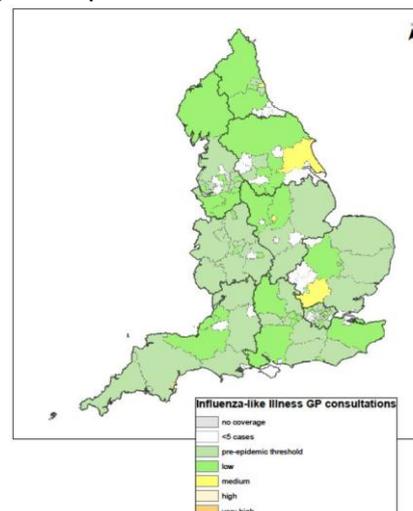
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system is at 6.2 per 100,000 in week 47 (Figure 5).

Figure 5 represents a map of GP ILI consultation rates in Week 47 across England by Local Authorities, using influenza-like illness surveillance thresholds.

Thresholds are calculated using a standard methodology for setting ILI thresholds across Europe (the "Moving Epidemic Method" (MEM)) and are based on six previous influenza seasons (excluding the 2009/10 H1N1 pandemic)

-For further information, please see the syndromic surveillance [webpage](#).

Figure 5: Map of GP ILI consultation rates in Week 47



Influenza confirmed hospitalisations

[| Back to top |](#)

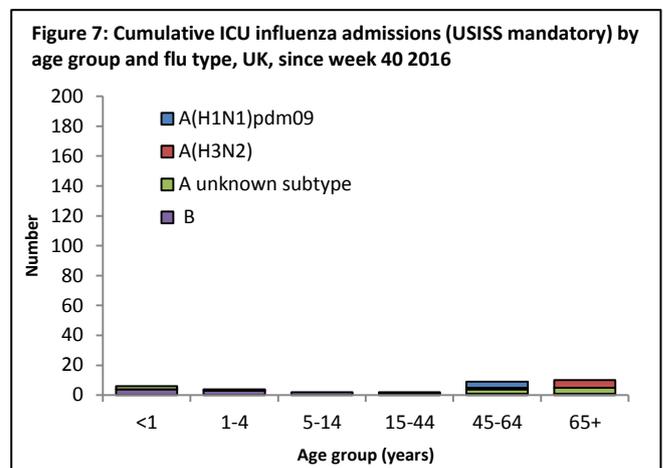
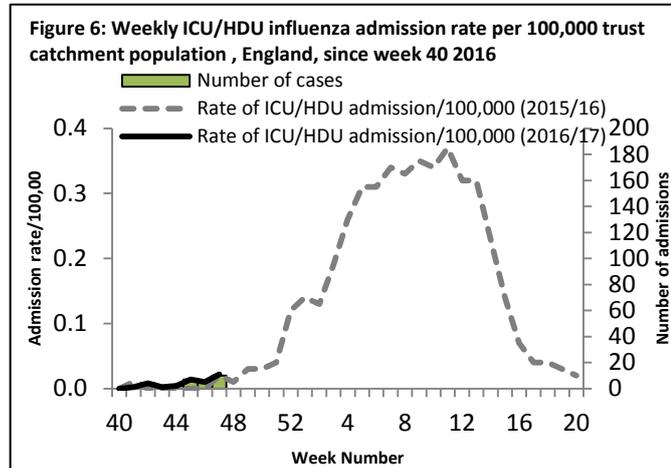
In week 47, there were 10 admissions to ICU/HDU with confirmed influenza (4 influenza A(H3N2), 5 influenza A(not subtyped) and 1 influenza B) reported through the USSS mandatory ICU/HDU surveillance scheme across the UK (134 Trusts). 16 hospitalised confirmed influenza cases (13 influenza A(H3N2) and 3 influenza A(not subtyped)) were reported through the USSS sentinel hospital network across England (16 Trusts).

A national mandatory collection (USSS mandatory ICU scheme) is operating in cooperation with the Department of Health to report the number of confirmed influenza cases admitted to Intensive Care Units (ICU) and High Dependency Units (HDU) and number of confirmed influenza deaths in ICU/HDU across the UK. A confirmed case is defined as an individual with a laboratory confirmed influenza infection admitted to ICU/HDU. In addition a sentinel network (USSS sentinel hospital network) of acute NHS trusts is established in England to report weekly laboratory confirmed hospital admissions. Further information on these systems is available through the [website](#). Please note data in previously reported weeks are updated and so may vary by week of reporting

- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 47)

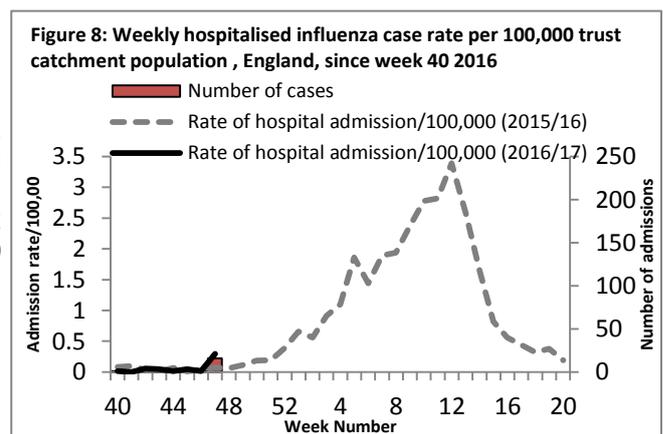
- In week 47, there were 10 admissions to ICU/HDU with confirmed influenza (4 influenza A(H3N2), 5 influenza A(not subtyped) and 1 influenza B) were reported across the UK (134/156 Trusts in England) through the USISS mandatory ICU scheme, with a rate of 0.02 per 100,000 compared to a rate of 0.01 per 100,000 in week 46 (Figures 6 and 7). No confirmed influenza deaths were reported in week 47 2016.

A total of 33 admissions (5 influenza A(H1N1)pdm09, 7 influenza A(H3N2), 11 influenza A(not subtyped) and 11 influenza B) and four confirmed deaths have been reported since week 40 2016.



- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 47)

- In week 47, there were 16 hospitalised confirmed influenza cases (13 influenza A(H3N2) and 3 influenza A(not subtyped)) reported through the USISS sentinel hospital network from 16 NHS Trusts across England (Figure 8), a rate of 0.30 per 100,000 compared to 0.02 per 100,000 in the previous week. A total of 29 hospitalised confirmed influenza admissions (22 influenza A(H3N2), 6 influenza A(not subtyped) and 1 B) have been reported since week 40 2016.



- USISS Severe Respiratory Failure Centre confirmed influenza admissions, UK (week 47)

- In week 47, there were no confirmed influenza admissions reported from the six Severe Respiratory Failure (SRF) centres in the UK. There have been no admissions reported since week 40 2016.

All-cause mortality data

[| Back to top |](#)

In week 47, no statistically significant excess all-cause mortality by week of death was seen through the EuroMOMO algorithm in England. In the devolved administrations, no significant excess mortality was noted in week 47 2016.

Seasonal mortality is seen each year in the UK, with a higher number of deaths in winter months compared to the summer. Additionally, peaks of mortality above this expected higher level typically occur in winter, most commonly the result of factors such as cold snaps and increased circulation of respiratory viruses, in particular influenza. Weekly mortality surveillance presented here aims to detect and report acute significant weekly excess mortality above normal seasonal levels in a timely fashion. Excess mortality is defined as a significant number of deaths reported over that expected for a given point in the year, allowing for weekly variation in the number of deaths. The aim is not to assess general mortality trends or precisely estimate the

excess attributable to different factors, although some end-of-winter estimates and more in-depth analyses (by age, geography etc.) are undertaken.

- Excess overall all-cause mortality, England and Wales

-- In week 46 2016, an estimated 10,694 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is an increase compared to the 10,470 estimated death registrations in week 45 2016.

- Excess all-cause mortality by age group, England, Wales, Scotland and Northern Ireland

-In week 47 2016 in England, no excess mortality by date of death above the upper 2 z-score threshold was seen in England after correcting ONS disaggregate data for reporting delay with the standardised [EuroMoMo](#) algorithm (Table 1). No significant excess was seen in any age groups or subnationally. This data is provisional due to the time delay in registration; numbers may vary from week to week.

- In the devolved administrations, no significant excess mortality above the threshold was seen in week 47 2016 (Table 2).

Table 2: Excess mortality by UK country*

Country	Excess detected in week 47 2016?	Weeks with excess in 2016/17
England	x	NA
Wales	x	NA
Scotland	x	46
Northern Ireland	-	-

* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

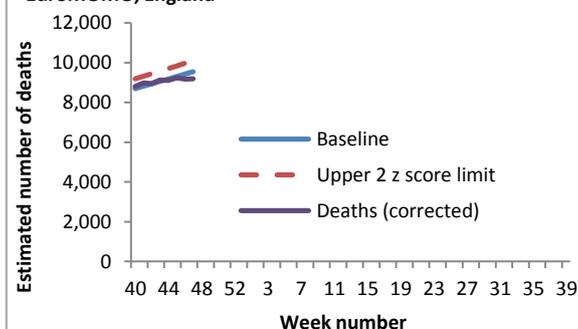
NB. Separate total and age-specific models are run for England which may lead to discrepancies between Tables 1 + 2

Table 1: Excess mortality by age group, England*

Age group (years)	Excess detected in week 47 2016?	Weeks with excess in 2016/17
<5	x	NA
5-14	x	NA
15-64	x	NA
65+	x	NA

* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

Figure 9: Excess mortality in all ages by week of death, EuroMOMO, England



Microbiological surveillance

[| Back to top |](#)

In week 47 2016, five samples tested positive for influenza (3 influenza A(H3N2) and 2 influenza A(unknown subtype)) through the UK GP sentinel schemes a positivity of 4.3%. 38 positive detections were recorded through the DataMart scheme (22 influenza A(H3N2), 14 influenza A(not subtyped) and 2 influenza B).

- Sentinel swabbing schemes in England (RCGP) and the Devolved Administrations

-In week 47, five samples tested positive for influenza (3 influenza A(H3N2) and 2 influenza A(unknown subtype)) through the UK GP sentinel swabbing schemes, with an overall positivity of 4.3% compared to 5.6% in week 46 (Table 3).

Since week 40 2016, 25 samples (12 influenza A(H3N2), 6 influenza A(untyped), 2 influenza A(H1N1)pdm09 and 5 influenza B) have tested positive for influenza through this scheme.

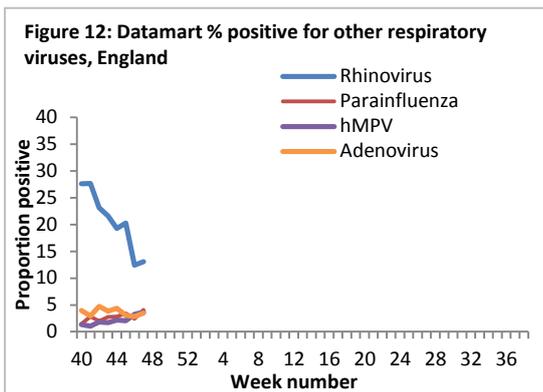
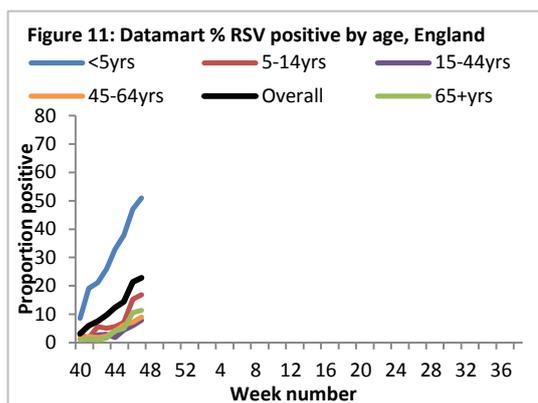
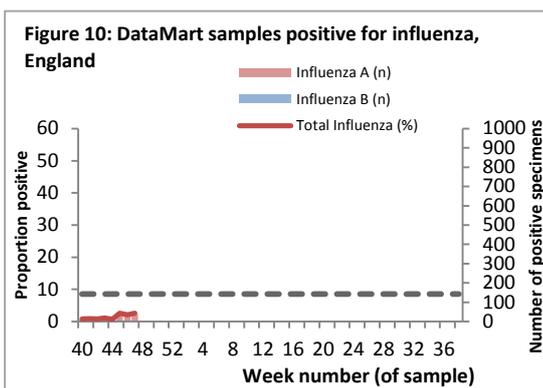
Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
43	1/81 (1.2%)	0/81 (0%)	0/1 (-)	0/2 (-)
44	0/81 (0%)	1/98 (1%)	1/2 (-)	0/1 (-)
45	3/70 (4.3%)	4/79 (5.1%)	0/7 (-)	0/0 (-)
46	4/80 (5%)	5/74 (6.8%)	0/4 (-)	0/3 (-)
47	3/68 (4.4%)	2/47 (4.3%)	0/0 (-)	0/2 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 47 2016, out of the 1,439 respiratory specimens reported through the Respiratory DataMart System, 38 samples (2.6%) were positive for influenza (22 influenza A(H3N2), 14 influenza A(not subtyped) and 2 influenza B) (Figure 10). The highest positivity was in the 65+ year olds at 3.8%. The overall positivity for RSV continued to increase from 21.3% in week 46 to 22.8% in week 47. The highest positivity was noted in the <5 year olds at 51.0% in week 47 compared to 47.0% in week 46 (Figure 11). Positivity for rhinovirus increased slightly from 12.4% in week 46 to 13.1% in week 47. Positivities for adenovirus, parainfluenza and human metapneumovirus (hMPV) all increased and were at 3.5%,4.1% and 3.7% respectively in week 47 (Figure12).



*The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe. The threshold to indicate a likelihood of influenza community circulation for Datamart % positive as calculated through the Moving Epidemic Method is 8.6% in 2016/17.

- Virus characterisation

PHE characterises the properties of influenza viruses through one or more tests, including genome sequencing (genetic analysis) and haemagglutination inhibition (HI) assays (antigenic analysis). These data are used to compare how similar the currently circulating influenza viruses are to the strains included in seasonal influenza vaccines, and to monitor for changes in circulating influenza viruses. The interpretation of genetic and antigenic data sources is complex due to a number of factors, for example, not all viruses can be cultivated in sufficient quantity for antigenic characterisation, so that viruses with sequence information may not be able to be antigenically characterised as well.

Since the start of the 2016/17 winter influenza season in week 40 2016, the PHE Respiratory Virus Unit has characterised two A(H1N1)pdm09 influenza viruses: one genetically and one antigenically. The A(H1N1)pdm09 virus genetically characterised belongs in the genetic subgroup 6B.1, which was the predominant genetic subgroup in the 2015/16 season. The virus antigenically analysed is similar to the A/California/7/2009 Northern Hemisphere 2016/17 (H1N1)pdm09 vaccine strain.

Genetic characterisation of 14 A(H3N2) influenza viruses since week 40 showed that they all belong to genetic subclade 3C.2a, with 10 belonging to a cluster within this genetic subclade designated as 3C.2a1. Viruses within this cluster are antigenically similar to other 3C.2a subclade viruses, which was the majority group circulating during the 2015/16 season. The Northern Hemisphere 2016/17 influenza A(H3N2) vaccine strain A/HongKong/4801/2014 belongs in genetic subclade 3C.2a.

One influenza B virus has been analysed genetically since week 40/2015 and has been characterised as belonging to the B/Yamagata/16/88-lineage. One influenza B virus has been isolated and antigenically characterised since week 40 2016. This virus was characterised as belonging to the B/Yamagata/16/88-lineage and was antigenically similar to B/Phuket/3073/2013, the influenza B/Yamagata-lineage component of 2016/17 Northern Hemisphere quadrivalent vaccine.

- Antiviral susceptibility

Since week 40 2016, one influenza A(H1N1)pdm09 and one influenza B (Yamagata) viruses have been tested for oseltamivir and zanamivir susceptibility, both of them were sensitive to oseltamivir and zanamivir.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 27 November 2016, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key causes of community acquired pneumonia (CAP) and the choice of antibiotics reflects the British Thoracic Society empirical guidelines for management of CAP in adults.

Table 4: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 12 weeks up to 27 November 2016, E&W

Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	3,125	88
	Macrolides	3,493	81
	Tetracycline	3,379	82
<i>H. influenzae</i>	Amoxicillin/ampicillin	13,093	69
	Co-amoxiclav	13,429	87
	Macrolides	5,152	14
	Tetracycline	13,172	98
<i>S. aureus</i>	Methicillin	6,034	91
	Macrolides	6,503	67
MRSA	Clindamycin	314	40
	Tetracycline	477	84
MSSA	Clindamycin	3,091	76
	Tetracycline	5,153	93

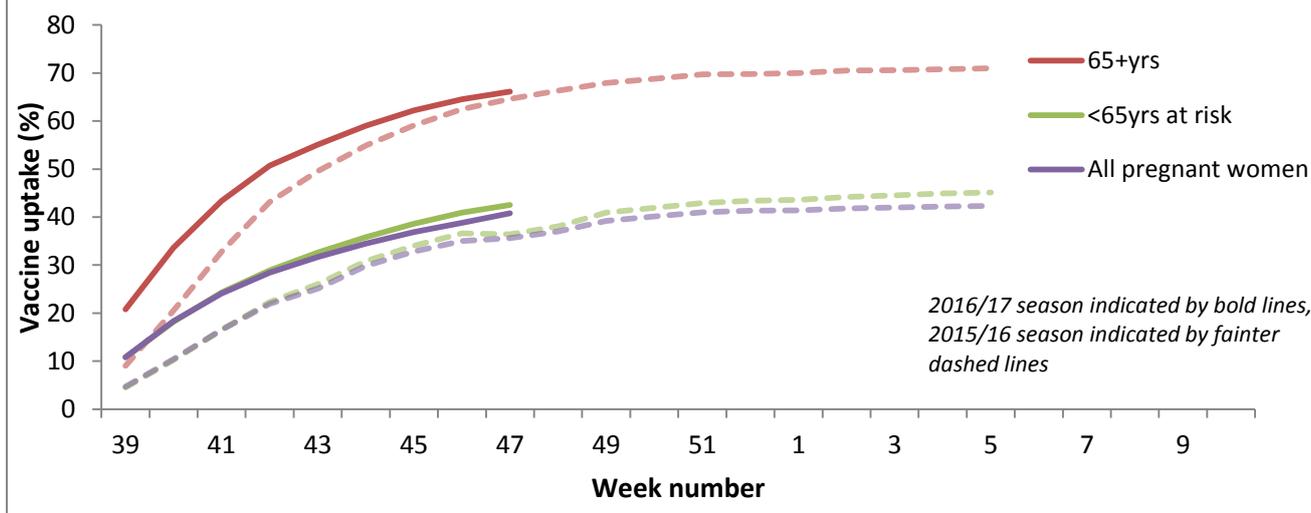
*Macrolides = erythromycin, azithromycin and clarithromycin

Vaccination

[| Back to top |](#)

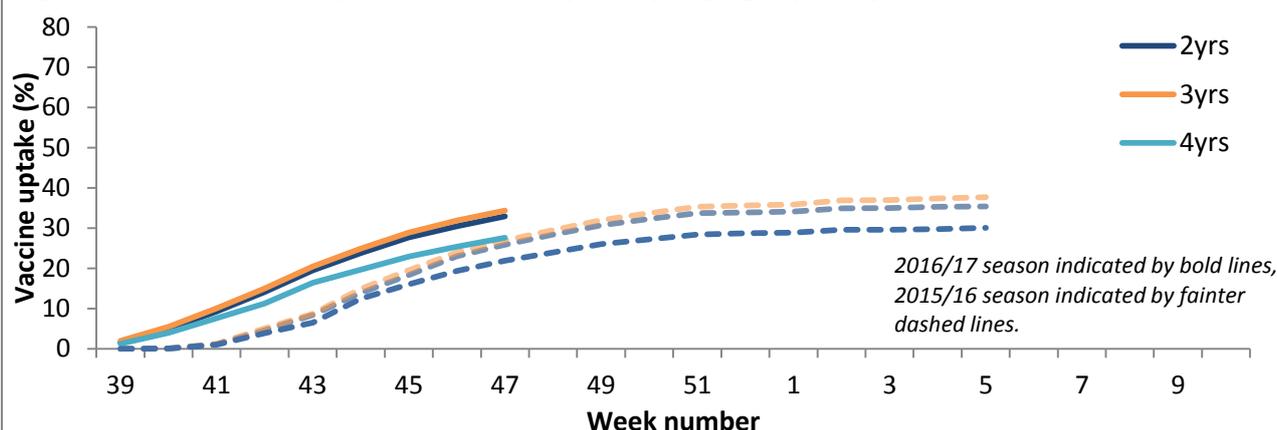
- Up to week 47 2016 in 89.7% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2016/17 influenza vaccine in targeted groups was as follows, with vaccination activity starting earlier than last season (Figure 13):
 - 42.5% in under 65 years in a clinical risk group
 - 40.8% in pregnant women
 - 66.1% in 65+ year olds

Figure 13: Cumulative weekly influenza vaccine uptake by target group in England



- In 2016/17, all two-, three- and four-year-olds continue to be eligible for flu vaccination. In addition, the programme has been extended to children of school years 1, 2 and 3 age. Up to week 47 2016 in 92.5% of GP practices reporting weekly to Immform, the provisional proportion of children in England who had received the 2016/17 influenza vaccine in targeted groups was as follows (Figure 14):
 - 32.9% in all 2 year olds
 - 34.4% in all 3 year olds
 - 27.6% in all 4 year olds

Figure 14: Cumulative weekly influenza vaccine uptake by target group in England



- Provisional data from the first monthly collection of influenza vaccine uptake in GP patients up to 31 October 2016 show that in 93.7% of all GP practices in England responding to the main GP survey, the proportion of people in England who received the 2016/17 influenza vaccine was as follows:
 - 33.3% in under 65 years in a clinical risk group
 - 32.4% in pregnant women
 - 56.0% in 65+ year olds
- Provisional data from the first monthly collection of influenza vaccine uptake in GP patients up to 31 October 2016 show that in 94.4% of all GP practices in England responding to the main GP survey, the proportion of people in England who received the 2016/17 influenza vaccine was as follows:
 - 20.3% in all 2 year olds
 - 21.5% in all 3 year olds
 - 17.1% in all 4 year olds
- Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 40.4% were vaccinated by 31 October 2016 from 95.8% of Trusts, compared to 32.4% vaccinated in the previous season by 31 October 2015. The report provides uptake at national, area team and CCG level.
- Provisional data from the first monthly collection of influenza vaccine uptake for children of school years 1, 2 and 3 age (from a sample of 89.5% of all Local Authorities in England) show the provisional proportion of children in England who received the 2016/17 influenza vaccine via school, pharmacy or GP practice by 31 October 2016 in targeted groups was as follows:
 - 14.5% in children of school Year 1 age (5-6 years)
 - 13.9% in children of school Year 2 age (6-7 years)
 - 13.2% in children of school Year 3 age (7-8 years)

International Situation

[Back to top](#)

Influenza activity in the temperate zone of the northern hemisphere remains at inter-seasonal levels. Influenza activity in temperate southern hemisphere countries is back at inter-seasonal levels.

- [Europe](#) updated on 28 November 2016 (Joint ECDC-WHO Influenza weekly update)

In week 46/2016, Influenza activity remained at baseline intensity levels in the region. The total number of virus detections among sentinel surveillance specimens increased to 10%, reaching a threshold indicative of increasing regional activity. The majority of viruses detected this week were influenza A(H3N2).

For week 46/2016, 106 of 1,020 (10%) sentinel specimens tested positive for influenza virus. Of these, 91% were type A and 9% were type B. All but one of the subtyped influenza A viruses were A(H3N2). The lineage of only one of the 11 influenza B viruses was determined, it being B/Victoria.

For week 46/2016, of those countries, territories and regions that conduct surveillance based on hospitalized laboratory-confirmed influenza cases in intensive care units (ICU) or other wards, Ireland and the United Kingdom reported six cases in other wards, five due to type A and one due to type B virus infection.

For week 46/2016, 435 specimens from non-sentinel sources (such as hospitals, schools, non-sentinel primary care units, nursing homes and other care institutions) tested positive for influenza viruses. Similar to the previous week, 96% were type A and 4% type B, with 93% of the subtyped influenza A viruses being A(H3N2).

- [United States of America](#) updated on 25 November 2016 (Centre for Disease Control report)

During week 46, influenza activity increased slightly but remained low in the United States.

The most frequently identified influenza virus subtype reported by public health laboratories during week 46 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased slightly, but remained low.

Nationwide during week 46, the proportion of outpatient visits for influenza-like illness (ILI) was 1.6%, which is below the national baseline of 2.2%

- [Canada](#) updated on 25 November 2016 (Public Health Agency report)

Influenza activity is approaching seasonal levels with many regions in Canada reporting increasing influenza activity.

A total of 188 positive influenza detections were reported in week 46. Influenza A(H3N2) continues to be the most common subtype detected.

In week 46, 1.0% of visits to sentinel healthcare professionals were due to influenza-like symptoms.

Two laboratory-confirmed influenza outbreaks were reported in week 45, a decrease from the previous week.

Twenty-six hospitalizations were reported from participating provinces and territories in week 46; the majority due to influenza A.

To date this season, detailed information on age and type/subtype has been received for 826 laboratory confirmed influenza cases. Adults aged 65+ accounted for over 40% of reported influenza cases. Among cases of influenza A(H3N2), adults aged 65+ accounted for 44% of cases.

- [Global influenza update](#) updated on 28 November 2016 (WHO website)

In North America and Europe, influenza activity was still low with few influenza virus detections and influenza-like illness (ILI) levels below seasonal thresholds. In the United States, respiratory syncytial virus (RSV) activity continued to be reported.

In East Asia, an increased level of influenza activity was reported in Southern China, influenza A(H3N2) remained the dominant virus circulating.

In Western Asia influenza detections remained low.

In the Caribbean countries, influenza and other respiratory virus activity remained low. In Central America, there was a slight increase in influenza virus activity but RSV continued to circulate in several countries as the predominant respiratory virus.

In tropical South America, respiratory virus activities remained low with exception of Colombia where RSV activity continued to be reported.

In tropical countries of South Asia, influenza virus detections remained low.

In South East Asia, influenza activity continued to be reported at low levels in Cambodia, Lao People's Democratic Republic (PDR), Thailand and Vietnam with influenza A(H3N2) virus predominating. In African region, influenza detections increased in Ghana with B viruses dominating.

In temperate South America, influenza and RSV activity continue to decrease throughout the sub-region.

In Oceania, influenza virus activity was at inter-seasonal levels.

Based on FluNet reporting, the WHO GISRS laboratories tested more than 75,463 specimens between 31 October 2016 and 13 November 2016. 3,603 were positive for influenza viruses, of which 3,248 (90.1%) were typed as influenza A and 355 (9.9%) as influenza B. Of the sub-typed influenza A viruses, 63 (2.5%) were influenza A(H1N1)pdm09 and 2,482 (97.5%) were influenza A(H3N2). Of the characterized B viruses, 34 (37.0%) belonged to the B-Yamagata lineage and 58 (63.0%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 21 November 2016 (WHO website)

Influenza A(H5) viruses

On [21 November 2016](#), one new laboratory-confirmed human case of influenza A(H5N6) virus infection was reported to WHO from China. A total of 15 laboratory-confirmed cases of human infection with influenza A(H5N6) virus, including six deaths, have been reported to WHO from China since 2014.

Since 2003, a total of 856 laboratory-confirmed cases of human infection with avian influenza A(H5N1) virus, including 452 deaths, have been reported to WHO from 16 countries.

Although other influenza A(H5) subtype viruses have the potential to cause disease in humans, no human cases, other than those with influenza A(H5N1) and A(H5N6), have been reported so far. According to reports received by the World Organisation for Animal Health (OIE), various influenza A(H5) subtypes continue to be detected in birds in West Africa, Europe and Asia. There have also been numerous detections of influenza A(H5N8) viruses in wild birds and domestic poultry in several countries in Asia and Europe since June 2016.

Influenza A(H7N9)

On [11 November 2016](#), the National Health and Family Planning Commission (NHFPC) of China notified WHO of two additional cases of laboratory-confirmed human infection with avian influenza A(H7N9) virus. A total of 800 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 322 deaths, have been reported to WHO.

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\)](#) latest update on 11 November 2016

Between [3 and 10 November 2016](#) the National IHR Focal Point of Saudi Arabia reported six (6) additional cases of Middle East Respiratory Syndrome (MERS). Two (2) deaths among previously reported MERS cases were also reported.

Up to 30 November 2016, a total of four cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (two imported and two linked cases) have been confirmed in the UK. On-going surveillance has identified 881 suspect cases in the UK that have been investigated for MERS-CoV and tested negative.

Globally, since September 2012, WHO has been notified of 1,832 laboratory-confirmed cases of infection with MERS-CoV, including at least 651 related deaths. Further information on management and guidance of possible cases is available [online](#). The latest ECDC MERS-CoV risk assessment can be found [here](#), where it is highlighted that risk of widespread transmission of MERS-CoV remains low.

Acknowledgements

[| Back to top |](#)

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