



PHE Weekly National Influenza Report

Summary of UK surveillance of influenza and other seasonal respiratory illnesses

12 October 2017 – Week 41 report (up to week 40 data)

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.

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Summary

During week 40 (ending 08 October 2017), influenza activity was low across all surveillance systems. RSV activity in the under 5 year olds is starting to increase.

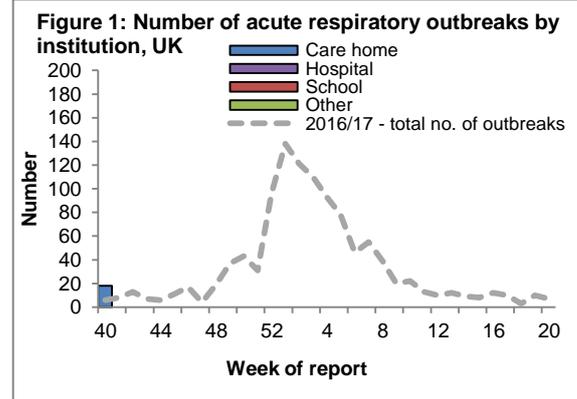
- [Community influenza surveillance](#)
 - Eighteen new acute respiratory outbreaks have been reported in the past 7 days, all of which were from care homes where two tested positive for influenza A(not subtyped).
- [Overall weekly influenza GP consultation rates across the UK](#)
 - In week 40, the overall weekly influenza-like illness (ILI) GP consultation rate was 6.8 per 100,000 in England. This is below the baseline threshold of 13.1 per 100,000 for this season. In the devolved administrations, ILI rates were also below baseline thresholds.
 - Through the GP In Hours Syndromic Surveillance system, GP in hours consultations for influenza like illness (ILI) were low.
- [Influenza-confirmed hospitalisations](#)
 - In week 40, there were two admissions to ICU/HDU with confirmed influenza (two influenza A(unknown subtype)) reported across the UK (120/155 Trusts in England) through the USISS mandatory ICU scheme with a rate of 0.00 per 100,000.
 - In week 40, there were 12 hospitalised confirmed influenza cases (six influenza A(H1N1pmd09), one influenza A(H3N2), two influenza A(unknown) and three influenza B) reported through the USISS sentinel hospital network (19 NHS Trusts across England), with a rate of 0.14 per 100,000.
 - No laboratory confirmed influenza admissions have been reported from the six Severe Respiratory Failure centres in the UK in week 40.
- [All-cause mortality data](#)
 - In week 40 2017, no statistically significant excess all-cause mortality by week of death was seen through the EuroMOMO algorithm in England and in the devolved administrations.
- [Microbiological surveillance](#)
 - Two samples tested positive for influenza (one influenza A(H3) and one influenza A(unknown subtype)) through the UK GP sentinel swabbing schemes.
 - Seventeen influenza positive detections were recorded through the DataMart scheme (eight influenza A(H3), six influenza A(unknown subtype) and three influenza B) in week 40. The overall positivity was 1.6% in week 40, which is below the threshold for 2017/18 season of 8.6%.The highest age-specific positivity was seen in the 65+ year olds (2.5%).The overall RSV positivity was at 4.5% with increased positivity in the <5 year olds at 17.6% in week 40.
- [Vaccination](#)
 - Up to week 40 2017, in 9.4% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2017/18 influenza vaccine in targeted groups was: 16.0% in under 65 years in a clinical risk group, 16.2% in pregnant women and 33.1% in 65+ year olds.
 - Due to insufficient data received for the GP children flu uptake data, data for 2 and 3 year olds is not available for this week.
 - Flu uptake data on 4 year olds will be collected through the school delivery programme and be published in the monthly report to be published on 23 November 2017.
- [International situation](#)
 - Globally, influenza activity in the temperate zone of the northern hemisphere was low, however high levels of influenza activity continued to be reported in the southern hemisphere. Worldwide, influenza A(H3N2) viruses were predominant.

Eighteen new acute respiratory outbreaks were reported in the past 7 days.

- Acute respiratory disease outbreaks

- Eighteen new acute respiratory outbreaks have been reported in the past 7 days. All 18 outbreaks were from care homes, where two tested positive for influenza A(not subtyped) and four tested positive for rhinovirus.

-Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and respscidsc@phe.gov.uk .

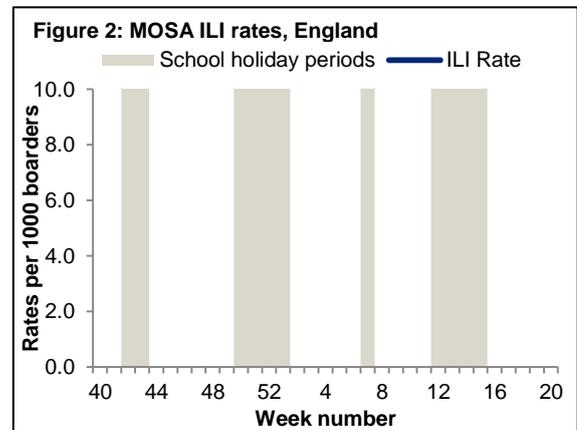


- Medical Officers of Schools Association (MOSA) & PHE surveillance scheme

- Boarding schools in England within the MOSA network are recruited each season to report various respiratory related illnesses including influenza like illnesses (ILI).

- Approximately 20 MOSA schools will be participating in the 2017/18 season. Data will be reported from week 42.

- If you are a MOSA school and would like to participate in this scheme, please email mosa@phe.gov.uk for more information.



- 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.

- Data will be reported from week 44.

- 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.

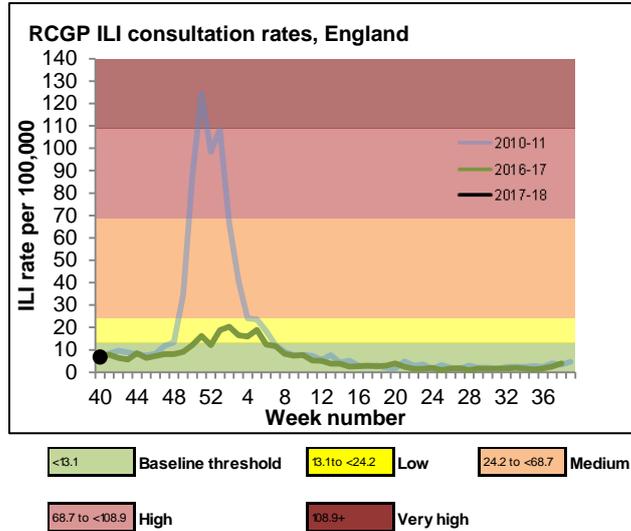
In week 40, the overall weekly influenza-like illness (ILI) GP consultation rate is low and is below the baseline threshold in England. In the devolved administrations, ILI rates were low in week 40.

- GP ILI consultations in the UK

RCGP (England)

- The weekly ILI consultation rate through the RCGP surveillance is at 6.8 per 100,000 in week 40. This is below the baseline threshold (13.1 per 100,000) (Figure 3*). By age group, the highest rates were seen in 15-44 year olds (9.1 per 100,000) and 65-74 year olds (9.0 per 100,000).

*The Moving Epidemic Method (MEM) 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 (based on 10 seasons excluding 2009/10) in a standardised approach across Europe.



UK

- In week 40, overall weekly ILI consultation rates across the countries of the UK were low.
- By age group, the highest rates were seen in the 45-64 year olds in Scotland and Northern Ireland (6.3 per 100,000 and 4.7 per 100,000 respectively) and in the 65-74 year olds in Wales (12.0 per 100,000).

Table 1: GP ILI consultations in the UK for all ages with MEM thresholds applied

GP ILI consultation rates (all ages)	Week number																	
	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	
England (RCGP)	6.8																	
Wales	5.5																	
Scotland	5.0																	
Northern Ireland	3.4																	

*The Moving Epidemic Method (MEM) 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 (based on 10 seasons excluding 2009/10), in a standardised approach across Europe.

GP In Hours Syndromic Surveillance System (England)

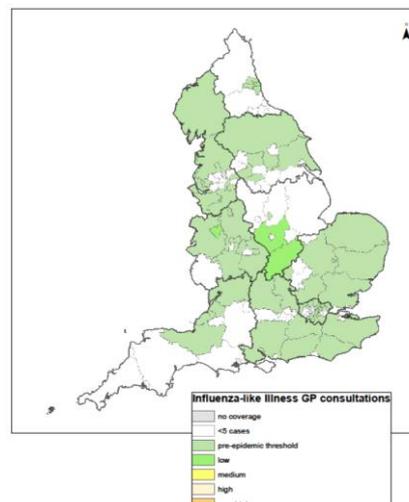
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system is at 4.5 per 100,000 in week 40 (Figure 4).

Figure 4 represents a map of GP ILI consultation rates in week 40 across England by Local Authorities, using influenza-like illness surveillance thresholds.

ILI thresholds on the map are calculated using a standard methodology for setting ILI thresholds across Europe (the "Moving Epidemic Method" (MEM)) and are based on previous influenza seasons from 2012/13 onwards.

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

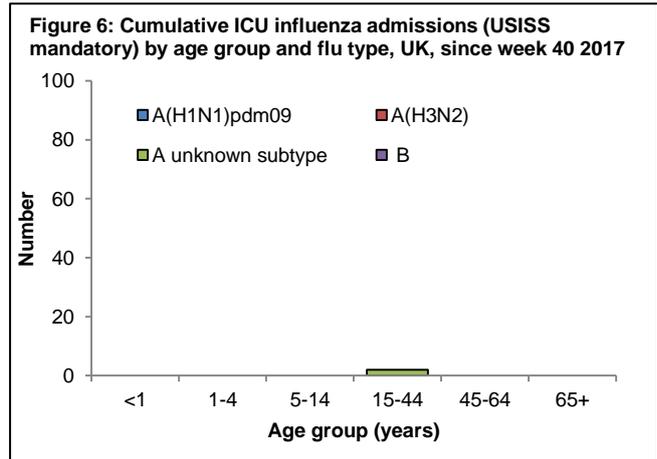
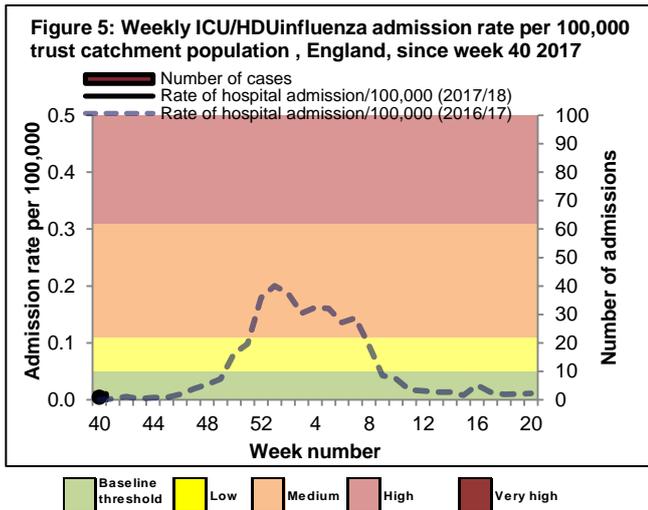
Figure 4: Map of GP ILI consultation rates in week 40



In week 40, there were two admissions to ICU/HDU with confirmed influenza (two influenza A(unknown subtype)) reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (120 Trusts). Twelve hospitalised confirmed influenza cases (six influenza A(H1N1pmd09), one influenza A(H3N2), two influenza A(unknown) and three influenza B) were reported through the USISS sentinel hospital network across England (19 Trusts).

- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 40)

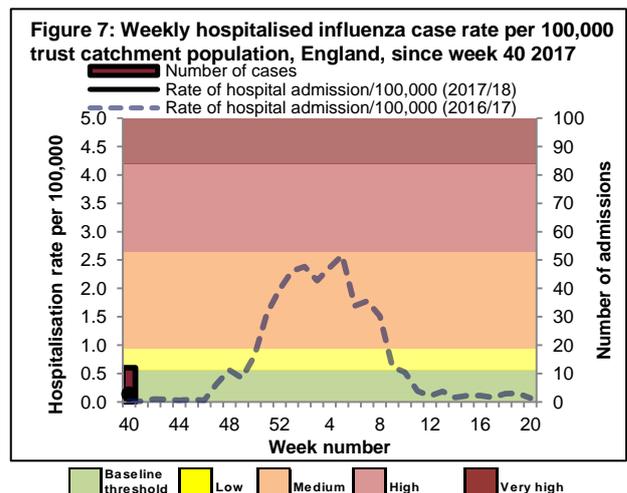
- In week 40, there were two admissions to ICU/HDU with confirmed influenza (two influenza A(unknown subtype) reported across the UK (120/155 Trusts in England) through the USISS mandatory ICU scheme, with a rate of 0.00 per 100,000 (Figures 5 and 6). Two influenza-related deaths were reported to have occurred in week 40 related to admissions prior to week 40.



*The Moving Epidemic Method (MEM) has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for ICU/HDU admission rates for the start of influenza activity (based on 6 seasons) in a standardised approach across Europe.

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 40)

- In week 40, there were 12 hospitalised confirmed influenza cases (six influenza A(H1N1pmd09), one influenza A(H3N2), two influenza A(unknown) and three influenza B) reported through the USISS sentinel hospital network from 19 NHS Trusts across England (Figure 8), a rate of 0.14 per 100,000.



*The Moving Epidemic Method (MEM) has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for hospital admission rates for the start of influenza activity (based on 6 seasons) in a standardised approach across Europe.

- USISS Severe Respiratory Failure Centre confirmed influenza admissions, UK (week 40)

- In week 40, there were no laboratory confirmed influenza admissions reported from the six Severe Respiratory Failure (SRF) centres in the UK.

In week 40 2017 in England, no statistically significant excess all-cause mortality by week of death was observed through the EuroMOMO algorithm in England. In the devolved administrations, no significant excess all-cause mortality was observed in week 40 2017.

- All-cause death registrations, England and Wales

- In week 39 2017, an estimated 9,689 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is a slight increase compared to the 9,534 estimated death registrations in week 38 2017.

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

- In week 40 2017 in England, no excess mortality by week of death above the upper 2 z-score threshold was seen overall, by age group or subnationally, after correcting ONS disaggregate data for reporting delay with the standardised EuroMOMO algorithm (Figure 8). This data is provisional due to the time delay in registration; numbers may vary from week to week.

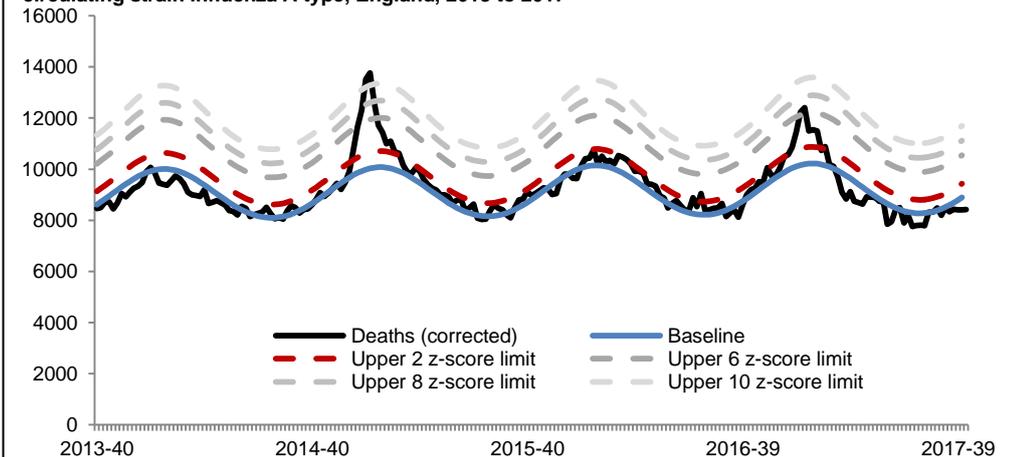
- In the devolved administrations, no significant excess mortality above the threshold was observed in week 40 (Table 2).

Table 2: Excess mortality by UK country, for all ages*

Country	Excess detected in week 40 2017?	Weeks with excess in 2017/18
England	×	NA
Wales	×	NA
Scotland	×	NA
Northern Ireland	×	NA

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

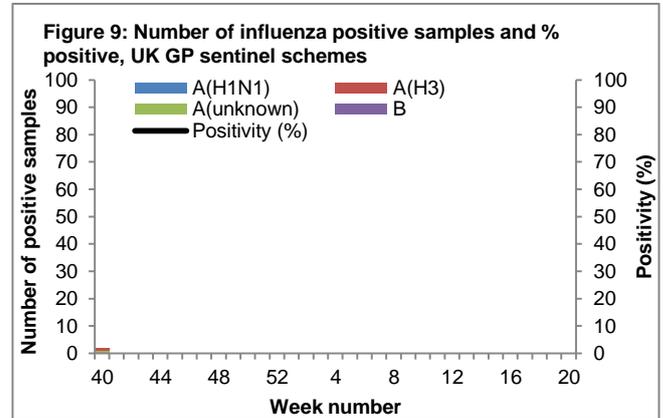
Figure 8: Weekly observed and expected number of all-age all-cause deaths, with the dominant circulating strain influenza A type, England, 2013 to 2017



In week 40 2017, two samples tested positive for influenza (one influenza A(H3) and one influenza A(unknown subtype)) through the UK GP sentinel schemes. Seventeen positive detections were recorded through the DataMart scheme (eight influenza A(H3), six influenza A(unknown subtype) and three influenza B) with a positivity of 1.6% in week 40. RSV pos

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

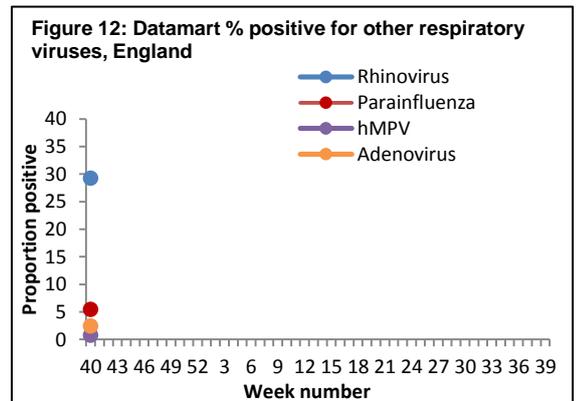
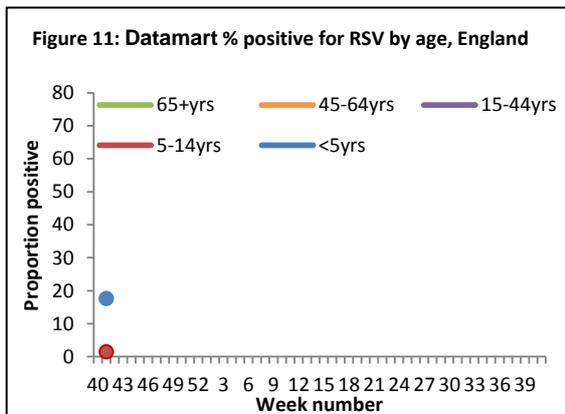
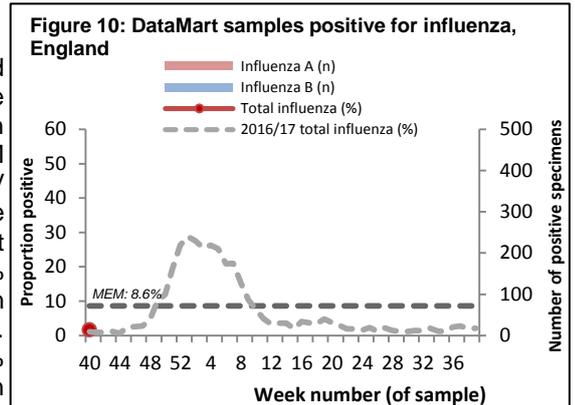
-In week 40, two samples tested positive for influenza (one influenza A(H3) and one influenza A(unknown subtype)) through the UK GP sentinel swabbing schemes (Table 3).



NB. Positivity (%) omitted when fewer than 10 specimens were tested

- Respiratory DataMart System (England)

In week 40 2017, out of the 1,061 respiratory specimens reported through the Respiratory DataMart System, 17 samples (1.6%) were positive for influenza (eight influenza A(H3), six influenza A(unknown subtype) and three influenza B) (Figure 10), which is below the MEM threshold for this season of 8.6%. The overall positivity for RSV continued to increase from 2.2% in week 39 to 4.5% in week 40. There has been an increase in RSV positivity amongst the <5 year olds at 17.6% in week 40, the positivity in all other age groups was below 2% (Figure 11). Rhinovirus positivity remained at high levels at 29.2% in week 40. Adenovirus positivity remained low at 2.4% in week 40. Parainfluenza positivity increased slightly from 4.1% in week 39 to 5.5% in week 40. Human metapneumovirus (hMPV) remained low at 0.8% in week 40 (Figure 12).



*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 2017/18.

- Virus characterisation

In week 40 2017, no influenza viruses were isolated or characterised by PHE Respiratory Virus Unit (RVU).

- Antiviral susceptibility

No influenza samples have been tested for oseltamivir and zanamivir susceptibility.

- Antimicrobial susceptibility

-Table 3 shows in the 12 weeks up to 08 October 2017, 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.

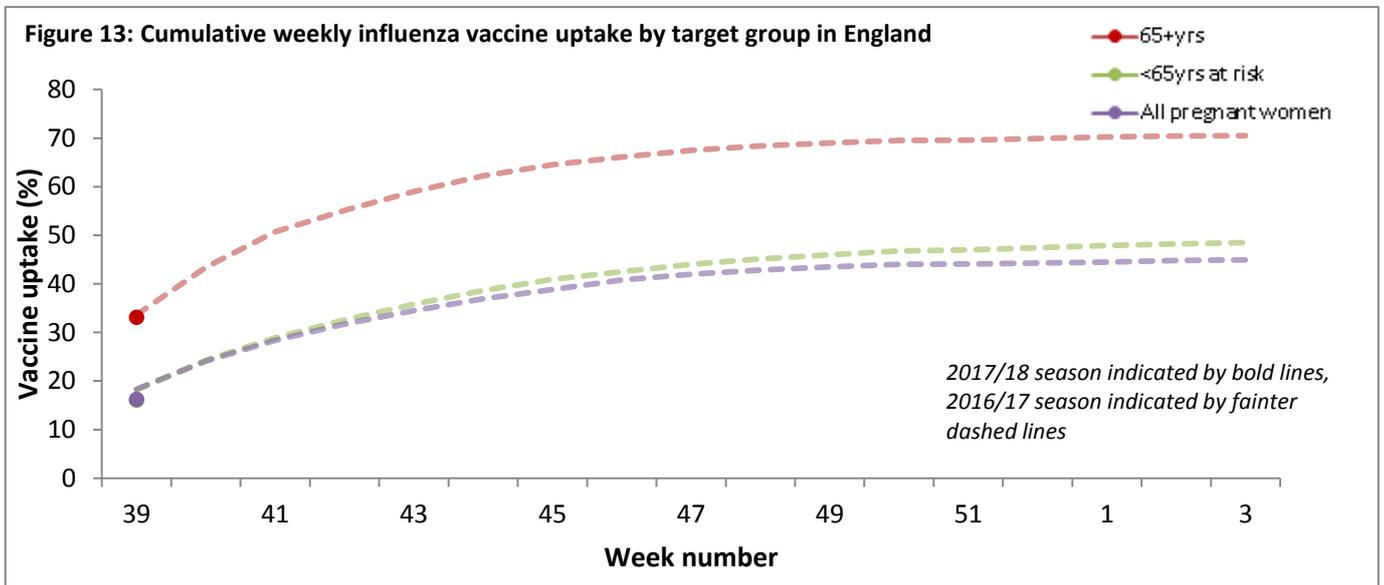
Organism	Specimens tested (N)	Specimens susceptible (%)	Specimens susceptible (%)
	357	86	90
<i>S. pneumoniae</i>	396	80	82
	382	82	85
<i>H. influenzae</i>	1297	69	68
	1310	87	87
	471	12	10
	1313	98	99
<i>S. aureus</i>	605	91	90
	656	68	67
MRSA	37	35	38
	54	83	81
MSSA	320	80	76
	519	95	93

*Macrolides = erythromycin, azithromycin and clarithromycin

Vaccination

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- Up to week 40 2017 in 9.0% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2017/18 influenza vaccine in targeted groups was as follows (Figure 12):
 - 16.0% in under 65 years in a clinical risk group
 - 16.2% in pregnant women
 - 33.1% in 65+ year olds



- In 2017/18, all two- and three-year-olds continue to be eligible for flu vaccination, through their GPs. In addition, the programme has been extended to children of school years Reception (4 year olds), 1, 2, 3 and 4 age. The data for the school programme, including 4 year olds, will be included in the monthly report to be published on 23 November 2017. Due to insufficient data received for the GP children flu uptake data, data for 2 and 3 year olds is not available.

Influenza activity remained at low levels in the temperate zone of the northern hemisphere however high levels of influenza activity continued to be reported in the temperate zone of the southern hemisphere. Worldwide, influenza A(H3N2) viruses predominated.

- [Europe](#) updated on 06 October 2017 (Joint ECDC-WHO Influenza weekly update)

This is the last report for the 2016-2017 season. Flu News Europe will begin weekly reporting of the influenza situation for the 2017-2018 season as of reporting-week 40/2017.

Influenza activity was at out-of-season levels in all countries during weeks 35-39/2017. All reporting countries continued to report low intensity of influenza activity.

Influenza viruses were detected sporadically both in sentinel and non-sentinel specimens, with both influenza type A and B viruses detected.

- [United States of America](#) updated on 06 October 2017 (Centre for Disease Control report)

During week 39, influenza activity was low in the United States.

Nationwide during week 39, the proportion of outpatient visits for influenza-like illness (ILI) was 1.2%, which is below the national baseline of 2.2%.

- [Canada](#) updated on 29 September 2017 (Public Health Agency report)

Overall, Influenza activity remains at interseasonal levels across the country. However, several indicators are above expected levels compared to previous seasons.

In weeks 37-38, the majority of influenza detections continued to be A(H3N2). The percentage of laboratory tests positive for influenza is higher for this time of year compared to previous seasons.

- [Global influenza update](#) updated on 02 October 2017 (WHO website)

Influenza activity remained at low levels in the temperate zone of the northern hemisphere. High levels of influenza activity continued to be reported in the temperate zone of the southern hemisphere and in some countries of South and South East Asia. In Central America and the Caribbean, low influenza activity was reported in a few countries. Worldwide, influenza A(H3N2) viruses predominated.

In temperate South America, influenza and respiratory syncytial virus (RSV) activities continued to trend downwards throughout most of the sub-region.

In Southern Africa, influenza activity appeared to be decreasing in South Africa, with influenza B virus detections predominant in recent weeks.

In Oceania, seasonal influenza activity continued at elevated levels, with influenza A(H3N2) viruses predominant followed by influenza B viruses.

In tropical South America, influenza and other respiratory virus activity remained low.

In the Caribbean and Central American countries, respiratory illness indicators and influenza activity remained low in general but RSV activity increased in several countries.

In Southern Asia, influenza A(H1N1)pdm09 virus detections were reported in India and Bhutan. However, influenza like illness (ILI) and severe acute respiratory infection (SARI) levels appeared to be decreasing in Bhutan.

In South East Asia, high levels of influenza activity continued to be reported, with all seasonal influenza subtypes present in the region.

In Western Asia, influenza activity continued to increase in Qatar, with influenza A(H1N1)pdm09 and A(H3N2) viruses co-circulating.

In East Asia, influenza activity remained low in general.

In Western Africa, influenza detections continued to be reported, with all seasonal influenza subtypes present in the region. Few influenza detections were reported in Middle and Eastern Africa.

In Northern Africa, no influenza virus detections were reported.

In Central Asia, there were no updated reports on virus detections or respiratory illness indicators.

In Europe and North America, little to no influenza activity was reported.

The WHO GISRS laboratories tested more than 56011 specimens from 04 September 2017 to 17 September 2017. 5856 were positive for influenza viruses, of which 4839 (82.6%) were typed as influenza A and 1017 (17.4%) as influenza B. Of the sub-typed influenza A viruses, 413 (11.1%) were influenza A(H1N1)pdm09 and 3305 (88.9%) were influenza A(H3N2). Of the characterized B viruses, 181 (65.3%) belonged to the B-Yamagata lineage and 96 (34.7%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 27 September 2017 (WHO website)

Influenza A(H5) viruses

Since the last update on [25 July 2017](#), one new laboratory-confirmed human case of influenza A(H5N1) virus infection was reported to WHO from Indonesia.

Since 2003, a total of 860 laboratory-confirmed cases of human infection with avian influenza A(H5N1) virus, including 454 deaths, have been reported to WHO from 16 countries. The last human cases of A(H5N1) virus infection reported from Indonesia occurred in 2015.

Influenza A(H5) subtype viruses have the potential to cause disease in humans and thus far, no human cases, other than those with influenza A(H5N1) and A(H5N6) viruses, have been reported to WHO. According to reports received by the World Organisation for Animal Health (OIE), various influenza A(H5) subtypes continue to be detected in birds in Africa, Europe and Asia. For more information on the background and public health risk of these viruses, please see the WHO assessment of risk associated with influenza A(H5N8) virus [here](#).

Influenza A(H7N9)

Between [25 July to 27 September 2017](#), 7 laboratory-confirmed human cases of influenza A(H7N9) virus infection were reported to WHO from China.

As of 27 September 2017, a total of 1564 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 612 deaths, have been reported to WHO.

Influenza A(H9N2)

Since 25 July 2017, one laboratory-confirmed human cases of A(H9N2) virus infection was reported to WHO from China.

Influenza A(H1N2) variant viruses

Two human infections with influenza A(H1N2)v viruses were detected in the state of Ohio in the United States (U.S).

Influenza A(H3N2) variant viruses

Since 25 July 2017, 19 human infections with influenza A(H3N2)v viruses were detected in the U.S. in several states.

Since reporting of novel influenza A viruses became nationally notifiable in 2005, 403 human infections with influenza A(H3N2)v viruses have been reported to the U.S. CDC and 31 of these occurred in 2017.

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\)](#) latest update on 11 October 2017

Between [31 August and 26 September 2017](#), the national IHR focal point of Saudi Arabia reported nine additional cases of Middle East Respiratory Syndrome (MERS), including four deaths. In addition, four deaths from previously reported cases were reported.

Up to 11 October 2017, 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 1,081 suspect cases in the UK that have been investigated for MERS-CoV and tested negative.

Globally, since September 2012, WHO has been notified of 2,090 laboratory-confirmed cases of infection with MERS-CoV, including at least 730 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

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This report was prepared by the Influenza section, Respiratory Diseases Department, Centre for Infectious Disease Surveillance and Control, Public Health England. We are grateful to all who provided data for this report including the RCGP Research and Surveillance Centre, the PHE Real-time Syndromic Surveillance team, the PHE Respiratory Virus Unit, the PHE Modelling and Statistics unit, the PHE Dept. of Healthcare Associated Infection & Antimicrobial Resistance, PHE regional microbiology laboratories, Office for National Statistics, the Department of Health, Health Protection Scotland, National Public Health Service (Wales), the Public Health Agency Northern Ireland, the Northern Ireland Statistics and Research Agency, QSurveillance[®] and EMIS and EMIS practices contributing to the QSurveillance[®] database.

Related links

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Weekly consultation rates in national sentinel schemes

- [Sentinel schemes operating across the UK](#)
- [RCGP scheme](#)
- Northern Ireland surveillance ([Public Health Agency](#))
- Scotland surveillance ([Health Protection Scotland](#))
- Wales surveillance ([Public Health Wales](#))
- [Real time syndromic surveillance](#)
- MEM threshold [methodology paper](#) and [UK pilot paper](#)

Community surveillance

- [Outbreak reporting](#)
- [FluSurvey](#)
- [MOSA](#)

Disease severity and mortality data

- [USISS](#) system
- [EuroMOMO](#) mortality project

Vaccination

- Seasonal influenza vaccine programme ([Department of Health Book](#))
- Childhood flu programme information for healthcare practitioners ([Public Health England](#))
- 2016/17 Northern Hemisphere seasonal influenza vaccine recommendations ([WHO](#))