



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

Influenza activity is at low levels in week 44 2014 (ending 2 November), however RSV continues to circulate, predominantly in under five year olds.

- [Community influenza surveillance](#)
 - In week 44 syndromic surveillance indicators for influenza remained low. Emergency department attendances and GP out of hours consultations for bronchitis/bronchiolitis and NHS 111 cough calls, particularly in the under one years age group, increased in line with increased laboratory reporting of RSV.
 - One new acute respiratory outbreak has been reported in a care home in the past seven days across the UK (positive for enterovirus).
- [Overall weekly influenza GP consultation rates across the UK](#)
 - In week 44, overall weekly influenza-like illness GP consultations remained low in Wales (3.9 per 100,000 in week 43), Scotland (4.7 per 100,000) and Northern Ireland (7.7 per 100,000).
 - Weekly GP In Hours influenza-like illness consultation rates for influenza are low in week 44.
 - There is no RCGP weekly data available this week because of continuing data quality issues. Work is being done to resolve these problems and it is hoped a normal service will resume in the coming weeks.
- [Influenza-confirmed hospitalisations](#)
 - No new admissions to ICU/HDU with confirmed influenza were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (142 Trusts in England) in week 44.
 - Three new hospitalised confirmed influenza cases (two influenza A(H3N2) and one influenza B) were reported through the USISS sentinel hospital network across England (28 Trusts).
- [All-cause mortality data](#)
 - In week 44 2014, no excess all-cause mortality by week of death was seen across the UK through the EuroMOMO algorithm.
- [Microbiological surveillance](#)
 - Three samples were positive for influenza through the English GP sentinel swabbing schemes (two A(H3) and one B, positivity of 6.3%).
 - In week 44 2014, 10 influenza positive detections were recorded through the DataMart scheme (seven A(H3), one A(not subtyped) and 2 B, a positivity of 1.5% compared to 1.6% the previous week). RSV positivity was elevated at 16.9% in week 44 in children <5 years of age.
- [Vaccination](#)
 - Up to week 44 2014 in 59% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2014/15 influenza vaccine in targeted groups was as follows: 35.1% in under 65 years in a clinical risk group, 30.0% in pregnant women, 57.3% in 65+ year olds, 17.5% in all 2 year olds, 18.8% in all 3 year olds and 14.9% in all 4 year olds.
- [International situation](#)
 - Globally, influenza activity remained low, with the exception of some Pacific Islands.
 - Influenza activity in the European Region is typically low at this time of year and there is no indication that the influenza season has started.

In week 43 influenza syndromic indicators remained low and one new acute respiratory outbreak was reported in the last seven days.

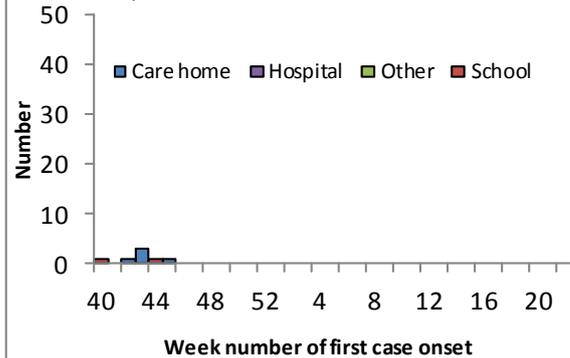
- PHE Real-time Syndromic Surveillance

-In week 44 syndromic surveillance indicators for influenza remained low. Emergency department attendances and GP out of hours consultations for bronchitis/bronchiolitis and NHS 111 cough calls, particularly in the under one years age group, increased. This is consistent with increased RSV positivity in under five year olds through the Respiratory Datamart System (see page 5).
 -For further information, please see the syndromic surveillance [webpage](#).

- Acute respiratory disease outbreaks

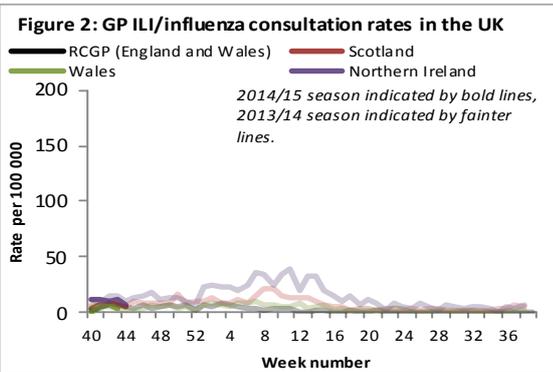
-One new acute respiratory outbreak was reported from a care home in Midlands and East of England (positive for enterovirus) in the last seven days. So far in the 2014/15 flu season, seven outbreaks (five in care homes and two in schools) have been reported in the UK (one flu A(H3), two rhinovirus, one adenovirus/parainfluenza, one enterovirus and two not tested).
 -Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and Respscidsc@phe.gov.uk.

Figure 1: Number of acute respiratory outbreaks by institution, UK



In week 44 overall weekly influenza GP consultations remained low in England, Wales, Scotland and Northern Ireland.

- Influenza/Influenza-Like-Illness (ILI)



Northern Ireland

-The Northern Ireland influenza rate was low at 7.7 per 100,000 in week 44 (Figure 2).
 -The highest rates were seen in 65-74 year olds (23.9 per 100,000), 15-44 olds (10.2 per 100,000) and 75+ year olds (7.4 per 100,000).

Wales

-Data for Wales was only available up to week 43.
 -The Welsh influenza rate was low at 3.9 per 100,000 in week 43 (Figure 2).
 -The highest rates were seen in 75+ year olds (7.5 per 100,000), 65-74 year olds (6.4 per 100,000) and 45-64 year olds (4.1 per 100,000).

Scotland

-The Scottish ILI rate was low at 4.7 per 100,000 in week 44 (Figure 2).
 -The highest rates were seen in 15-44 year olds (5.8 per 100,000), 45-64 year olds (5.2 per 100,000) and 65-74 year olds (4.7 per 100,000).

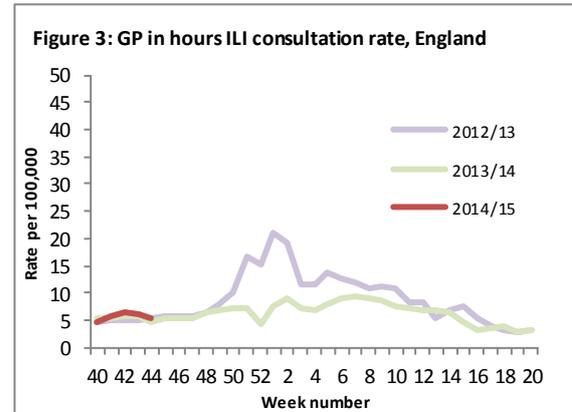
RCGP (England and Wales)

-There is no RCGP weekly data available this week because of continuing data quality issues. Work is being done to resolve these problems and it is hoped a normal service will resume in the coming weeks.

GP In Hours Syndromic Surveillance System (England)

-The weekly ILI consultation rate per 100,000 population through the GP In Hours Syndromic Surveillance system remained low in week 44 and similar to levels in previous years for the time of year (Figure 3).

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



Influenza confirmed hospitalisations

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In week 44, no new admissions of confirmed influenza cases to ICU/HDU were reported through the national USISS mandatory ICU scheme across the UK (142 Trusts in England). Three new hospitalised confirmed influenza cases (two influenza A(H3N2) and one influenza B) have been reported through the USISS sentinel hospital network across England (28 Trusts).

A national mandatory collection (USISS 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 (USISS sentinel hospital network) of acute NHS trusts has been 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 44)

-In week 44, no new admissions to ICU/HDU with confirmed influenza infection were reported across the UK (142/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 4 and 5). No new confirmed influenza deaths were reported in week 44 2014. A total of six admissions (five A unknown subtype and one A(H3)) and one confirmed influenza death have been reported since week 40 2014.

Figure 4: Weekly ICU influenza admissions and deaths (USISS mandatory) by week of admission/death, UK, since week 40 2014

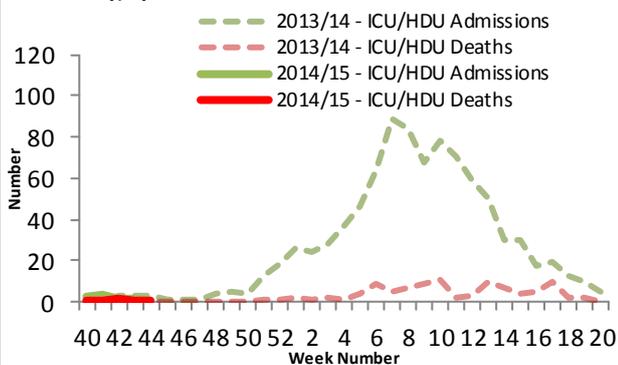
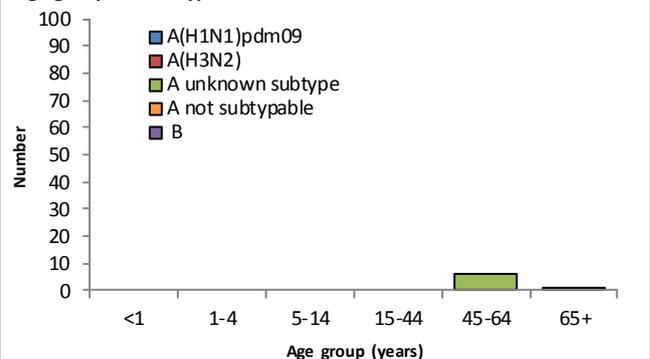


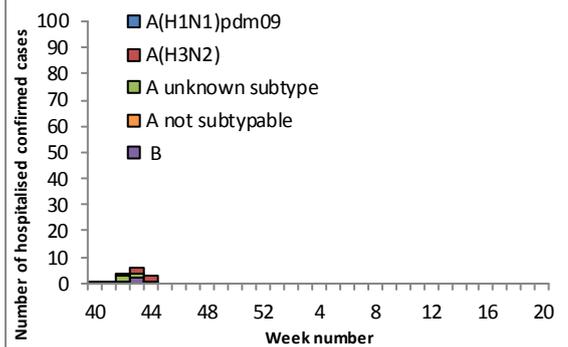
Figure 5: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2013



- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 44)

-In week 44, three new hospitalised confirmed influenza cases (two influenza A(H3N2) and one influenza B) were reported through the USISS sentinel hospital network from 28 NHS Trusts across England (Figure 6). A total of 15 hospitalised confirmed influenza admissions (six A(H3N2), four A unknown subtype and five B) have been reported since week 40.

Figure 6: Weekly hospitalised cases (USISS sentinel) by flu type, England, since week 40 2013



All-cause mortality data

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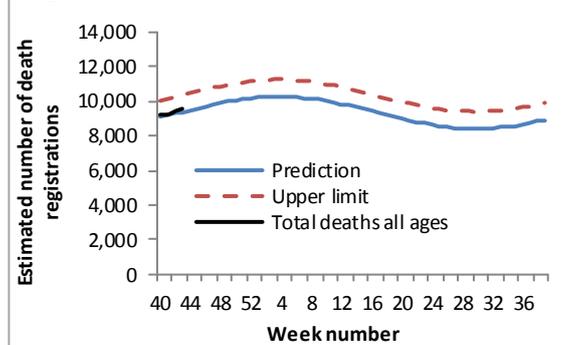
In week 44 2014, no excess all-cause mortality by week of death was seen in England through the EuroMOMO algorithm.

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 43 2014, an estimated 9,603 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is slightly more than the 9,464 estimated death registrations in week 42 but remains below the 95% upper limit of expected death registrations for this time of year as calculated by PHE (Figure 7).

Figure 7: Observed & predicted all-cause death registrations, E&W



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

-In week 44 2014, no excess mortality by date of death above the upper 2 z-score threshold was seen in 65+ year olds in England after correcting ONS disaggregate data for reporting delay with the standardised EuroMOMO algorithm (Figure 8, Table 1), in other age groups or by PHE region. This data is provisional due to the time delay in registration; numbers may vary from week to week.

-No excess mortality above the threshold through the same standardised algorithm was seen across Wales, Scotland or Northern Ireland in week 44 (Table 2).

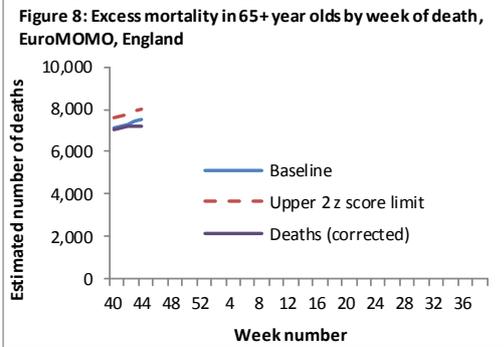


Table 1: Excess mortality by age group, England*

Age group (years)	Excess detected in week 44 2014?	Weeks with excess in 2014/15
<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

Table 2: Excess mortality by UK country*

Country	Excess detected in week 44 2014?	Weeks with excess in 2014/15
England	x	NA
Wales	x	NA
Scotland	x	NA
Northern Ireland	x	NA

* 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 3 + 4

Microbiological surveillance

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In week 44 2014, six samples were positive for influenza through the UK GP sentinel schemes (two A(H3), two B, one A(H1N1)pdm09 and one A(not subtyped)). 10 influenza positive detections were recorded through the DataMart scheme (seven A(H3), one A(not subtyped) and two B).

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

-In week 43, three samples from England were positive for influenza (two A(H3) and one B). Three samples were positive for influenza in Northern Ireland (one A(H1N1)pdm09, one A (not subtyped) and one B) and no samples were positive for influenza in Scotland and Wales (Table 3).

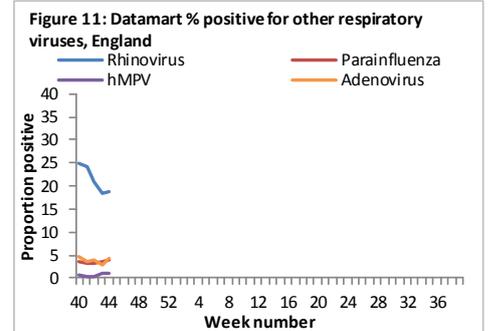
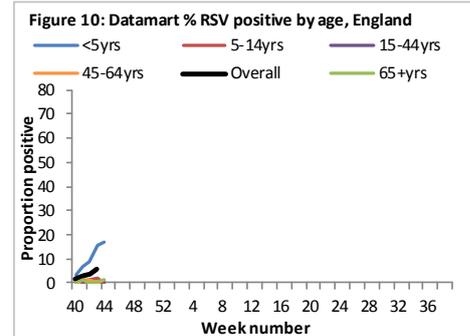
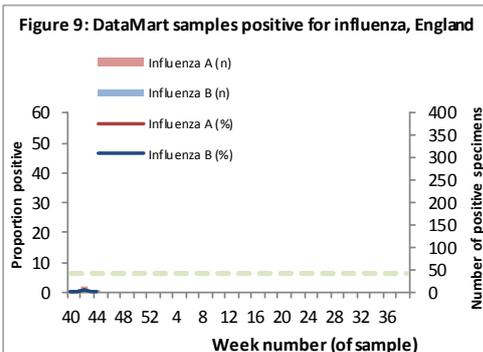
Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
41	1/27 (3.7%)	5/53 (9.0%)	0/0 (-)	0/4 (-)
42	1/32 (3.1%)	1/42 (2.0%)	0/0 (-)	0/0 (-)
43	0/20 (0.0%)	2/47 (4.3%)	0/1 (-)	0/1 (-)
44	3/48 (6.3%)	0/38 (0.0%)	3/3 (-)	0/0 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 44 2014, out of the 679 respiratory specimens reported through the Respiratory DataMart System, 10 samples (1.5%) were positive for influenza (seven A(H3), one A(not subtyped) and two B, (Figure 9*)). The overall positivity for RSV was 7.0% in week 44, with the highest positivity reported in the <5 years (a slight increase from 15.2% to 16.9% in week 44, Figure 10). Positivity for rhinovirus remained stable at 18.8% in week 44, while other respiratory viruses remained at low levels: adenovirus 4.1%, parainfluenza 3.9% and hMPV 1.1%, Figure 11).



*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 for the start of influenza activity for Datamart % positive as calculated through the Moving Epidemic Method is 6%.

- Virus characterisation

Since week 40 2014, the PHE Respiratory Virus Unit (RVU) has isolated and antigenically characterised three influenza A(H3N2) viruses, all of which were similar to the A/Texas/50/2012 H3N2 Northern Hemisphere 2014/15 vaccine strain.

- Antiviral susceptibility

Since week 40 2014, no influenza viruses were tested for antiviral susceptibility in the UK.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 26 October 2014, 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.

12 weeks up to:

26/Oct/14

Table 4: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 12 weeks up to 26 Oct 2014, E&W

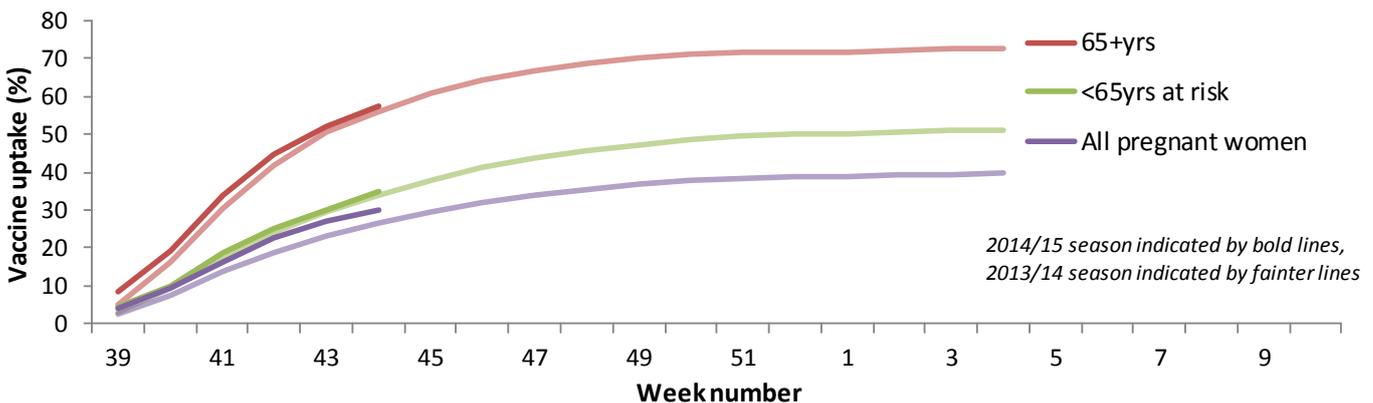
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	1,722	91
	Macrolides	1,725	79
	Tetracycline	1,616	81
<i>H. influenzae</i>	Amoxicillin/ampicillin	7,405	73
	Co-amoxiclav	6,957	92
	Macrolides	2,034	12
	Tetracycline	7,224	98
<i>S. aureus</i>	Methicillin	3,605	92
	Macrolides	3,391	68
MRSA	Clindamycin	172	41
	Tetracycline	271	86
MSSA	Clindamycin	1,438	80
	Tetracycline	2,658	93

Vaccination

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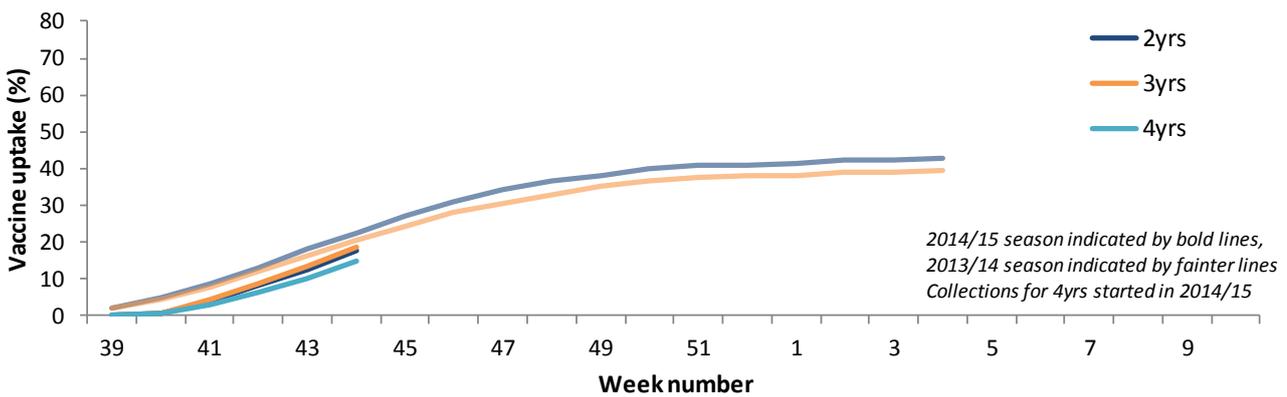
- Up to week 44 2014 in 59% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2014/15 influenza vaccine in targeted groups was as follows (Figure 12):
 - 35.1% in under 65 years in a clinical risk group
 - 30.0% in pregnant women
 - 57.3% in 65+ year olds

Figure 12: Cumulative weekly influenza vaccine uptake by target group in England



- The childhood universal influenza vaccination programme has extended from 2-3 year olds in 2013/14 to 2-4 year olds in 2014/15. Up to week 44 2014 in 59% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2014/15 influenza vaccine in targeted groups was as follows (Figure 13):
 - 17.5% in all 2 year olds
 - 18.8% in all 3 year olds
 - 14.9% in all 4 year olds

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



International Situation

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Globally, influenza activity remained low, with the exception of some Pacific Islands. Influenza activity in the European Region is typically low at this time of year and there is no indication that the influenza season has started.

- [Europe](#) 31 October 2014 (Joint ECDC-WHO Influenza weekly update)

Influenza activity in the European Region is typically low at this time of year and there is no indication that the influenza season has started in the Region.

For week 43/2014, 36 countries reported data on cases of influenza-like illness (ILI) and acute respiratory infection (ARI): 25 countries reported ILI data and 18, ARI data. From the previous week, ILI rates increased in 12 countries and decreased in eight. For ARI, 13 countries experienced increasing rates and five, decreasing rates. In total, out of 429 sentinel ILI and ARI specimens tested by 29 countries, eight (2%) tested positive for influenza. Three were subtyped as influenza A(H3N2); one as influenza A(H1N1); one as influenza A unsubtype, and three as influenza B. Reporting on the qualitative indicators was in line with the low ILI and ARI rates across the Region. All 36 countries reported low intensity, with nine countries reporting sporadic geographic spread. Five countries reported increasing trends (Albania, Azerbaijan, Bulgaria, the United Kingdom (Northern Ireland) and Uzbekistan).

For week 43/2014, 429 sentinel specimens were tested in 29 countries, with eight detections (2%) reported by four countries. Three were subtyped as influenza A(H3N2); one as influenza A(H1N1); one as influenza A unsubtype, and three as influenza B. In addition, 64 specimens from non-sentinel sources tested positive for influenza; 35 were influenza type A and 29 influenza type B. Eight influenza A viruses were subtyped: seven as A(H3N2) and one as A(H1N1)pdm09. Over the last four weeks, 25 influenza viruses were detected among specimens tested in the sentinel system. Eighteen were positive for influenza A virus; 13 were A(H3N2); two were A(H1N1), and three were not subtyped. Seven were positive for influenza B virus. This week, 11 countries reported 93 specimens positive for RSV, an increase from 73 in the previous week. Last season, most RSV detections in the Region were reported between November and February.

For week 43/2014, the United Kingdom reported one case of laboratory confirmed influenza, which was admitted to an intensive care unit (ICU). Since week 40/2014, three countries (Ireland, Spain and the United Kingdom) have reported hospital data. A total of 11 laboratory-confirmed, hospitalized influenza cases have been reported: one in Ireland, three in Spain and seven in the United Kingdom. All seven cases from the United Kingdom were admitted to ICU and all were aged 19–64 years. Influenza A was detected in all cases from the United Kingdom, with three viruses subtyped as A(H3N2). Where ages were provided for the cases from Ireland and Spain, three were in people older than 70 years; one was aged 10–19 years, and one 19–64 years.

No indications of increased mortality due to influenza have been reported through the European monitoring of excess mortality for public health action (EuroMOMO – <http://www.euromomo.eu>).

- [United States of America](#) 31 October 2014 (Centre for Disease Control report)

During week 43 (October 19-25, 2014), influenza activity was low in the United States. The proportion of outpatient visits for influenza-like illness (ILI) was 1.4%, which is below the national baseline of 2.0. All ten regions reported ILI below their region-specific baseline level. One state experienced low ILI activity; Puerto Rico, New York City and 49 states experienced minimal ILI activity; and the District of Columbia had

insufficient data. The geographic spread of influenza in Guam was reported as widespread; one state reported regional activity, Puerto Rico and eight states reported local activity; the U.S. Virgin Islands and 32 states reported sporadic activity; and the District of Columbia and nine states reported no influenza activity. During week 42, 5.5% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 6.1% for week 43.

Of 7,449 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 43, 320 (4.3%) were positive for influenza (155 influenza A subtype not performed, 83 influenza B, 79 influenza A(H3) and three influenza A(H1N1)pdm09).

No influenza-associated pediatric deaths were reported to CDC during week 43. One influenza-associated pediatric death has been reported for the 2014-2015 season at this time.

- [Canada](#) 31 October 2014 (Public Health Agency report)

Influenza indicators (including influenza detections, outbreaks and hospitalizations) continued to increase in week 43, mostly in the western and central provinces. The majority of regions in Canada reported no activity; however, two regions reported localized activity and 15 regions reported sporadic activity. In week 43, two new outbreaks of influenza were reported in long-term care facilities.

The number of positive influenza tests continued to increase in week 43 to 66 influenza detections (2.1% of tests). To date, 84% of influenza detections have been influenza A, and the majority of those subtyped have been A(H3). Among cases with reported age, the largest proportion was in those ≥ 65 years of age (46%).

The national influenza-like-illness (ILI) consultation rate increased in week 43 to 35.7 consultations per 1,000. The rates were highest among those < 20 years of age in week 43. The rates since mid-June have been above the expected range for this time of year.

Since the start of the 2014-15 season, 43 laboratory-confirmed influenza-associated hospitalizations have been reported from participating provinces and territories; 41 were cases of influenza A, of which the majority were A(H3N2); 53% were patients ≥ 65 years of age. No ICU admissions were reported. Three deaths with influenza A(H3N2) have been reported in adults ≥ 45 years of age. There is a reporting delay from some regions that have not yet begun submission of weekly reports. Further data is available [here](#).

- [Global influenza update](#) 3 November 2014 (WHO website)

Globally, influenza activity was low, with the exception of some Pacific Islands.

In North America, influenza activity began to increase slightly but remained low.

In Europe overall influenza activity remained at inter-seasonal levels.

In tropical countries of the Americas, influenza detections decreased with respiratory syncytial virus (RSV) causing most influenza-like illness (ILI) and severe acute respiratory infections (SARI).

In Africa, eastern and, western Asia, influenza activity was low. In tropical Asia, influenza activity continued to decrease or remained low with influenza B predominant in India and Viet Nam.

In the southern hemisphere, influenza activity reached inter-seasonal levels except in several Pacific Islands where ILI activity remained high.

- Enterovirus D68 (EV-D68) 4 November 2014

From mid-August to 4 November 2014, [1,108 persons](#) (mostly children) in the USA were confirmed to have respiratory illness caused by EV-D68 and cases have also been reported in Canada. This represents an increase in the number of confirmed and suspected cases associated with EV-D68 compared to reports from previous years. In addition, there has been a report of a cluster of neurological illness possibly associated with EV-D68 in nine children in [North America](#) and several media reports of further small clusters which are currently under investigation by public health authorities. ECDC have released a [rapid risk assessment](#) of the situation.

In the UK, [12 cases](#) of laboratory confirmed EV-D68 infection mainly in young children have been reported since 2012. There is a moderate risk that EV-D68 is currently circulating within the UK but will be mostly undetected as cases can be asymptomatic/mildly symptomatic and the virus is not currently part of routine respiratory screening. Awareness has been raised around the symptoms resulting from infection and the potential clustering of cases of respiratory and neurological illness.

- [Avian Influenza](#) 5 November 2014 (WHO website)

Influenza A(H7N9)

The most recent human infections with influenza A(H7N9) were reported by WHO on [29 October 2014](#) (two cases). So far, the overall risk associated with the H7N9 virus has not changed. WHO does not advise special screening at points of entry with regard to this event, nor does it currently recommend any travel or trade restrictions.

For further updates please see the WHO website and for advice on clinical management please see information available [online](#).

Influenza A(H5N1)

From 2003 through 2 October 2014, 668 human cases of H5N1 avian influenza have been officially reported to [WHO](#) from 16 countries, of which 393 (59%) died.

- Novel coronavirus 5 November 2014

Up to 5 November 2014, a total of four cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (two imported and two linked cases) have been confirmed in England. On-going surveillance has identified 224 suspect cases in the UK that have been investigated for MERS-CoV and tested negative. A further 893 confirmed cases have been reported internationally, resulting in a current global total of [897 cases](#), with the most recent cases reported from Kingdom of Saudi Arabia. Further information on management and guidance of possible cases is available [online](#).

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, NHS Direct, 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](#)
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- Scotland surveillance ([Health Protection Scotland](#))
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- MEM threshold [methodology paper](#) and [UK pilot paper](#)

Community surveillance

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Disease severity and mortality data

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- [EuroMOMO](#) mortality project

Vaccination

- Seasonal influenza vaccine programme ([Department of Health Book](#))
- Childhood flu programme information for healthcare practitioners ([Public Health England](#))
- 2014/15 Northern Hemisphere seasonal influenza vaccine recommendations ([WHO](#))