



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

In week 51 2014 (ending 21 December), across all indicators influenza activity increased nationally. Overall, levels are now similar to the peak in flu activity observed in the last three seasons, but have not reached the levels seen in the last notable seasons of 2010/11 and 2008/09. The Department of Health have issued an [alert](#) on the prescription of antiviral medicines by GPs.

- [Community influenza surveillance](#)
 - In week 51 syndromic surveillance indicators for influenza continued to increase across all systems.
 - 16 in care homes (1 flu A(H3), 2 flu A(untyped) and 13 not tested), nine in hospitals (5 flu A(untyped), and 4 not tested), and 4 in schools (all not tested).
 - The FluSurvey project, internet-based surveillance of influenza in the general population, is now running. For information on how to participate, please see the [website](#).
- [Overall weekly influenza GP consultation rates across the UK](#)
 - In week 51, overall weekly influenza-like illness (ILI) GP consultations increased in Wales (14.9 per 100,000) and remained low in Scotland (11.6 per 100,000) and Northern Ireland (17.5 per 100,000).
 - The weekly ILI consultation rate per 100,000 population through the GP In Hours Syndromic Surveillance system continued to increase in week 51 (18.4 per 100 000).
- [Influenza-confirmed hospitalisations](#)
 - 43 new admissions to ICU/HDU with confirmed influenza (35 A unknown subtype and five A(H3N2)) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (88 Trusts in England) in week 51, a rate of 0.15 per 100,000 compared to 0.08 per 100,000 the previous week.
 - 33 new hospitalised laboratory confirmed influenza cases (26 influenza A(H3N2) and seven A unknown subtype) were reported through the USISS sentinel hospital network across England (11 Trusts), a rate of 0.92 per 100,000 compared to 0.48 per 100,000 the previous week.
- [All-cause mortality data](#)
 - In week 51 2014, where data was available no excess all-cause mortality by week of death was seen across the UK through the EuroMOMO algorithm.
- [Microbiological surveillance](#)
 - 36 samples were positive for influenza through the UK GP sentinel swabbing schemes in week 51 (34 A(H3) and two A(not subtyped), positivity of 49.3% compared to 24.5% the previous week (updated)).
 - In week 51 2014, 300 influenza positive detections were recorded through the DataMart scheme (232 A(H3), 67 A(not subtyped) and one A(H1N1)pdm09, positivity of 22.2% compared to 16.0% the previous week), with the highest positivity by age group in 5-14 year olds at 33.3%.
 - The majority of influenza A(H3N2) viruses isolated and characterised by the PHE Respiratory Virus Unit were similar to the Northern Hemisphere 2014/15 vaccine strain, however three (14%) showed reduced reactivity and were similar to the H3N2 virus selected for the 2015 Southern Hemisphere influenza vaccine. PHE is continuing to monitor the situation.
- [Vaccination](#)
 - Up to week 51 2014 in 93% 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: 71.1% in 65+ year olds, 48.0% in under 65 years in a clinical risk group, 42.5% in pregnant women, 36.2% in all 2 year olds, 38.7% in all 3 year olds and 30.4% in all 4 year olds.
 - Provisional data from the second monthly collection of influenza vaccine uptake by frontline healthcare workers show 48.2% were vaccinated by 30 November 2014 from 97.0% of Trusts, compared to 48.6% vaccinated the previous season by 30 November 2013.
 - Provisional data from the second monthly collection of influenza vaccine uptake up to 30 November 2014 by targeted groups has been published. The [report](#) provides uptake at national, area team and CCG level.
- [International situation](#)
 - Globally, influenza activity continued to increase in the northern hemisphere and in several countries has passed the seasonal threshold, with influenza A(H3N2) predominating so far. In the European Region, influenza activity remained low but was increasing.

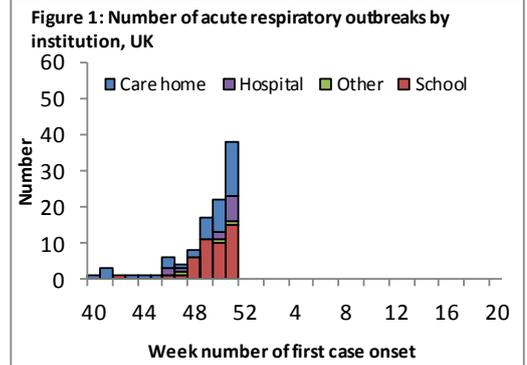
In week 51 syndromic indicators for influenza-like illness continued to increase and 29 new acute respiratory outbreaks were reported in the last seven days.

- PHE Real-time Syndromic Surveillance

-In week 51 syndromic surveillance indicators for influenza have continued to increase across all systems. This includes cold/flu calls through NHS 111, influenza-like illness consultation rates through the GP In Hours scheme (see page 3), respiratory attendances in emergency departments and influenza-like illness consultation rates through the GP Out of Hours scheme.
 -For further information, please see the syndromic surveillance [webpage](#).

- Acute respiratory disease outbreaks

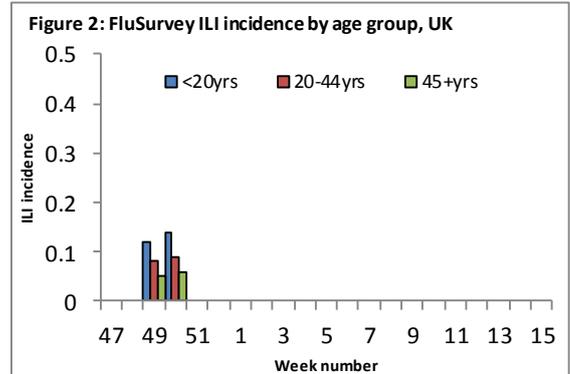
29 new acute respiratory outbreaks have been reported in the past six days, 16 in care homes (1 flu A(H3), 2 flu A(untyped) and 13 not tested), nine in hospitals (5 flu A(untyped), and 4 not tested), and 4 in schools (all not tested). So far in the 2014/15 flu season, 112 outbreaks (46 in care homes, 48 in schools, 14 in hospitals and 4 in other settings, Figure 1) have been reported in the UK (18 with flu A(H3) infection, 19 flu A (untyped), one flu B, five rhinovirus, two RSV, one parainfluenza, one adenovirus/parainfluenza, one enterovirus and 64 with no test results available).



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

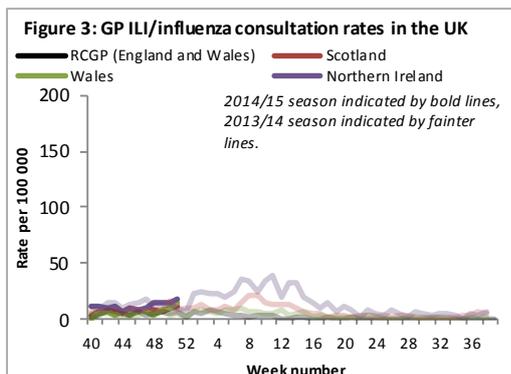
- FluSurvey

-Internet-based surveillance of influenza in the general population is undertaken through the FluSurvey project (<http://flusurvey.org.uk>) run by the London School of Hygiene and Tropical Medicine. Please see the website for information on how to register.
 -In week 50, the incidence of ILI reports by age group was highest in <20 year olds (Figure 2).



In week 51 overall weekly influenza-like illness GP consultations increased in England and Wales, but remained low in Scotland and Northern Ireland.

- Influenza/Influenza-Like-Illness (ILI)



Northern Ireland

-The Northern Ireland influenza rate remained low at 17.5 per 100,000 in week 51 (Figure 3).

-The highest rates were seen in 45-64 year olds (26.9 per 100,000), 75+ year olds (21.0 per 100,000) and 15-44 year olds (17.3 per 100,000).

Wales

-The Welsh influenza rate continued to increase from 9.7 to 14.9 per 100,000 in week 51 (Figure 3).

-The highest rates were seen in 15-44 year olds (22.4 per 100,000), 45-64 year olds (14.4 per 100,000) and 75+ year olds (11.8 per 100,000).

Scotland

-The Scottish ILI rate remained low at 11.6 per 100,000 in week 51 (Figure 3).

-The highest rates were seen in 45-64 year olds (13.7 per 100,000), 15-44 year olds (12.7 per 100,000) and 75+ year olds (10.8 per 100,000).

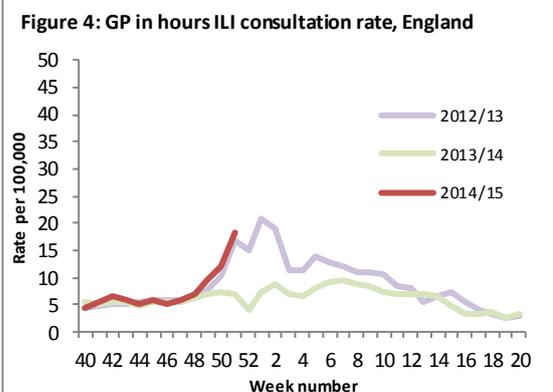
RCGP (England and Wales)

-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 continued to increase during week 51 from 12.1 to 18.4 per 100,000 (Figure 4). By age group, ILI rates increased across all ages with the highest rates in the 15-44 and 45-64 year age groups.

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



Influenza confirmed hospitalisations

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In week 51, 43 new admissions of confirmed influenza cases (35 A unknown subtype and five A(H3N2)) to ICU/HDU were reported through the national USISS mandatory ICU scheme across the UK (88 Trusts in England). 33 new hospitalised confirmed influenza cases (26 influenza A(H3N2) and seven A unknown subtype) have been reported through the USISS sentinel hospital network across England (11 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 51)

-In week 51, 43 new admissions to ICU/HDU with confirmed influenza infection (35 A unknown subtype and five A(H3N2)) were reported across the UK (88/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 5 and 6), a rate of 0.15 per 100,000 compared to 0.08 per 100,000 the previous week. Four new confirmed influenza deaths were reported in week 51 2014. A total of 129 admissions (102 A unknown subtype, 19 A(H3), five B and 3 A(H1N1)pdm09) and 10 confirmed influenza deaths have been reported since week 40 2014.

Figure 5: Weekly ICU/HDU influenza admission rate per 100,000 trust catchment population, England, since week 40 2014

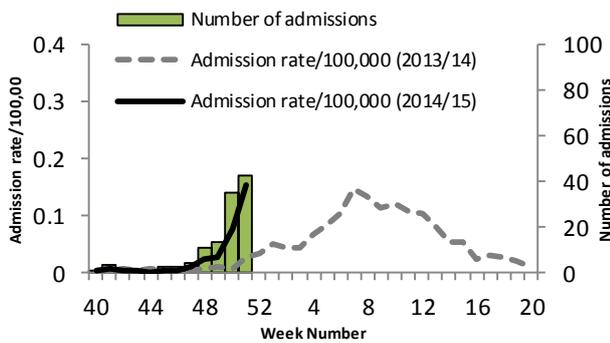
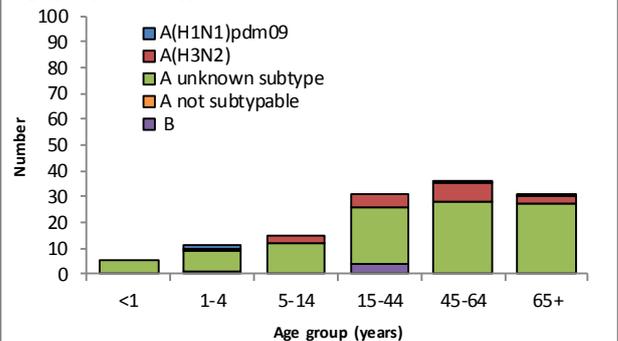


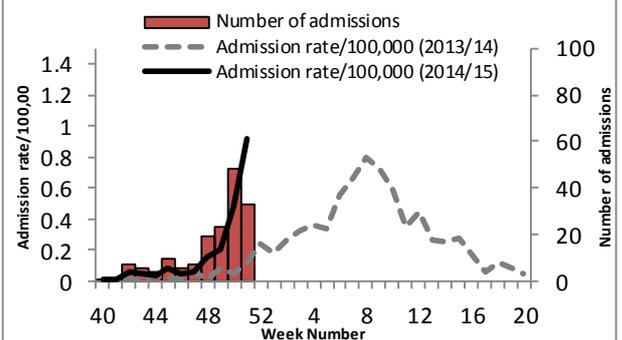
Figure 6: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2014



- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 51)

-In week 51, 33 new hospitalised confirmed influenza cases (26 influenza A(H3N2) and seven A unknown subtype) were reported through the USISS sentinel hospital network from 11 NHS Trusts across England (Figure 7), a rate of 0.92 per 100,000 compared to 0.48 per 100,000 the previous week. A total of 165 hospitalised confirmed influenza admissions (105 A(H3N2), 41 A unknown subtype, 15 B and four A(H1N1pdm09)) have been reported since week 40.

Figure 7: Weekly hospitalised influenza case rate per 100,000 trust catchment population, England, since week 40 2014



All-cause mortality data

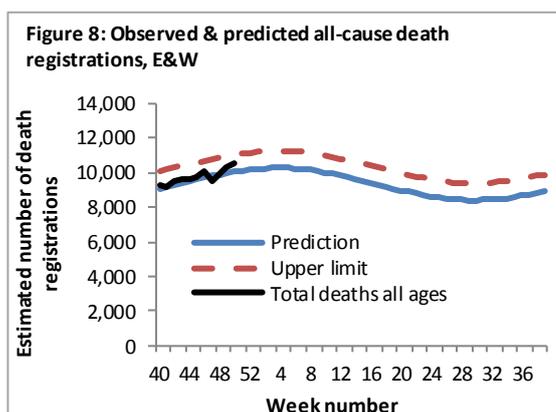
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In week 51 2014, no excess all-cause mortality by week of death was seen in England through the EuroMOMO algorithm.

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 50 2014, an estimated 10,550 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is slightly more than the 10,267 estimated death registrations in week 49 but remains below the 95% upper limit of expected death registrations for this time of year as calculated by PHE (Figure 8).



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

-In week 51 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 9, 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 in week 51. Data was not available for Scotland or Northern Ireland (Table 2).

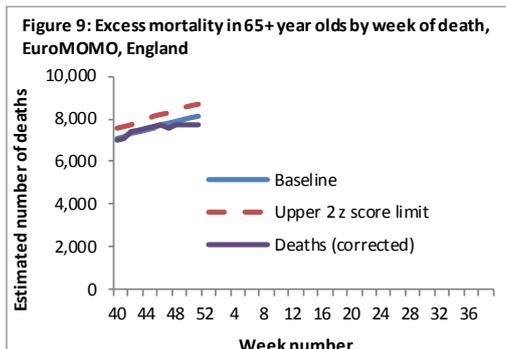


Table 1: Excess mortality by age group, England*

Age group (years)	Excess detected in week 51 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 51 2014?	Weeks with excess in 2014/15
England	x	NA
Wales	x	NA
Scotland	NA	NA
Northern Ireland	NA	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 1 + 2

Microbiological surveillance

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In week 51 2014, 36 samples were positive for influenza through the UK GP sentinel schemes (34 A(H3) and two A(not subtyped), positivity of 49.3%). 300 influenza positive detections were recorded through the DataMart scheme (232 A(H3), 67 A(not subtyped) and one A(H1N1)pdm09, positivity of 22.2%).

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

-In week 51, 31 samples were positive for influenza in England (29 A(H3) and two A(not subtyped)) and five in Scotland (five A(H3)). No samples in Wales or Northern Ireland were positive for influenza (Table 3).

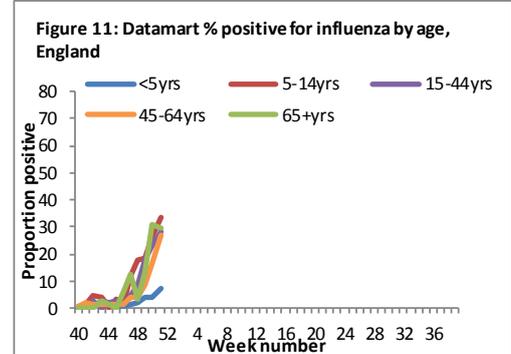
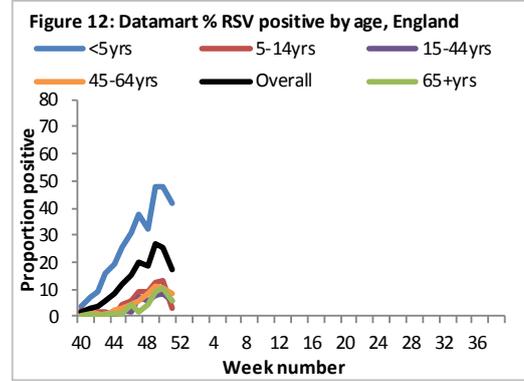
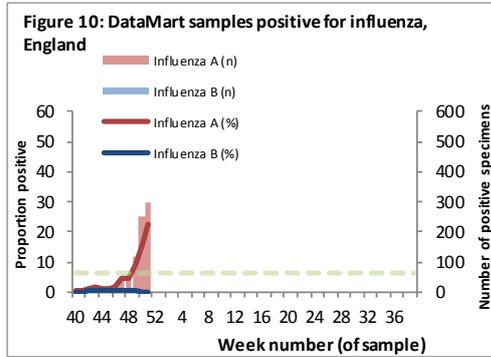
Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
48	5/72 (6.9%)	3/63 (4.8%)	0/3 (-)	0/5 (-)
49	10/79 (12.6%)	0/58 (0.0%)	0/4 (-)	2/6 (-)
50	33/105 (31.4%)	0/29 (0.0%)	0/0 (-)	1/5 (-)
51	31/60 (51.7%)	5/11 (17.2%)	0/2 (-)	0/0 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 51 2014, out of the 1,349 respiratory specimens reported through the Respiratory DataMart System, 300 samples (22.2%) were positive for influenza (232 A(H3), 67 A(not subtyped) and one influenza A(H1N1)pdm09 (Figure 10*). The highest positivity by age group was reported in 5-14 year olds (33.3%). The overall positivity for RSV decreased to 17.3% in week 51, with the highest positivity reported in the <5 years (41.5%, Figure 12). Positivity for rhinovirus decreased to 8.4% in week 51, while other respiratory viruses remained at low levels: adenovirus 2.0%, parainfluenza 2.6% and hMPV 3.0%.



*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 6%.

- Virus characterisation

Since week 40 2014, the PHE Respiratory Virus Unit (RVU) has isolated and antigenically characterised 22 influenza A(H3N2) viruses. Of these, the majority were similar to the A/Texas/50/2012 H3N2 Northern Hemisphere 2014/15 vaccine strain, however three showed reduced reactivity in antigenic tests with A/Texas/50/2012 antiserum. These three isolates are antigenically similar to A/Switzerland/9715293/2013, the H3N2 virus selected for the 2015 Southern Hemisphere influenza vaccine. Further characterization of these isolates by genetic analysis is ongoing.

- Antiviral susceptibility

Since week 40 2014, 14 influenza viruses (7 A(H3N2), 4 A(H1N1)pdm09 and 3 B) have been tested for oseltamivir susceptibility in the UK and all are sensitive. The seven flu A(H3N2) and the three flu B were also tested against zanamivir and are all sensitive.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 14 December 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.

Table 4: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 12 weeks up to 14 Dec 2014, E&W

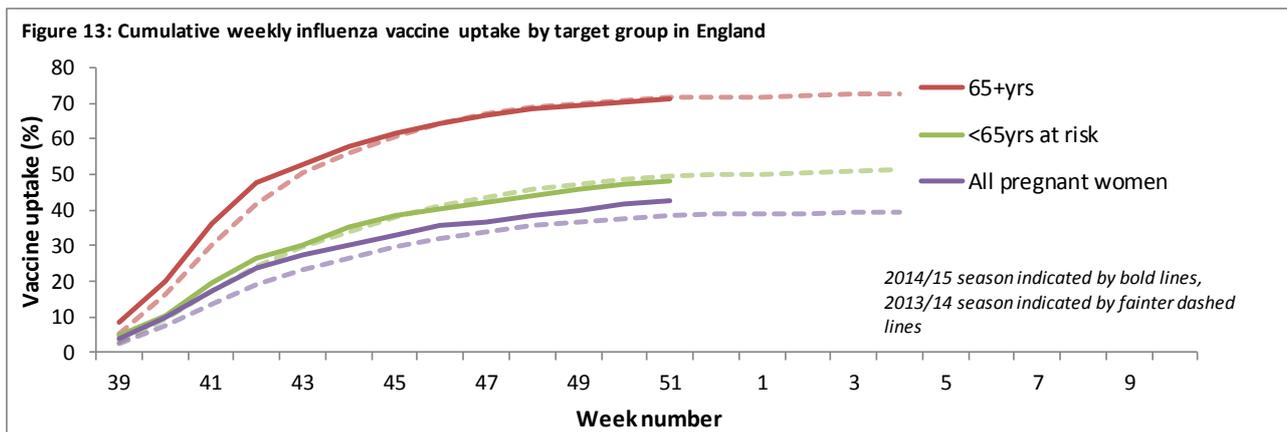
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	2,484	90
	Macrolides	2,619	80
	Tetracycline	2,509	83
<i>H. influenzae</i>	Amoxicillin/ampicillin	9,400	73
	Co-amoxiclav	8,736	93
	Macrolides	3,514	18
<i>S. aureus</i>	Tetracycline	9,493	98
	Methicillin	3,520	90
	Macrolides	3,400	70
MRSA	Clindamycin	244	40
	Tetracycline	316	81
MSSA	Clindamycin	1,652	79
	Tetracycline	2,674	92

*Macrolides = erythromycin, azithromycin and clarithromycin

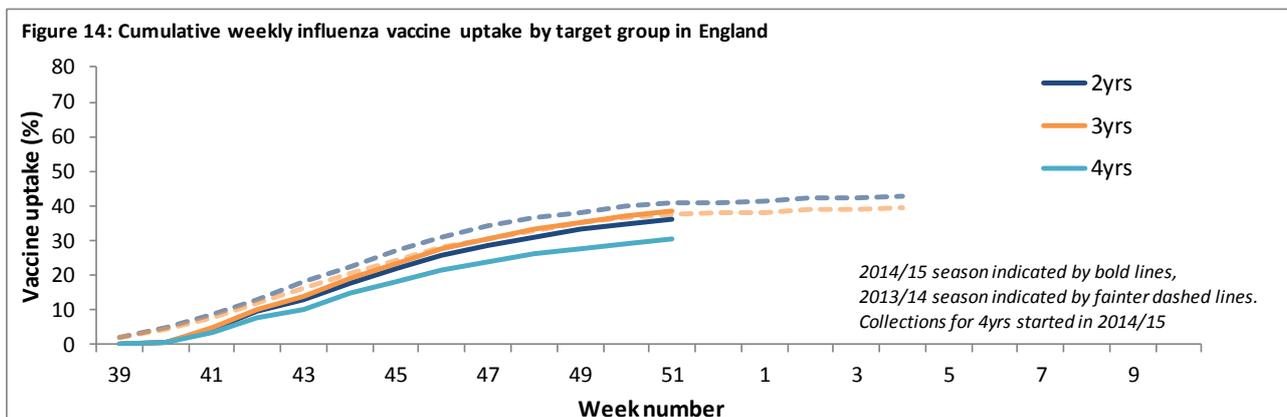
Vaccination

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- Up to week 51 2014 in 93% 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):
 - 48.0% in under 65 years in a clinical risk group
 - 42.5% in pregnant women
 - 71.1% in 65+ year olds



- 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 51 2014 in 93% 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 14):
 - 36.2% in all 2 year olds
 - 38.7% in all 3 year olds
 - 30.4% in all 4 year olds



- Provisional data from the second monthly collection of influenza vaccine uptake by frontline healthcare workers show 48.2% were vaccinated by 30 November 2014 from 97.0% of Trusts, compared to 48.6% vaccinated the previous season by 30 November 2013. The [report](#) provides uptake at national, geographical area, area team (on behalf of primary care and independent sector healthcare providers) and individual Trust level.
- Provisional data from the second monthly collection of influenza vaccine uptake up to 31 October 2014 by targeted groups has been published. The [report](#) provides uptake at national, area team and CCG level.

International Situation

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Globally, influenza activity continued to increase in the northern hemisphere and in several countries has passed the seasonal threshold, with influenza A(H3N2) predominating so far. In the European Region, influenza activity remained low but was increasing.

- [Europe](#) 19 December 2014 (Joint ECDC-WHO Influenza weekly update)

In week 50/2014, influenza activity in the WHO European Region remained low but was on the increase. An increasing number of countries are reporting influenza virus detections. Influenza A(H3N2) has so far been the predominant virus. There are indications that circulating A(H3N2) virus strains may have drifted from the strain used in the vaccine. Although this does not change the recommendation to vaccinate risk groups, careful monitoring of the situation will be required, as well as ensuring dissemination of information to clinicians on treatment guidelines.

Forty-one countries reported low or baseline influenza activity for week 50/2014, and 28 countries reported sporadic cases of influenza. However, two (Malta and the Netherlands) reported medium levels of influenza, while the Netherlands and the United Kingdom (England) reported laboratory-confirmed influenza infections in

50% or more of the administrative units of the country (or reporting sites). Other indications that influenza activity is increasing include the fact that 10 countries (Albania, Austria, Azerbaijan, Finland, Ireland, the Netherlands, Romania, Slovenia and the United Kingdom (England and Wales)) reported increasing influenza activity, while the remainder reported stable or decreasing trends.

Since week 40/2014, four countries (France, Spain, Sweden and the United Kingdom) have reported a total of 91 laboratory-confirmed, hospitalized influenza cases, 89 of which were in ICUs (77 cases reported by the United Kingdom, six by France, five by Spain and one by Sweden). Of these, 62 were positive for influenza A virus (14 subtyped, all A(H3N2)), and 12 for influenza B virus. In addition, Ireland and Spain reported one fatal case each due to influenza A.

In week 50/2014, influenza A predominated (67 positive specimens versus 12 of influenza B). The predominant A subtype was A(H3N2) (52), with five A(H1N1)pdm09. The lineage of two of the 10 B viruses was determined; both were of the B/Yamagata lineage, which was recommended for inclusion in trivalent influenza vaccine. Among sentinel specimens collected in week 50/2014 and tested for respiratory syncytial virus (RSV), 49 across 10 countries were positive, and 1341 specimens from other sources were found to be positive in 16 countries. This represents a slight increase from the previous week.

Most viruses that have been characterized to date by laboratories reporting to the European Surveillance System (TESSy) as A(H1N1)pdm09 are similar to those recommended for inclusion in the current vaccines recommended by WHO. For A(H3N2), the results of genetic and, to some extent, antigenic characterization indicate a situation in Europe similar to that reported by the United States Centers for Disease Control and Prevention with the majority of A(H3N2) viruses being significantly different antigenically from the current component of the seasonal influenza vaccine. This will require close monitoring of the situation as the season progresses.

- [United States of America](#) 19 December 2014 (Centre for Disease Control report)

During week 50 (December 7-13, 2014), influenza activity continued to increase in the United States. The proportion of outpatient visits for influenza-like illness (ILI) was 3.7%, above the national baseline of 2.0%. Nine of 10 regions reported ILI at or above region-specific baseline levels. Puerto Rico and 13 states experienced high ILI activity; six states experienced moderate ILI activity; New York City and five states experienced low ILI activity; 26 states experienced minimal ILI activity; and the District of Columbia had insufficient data. The geographic spread of influenza in Guam and 29 states was reported as widespread; Puerto Rico and 14 states reported regional activity; the District of Columbia, the U.S. Virgin Islands and five states reported local activity; and two states reported sporadic activity. During week 50, 6.0% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 6.7% for week 50.

Of 20,064 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 50, 5,200 (25.9%) were positive for influenza. (3,105 influenza A subtype not performed, 1,893 influenza A (H3), 194 influenza B and 8 influenza A(H1N1)pdm09).

Four influenza-associated pediatric deaths were reported to CDC during week 50. Two deaths were associated with an influenza A (H3) virus and occurred during week 49 (week ending December 6, 2014). One death was associated with an influenza A virus for which no subtyping was performed and occurred during week 50 (week ending December 13, 2014), and one death was associated with an influenza B virus and occurred during week 49. A total of 11 influenza-associated deaths have been reported during the 2014-2015 season from six states.

[Influenza viral characterization data](#) indicates that 48% of the influenza A (H3N2) viruses collected and analyzed in the United States from October 1 through November 22, 2014 were antigenically "like" the 2014-2015 influenza A (H3N2) vaccine component, but that 52% were antigenically different (drifted) from the H3N2 vaccine virus. In past seasons during which predominant circulating influenza viruses have been antigenically drifted, decreased vaccine effectiveness has been observed. However, vaccination has been found to provide some protection against drifted viruses. Though reduced, this cross-protection might reduce the likelihood of severe outcomes such as hospitalization and death. In addition, vaccination will offer protection against circulating influenza strains that have not undergone significant antigenic drift from the vaccine viruses (such as influenza A (H1N1) and B viruses).

- [Canada](#) 19 December 2014 (Public Health Agency report)

In week 50, laboratory detections of influenza increased sharply for the fourth consecutive week. A(H3N2) continues to be the most common type of influenza affecting Canadians. In both laboratory detections and hospitalizations, the majority of cases have been among seniors ≥ 65 years of age. Similar to the previous week, there were a large number of newly-reported laboratory-confirmed outbreaks of influenza: 72 influenza A outbreaks in 8 provinces, of which 57 were in long-term care facilities (LTCF). To date, the NML has found

that the majority H3N2 influenza specimens are not optimally matched to the vaccine strain which may result in reduced vaccine effectiveness against the H3N2 influenza virus. However, the vaccine can still provide some protection against H3N2 influenza illness and can offer protection against other influenza strains such as A(H1N1) and B.

In week 50, the number of positive influenza tests increased sharply for the fourth week in a row, to 1,963 influenza detections (25.9% of tests), predominantly due to influenza A. To date, 96% of influenza detections have been influenza A, and 99.6% of those subtyped have been A(H3). The timing of the season and predominant A(H3N2) subtype is similar to the pattern observed during the 2012-13 influenza season when percent positive for influenza peaked in week 52 (35%). To date, among the cases of influenza with reported age, the largest proportion was in adults ≥ 65 years of age (56%). The national influenza-like-illness (ILI) consultation rate increased in week 49 to 44.3 consultations per 1,000, which is above expected levels for week 49. This week, the rates were highest among the 20 to 64 years of age group. In previous weeks, the ILI consultation rates of this group have been among the lowest.

In week 50, 113 laboratory-confirmed influenza-associated hospitalizations were reported from participating provinces and territories, all but four with influenza A, and 65% were patients ≥ 65 years of age. Since the start of the 2014-15 season, 492 hospitalizations have been reported; 476 (97%) with influenza A. Among cases for which the subtype of influenza A was reported, 99% (374/376) were A(H3N2). The majority of cases (59%) were ≥ 65 years of age. Ten ICU admissions have been reported in adults ≥ 65 years of age with influenza A. Twenty-seven deaths with influenza A have been reported: one child < 5 years of age, one adult 45-64 years and 25 adults ≥ 65 years of age. Detailed clinical information (e.g. underlying medical conditions) is not known for these cases. Further data is available [here](#).

- [Global influenza update](#) 15 December 2014 (WHO website)

Globally, influenza activity increased in the northern hemisphere and in several countries has passed the seasonal threshold. Influenza A(H3N2) viruses predominated so far.

In North America, the levels of influenza activity, mainly associated with A(H3N2) virus, passed the seasonal threshold.

In Europe overall influenza activity continued to increase, though with no clear indication that the influenza season had begun.

In eastern Asia, influenza activity increased with, influenza A(H3N2) predominated.

In northern and western Africa influenza activity increased with influenza B virus predominant.

In tropical countries of the Americas, influenza activity increased in some countries of the Caribbean, decreased in Central America and was low in the tropical countries of South America.

In tropical Asia, influenza activity was low.

In the southern hemisphere, influenza activity remained at a low level, but ILI activity remained high in several Pacific Islands.

- Enterovirus D68 (EV-D68) 18 December 2014

From mid-August to 18 December 2014, CDC or state public health laboratories have confirmed a total of [1,152 persons](#) in 49 states and the District of Columbia with respiratory illness caused by EV-D68. Reports from most states over the last couple months have indicated reduced EV-D68-like illness activity. However, EV-D68 infections could continue through late fall. Over the last two weeks that CDC obtained reports, some states reported increasing respiratory illness activity. However, since other seasonal respiratory viruses, such as influenza and respiratory syncytial virus, are starting to circulate now, we are not sure if this increase is caused by these seasonal viruses or EV-D68.

ECDC have published a [rapid risk assessment](#). Based on information currently available to ECDC, the risk of increased severe cases of EV-D68 in EU/EEA countries is assessed as moderate, in light of recent reports of such cases and because the circulation of this strain in the population seems to be geographically widespread in the EU.

The UK has an enhanced enterovirus surveillance system established as part of poliovirus elimination. Samples from individuals who present with neurological symptoms (such as acute flaccid paralysis or meningitis) and in whom enterovirus is detected should be sent for sub-typing at the reference laboratory. From 2012 to 1 September 2014, a total of 12 EV-D68 cases had been diagnosed, mainly in children. Following the reports from North America, guidance was developed highlighting that EV-D68 should be considered as a possible cause of disease in children with severe acute respiratory infections and/or with unexplained neurological symptoms, when all other respiratory virus screens are negative and if a rhinovirus/enterovirus positive PCR is initially detected. Although no unexplained clusters of severe respiratory or neurological

disease have been reported, since September 2014, a total of 33 sporadic cases have been detected in children and adults. From the information available to date, the majority seem to have presented with respiratory symptoms with two children presenting with neurological symptoms.

- [Avian Influenza](#) 22 December 2014 (WHO website)

Influenza A(H7N9)

The most recent human infections with influenza A(H7N9) were reported by WHO on [15 November 2014](#) (three 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 4 December 2014, 676 human cases of H5N1 avian influenza have been officially reported to [WHO](#) from 16 countries, of which 398 (59%) died.

- Novel coronavirus 22 December 2014

Up to 22 December 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 934 confirmed cases have been reported internationally, resulting in a current global total of 938 cases, with the most recent cases reported on 17 December 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.

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- 2014/15 Northern Hemisphere seasonal influenza vaccine recommendations ([WHO](#))