PHE Weekly National Influenza Report

Summary of UK surveillance of influenza and other seasonal respiratory illnesses

11 December 2014 – Week 50 report (up to week 49 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.

Report contents:

Summary

In week 49 2014 (ending 7 December), influenza activity increased for several indicators, including syndromic indicators, GP ILI consultation rates and proportion of samples positive for influenza. RSV continues to circulate, predominantly in under five year olds.

- Community influenza surveillance
  - In week 49 syndromic surveillance indicators for influenza-like illness have started to increase across all systems.
  - Twelve new acute respiratory outbreaks have been reported in the past seven days, seven in schools (one flu A(H3), one A(not subtyped) and five not tested), four in care homes (all not tested) and one in a nursery (not tested).
- Overall weekly influenza GP consultation rates across the UK
  - In week 49, overall weekly influenza-like illness GP consultations started to increase in Wales (10.9 per 100,000) but remained low in Scotland (6.5 per 100,000) and Northern Ireland (15.7 per 100,000)).
  - The weekly ILI consultation rate per 100,000 population through the GP In Hours Syndromic Surveillance system has started to increase in week 49.
- Influenza-confirmed hospitalisations
  - 13 new admissions to ICU/HDU with confirmed influenza (11 A unknown subtype and two B) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (132 Trusts in England) in week 49.
  - 20 new hospitalised confirmed influenza cases (16 influenza A(H3N2), two A unknown subtype and two B) were reported through the USISS sentinel hospital network across England (25 Trusts).
- All-cause mortality data
  - In week 49 2014, no excess all-cause mortality by week of death was seen across the UK through the EuroMOMO algorithm.
- Microbiological surveillance
  - Four samples were positive for influenza through the UK GP sentinel swabbing schemes in week 48 (one A(H3) and one B, positivity of 4.3% compared to 2.4% the previous week (updated)).
  - In week 49 2014, 80 influenza positive detections were recorded through the DataMart scheme (58 A(H3), 19 A(not subtyped) and three B, a positivity of 8.1% compared to 4.6% the previous week, with a positivity of 18.8% in 5-14 year olds). RSV positivity was elevated at 48.5% in week 49 in children <5 years of age.
  - 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 showed reduced reactivity and were similar to the H3N2 virus selected for the 2015 Southern Hemisphere influenza vaccine.
- Vaccination
  - Up to week 49 2014 in 88% 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: 69.7% in 65+ year olds, 45.9% in under 65 years in a clinical risk group, 39.8% in pregnant women, 33.1% in all 2 year olds, 35.4% in all 3 year olds and 27.8% in all 4 year olds.
  - Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 36.8% were vaccinated by 31 October 2014 from 96.6% of Trusts, compared to 35.0% vaccinated the previous season by 31 October 2013.
- International situation
  - Globally, influenza activity remained low, with the exception of some Pacific Islands, although activity in North America continued to increase.
  - In the European Region, although sporadic influenza virus detections are being reported in an increasing number of countries, there is no indication that the influenza season has started.

Community surveillance

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In week 49 syndromic indicators for influenza-like illness have started to increase and 12 new acute respiratory outbreaks were reported in the last seven days.

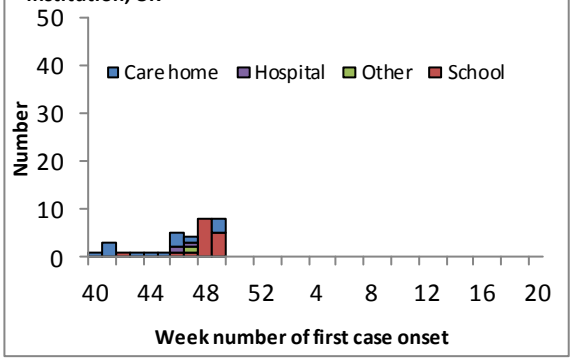
- PHE Real-time Syndromic Surveillance

-In week 49 syndromic surveillance indicators for influenza-like illness have started 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), influenza-like illness emergency department attendances 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

-Twelve new acute respiratory outbreaks have been reported in the past seven days, seven in schools (1 flu A(H3), one A(not subtyped) and five not tested), four in care homes (not tested) and one in a nursery (not tested). So far in the 2014/15 flu season, 37 outbreaks (15 in care homes, 18 in schools, two in hospitals and two in nurseries) have been reported in the UK (eight A(H3), one flu A (untyped), three rhinovirus, one parainfluenza, one adenovirus/parainfluenza, one enterovirus and 20 not tested.
-Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and Respscidsc@phe.gov.uk.

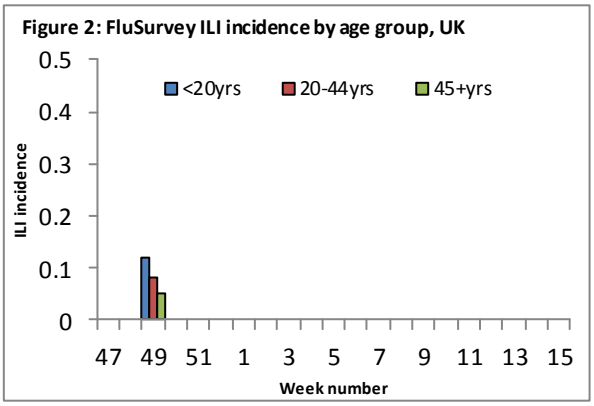
Figure 1: Number of acute respiratory outbreaks by institution, UK



- PHE Real-time Syndromic Surveillance

-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 49, the incidence of ILI reports by age group was highest in <20 year olds (Figure 2).

Figure 2: FluSurvey ILI incidence by age group, UK



Weekly consultation rates in national sentinel schemes

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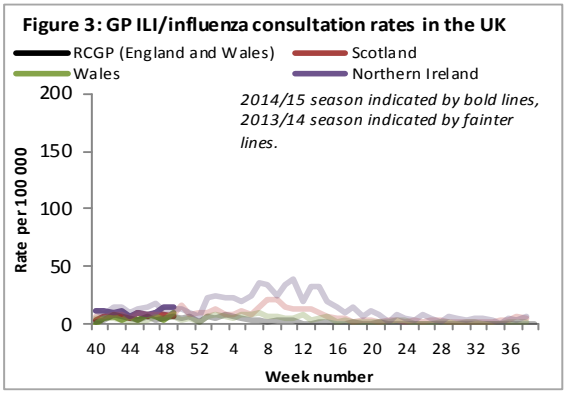
In week 49 overall weekly influenza-like illness GP consultations started to increase in England and Wales, but remained low in Scotland and Northern Ireland.

- Influenza/Influenza-Like-Illness (ILI)

Figure 3: GP ILI/influenza consultation rates in the UK



Northern Ireland

-The Northern Ireland influenza rate remained low at 15.7 per 100,000 in week 49 but remains low (Figure 3).

-The highest rates were seen in 1-4 year olds (69.9 per 100,000), 65-74 year olds (24.5 per 100,000) and 75+ year olds (14.9 per 100,000).

Wales

-The Welsh influenza rate increased from 3.6 to 10.9 per 100,000 in week 49 (Figure 3).

-The highest rates were seen in 15-44 year olds (18.2 per 100,000), 5-14 year olds (16.0 per 100,000) and 1-4 year olds (9.7 per 100,000).

Scotland

-The Scottish ILI rate was low at 6.5 per 100,000 in week 49 (Figure 3).

-The highest rates were seen in 15-44 year olds (7.8 per 100,000), 45-64 year olds (7.3 per 100,000) and 65-74 year olds (6.4 per 100,000).

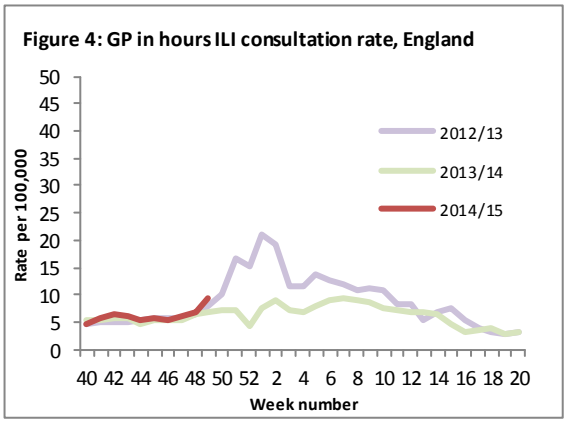
RCGP (England and Wales)

-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 has started to increase in week 49 (Figure 4). By age group, ILI consultations are highest in 1-4 and 15-44 year olds.

-For further information, please see the syndromic surveillance webpage.



Influenza confirmed hospitalisations

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In week 49, 13 new admissions of confirmed influenza cases (11 A unknown subtype and two B) to ICU/HDU were reported through the national USISS mandatory ICU scheme across the UK (132 Trusts in England). 20 new hospitalised confirmed influenza cases (16 influenza A(H3N2), two A unknown subtype and two B) have been reported through the USISS sentinel hospital network across England (25 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 49)

-In week 49, 13 new admissions to ICU/HDU with confirmed influenza infection (11 A unknown subtype and two B) were reported across the UK (132/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 5 and 6) compared to 11 in week 48. Two new confirmed influenza deaths were reported in week 49 2014. A total of 41 admissions (27 A unknown subtype, seven A(H3) and seven B) and four 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

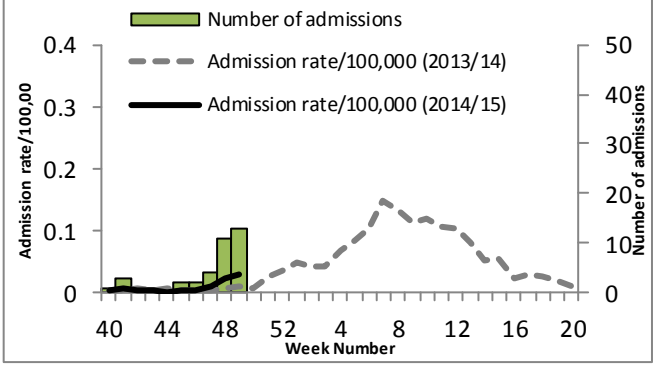
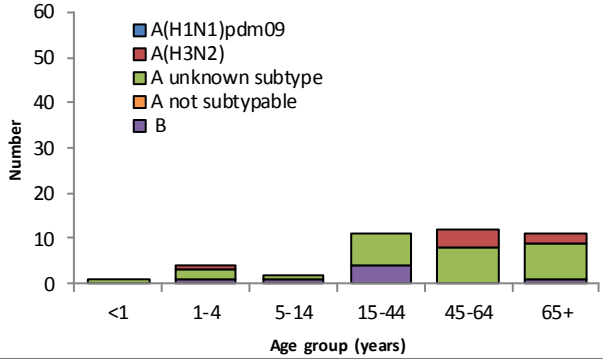


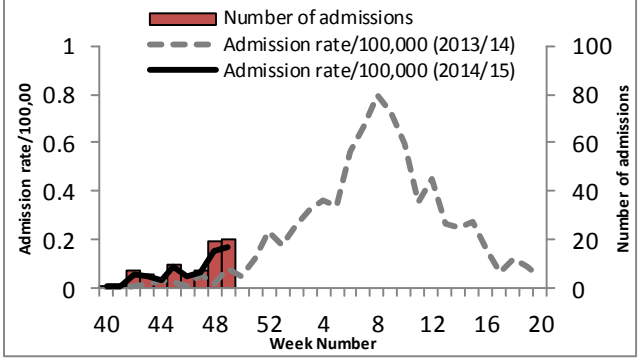
Figure 6: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2013



- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 49)

-In week 49, 20 new hospitalised confirmed influenza cases (16 influenza A(H3N2), two A unknown subtype and two B) were reported through the USISS sentinel hospital network from 25 NHS Trusts across England (Figure 7, a rate of 0.17 per 100,000). A total of 81 hospitalised confirmed influenza admissions (48 A(H3N2), 16 A unknown subtype, 15 B and two 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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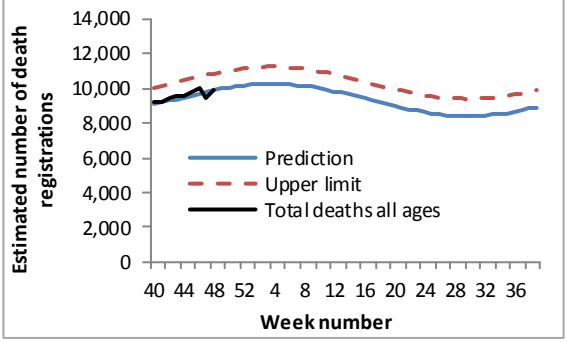
In week 49 2014, no excess all-cause mortality by week of death was seen in England through the EuroMOMO algorithm.

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 48 2014, an estimated 9,928 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is slightly more than the 9,472 estimated death registrations in week 47 but remains below the 95% upper limit of expected death registrations for this time of year as calculated by PHE (Figure 8).

Figure 8: Observed & predicted all-cause death registrations, E&W



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

-In week 49 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, Scotland or Northern Ireland in week 49 (Table 2).

Figure 9: Excess mortality in 65+ year olds by week of death, EuroMOMO, England

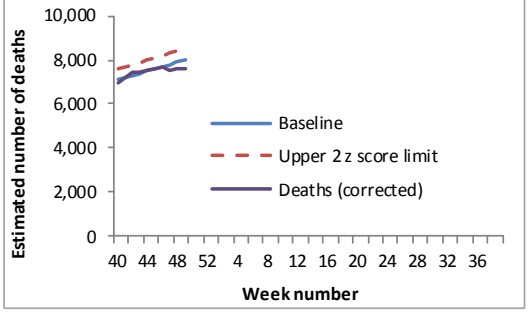


Table 1: Excess mortality by age group,England*

Age group (years)	Excess detected in week 49 2014?	Weeks with excess in 2014/15
<5	×	NA
5-14	×	NA
15-64	×	NA
65+	×	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 49 2014?	Weeks with excess in 2014/15
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*

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 49 2014, four samples were positive for influenza through the UK GP sentinel schemes (three A(H3) and one B, positivity of 4.3%). 80 influenza positive detections were recorded through the DataMart scheme (58 A(H3), 19 A(not subtyped) and three B, positivity of 8.1%).

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

-In week 49, two samples were positive for influenza in England (one A(H3) and one B) and two in Wales (two A(H3)). No samples in Scotland or Northern Ireland were positive for influenza (Table 3).

Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
46	3/52 (5.8%)	3/58 (5.2%)	0/1 (-)	0/4 (-)
47	4/64 (6.3%)	2/62 (3.2%)	0/3 (-)	0/0 (-)
48	0/61 (0.0%)	3/63 (4.8%)	0/3 (-)	0/4 (-)
49	2/52 (3.8%)	0/38 (0.0%)	0/2 (-)	2/2 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 49 2014, out of the 990 respiratory specimens reported through the Respiratory DataMart System, 80 samples (8.1%) were positive for influenza (58 A(H3), 19 A(not subtyped) and 3 B, (Figure 10*)), which is above the MEM threshold* of 6%. The highest positivity by age group was reported in 5-14 year olds (18.8%, Figure 11). The overall positivity for RSV was 26.5% in week 49, with the highest positivity reported in the <5 years (increase from 31.7% to 48.5% in week 49, Figure 12). Positivity for rhinovirus increased slightly to 12.5% in week 49, while other respiratory viruses remained at low levels: adenovirus 3.2%, parainfluenza 4.0% and hMPV 2.4%.

Figure 12: Datamart % RSV positive by age, England

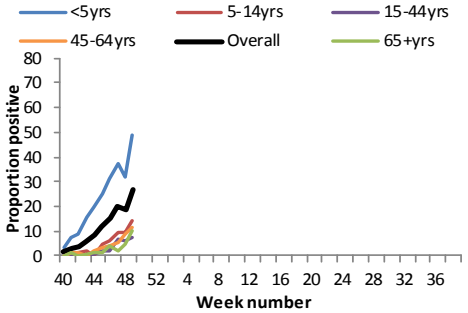


Figure 10: DataMart samples positive for influenza, England

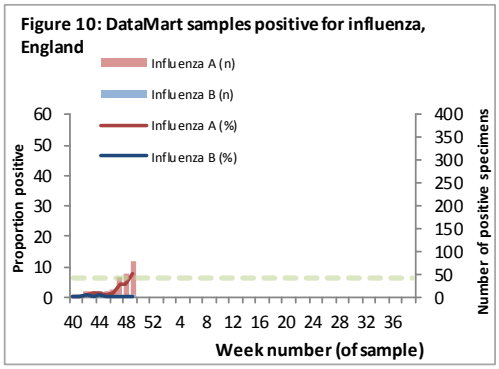
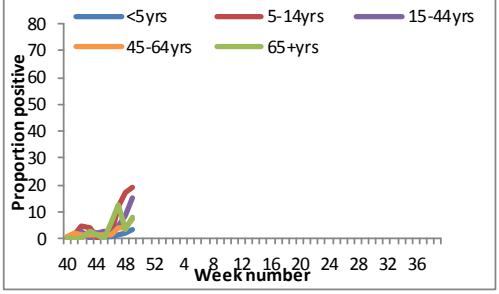


Figure 11: Datamart % positive for influenza by age, England



**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 16 influenza A(H3N2) viruses. Of these, the majority were similar to the A/Texas/50/2012 H3N2 Northern Hemisphere 2014/15 vaccine strain, however 3 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, seven influenza viruses (3 A(H3N2), 3 A(H1N1)pdm09 and 1B) have been tested for oseltamivir susceptibility in the UK and all are sensitive. The three flu A(H3N2) and the flu B virus were also tested against zanamivir and are all sensitive.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 30 November 2014, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenza, 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 30 Nov 2014, E&W

Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
S. pneumoniae	Penicillin	2,240	90
	Macrolides	2,350	79
	Tetracycline	2,240	82
H. influenzae	Amoxicillin/ampicillin	8,830	73
	Co-amoxiclav	8,288	92
	Macrolides	3,366	19
	Tetracycline	8,990	98
S. aureus	Methicillin	3,516	90
	Macrolides	3,379	69
MRSA	Clindamycin	249	37
	Tetracycline	316	82
MSSA	Clindamycin	1,637	79
	Tetracycline	2,640	92

Macrolides = erythromycin, azithromycin and clarithromycin

Vaccination

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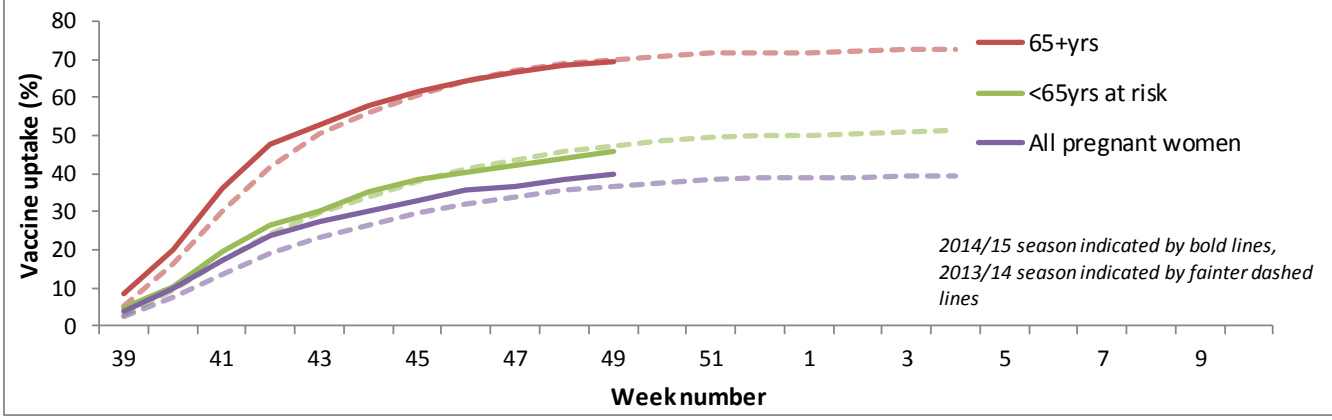
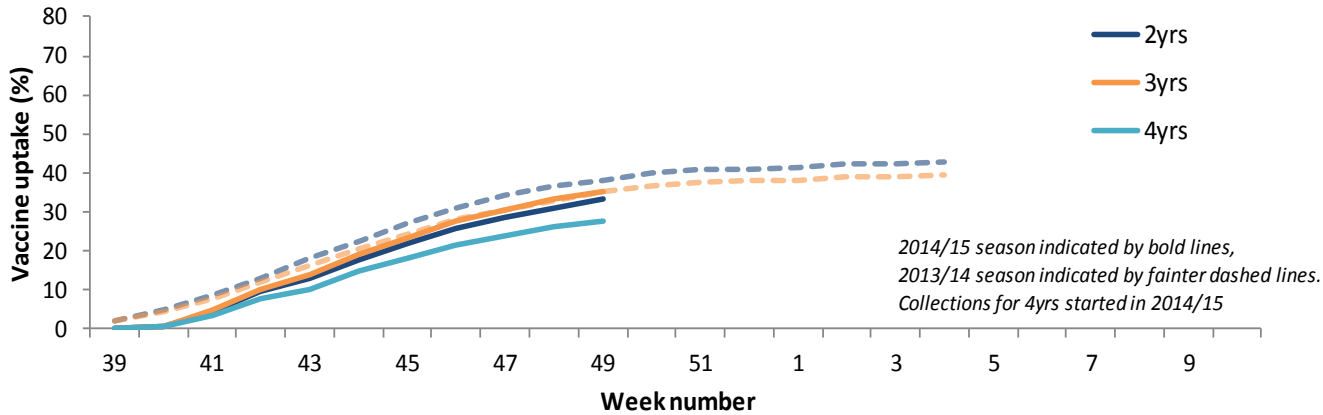
- Up to week 49 2014 in 88% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2014/15 influenza vaccine in targeted groups was as follows (Figure 13):
  - 45.9% in under 65 years in a clinical risk group
  - 39.8% in pregnant women
  - 69.7% in 65+ year olds

Figure 13: 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 49 2014 in 88% 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):
    - 33.1% in all 2 year olds
    - 35.4% in all 3 year olds
    - 27.8% in all 4 year olds

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



- Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 36.8% were vaccinated by 31 October 2014 from 96.6% of Trusts, compared to 35.0% vaccinated the previous season by 31 October 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 first 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 remained low, with the exception of some Pacific Islands, although activity in North America continued to increase. In the European Region, although sporadic influenza virus detections are being reported in an increasing number of countries, there is no indication that the influenza season has started.

- Europe 5 December 2014 (Joint ECDC-WHO Influenza weekly update)

Although sporadic influenza virus detections are being reported in an increasing number of countries, there is no indication that the influenza season has started in the Region.

Thirty-seven of the 46 countries submitting data on qualitative indicators reported low intensity of influenza activity for week 48/2014, one (Azerbaijan) reported medium intensity. Fourteen countries reported sporadic influenza activity, the Netherlands, regional spread. Six countries (Azerbaijan, Belarus, Poland, the Russian Federation, Spain and the United Kingdom (England and Northern Ireland)), mostly in the eastern part of the European Region, reported increasing influenza activity while the remainder reported stable or decreasing trends. Increasing ILI and ARI rates were observed in most countries but these remained below the epidemic threshold.

In week 48/2014, 889 sentinel specimens were tested across 31 countries, with 29 influenza virus detections (3%) reported by 12 countries; 15 were of type A and 14 of type B. Twelve of the influenza A viruses were subtyped; two were A(H1N1)pdm09 and 10 were A(H3N2). Two of the fourteen B viruses were of the B/Yamagata lineage.

Over the first nine weeks of the weekly reporting period for the 2014/2015 influenza season, influenza viruses have been detected in 125 (2%) of 5 410 sentinel system specimens. Seventy-eight (62%) were positive for type A influenza virus: 54 (69%) A(H3N2), 10 (13%) A(H1N1)pdm09 and 14 (18%) un-subtyped. Forty-seven (38%) were positive for type B influenza virus; the lineage was determined for nine of these viruses, two were B/Victoria lineage and seven B/Yamagata lineage.

Since week 40/2014, 20 antigenic characterizations of influenza viruses have been reported: three A(H1N1)pdm09 were A/California/7/2009-like, 10 A(H3N2) were A/Texas/50/2012-like, three were B/Massachusetts/02/2012 and two B/Wisconsin/1/2010 (both B/Yamagata/16/88-lineage). Forty-two viruses have been genetically characterized, 40 belonging to the A(H3N2) A/Texas/50/2012 subgroup (3C) and two belonging to the B/Wisconsin/1/2010 clade.

Most of the viruses that have been characterized to date are similar to those included in the vaccines currently recommended by WHO.

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 5 December 2014 (Centre for Disease Control report)

During week 48 (November 23-29, 2014), influenza activity increased in the United States. The proportion of outpatient visits for influenza-like illness (ILI) was 2.6%, above the national baseline of 2.0%. Eight of 10 regions reported ILI at or above region-specific baseline levels. Puerto Rico and six states experienced high ILI activity; one state experienced moderate ILI activity; five states experienced low ILI activity; New York City and 38 states experienced minimal ILI activity; and the District of Columbia had insufficient data. The geographic spread of influenza in Puerto Rico and six states was reported as widespread; 14 states reported regional activity; the U.S. Virgin Islands and 19 states reported local activity; the District of Columbia and 11 states reported sporadic activity; and Guam did not report.

During week 48, 5.4% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 6.5% for week 48.

Of 13,398 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 48, 2,274 (17.0%) were positive for influenza. (1,468 influenza A subtype not performed, 656 influenza A (H3), 145 influenza B and five influenza A(H1N1)pdm09).

No influenza-associated paediatric deaths were reported to CDC during week 48. To date, five influenza-associated pediatric deaths have been reported for the 2014-2015 season.

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 5 December 2014 (Public Health Agency report)

In week 48, laboratory detections of influenza increased sharply for the second consecutive week (twice the number detected in week 47) and hospitalizations with influenza also increased. 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 was a

large number of newly-reported laboratory-confirmed outbreaks of influenza in week 48: 21 reported in 5 provinces, of which 17 were in long-term care facilities.

In week 48, the number of positive influenza tests increased sharply for the second week in a row, to 630 influenza detections (15.2% of tests), predominantly due to influenza A. To date, 94% of influenza detections have been influenza A, and 99% 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. To date, among the cases of influenza A with reported age, the largest proportion was in adults ≥65 years of age (61%).

The national influenza-like-illness (ILI) consultation rate increased in week 48 to 29.1 consultations per 1,000, which is above expected levels for week 48. To date this season, the rates have been highest among those <20 years of age.

In week 48, 13 laboratory-confirmed influenza-associated paediatric (≤16 years of age) hospitalizations were reported by the Immunization Monitoring Program Active (IMPACT) network: 12 cases of influenza A and one case of influenza B (Figure 8a). To date this season, 51 hospitalizations have been reported by the IMPACT network, 46 (90%) of which were cases of influenza A. Among cases for which the influenza A subtype was reported, 35/37 were A(H3N2). The majority of cases (67%) were in children <5 years of age (Table 4). To date, six cases were admitted to the ICU (Figure 9a). Further data is available here.

- Global influenza update 1 December 2014 (WHO website)

In North America, influenza activity continued to increase.

In Europe overall influenza activity increased slightly but remained low.

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

In Africa and western Asia, influenza activity was low.

In eastern Asia, influenza activity in most countries remained low.

In tropical Asia, influenza activity was low with influenza B predominant in Viet Nam.

In the southern hemisphere, influenza activity remained low except in several Pacific Islands where ILI activity remained high.

- Enterovirus D68 (EV-D68) 10 December 2014

From mid-August to 20 November 2014, CDC or state public health laboratories have confirmed a total of 1,121 persons in 47 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 an updated 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 27 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 one child presenting with symptoms of viral meningoencephalitis.

- Avian Influenza 10 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 2 December 2014

Up to 2 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 923 confirmed cases have been reported internationally, resulting in a current global total of 927 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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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)
- 2014/15 Northern Hemisphere seasonal influenza vaccine recommendations (WHO)