



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

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Summary

Indicators of influenza activity are at minimal levels suggesting no community transmission at present, though RSV is currently circulating.

- Overall weekly influenza GP consultation rates across the UK
 - In week 47 (ending 24 November 2013), overall weekly influenza GP consultations remained low in England (3.5 per 100,000), Wales (6.6 per 100,000), Scotland (7.8 per 100,000) and Northern Ireland (18.8 per 100,000).
 - In week 47 there have been further national increases in acute respiratory infection syndromic indicators, particularly in children, in line with seasonal expectations. This is consistent with increasing respiratory syncytial virus (RSV) activity.
 - Two new acute respiratory outbreaks have been reported in the past seven days in care homes (both not tested).
- Virology
 - In week 47 2013, seven influenza positive detections were recorded through the DataMart scheme (three A(H1N1)pdm09, one A(H3), one A(not subtyped) and two B, positivity of 0.8% compared to 0.6% in week 46)
 - No samples were positive through the UK sentinel schemes.
- Disease severity and mortality
 - Three new admissions to ICU/HDU with confirmed influenza (one A(H1N1)pdm09, one A unknown subtype and one B) were reported through the USISS mandatory ICU surveillance scheme across the UK (150 Trusts in England) in week 46. Four new hospitalised confirmed influenza case (three A(H1N1)pdm09 and one B) were reported through the USISS sentinel hospital network across England (28 Trusts).
 - In week 47 2013, no excess all-cause mortality was seen across the UK through the EuroMOMO algorithm. This data is provisional due to the time delay in death registration.
- Vaccination
 - Up to week 47 2013 in 77.7% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2013/14 influenza vaccine in targeted groups was as follows: 34.1% in all 2 year olds, 30.6% in all 3 year olds, 43.6% in under 65 years in a clinical risk group, 34.0% in all pregnant women and 67.0% in 65+ year olds.
 - Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 35.0% were vaccinated by 31 October 2013 from 94.9% of Trusts, compared to 28.4% vaccinated the previous season by 31 October 2012.
- International situation
 - Overall influenza activity in North America has increased but remains at low levels throughout the region.
 - European countries continue to report low levels of influenza activity.

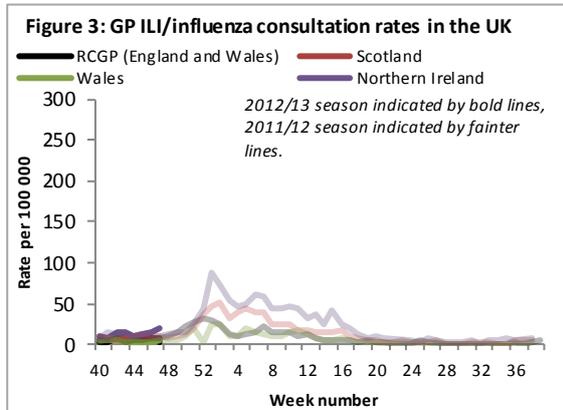
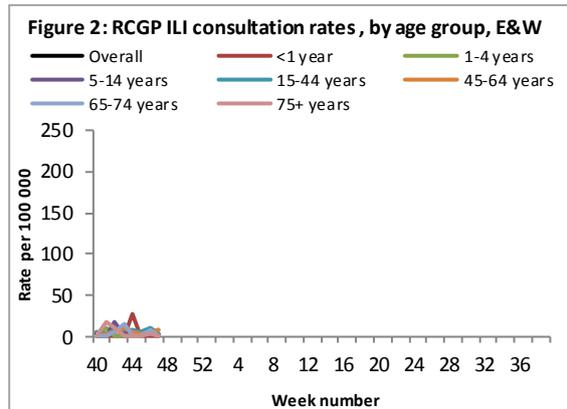
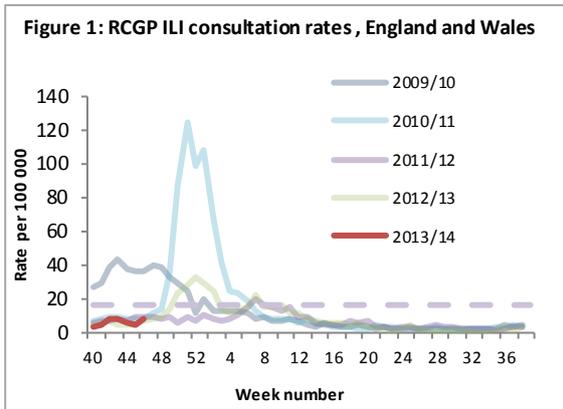
In week 47 (ending 17 November 2013), overall weekly influenza GP consultations remained low in England, Wales, Scotland and Northern Ireland.

- Influenza/Influenza-Like-Illness (ILI)

RCGP (England and Wales)

-The overall ILI consultation rate from RCGP for England and Wales decreased slightly in week 47 2013 (3.5 per 100,000) compared to week 46 (7.5 per 100,000) (Figure 1*). ILI rates decreased in the South region (from 11.8 to 2.6 per 100,000) and remained stable in the North (from 4.3 to 4.9 per 100,000) and Central regions (from 4.7 to 3.4 per 100,000).

-In week 47 2013, the highest rates were seen in 1-4 year olds (7.8 per 100,000) and 45-64 year olds (7.0 per 100,000).



Northern Ireland

-The Northern Ireland influenza rate increased from 14.4 per 100,000 in week 46 to 18.8 per 100,000 in week 47 (Figure 3).

-In week 47 2013, the highest rates were seen in <1 year olds (from 0.0 to 48.4 per 100,000) and 45-64 year olds (from 16.1 to 24.5 per 100,000).

Wales

-The Welsh influenza rate increased from 3.3 per 100,000 in week 46 to 6.6 per 100,000 in week 47 (Figure 3).

-The highest rate was seen in <1 year olds (from 0.0 to 34.0 per 100,000) followed by 15-44 year olds (from 2.4 to 9.0 per 100,000).

Scotland

-The Scottish ILI rate remained stable from 8.1 per 100,000 in week 46 to 7.8 per 100,000 in week 47 (Figure 3).

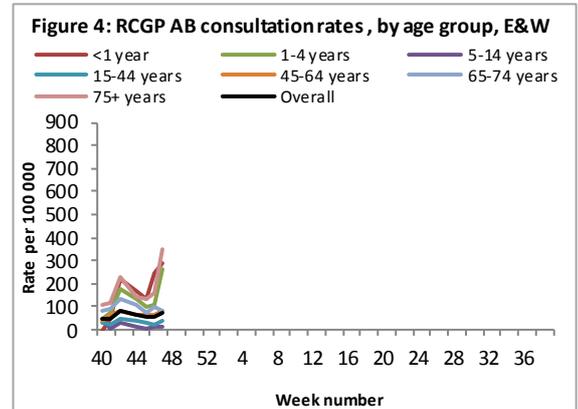
-The highest rate was seen in 1-4 year olds (from 5.5 to 12.0 per 100,000) followed by 65-74 year olds (from 8.8 to 9.6 per 100,000).

*The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe. The threshold calculated for RCGP ILI consultation rates for 2013/14 is 15.6 per 100,000.

- Other respiratory indicators

Acute bronchitis (AB)

The overall weekly consultation rate for acute bronchitis (AB) in England and Wales through the RCGP scheme increased from 59.1 per 100,000 in week 46 to 73.4 per 100,000 in week 47 (Figure 4). The highest rates were seen in 75+ year olds (352.7 per 100,000) and <1 year olds (287.3 per 100,000).



Community surveillance

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In week 47 there have been further national increases in acute respiratory infection syndromic indicators and two new acute respiratory outbreaks have been reported.

- PHE Real-time Syndromic Surveillance

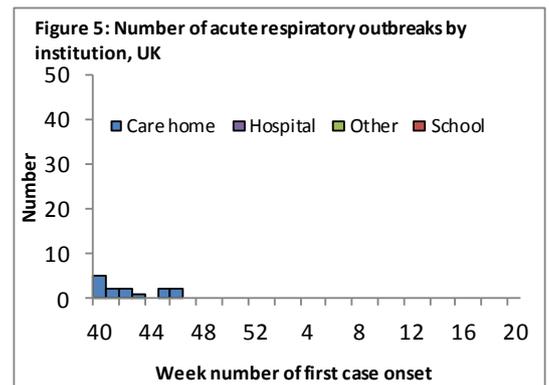
-In week 47 there have been further national increases in acute respiratory infection syndromic indicators, particularly in children, in line with seasonal expectations. This is consistent with increasing respiratory syncytial virus (RSV) activity.

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

- Acute respiratory disease outbreaks

-Two new acute respiratory outbreaks were reported in the last 7 days in England in care homes in Midlands and East of England and they were not tested. So far this season, all 15 outbreaks have been reported in care homes (where tested, one influenza A not sub-typed, three rhinovirus, one RSV and one parainfluenza) (Figure 5).

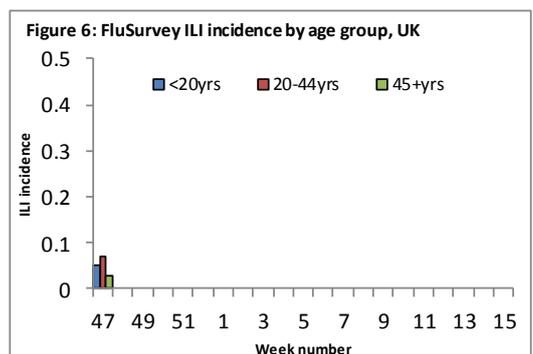
-Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and Respcidsc@phe.gov.uk.



- 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.

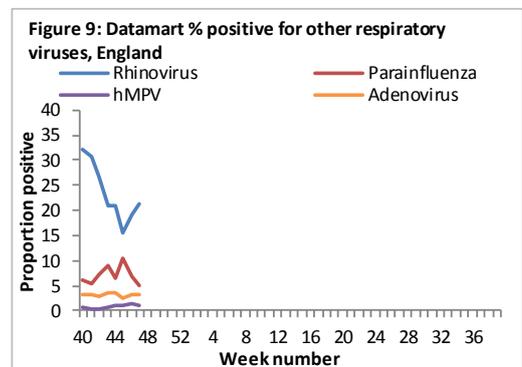
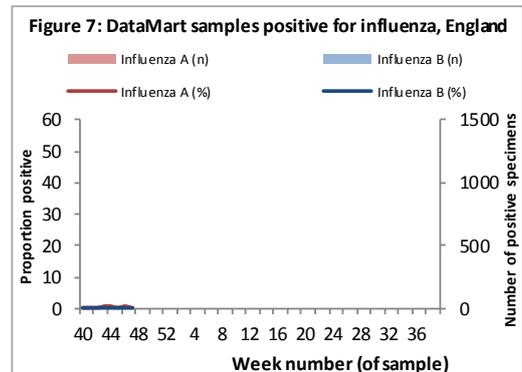
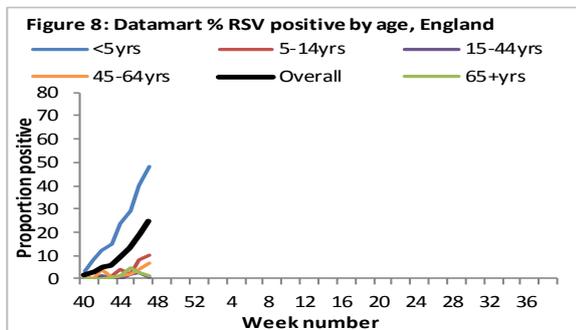
In week 47, the incidence of ILI reports was highest in 20-44 year olds (Figure 6).



In week 47 2013, seven influenza positive detections were recorded through the DataMart scheme (three A(H1N1)pdm09, one A(H3), one A(not subtyped) and two B) and no samples were positive through the UK sentinel schemes.

• Respiratory DataMart System (England)

-In week 47 2013, out of the 857 respiratory specimens reported through the Respiratory Datamart System, three (0.4%) positive for flu A (H1N1) pdm09, one (0.1%) positive for flu A (H3) and one (0.1%) were positive for flu A (not subtyped), and two samples were positive for influenza B (Figure 5). The overall positivity for RSV continued to increase from 19.0% in week 46 to 24.5% in week 47, with the highest positivity reported in the <5 years with an increase from 39.8% in week 46 to 48.2% in week 47. Positivity for rhinovirus increased slightly from 19.0% in week 46 to 21.3% in week 47. Positivity decreased for parainfluenza (from 6.9% to 4.9%). Other respiratory viruses remained at low levels: adenovirus 3.3% and hMPV 0.9% (Figures 8 and 9).



• Sentinel swabbing schemes in England (RCGP/SMN) and the Devolved Administrations

-No samples from Scotland, England and Northern Ireland were positive for influenza in week 47 (Table 1). No samples were tested through the Welsh scheme.

Table 1: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
44	1/45 (2.2%)	0/44 (0%)	0/0 (-)	0/0 (-)
45	1/54 (1.9%)	0/51 (0%)	0/5 (-)	0/0 (-)
46	0/76 (0%)	0/59 (0%)	0/4 (-)	0/0 (-)
47	0/33 (0%)	0/32 (0%)	0/4 (-)	0/0 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

• Virus characterisation

-Since week 40, six influenza A(H1N1)pdm09 viruses similar to the A/California/07/2009 vaccine strain has been antigenically characterised by PHE Respiratory Virus Unit (RVU).

• Antiviral susceptibility

Since week 40 2013, twelve and six influenza samples have been tested for Osetamivir and Zanamivir susceptibility, respectively, in the UK, and no virus has been found to be resistant so far in this season.

• Antimicrobial susceptibility

-In the 12 weeks up to 17 November 2013, 81% or greater of all lower respiratory tract isolates of *Staphylococcus aureus*, *Streptococcus pneumoniae* and *Haemophilus influenzae* reported as tested were susceptible to the antibiotics tetracycline and co-amoxiclav (Table 2). There have been no significant changes in susceptibility in recent years.

Table 2: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 12 weeks up to 17 Nov 2013, E&W

Organism	Tetracyclines		Co-amoxiclav	
	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)
<i>S. aureus</i>	3,063	92	170	88
<i>S. pneumoniae</i>	1,717	81	1808*	90*
<i>H. influenzae</i>	7,275	98	6,809	92

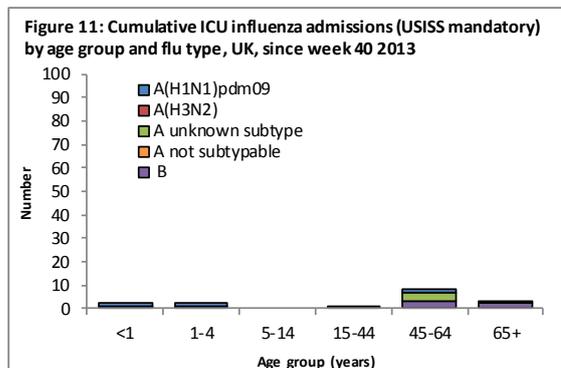
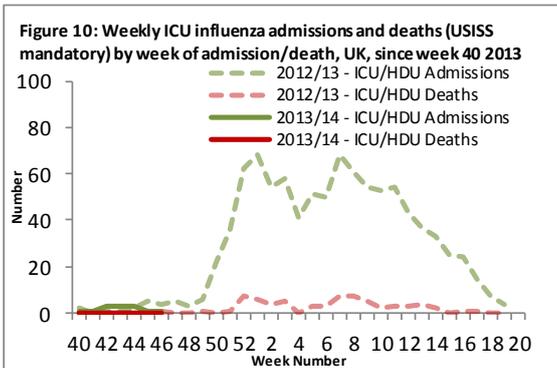
* *S. pneumoniae* isolates are not routinely tested for susceptibility to co-amoxiclav, however laboratory results for benzyl-penicillin are extrapolated to determine sensitivity to other beta-lactams such as co-amoxiclav.

In week 47, three new admissions of confirmed influenza cases to ICU/HDU (one A(H1N1)pdm09, one A unknown subtype and one B) and no confirmed influenza deaths in ICU/HDU have been reported through the national USISS mandatory ICU scheme across the UK (150 Trusts in England). Four new hospitalised confirmed influenza cases have been reported through the USISS sentinel hospital network across England (three A(H1N1)pdm09 and one B) (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.

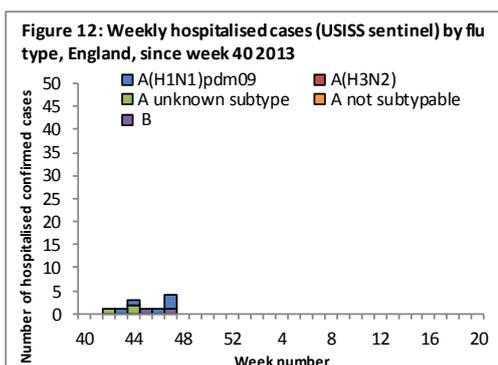
- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 47)

-In week 47, three new admissions to ICU/HDU with confirmed influenza infection (one A(H1N1)pdm09, one A unknown subtype and one B) were reported across the UK (150/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 10 and 11). No new confirmed influenza deaths were reported in week 47 2013. A total of 16 admissions (three A(H1N1)pdm09, six A(unknown) and seven B) and no confirmed influenza deaths have been reported since week 40 2013.



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

-In week 47, four new hospitalised confirmed influenza case (three A(H1N1)pdm09 and one B) were reported through the USISS sentinel hospital network from 26 NHS Trusts across England (Figure 12). A total of 11 hospitalised confirmed influenza admissions (six A(H1N1)pdm09, three A unknown and two B) have been reported since week 40 2013.



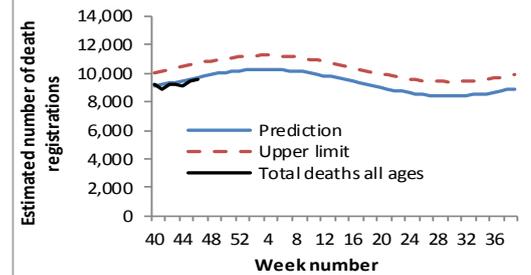
In week 47, no excess in all-cause mortality was seen across the UK overall, by age group or by region.

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 overall all-cause mortality, England and Wales

-In week 46 2013, an estimated 9,583 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is slightly more than the 9,449 estimated death registrations in week 45 but remains below the 95% upper limit of expected death registrations for this time of year as calculated by PHE (Figure 13).

Figure 11: Observed & predicted all-cause death registrations, E&W



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

-In week 47 2013, 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 14, Table 3). This data is provisional due to the time delay in registration and so numbers may vary from week to week.

-No excess mortality above the threshold through the same standardised algorithm was seen subnationally or in the devolved administrations (Table 4).

Table 3: Excess mortality by age group, England*

Age group (years)	Excess detected in week 47 2013?	Weeks with excess in 2013/14
<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

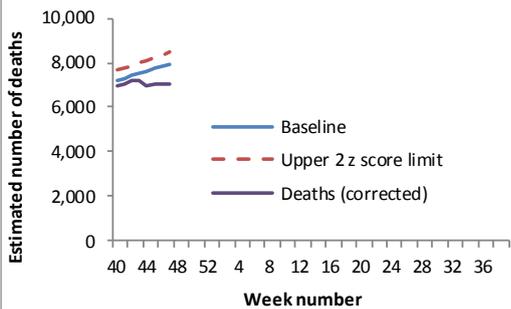
Table 4: Excess mortality by UK country*

Country	Excess detected in week 47 2013?	Weeks with excess in 2013/14
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

Figure 12: Excess mortality in 65+ year olds by week of death, EuroMOMO, England

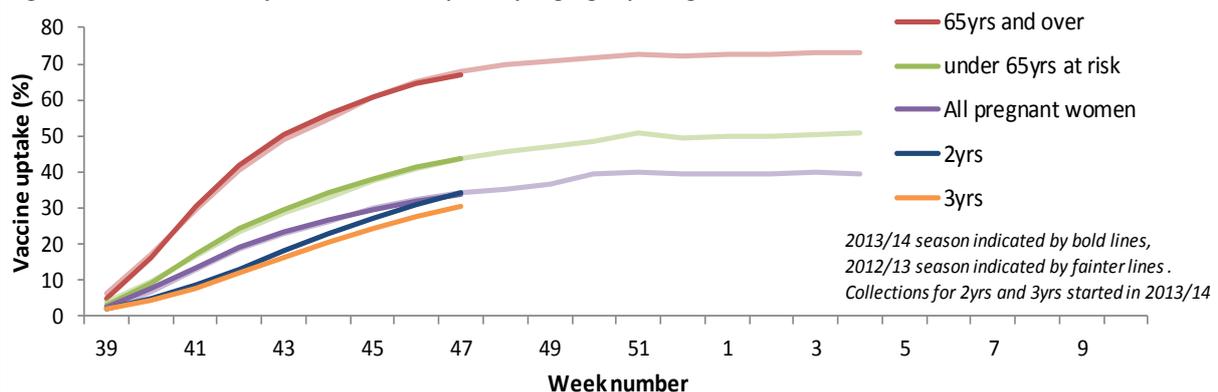


Vaccination

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- Up to week 47 2013 in 77.7% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2013/14 influenza vaccine in targeted groups was as follows (Figure 15):
 - 34.1% in all 2 year olds
 - 30.6% in all 3 year olds
 - 43.6% in under 65 years in a clinical risk group
 - 34.0% in all pregnant women
 - 67.0% in 65+ year olds

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



- In the first monthly collection up to 31 October 2013, provisional cumulative seasonal influenza vaccine uptake from 87.9% of GP practices was 54.9% in 65 years and over, 33.1% in under 65 year olds at risk, 25.8% in all pregnant women, 21.9% in all 2 year olds and 19.9% in all 3 year olds. The [report](#) provides uptake to Area Team level, CCG level and in key targeted groups.
- Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 35.0% were vaccinated by 31 October 2013 from 94.9% of Trusts, compared to 28.4% vaccinated the previous season by 31 October 2012. The [report](#) provides uptake to Trust level.

International Situation

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Overall influenza activity in North America has increased but remains at low levels throughout the region. European countries continue to report low levels of influenza activity.

- [Europe](#) 22 November 2013 (European Centre for Disease Prevention and Control report)

For week 46/2013, clinical data were reported by 28 countries, all of which experienced low-intensity influenza activity, the lowest category of reporting. Geographic patterns of influenza activity were reported as sporadic by Denmark, France, Norway, Sweden and the UK (Scotland). All other countries reported no activity. Increasing trends were reported by Bulgaria and decreasing by Poland, while all other countries reported stable trends (Table 1, Map 2). The incidence of ILI/ARI was below epidemic thresholds in all countries.

For week 46/2013, 20 countries tested a total of 459 sentinel specimens, of which one (0.2%) was positive for influenza A(H1N1)pdm09 virus. In addition, 34 non-sentinel source specimens (e.g. specimens collected for diagnostic purposes in hospitals) were found to be positive for influenza virus, 26 were type A and eight were type B viruses. Of 15 subtyped influenza A viruses, 11 were A(H1)pdm09 and four A(H3). Of the nine antigenic characterisations of influenza A viruses reported as sentinel and non-sentinel specimens since week 40/2013, eight have been characterised as A(H1)pdm09 A/California/7/2009 (H1N1)-like, and one B(Yamagata) lineage virus could not be attributed to any of the reportable categories.

Since week 40/2013, three countries have reported 15 hospitalised laboratory-confirmed influenza cases (Table 5). For week 46/2013, one hospitalised laboratory-confirmed influenza A case was reported by the UK. Of the 15 hospitalised laboratory-confirmed influenza cases reported since week 40/2013, eight cases were related to influenza type A infection and seven to type B

- [United States of America](#) 22 November 2013 (Centre for Disease Control report)

During week 46 2013, influenza activity increased slightly in the United States

Nationwide during week 46, 1.5% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). This percentage is below the national baseline of 2.0%. (*ILI is defined as fever (temperature of 100°F [37.8°C] or greater) and cough and/or sore throat.*) On a regional level, the percentage of outpatient visits for ILI ranged from 0.5% to 3.5% during week 46. One region (Region 6) reported a proportion of outpatient visits for ILI above their region-specific baseline level. One region reported ILI above region-specific baseline levels. One state experienced high ILI activity, two states experienced moderate ILI activity, four states experienced low ILI activity, 43 states and New York City experienced minimal ILI activity and the District of Columbia had insufficient data.

During week 46, 5.8% 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 46. No influenza-associated pediatric deaths were reported to CDC during week 46. A total of two influenza-associated pediatric deaths for the 2013-2014 season have been reported.

Of 4,457 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 46, 312 (7.0%) were positive for influenza. By type, 280 (89.7%) were influenza A (118 (42.1%) A(H1N1)pdm09, 148 subtyping not performed and 14 (5.0%) A(H3)) and 32 (10.3%) were influenza B.

- [Canada](#) 22 November 2013 (Public Health Agency report)

Influenza activity in Canada continued to increase for the fourth week in a row, indicating that the 2013-14 season has started. In week 46, three regions in ON(2) and QC(1) reported localized activity and 13 regions (in BC(1), AB(2), SK(1), ON(4), QC(4) and NB(1)) reported sporadic activity. The national influenza-like-

illness (ILI) consultation rate decreased slightly from 19.9/1,000 in week 45 to 16.9/1,000 in week 46, but was similar to the previous three weeks. Two new influenza outbreaks in long-term care facilities were reported in week 46. To date this season, a total of 10 influenza-associated paediatric hospitalizations have been reported by the IMPACT network. One ICU admission was required in a child 2-4 years of age with influenza B. No deaths have been reported.

- [Global influenza update](#) 22 November 2013 (WHO website)

Overall influenza activity in North America increased slightly over the past three weeks, but remained at low levels throughout the region. Countries from the WHO European Region continued to report low levels of influenza activity with only a few countries reporting sporadic influenza detections among samples from sentinel and non-sentinel sources. In northern Asia, influenza activity slightly increased in the north of China and Mongolia. Influenza transmission in southern Asia was low. In Hong Kong Special Administrative Region, China, and in the south of China influenza detections decreased. In South East Asia, influenza activity decreased in Viet Nam, but increased in Cambodia, Lao People's Democratic Republic and Thailand. In this area, co-circulation of influenza A(H1N1)pdm09, influenza A(H3N2) and influenza B virus was reported.

In the Caribbean region of Central America and tropical South America, influenza A detections remained at low levels. Respiratory syncytial virus (RSV) continued to predominate in certain countries, but the RSV activity largely remained within expected seasonal levels.

The influenza season in the southern hemisphere is largely over.

- [Avian Influenza](#) 6 November 2013 (WHO website)

Influenza A(H7N9)

Up to 6 November 2013, [139](#) cases of human infection with influenza A(H7N9) from China have been reported by WHO, including 45 deaths (case fatality ratio=32%). The most recent two cases had contact with live poultry and were admitted to hospital on 31 October. One is a three year old boy from Guandong Province and is currently in a stable condition while the second is a 64 year old woman from Zhejiang Province and is currently in a critical condition. So far there is no evidence of sustained human-to-human transmission. 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 to 7 October 2013, 641 human cases of H5N1 avian influenza have been officially reported to [WHO](#) from 15 countries, of which 380 (59%) died.

- Novel coronavirus 26 November 2013

Up to 26 November 2013, 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 108 suspect cases in the UK that have been investigated for MERS-CoV and tested negative. A further 153 confirmed cases have been reported internationally. This results in a current global total of [160 cases](#), 68 of which have died (case fatality ratio=42.5%). 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 paper](#)

Community surveillance

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

Disease severity and mortality data

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

Vaccination

- 2012/13 seasonal influenza vaccine programme ([Department of Health Green Book](#))
- Childhood flu programme Q&A for healthcare professionals ([Public Health England](#))
- 2013/14 Northern Hemisphere seasonal influenza vaccine recommendations ([WHO](#))