



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.

- Overall weekly influenza GP consultation rates across the UK
  - In week 45 (ending 10 November 2013), overall weekly influenza GP consultations remained low in England (4.2 per 100,000), Wales (2.9 per 100,000), Scotland (10.8 per 100,000) and Northern Ireland (13.2 per 100,000).
  - In week 44 there have been national increases in bronchitis/bronchiolitis and acute respiratory infection emergency department attendances, particularly in children aged <5 years old. This is consistent with increasing respiratory syncytial virus (RSV) activity. One new acute respiratory outbreak has been reported in the past seven days in a care home (not tested).
- Flusurvey, an online flu surveillance system, has been launched for 2013/14. For further information and to register, please see the [website](#).
- Virology
  - In week 45 2013, ten influenza positive detections were recorded through the DataMart scheme (six A(H1N1)pdm09, two A(not subtyped) and two B, positivity of 1.4%, a similar value to week 44). One sample was positive for influenza (one A(H1N1)pdm09) through the UK sentinel schemes.
- Disease severity and mortality
  - One new admission to ICU/HDU with confirmed influenza (one B) was reported through the USSS mandatory ICU surveillance scheme across the UK (142 Trusts in England) in week 45. One new hospitalised confirmed influenza case (one B) was reported through the USSS sentinel hospital network across England (28 Trusts).
  - In week 45 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 45 2013 in 74.4% 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: 27.1% in all 2 year olds, 24.4% in all 3 year olds, 37.9% in under 65 years in a clinical risk group, 29.5% in all pregnant women and 60.8% in 65+ year olds
- International situation
  - Although in many European countries influenza-like illness activity started to increase, influenza detections in the northern hemisphere temperate zones remained low.

In week 45 (ending 10 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 remained stable in week 45 2013 (4.2 per 100,000) compared to week 44 (5.7 per 100,000) (Figure 1\*). ILI rates decreased in the Central region (from 6.3 to 2.5 per 100,000) and remained stable in the North (from 2.1 to 3.2 per 100,000) and South regions (from 7.5 to 6.6 per 100,000).

-In week 44 2013, the highest rates were seen in 15-44 year olds (6.5 per 100,000) and 45-64 year olds (3.6 per 100,000).

Figure 1: RCGP ILI consultation rates, England and Wales

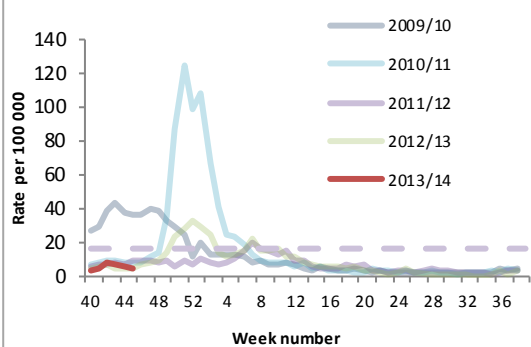


Figure 2: RCGP ILI consultation rates, by age group, E&W

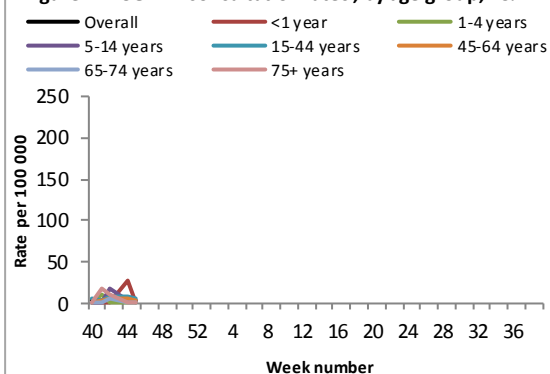
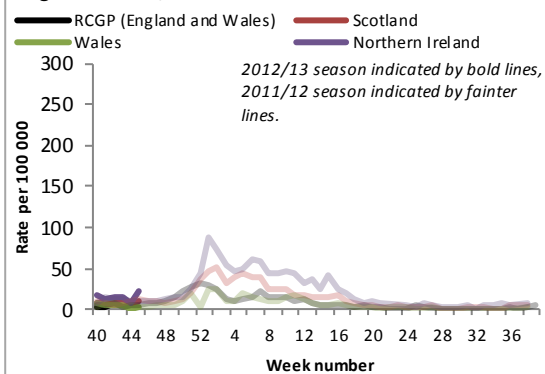


Figure 3: GP ILI/influenza consultation rates in the UK



Northern Ireland

-The Northern Ireland influenza rate increased slightly from 10.6 per 100,000 in week 44 to 13.2 per 100,000 in week 45 (Figure 3).

-In week 45 2013, the highest rates were seen in 15-44 year olds (from 9.1 to 22.2 per 100,000) and 65-74 year olds (from 6.3 to 12.2 per 100,000).

Wales

-The Welsh influenza rate remained stable from 2.1 per 100,000 in week 44 to 2.9 per 100,000 in week 45 (Figure 3).

-The highest rate was seen in 65-74 year olds (from 2.9 to 6.7 per 100,000) followed by 15-44 year olds (from 1.6 to 3.8 per 100,000).

Scotland

-The Scottish ILI rate increased from 4.8 per 100,000 in week 44 to 10.8 per 100,000 in week 45 (Figure 3).

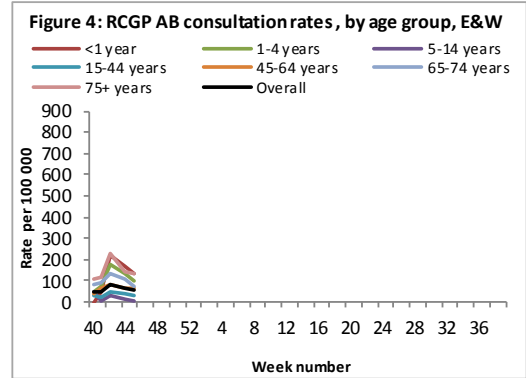
-The highest rate was seen in 1-4 year olds (from 11.4 to 29.0 per 100,000) followed by 45-64 year olds (from 5.4 to 11.6 per 100,000).

\*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 decreased slightly from 58.3 per 100,000 in week 44 to 54.2 per 100,000 in week 45 (Figure 4). The highest rates were seen in <1 year olds (138.4 per 100,000), 75+ year olds (133.9 per 100,000) and 1-4 year olds (99.4 per 100,000).



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**In week 45 there have been national increases in bronchitis/bronchiolitis and acute respiratory infection emergency department attendances and one new acute respiratory outbreak has been reported.**

- PHE Real-time Syndromic Surveillance

-In week 44 there have been national increases in bronchitis/bronchiolitis and acute respiratory infection emergency department attendances, particularly in children aged <5 years old. This is consistent with increasing respiratory syncytial virus (RSV) activity.  
 -For further information, please see the syndromic surveillance [webpage](#).

- Acute respiratory disease outbreaks

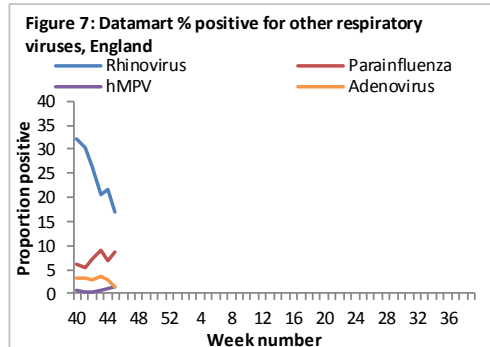
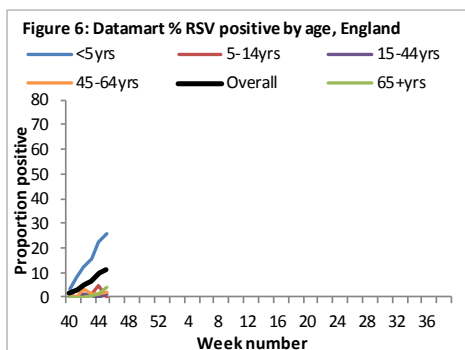
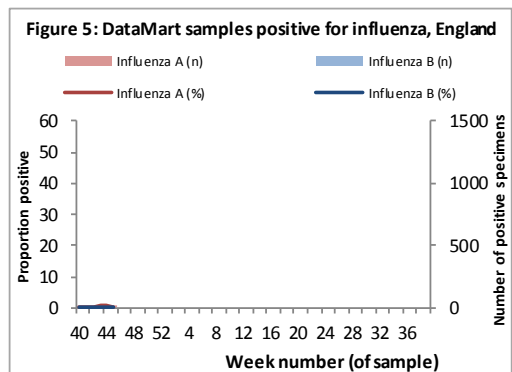
-One new acute respiratory outbreak was reported in the last 7 days in England in a care home which was not tested (Midlands and East of England PHE Region). So far this season, all twelve outbreaks have been reported in care homes (where tested, one influenza A not sub-typed, three rhinovirus, one RSV and one parainfluenza)  
 -Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and [Respcidsc@phe.gov.uk](mailto:Respcidsc@phe.gov.uk).

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**In week 45 2013, ten influenza positive detections were recorded through the DataMart scheme (six A(H1N1)pdm09, two A(not subtyped) and two B) and one sample was positive through the UK sentinel schemes (one A(H1N1)pdm09).**

- Respiratory DataMart System (England)

-In week 45 2013, out of the 714 respiratory specimens reported through the Respiratory Datamart System, six (0.8%) positive for flu A (H1N1) pdm09, two (0.3%) were positive for flu A (not subtyped), and two (0.3%) were positive for influenza B (Figure 5). Positivity for rhinovirus decreased from 21.7% in week 44 to 17.0% in week 45; positivity increased for parainfluenza (from 6.7% to 8.6%); positivity continued to increase for RSV (from 9.6% to 11.3%, 26.0% in <5yr olds ) and other respiratory viruses remained at low levels: (adenovirus 1.5% and hMPV 1.3%) (Figures 6 and 7).



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

-One sample was positive for influenza (one A(H1N1)pdm09) from England and no samples from Scotland or Northern Ireland were positive for influenza in week 45 (Table 1). No samples were tested through the Welsh scheme.

**Table 1: Sentinel influenza surveillance in the UK**

Week	England	Scotland	Northern Ireland	Wales
42	0/69 (0%)	0/37 (0%)	0/0 (-)	0/0 (-)
43	2/51 (3.9%)	0/47 (0%)	0/2 (-)	0/0 (-)
44	1/35 (2.9%)	0/44 (0%)	0/0 (-)	0/0 (-)
45	1/44 (2.3%)	0/28 (0%)	0/2 (-)	0/0 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Virus characterisation

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

- Antiviral susceptibility

-In week 45 2013, no influenza viruses were tested for antiviral susceptibility by PHE RVU.

- Antimicrobial susceptibility

-In the 12 weeks up to 3 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 3 Nov 2013, E&W**

Organism	Tetracyclines		Co-amoxiclav	
	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)
<i>S. aureus</i>	3,000	92	179	88
<i>S. pneumoniae</i>	1,623	81	1720*	90*
<i>H. influenzae</i>	7,157	99	6,676	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.

## Influenza confirmed hospitalisations

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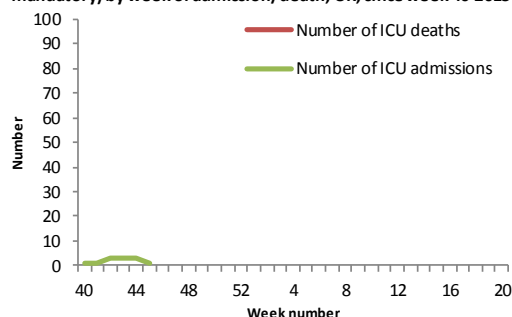
**In week 45, one new admission of confirmed influenza cases to ICU/HDU (one B) and no confirmed influenza deaths in ICU/HDU have been reported through the national USISS mandatory ICU scheme across the UK (142 Trusts in England). One new hospitalised confirmed influenza case has been reported through the USISS sentinel hospital network across England (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.

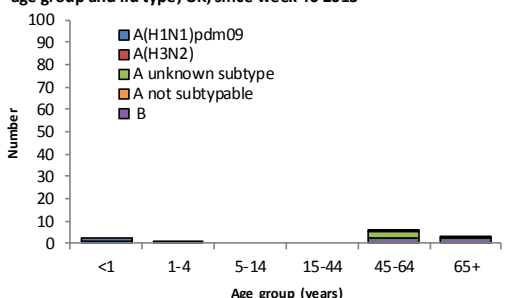
- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 45)

-In week 45, one new admission to ICU/HDU with confirmed influenza infection (one B) was reported across the UK (142/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 8 and 9). No new confirmed influenza deaths were reported in week 45 2013. A total of twelve admissions (two A(H1N1)pdm09, four A(unknown) and six B) and no confirmed influenza deaths have been reported since week 40 2013.

**Figure 8: Weekly ICU influenza admissions and deaths (USISS mandatory) by week of admission/death, UK, since week 40 2013**



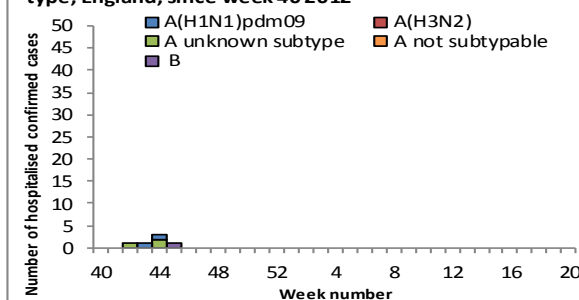
**Figure 9: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2013**



- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 45)

-In week 45, one new hospitalised confirmed influenza case (one B) was reported through the USISS sentinel hospital network from 28 NHS Trusts across England (Figure 10). A total of six hospitalised confirmed influenza admissions (two A(H1N1)pdm09, three A unknown and one B) have been reported since week 40 2013.

**Figure 10: Weekly hospitalised cases (USISS sentinel) by flu type, England, since week 40 2012**



**All-cause mortality data**

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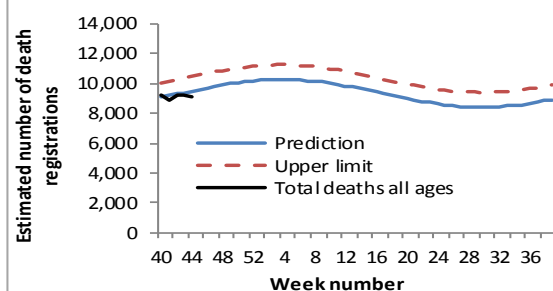
**In week 45, no excess in all-cause mortality was seen across the UK overall, by age group or by region.**

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 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 44 2013, an estimated 9,107 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is less than the 9,236 estimated death registrations in week 43 and is below the 95% upper limit of expected death registrations for this time of year as calculated by PHE (Figure 11).

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



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

-In week 45 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 12, Table 3). This data is provisional due to the time delay in registration and so numbers may vary from week to week.

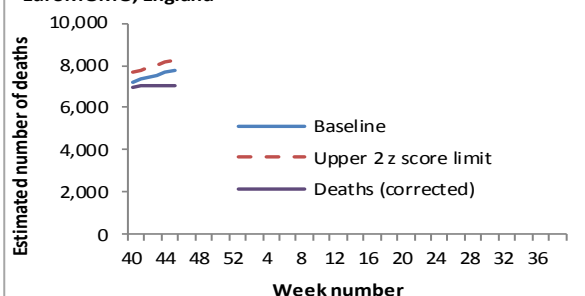
-No excess mortality above the threshold through the same standardised algorithm was seen subnationally or in the devolved administrations (Table 4).

**Table 3: Excess mortality by age group, England\***

Age group (years)	Excess detected in week 45 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

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



**Table 4: Excess mortality by UK country\***

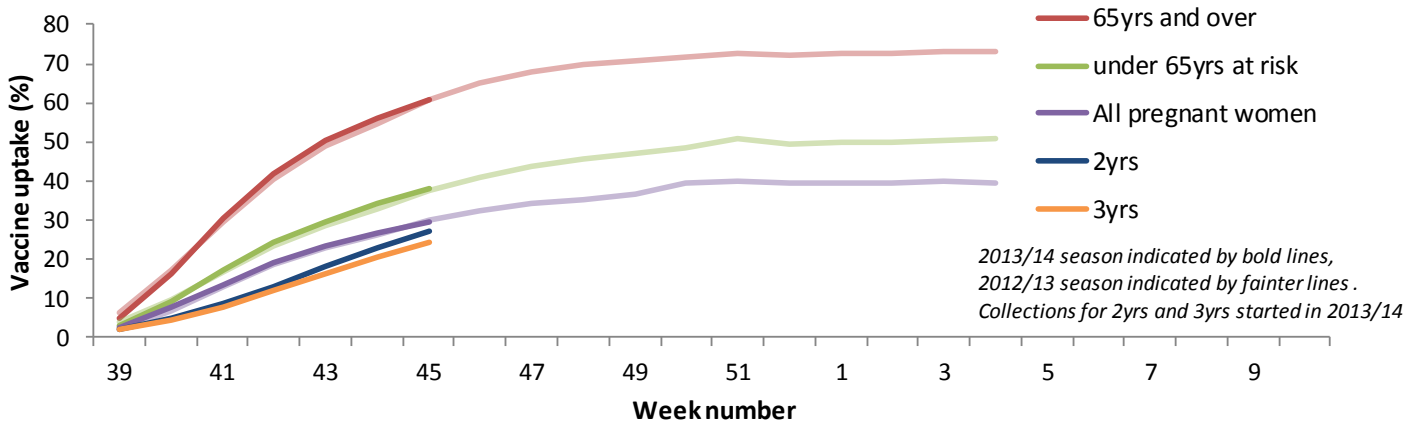
Country	Excess detected in week 45 2013?	Weeks with excess in 2013/14
England	x	NA
Wales	x	NA
Scotland	x	NA
Northern Ireland	x	NA

\* 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

- Up to week 45 2013 in 74.4% 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 13):
  - 27.1% in all 2 year olds
  - 24.4% in all 3 year olds
  - 37.9% in under 65 years in a clinical risk group
  - 29.5% in all pregnant women
  - 60.8% in 65+ year olds

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



Although in many European countries influenza-like illness activity started to increase, influenza detections in the northern hemisphere temperate zones remained low.

- [Europe](#) 8 November 2013 (European Centre for Disease Prevention and Control report)

For week 44 2013, clinical data were reported by 25 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, Slovakia and the UK (Scotland). All other countries reported no activity. All countries reported decreasing or stable trends.

For week 44/2013, 19 countries collected 236 sentinel specimens, one of which, from the Netherlands, tested positive for influenza A(H3) virus. In addition, 34 specimens from non-sentinel sources (e.g. specimens collected for diagnostic purposes in hospitals) were found to be positive for influenza virus. Of these, 30 were type A and four type B. Of four subtyped influenza A viruses, three were A(H1)pdm09 and one was A(H3). For two of the influenza B viruses, the lineage was determined as B/Yamagata/16/88 lineage.

Since week 40/2013, nine hospitalised laboratory-confirmed influenza cases have been reported by UK and Ireland, with eight of the patients having been admitted to ICU. Five of the cases were infected with influenza A, two of which were subtyped as A(H1)pdm09, and four were infected with influenza B virus.

- [United States of America](#) 8 November 2013 (Centre for Disease Control report)

During week 44 2013, influenza activity remained low in the United States. Nationwide during week 44, 1.4% 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%. On a regional level, the percentage of outpatient visits for ILI ranged from 0.4% to 2.6% during week 44. All 10 regions reported a proportion of outpatient visits for ILI below their region-specific baseline levels. One state experienced moderate ILI activity, three states experienced low ILI activity. Forty-six states and New York City experienced minimal ILI. Data were insufficient to calculate an ILI activity level from the District of Columbia.

During week 44, 5.3% of all deaths reported through the 122-Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 6.3% for week 44. No influenza-associated pediatric deaths for the 2013-2014 season have been reported to CDC.

Of 4,118 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 44, 201 (4.9%)

were positive for influenza. By type, 167 (83.1%) were influenza A (forty three (25.7%) A(H1N1)pdm09, 105 subtyping not performed and 19 (11.4%) A(H3)) and 34 (16.9%) were influenza B.

- [Canada](#) 8 November 2013 (Public Health Agency report)

Influenza activity in Canada increased slightly in week 44. Ten regions reported sporadic activity. The number of regions reporting sporadic activity has increased over the past three weeks. The national influenza-like-illness (ILI) consultation rate decreased slightly from 18.2/1,000 in week 43 to 16.7/1,000 in week 44. No new influenza outbreaks were reported in week 44. To date this season, a total of five influenza-associated paediatric hospitalizations have been reported (one child 0-5 months of age and four 2-4 years of age). To date this season, six adult influenza-associated hospitalizations have been reported (all adults over 45 years of age with influenza A).

- [Global influenza update](#) 11 November 2013 (WHO website)

Although in many European countries influenza-like illness activity started to increase, influenza detections in the northern hemisphere temperate zones remained low. 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 Thailand and Viet Nam, but increased in Cambodia and Lao People's Democratic Republic. 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 countries, reported cases of influenza A infection remained at low levels among most Caribbean islands and Central American countries, with increased reports of influenza B in certain countries. Respiratory syncytial virus (RSV) continued to predominate in certain countries, but the RSV activity largely remained within expected seasonal levels.

Influenza activity peaked in the temperate countries of South America and in South Africa in late June. Temperate South American countries reported cases of A(H1N1)pdm09 A (H3N2) and influenza B, and acute respiratory activity remained low.

In Australia and New Zealand, numbers of influenza viruses detected and rates of influenza-like illness decreased. Co-circulation of influenza A(H1N1)pdm09, A(H3N2) and B viruses was reported in both countries.

- [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 Guangdong 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 11 November 2013

Up to 11 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 101 suspect cases in the UK that have been investigated for MERS-CoV and tested negative. A further 149 confirmed cases have been reported internationally. This results in a current global total of [153 cases](#), 64 of which have died (case fatality ratio=42%). Further information on management and guidance of possible cases is available [online](#).

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<sup>®</sup> and EMIS and EMIS practices contributing to the QSurveillance<sup>®</sup> database.

**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](#))