



PHE Weekly National Influenza Report

Summary of UK surveillance of influenza and other seasonal respiratory illnesses

7 November 2013 – Week 45 report (up to week 44 data)

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 44 (ending 3 November 2013), overall weekly influenza GP consultations remained low in England (5.6 per 100,000), Wales (2.2 per 100,000), Scotland (4.7 per 100,000) and Northern Ireland (10.6 per 100,000)).
 - Through various syndromic indicators, there is nothing of significance to report in week 44 2013.
 - Two new acute respiratory outbreaks have been reported in the past seven days in care homes (one rhinovirus and one not tested).
- Virology
 - In week 44 2013, nine influenza positive detections were recorded through the DataMart scheme (five A(H3) and four A(H1N1)pdm09, positivity of 1.4%). No samples were positive through the UK sentinel schemes.
- Disease severity and mortality
 - Three new admissions to ICU/HDU with confirmed influenza (one A unknown and two B) were reported through the USISS mandatory ICU surveillance scheme across the UK (139 Trusts in England) in week 44. Three new hospitalised confirmed influenza case (one A(H1N1pdm09) and two A unknown) were reported through the USISS sentinel hospital network across England (29 Trusts). In week 44 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 44 2013 in 71.6% 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: 22.6% in all 2 year olds, 20.5% in all 3 year olds, 34.1% in under 65 years in a clinical risk group, 26.5% in pregnant women and 56.0% 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 44 (ending 3 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 44 2013 (5.6 per 100,000) compared to week 43 (6.4 per 100,000) (Figure 1*). ILI rates decreased in the North (from 6.4 to 2.1 per 100,000) and remained stable in the Central (from 7.5 to 6.4 per 100,000) and South regions (from 5.8 to 7.4 per 100,000).

-In week 44 2013, the highest rates were seen in under one year olds (27.7 per 100,000) and 15-44 year olds (9.2 per 100,000).

Figure 1: RCGP ILI consultation rates, England and Wales

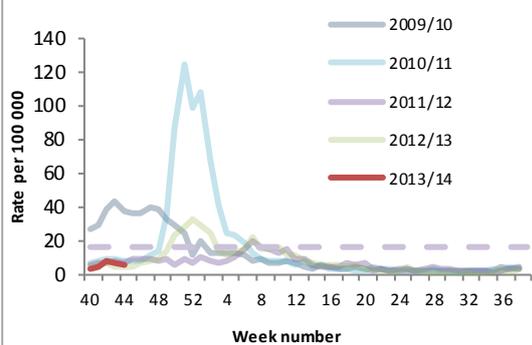


Figure 2: RCGP ILI consultation rates, by age group, E&W

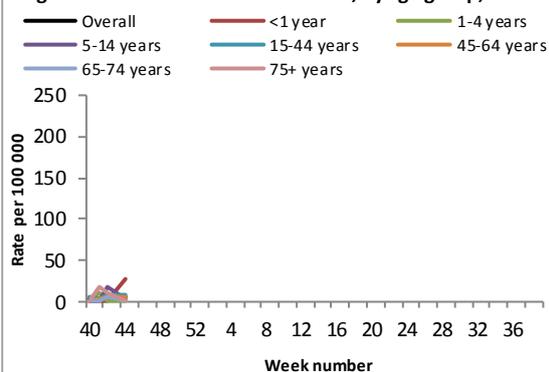
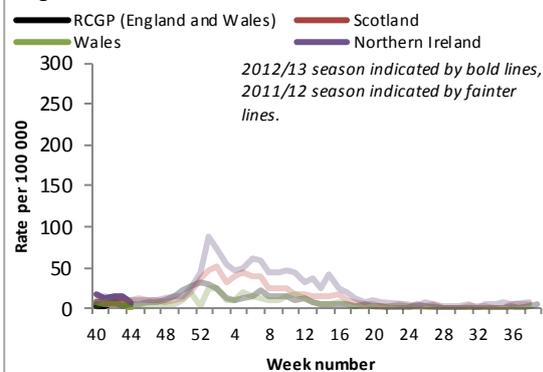


Figure 3: GP ILI/influenza consultation rates in the UK



Northern Ireland

-The Northern Ireland influenza rate decreased from 14.4 per 100,000 in week 43 to 10.6 per 100,000 in week 44 (Figure 3).

-In week 44 2013, the highest rates were seen in 1-4 year olds (from 20.2 to 30.2 per 100,000) and 45-64 year olds (from 6.3 to 12.5 per 100,000).

Wales

-The Welsh influenza rate remained stable from 4.2 per 100,000 in week 43 to 2.2 per 100,000 in week 44 (Figure 3).

-The highest rate was seen in 75+ year olds (from 10.0 to 4.0 per 100,000) followed by 45-64 year olds (from 2.3 to 3.6 per 100,000).

Scotland

-The Scottish ILI rate decreased from 8.5 per 100,000 in week 43 to 4.7 per 100,000 in week 44 (Figure 3).

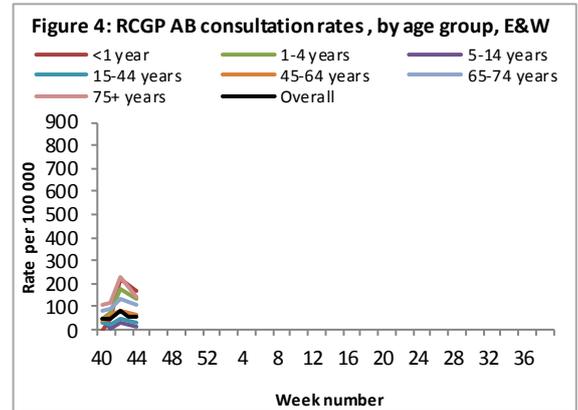
-The highest rate was seen in 1-4 year olds (from 5.9 to 10.3 per 100,000) followed by 45-64 year olds (from 10.6 to 5.4 per 100,000).

*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 slightly from 55.5 per 100,000 in week 43 to 59.5 per 100,000 in week 44 (Figure 4). The highest rates were seen in <1 year olds (166.2 per 100,000), 75+ year olds (145.5 per 100,000) and 1-4 year olds (133.7 per 100,000).



Community surveillance

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Through various syndromic indicators, there is nothing of significance to report in week 44 2013 and two new acute respiratory outbreaks have been reported.

- PHE Real-time Syndromic Surveillance

-Through various syndromic surveillance systems (NHS Direct, emergency departments, GP in-hours and GP out-of-hours schemes), there is nothing of significance to report in week 44 2013.
 -For further information, please see the syndromic surveillance [webpage](#).

- Acute respiratory disease outbreaks

-Two new acute respiratory outbreak were reported in the last 7 days in England in care homes (North England and South England PHE regions). One tested positive for rhinovirus and the other one not tested. So far this season, all eleven 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.

Microbiological surveillance

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In week 44 2013, nine influenza positive detections were recorded through the DataMart scheme (five A(H3) and four A(H1N1)pdm09) and no samples were positive through the UK sentinel schemes.

- Respiratory DataMart System (England)

-In week 44 2013, out of the 648 respiratory specimens reported through the Respiratory Datamart System, five (0.8%) were positive for flu A (H3), four (0.6%) positive for flu A (H1N1) pdm09 and no samples were positive for influenza B (Figure 5). Positivity remained high for rhinovirus (22.0%); positivity decreased slightly for parainfluenza (from 9.0% to 6.8%); positivity continued to increase for RSV (from 6.3% to 10.0%, with the highest positivity in <5yrs, 2.5%) and other respiratory viruses remained at low levels: (adenovirus 2.8% and hMPV 1.2%) (Figures 6 and 7).

Figure 5: DataMart samples positive for influenza, England

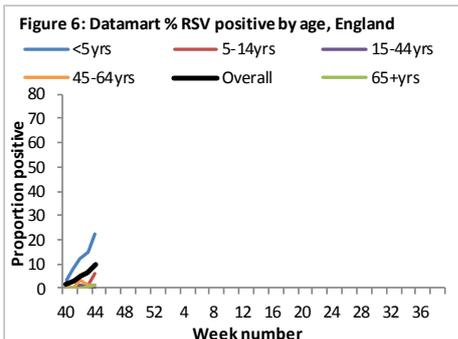
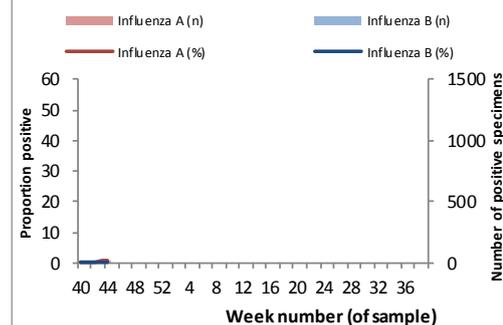
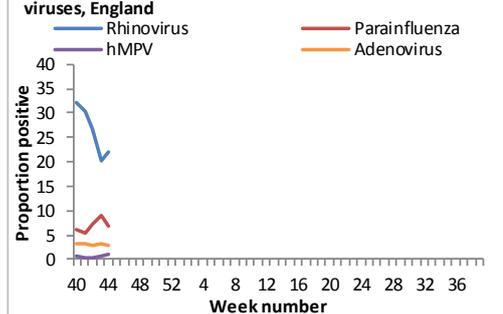


Figure 7: Datamart % positive for other respiratory viruses, England



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

-No samples from Scotland or England were positive for influenza in week 44 (Table 1). No samples were tested through the Welsh and Northern Ireland schemes.

Table 1: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
41	0/25 (0%)	1/45 (2.2%)	0/1 (-)	0/0 (-)
42	0/69 (0%)	0/37 (0%)	0/0 (-)	0/0 (-)
43	0/27 (0%)	0/47 (0%)	0/2 (-)	0/0 (-)
44	0/2 (-)	0/21 (0%)	0/0 (-)	0/0 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Virus characterisation

-In week 44 2013, 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 44 2013, no influenza viruses were tested for antiviral susceptibility by PHE RVU.

- Antimicrobial susceptibility

-In the 12 weeks up to 27 October 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 27 Oct 2013, E&W

Organism	Tetracyclines		Co-amoxiclav	
	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)
<i>S. aureus</i>	3,053	92	181	88
<i>S. pneumoniae</i>	1,591	81	1678*	91*
<i>H. influenzae</i>	7,103	99	6,613	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 44, three new admissions of confirmed influenza cases to ICU/HDU (one A unknown and two B) and no confirmed influenza deaths in ICU/HDU have been reported through the national USISS mandatory ICU scheme across the UK (139 Trusts in England). Three new hospitalised confirmed influenza case has been reported through the USISS sentinel hospital network across England (one A(H1N1)pdm09 and two A unknown) (29 Trusts).

A national mandatory collection (USISS mandatory ICU scheme) is operating in cooperation with the Department of Health to report the number of confirmed influenza cases admitted to Intensive Care Units (ICU) and High Dependency Units (HDU) and number of confirmed influenza deaths in ICU/HDU across the UK. A confirmed case is defined as an individual with a laboratory confirmed influenza infection admitted to ICU/HDU. In addition a sentinel network (USISS sentinel hospital network) of acute NHS trusts has been established in England to report weekly laboratory confirmed hospital admissions. Further information on these systems is available through the [website](#). Please note data in previously reported weeks are updated and so may vary by week of reporting.

- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 44)

-In week 44, three new admissions to ICU/HDU with confirmed influenza infection (one A unknown and two B) were reported across the UK (139/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 8 and 9). No new confirmed influenza deaths were reported in week 44 2013. A total of eleven admissions (two A(H1N1)pdm09, four A(unknown) and five 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

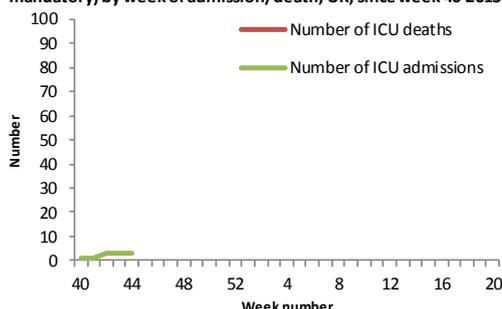
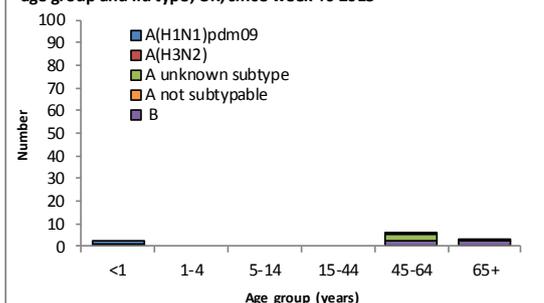


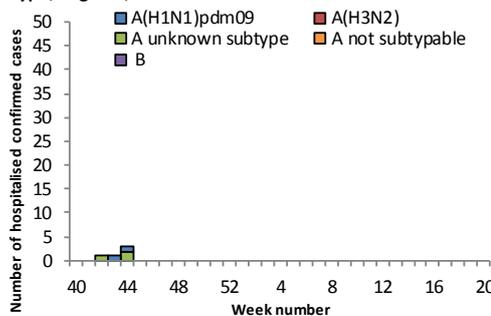
Figure 9: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2013



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

-In week 44, three new hospitalised confirmed influenza case (one A(H1N1)pdm09 and two A unknown) were reported from the USISS sentinel hospital network from 29 NHS Trusts across England (Figure 10). A total of five hospitalised confirmed influenza admissions (two A(H1N1)pdm09 and three A unknown) 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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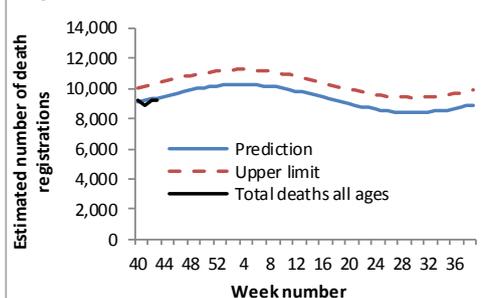
In week 44, no excess in all-cause mortality was seen across the UK overall, by age group or by region.

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 43 2013, an estimated 9,236 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is similar to the 9,236 estimated death registrations in week 42 but 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 44 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 44 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

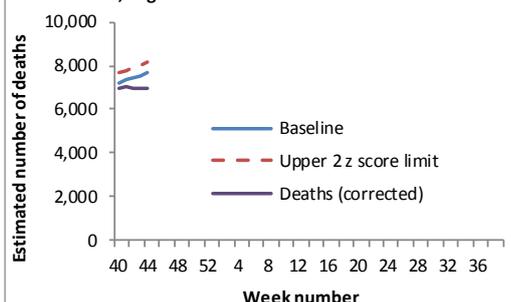


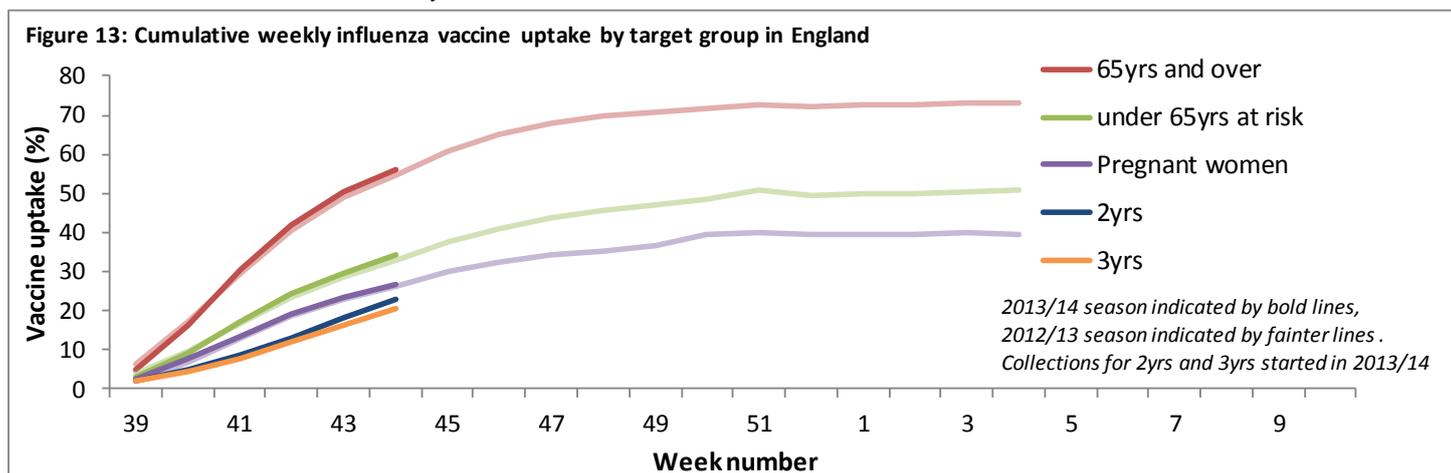
Table 4: Excess mortality by UK country*

Country	Excess detected in week 44 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 44 2013 in 71.6% 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):
 - 22.6% in all 2 year olds
 - 20.5% in all 3 year olds
 - 34.1% in under 65 years in a clinical risk group
 - 26.5% in pregnant women
 - 56.0% in 65+ year olds



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

- [Europe](#) 1 November 2013 (European Centre for Disease Prevention and Control report)

For week 43 2013, clinical data were reported by 27 countries, all of which experienced low-intensity influenza activity, the lowest category of reporting. Of the five countries that reported local or sporadic patterns of influenza activity, two (Denmark and Sweden) had laboratory-confirmed sentinel influenza cases. Decreasing trends were reported by Poland and Romania while all other countries reported stable trends. Nevertheless, in all countries the incidence of ILI/ARI was below the epidemic threshold.

For week 43 2013, 21 countries tested 351 sentinel specimens of which four (1.1%) were positive for influenza virus. One of the three type A viruses was not subtyped, one was subtyped as A(H1)pdm09 and one as A(H3); one was a B virus for which the lineage is unknown. In addition, 24 non-sentinel source specimens (e.g. specimens collected for diagnostic purposes in hospitals) were positive for influenza virus, 21 type A and three type B. All five subtyped influenza A viruses were A(H1)pdm09.

For week 43/2013, three hospitalised laboratory-confirmed influenza cases were reported by the UK. One of the cases was infected with influenza A (not subtyped), one with A(H1N1)pdm09 and one with type B influenza virus.

Since week 40/2013, nine hospitalised laboratory-confirmed influenza cases have been reported by Ireland, and the UK. Four patients were infected with influenza B virus, and of five type A viruses detected in the other patients, two were A(H1)pdm09 and three were not subtyped.

- [United States of America](#) 1 November 2013 (Centre for Disease Control report)

During week 43 2013, influenza activity remained low in the United States. Nationwide, 1.2% 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 0.5% to 2.6% during week 43. All 10 regions reported a proportion of outpatient visits for ILI below their region-specific baseline levels. Three states experienced low ILI activity (Louisiana, Mississippi, and Texas).Forty seven states and New York City experienced minimal ILI activity. Data were insufficient to calculate an ILI activity level from the District of Columbia.

During week 43, 5.6% 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 43. No influenza-associated pediatric deaths for the 2013-2014 season have been reported to CDC.

Of 3,241 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 43, 145 (4.5%) were positive for influenza. By type, 135 (93.1%) were influenza A (twenty eight (20.7%) A(H1N1)pdm09, 100 subtyping not performed and 7 (5.2%) A(H3)) and 10 (6.9%) were influenza B.

- [Canada](#) 1 November 2013 (Public Health Agency report)

Influenza activity in Canada increased slightly in week 43. Seven regions (in BC(1), AB(2), ON(2) and QC(2)) reported sporadic activity. The number of regions reporting sporadic activity has increased over the past two weeks. The national influenza-like-illness (ILI) consultation rate decreased slightly from 23.4/1,000 in week 42 to 20.4/1,000 in week 43.

- [Global influenza update](#) 24 October 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. In the regions of tropical Asia influenza activity was variable from country to country. In Hong Kong Special Administrative Region, China, influenza detections decreased, while in the south of China an increase in influenza detections was seen. In South East Asia, influenza detections decreased in Thailand, but increased in Viet Nam. In this area, co-circulation of 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. Respiratory syncytial virus (RSV) continued to predominate, 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 co-circulation of influenza B and A (H3N2) in most countries, and while RSV activity continued to predominate, it showed an overall decreasing trend.

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 sustainable 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 6 November 2013

Up to 6 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 99 suspect cases in the UK that have been investigated for MERS-CoV and tested negative. A further 146 confirmed cases have been reported internationally. This results in a current global total of [150 cases](#), 64 of which have died (case fatality ratio=43%). 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

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- [Real time syndromic surveillance](#)
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Community surveillance

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Disease severity and mortality data

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- [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](#))