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## Summary

### GP consultation rates and indicators of influenza activity remain low.

- Weekly influenza GP consultation rates remain low in England, Wales, Scotland and Northern Ireland.
  - In week 47 (ending 25 November 2012), the weekly primary care ILI consultation rate was low in England (7.9 per 100,000), Scotland (9.7 per 100,000), Northern Ireland (10.5 per 100,000) and Wales (6.6 per 100,000).
  - The weekly proportion of NHS Direct calls for cold/flu and fever (5-14yrs) were below the early warning thresholds for influenza in week 47.
  - Eight new acute respiratory disease outbreaks have been reported in the past seven days.
- Virology
  - 30 (3.5%) of the 864 respiratory specimens reported to DataMart (England) tested positive for influenza in week 47 (2 A(H3), 5 A subtype not known and 23 B). The proportion of samples positive increased for RSV, particularly in the under five year olds, increased for rhinovirus, parainfluenza and adenovirus, and remained stable for hMPV.
  - Three influenza A and one influenza B positive detections were recorded through the two English GP-based sentinel schemes in week 47.
- RSV activity continues to increase. Monoclonal antibodies (Palivizumab) are indicated for the prevention of RSV in at-risk children. For further information please see the relevant [chapter](#) in the Department of Health Immunisation handbook.
- Disease severity and mortality
  - Four new admissions to ICU/HDU with confirmed influenza (one A(H1N1)pdm09, two A(subtype not known) and one B) were reported through the USISS mandatory ICU surveillance scheme across the UK in week 47.
  - No excess all-cause mortality was seen by age group or region in week 47 across the UK as calculated with the EuroMOMO algorithm.
- Influenza vaccination
  - Up to week 47, 67.9% of people in England aged 65 years and over had received the 2012/13 influenza vaccine (provisional data). For those in a clinical risk group aged under 65 years, provisional uptake was 43.8%.
  - Amongst pregnant women, the provisional uptake was 34.1%.
  - Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 28.4% were vaccinated by 31 October 2012.
- International situation
  - During week 46 2012, there is currently little evidence of sustained influenza virus transmission in Europe – much of the clinical activity with influenza-like illness will be due to other respiratory pathogens.
  - Countries of the Northern Hemisphere temperate region report increasing detections of influenza viruses, however none have crossed their seasonal threshold for ILI/ARI consultation rates or announced the beginning of their season.
- Novel coronavirus 2012
  - WHO has reported further new confirmed cases of novel coronavirus from Kingdom of Saudi Arabia and Qatar. This brings the total number of laboratory confirmed cases of novel coronavirus 2012 reported globally to six. In the UK there has been one confirmed imported case to date.

In week 47 (ending 25 November 2012), weekly influenza GP consultation rates in England, Wales, Scotland and Northern Ireland remained low.

- Influenza/Influenza-Like-Illness (ILI)

RCGP (England and Wales)

-The overall ILI consultation rate from RCGP for England and Wales increased slightly to 7.9 per 100,000 in week 47 (Figure 1). ILI rates increased in the North (from 4.2 to 5.6 per 100,000) and the South (5.1 to 8.7 per 100,000), and decreased in the Central region (from 12.6 to 8.7 per 100,000).

-The rate increased in most age groups, except the <1, 15-44 and 75+ year groups. The highest rate is in the 65-74 year group (10.5 per 100,000).

Figure 1: RCGP ILI consultation rates, England and Wales

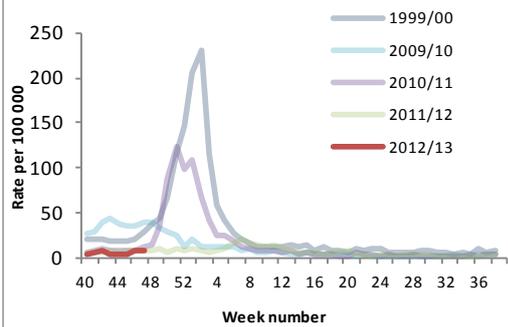


Figure 2: RCGP ILI consultation rates, by age group, E&W

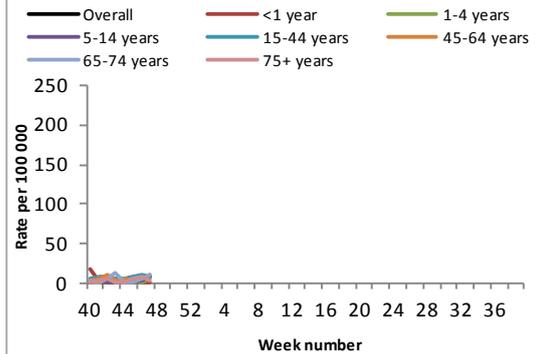
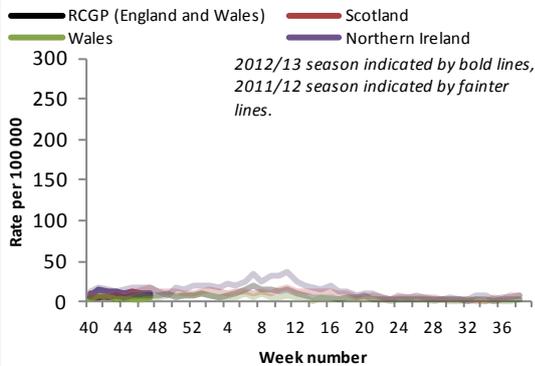


Figure 3: GP ILI/influenza consultation rates in the UK



Northern Ireland

-The combined influenza/ILI rate in Northern Ireland increased slightly to 10.5 per 100,000 in week 47 (Figure 3).

-The rate increased in the 15-44 and 45-64 year groups. The highest rate was in the 45-64 year group (14.6 per 100,000) followed by the 15-44 year group (12.9 per 100,000). The rate decreased or remained stable in the other age groups.

Wales

-The Welsh influenza rate increased from 2.0 in week 46 to 6.6 per 100,000 in week 47 (Figure 3).

-The rate increased in all age groups except the <1 and 1-4 year groups. The highest rate was reported in the 5-14 year group (10.8 per 100,000).

Scotland

-The Scottish ILI rate remained stable at 9.7 per 100,000 in week 47 (Figure 3).

-The rate remained fairly stable in all age groups except a decrease in the under 1 group and an increase in the 1-4 year group. The highest rate remained in the 45-64 year group (13.0 per 100,000).

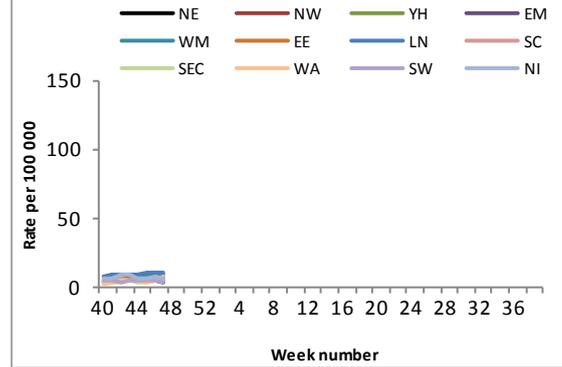
HPA/QSurveillance System (England, Wales and Northern Ireland)

-In the HPA/QSurveillance system, the overall ILI consultation rate remained stable at 7.1 per 100,000 in week 47).

-The rate remained fairly stable in all age groups with the highest rate reported in the 15-44 year group (8.7 per 100,000).

-The rate increased slightly in East of England and the highest rate continued to be reported in London (10.3 per 100,000).

**Figure 4: QSurv ILI consultation rates, by region, E,W&NI**



- Other respiratory indicators

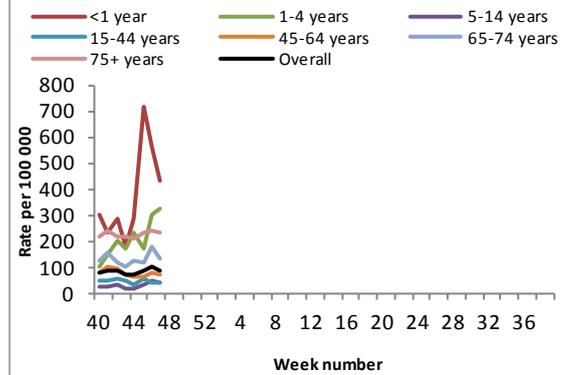
Acute bronchitis (AB)

The overall weekly consultation rate for acute bronchitis (AB) in England and Wales through the RCGP scheme decreased from 101.3 in week 46 to 90.5 per 100,000 in week 47 (Figure 5). Under one year olds still had the highest rate (with a decrease from 563.9 to 435.0 per 100,000), followed by 1-4 year olds (from 299.4 to 324.1 per 100,000).

Pneumonia

The overall weekly consultation rate for pneumonia from the HPA/QSurveillance system remained stable at 1.0 per 100,000 in week 47

**Figure 5: RCGP AB consultation rates, by age group, E&W**



**Community surveillance**

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**In week 47 2012, the weekly proportion of NHS Direct calls for cold/flu and for fever (5-14 yrs) were below the early warning thresholds of 1.6% and 11.7% respectively. Eight acute respiratory disease outbreaks have been reported in the past seven days.**

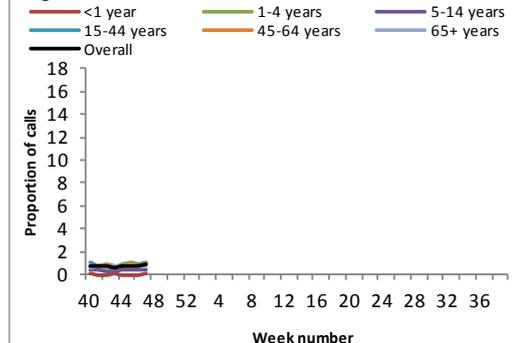
- HPA/NHS Direct syndromic surveillance system

-The weekly national proportion of NHS Direct calls for cold/flu remained below the early warning threshold level for influenza of 1.6% (0.9% in week 47) (Figure 6). All age groups remained stable.

-The weekly proportion of calls for fever in the 5-14 year group remained below the influenza threshold of 11.7% (6.0% in week 47).

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

**Figure 6: NHS Direct % calls for colds/flu, E&W**

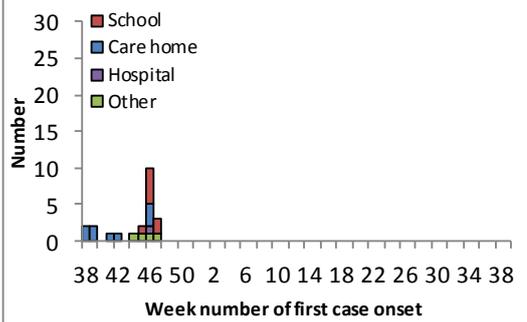


- Acute respiratory disease outbreaks

-Eight new acute respiratory outbreaks have been reported in the past seven days from regions of Yorkshire and Humber, South West, South East, East Midlands and East of England. So far this season, nine outbreaks have been reported in care homes (three rhinovirus, one influenza B and five not tested) (Figure 7), eight in schools (one A(H3), one A subtype not known, three B and three not tested), and three in other settings (one A(H1N1)pdm09, one RSV and one not tested).

-Outbreaks should be recorded on HPZone and reported to the local HPA Health Protection Unit and [Respcdsc@hpa.org.uk](mailto:Respcdsc@hpa.org.uk).

Figure 7: Number of acute respiratory outbreaks by institution, UK



**Microbiological surveillance**

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In week 47 2012, 30 influenza positive detections (2 A(H3), 5 A subtype not known and 23 B) were recorded through the DataMart scheme (positivity of 3.5%). Four of the 43 samples received via the two English GP-based sentinel schemes in week 47 was positive for influenza (three A and one B).

- English DataMart

-30 (3.5%) of the 864 respiratory specimens reported to the English DataMart virological surveillance system as taken in week 47 were positive for influenza (2 A(H3), 5 A subtype not known and 23 B) (Figure 8).

-In week 47, positivity continued to increase for RSV (from 25.3% to 32.3%), with the highest rate in under five year olds (55.4%), increased for rhinovirus (18.0%), parainfluenza (3.2%) and adenovirus (6.0%), and remained stable for hMPV (2.5%) (Figures 9 and 10).

Figure 8: DataMart samples positive for influenza, England

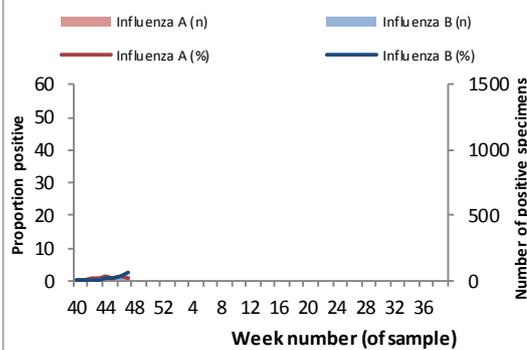


Figure 9: Datamart % RSV positive by age, England

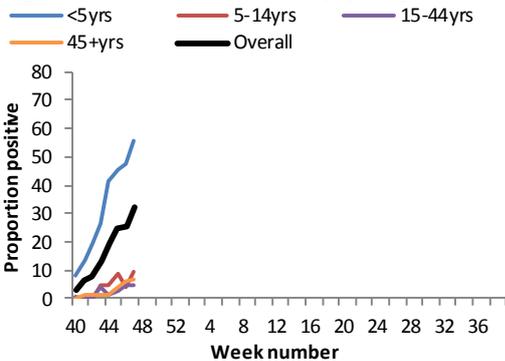
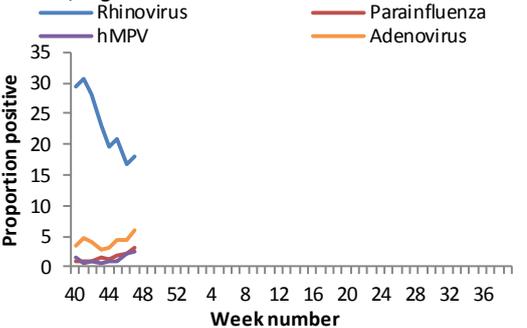


Figure 10: Datamart % positive for other respiratory viruses, England



- RCGP/SMN sentinel swabbing schemes and devolved administrations

-Of the 43 samples received and tested via the two English GP-based sentinel schemes in week 47, four were positive (9.3%) for influenza (three A and one B). No samples received in Scotland, Northern Ireland and Wales were positive for influenza (Table 1).

Table 1: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
43	8/32 (25%)	0/15 (0%)	0/0 (-)	0/1 (-)
44	5/53 (9.4%)	1/22 (4.5%)	0/0 (-)	0/1 (-)
45	0/63 (0%)	1/27 (3.7%)	0/1 (-)	0/2 (-)
46	5/74 (6.8%)	2/50 (4%)	0/3 (-)	0/0 (-)
47	4/43 (9.3%)	0/24 (0%)	0/3 (-)	0/3 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Virus characterisation

- Since week 40 2012, the HPA Respiratory Virus Unit (RVU) has isolated and antigenically characterised 15 influenza A(H3N2) viruses similar to the A/Victoria/361/2011 vaccine strain, and one influenza A(H1N1)pdm09 virus similar to the A/California/07/2009 vaccine strain. Of six influenza B viruses isolated, three belong to the B-Yamagata lineage and three to the B-Victoria lineage.

- Antiviral susceptibility

-No influenza viruses have been found to be resistant to antivirals at RVU and regional laboratories since week 40 2012.

- Antimicrobial susceptibility

-In the 12 weeks up to 18 November 2012, 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 18 Nov. 2012, E&W**

Organism	Tetracyclines		Co-amoxiclav	
	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)
<i>S. aureus</i>	2,666	93	151	85
<i>S. pneumoniae</i>	1,752	81	1841*	92*
<i>H. influenzae</i>	7,103	98	6,735	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.

### Disease severity and mortality data

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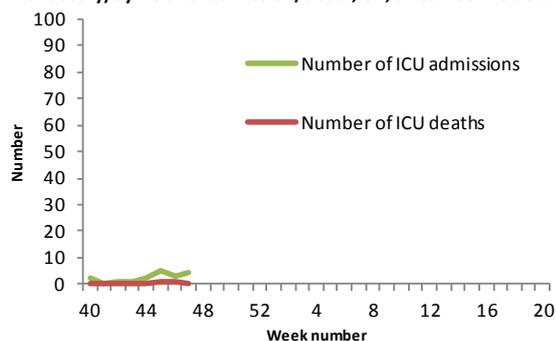
In week 47, four new admissions of confirmed influenza cases to ICU/HDU (one A(H1N1)pdm09, two A unknown subtype and one B) and no confirmed influenza deaths in ICU/HDU have been reported through the national USISS mandatory ICU scheme across the UK. Three new hospitalised confirmed influenza cases have been reported through the USISS sentinel hospital network across England (one A(H1N1)pdm09), one A(H3N2), and one B).

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 [HPA website](#). Please note data in previously reported weeks are updated and so may vary by week of reporting.

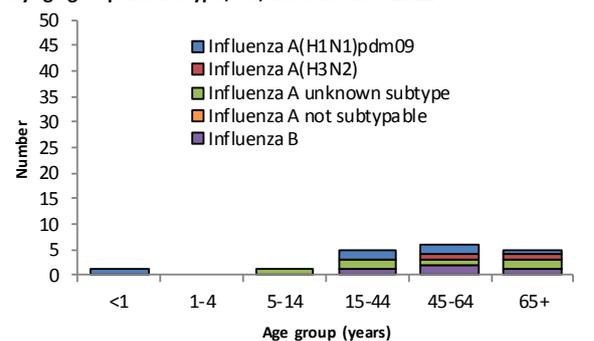
- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 47)

-In week 47, four new admissions to ICU/HDU with confirmed influenza infection (one A(H1N1)pdm09, two A unknown subtype and one B) were reported across the UK (151/163 Trusts in England) through the USISS mandatory ICU scheme (Figures 11 and 12). A total of 18 admissions (six A(H1N1)pdm09, two A(H3N2), six A unknown subtype and four B) have been reported since week 40 2012. Two confirmed influenza deaths have been reported across the UK in ICU/HDU since week 40 (Figure 11).

**Figure 11: Weekly ICU influenza admissions and deaths (USISS mandatory) by week of admission/death, UK, since week 40 2012**



**Figure 12: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2012**



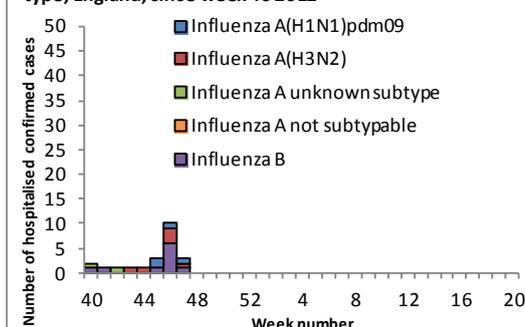
- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 47)

-In week 47, three new hospitalised confirmed influenza cases (one A(H1N1)pdm09), one A(H3N2), and one B) were reported from the USISS sentinel hospital network from 27 NHS Trusts across England (Figure 13).

-Five of the hospitalised cases from the USISS sentinel hospital network since week 40 2012 are reported to have been admitted to HDU/ICU.

-A total of 22 hospitalised confirmed influenza admissions (four A(H1N1)pdm09, six A(H3N2), two A unknown subtype and ten B) have been reported since week 40 2012.

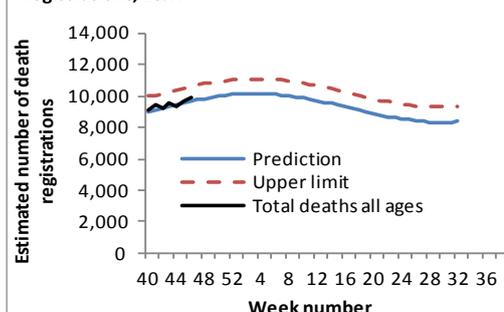
Figure 13: Weekly hospitalised cases (USISS sentinel) by flu type, England, since week 40 2012



- Excess overall all-cause mortality, England and Wales

-In week 46, an estimated 9,900 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is slightly more than the 9,683 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 the HPA (Figure 14).

Figure 14: 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 47 2012, no excess mortality by date of death above the upper 2 z-score threshold was seen by age group or region in England after correcting ONS disaggregate data for reporting delay with the standardised [EuroMOMO algorithm](#) (Figure 15, Table 2). This data is provisional due to the time delay in registration and so numbers may vary from week to week. Across the UK, no excess was reported in week 47 (Table 3).

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

Age group (years)	Excess detected in week 47 2012?	Cumulative excess since week 40 2012
<5	x	0
5-14	x	0
15-64	x	0
65+	x	0

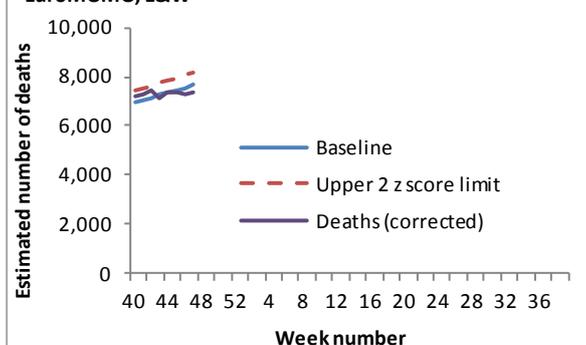
\* Excess mortality is calculated as the observed minus the expected number of deaths that week

Table 4: Excess mortality by UK country\*

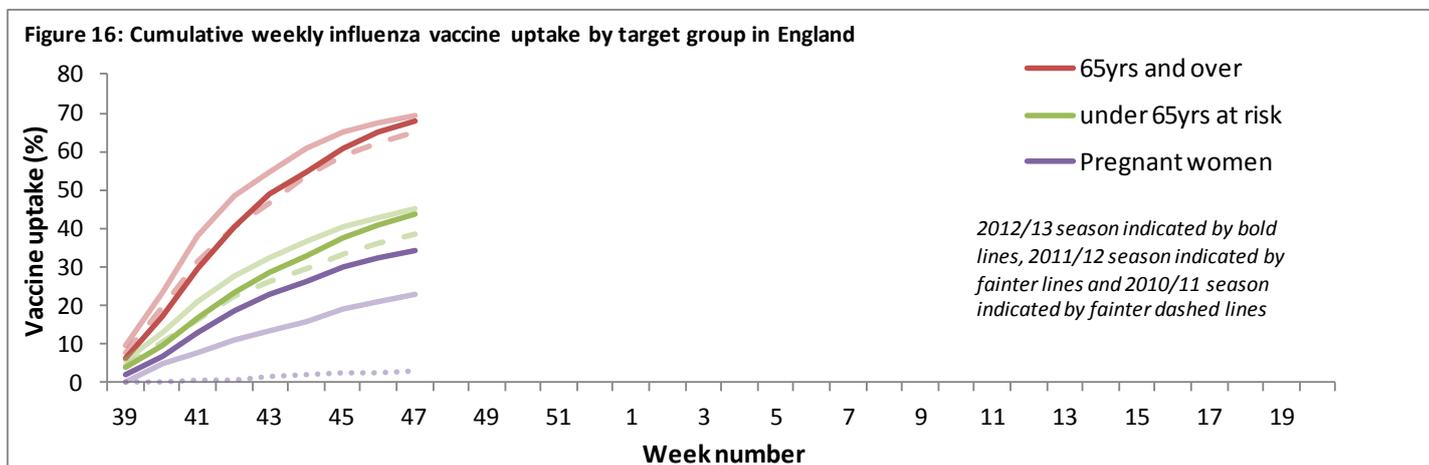
Country	Excess detected in week 47 2012?	Cumulative excess since week 40 2012
England	x	0
Wales	x	0
Scotland	x	0
Northern Ireland	x	0

\* Excess mortality is calculated as the observed minus the expected number of deaths that week

Figure 15 Excess mortality in 65+ year olds by week of death, EuroMOMO, E&W



- Up to week 47 2012 in 73.5% of GP practices reporting weekly, the provisional proportion of people in England aged 65 years and over who had received the 2012/13 influenza vaccine was 67.9%, while in those aged under 65 years in a clinical risk group it was 43.8% (provisional data from Immform). Amongst pregnant women, the uptake was 34.1% (provisional data from Immform) (Figure 16).
- NHS health staff have been advised to receive the seasonal influenza vaccine in 2012/13. Further information is available [here](#).



- In the first monthly collection up to 31 October 2012, provisional cumulative seasonal influenza vaccine uptake was 53.7% in 65 years and over and 32.3% in under 65 year olds at risk from 91.7% of GP practices. The provisional cumulative uptake in pregnant women was 26.1% though this data needs to be interpreted with caution; denominators may be regarded as over-inclusive as they may include women that become eligible and then ineligible before they are vaccinated (i.e. vaccine uptake for pregnant women is likely to be underestimated).
- Provisional data from the first monthly collection of influenza vaccine uptake by frontline healthcare workers show 28.4% were vaccinated by 31 October 2012 from 93.5% of Trusts (including PCTs).

**During week 46 2012, there is currently little evidence of sustained influenza virus transmission in Europe – much of the clinical activity with influenza-like illness will be due to other respiratory pathogens. Countries of the Northern Hemisphere temperate region report increasing detections of influenza viruses, however none have crossed their seasonal threshold for ILI/ARI consultation rates or announced the beginning of their season.**

- [Europe](#) 23 November 2012 (European Centre for Disease Prevention and Control report)

During week 46 2012, all 27 reporting countries experienced low intensity influenza activity. Geographic spread was reported as sporadic by 12 countries, while the remaining 15 countries reported no geographic spread. Stable trends in clinical activity were reported by 22 countries while increasing trends were reported by Bulgaria and Poland. A decreasing trend was reported by Romania and Slovakia. Given the absence of Bulgarian sentinel samples positive for influenza, the increasing ARI rate observed in Bulgaria for the second consecutive week is probably due to other respiratory pathogens.

In week 46 2012, 21 countries reported virological data. Of 416 sentinel specimens tested, 13 (3%) were positive for influenza. The positive detections were reported by eight countries: six were type A and seven were type B. During week 46 2012, 76 non-sentinel source specimens, e.g. specimens collected for diagnostic purposes in hospitals, were found to be positive for influenza virus, 42 were type A and 34 were type B. Of the 15 subtyped influenza A viruses, 10 (67%) were A(H1)pdm09 and five (33%) were A(H3). The lineage of five non-sentinel B viruses characterised further was Yamagata. Of the 54 influenza viruses detected in sentinel specimens since week 40/2012, 31 (57%) were type A viruses and 112 (35%) were type B viruses. Of 23 type A viruses subtyped, 19 were A(H3) and four A(H1)pdm09.

- [United States of America](#) 21 November 2012 (Centre for Disease Control report)

During week 46 2012, influenza activity increased in the United States. Nationwide, 1.6% of patient visits reported through the US Outpatient Influenza-Like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI) in week 46 2012 which was below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels. One state experienced high ILI activity, two states experienced moderate ILI activity, three states experienced low ILI activity; New York City and 41 states experienced minimal ILI activity, and the District of Columbia and three states had insufficient data. The geographic spread of influenza in one state was reported as widespread, six states reported regional activity; eight states reported local activity; the District of Columbia, Guam, and 31 states reported sporadic activity; three states reported no influenza activity, and Puerto Rico, the U.S. Virgin Islands, and one state did not report.

The proportion of deaths attributed to pneumonia and influenza (P&I), 6.4%, was below the epidemic threshold of 6.6% for week 46 2012. One influenza-associated paediatric death was reported to CDC during week 46 2012 and was associated with an influenza A(H3) virus. A total of two influenza-associated pediatric deaths have been reported during the 2012/13 season.

Of 3,742 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, 495 (13.2%) were positive for influenza. By type, 334 (67.6%) were influenza A (five (1.5%) A(H1N1)pdm09, 155 subtyping not performed and 174 (52.1%) A(H3)) and 160 (32.4%) were influenza B.

- [Canada](#) 23 November 2012 (Public Health Agency report)

Influenza activity in Canada increased compared to the previous week with more regions reporting sporadic and localised activity. In week 46, eight regions reported localized activity, 16 regions reported sporadic activity and the rest reported no activity. Nine new influenza outbreaks were reported in week 46: six in long-term care facilities and three in other settings.

The percentage of positive influenza tests increased from the previous week from 4.5% in week 45 to 6.0% in week 46. Of the influenza viruses detected in week 46 (n=151), 93.4% were positive for influenza A viruses (of which 60.3% were A(H3) 3.5% were A(H1N1)pdm09, and 36.2% were A untyped) and 6.6% were influenza B viruses. Cumulative influenza virus detected by type/subtype to date are as follows: 92.6% influenza A (64.3% A(H3), 5.0% A(H1N1)pdm09 and 30.7% A(untyped)) and 7.4% influenza B.

In week 46, 19 laboratory-confirmed influenza associated hospitalisations were reported. One was aged between 1-4 years, one between 5-9 years, two between 15-19 years, two between 20-44 years, five between 45-64 years, and eight were aged ≥65 years. To date this season, 68 influenza associated hospitalisations have been reported from four provinces, two thirds of which were 65+years olds. The majority of cases have been influenza A (95.6%). Of the 49 influenza A hospitalizations for which subtype was available, 12.2% (6/49) were due to influenza A(H1N1)pdm09 and 87.8% (43/49) were due to A(H3). Of the 37 cases with available data, there have been six hospitalizations for which admission to ICU was required. To date this season, one influenza-associated death has been reported (week 36) in a hospitalized influenza A(H3) case who was ≥ 65 years of age. The national ILI consultation rate increased from the previous week from 18.0 to 27.2 per 1,000 patient visits but remains within the expected levels for this time of year.

- [Global influenza update](#) 23 November 2012 (WHO website)

Countries of the Northern Hemisphere temperate region report increasing detections of influenza viruses, however none have crossed their seasonal threshold for ILI/ARI consultation rates or announced the beginning of their season.

Countries in southern and south east Asia, except Cambodia, reported decreasing influenza virus detections. Cambodia has reported increased detections of influenza A(H3N2) for at least six weeks.

In Sub-Saharan Africa, Cameroon has continued to experience circulation of influenza A(H3N2) but appears to have peaked and the rate of detections has decreased. Ethiopia and Ghana reported increases in influenza A(H1N1)pdm09 while Madagascar, Kenya and Togo reported low circulation of mainly influenza B.

Influenza activity in the temperate countries of the Southern Hemisphere is at inter-seasonal levels.

- [Avian Influenza](#) 10 August 2012 (WHO website)

Since 2003, 608 human cases of H5N1 avian influenza have been reported to WHO from 15 countries. Of these, 359 (59%) have reportedly died (19 of 30, 63% in 2012).

The latest confirmed case reported by the WHO is from Indonesia, a 37 year old male who died on 30 July 2012 after developing symptoms on 24 July 2012.

- [Novel coronavirus 2012](#) (WHO website)

WHO has reported further new confirmed cases of novel coronavirus from Kingdom of Saudi Arabia and Qatar. This brings the total number of laboratory confirmed cases of novel coronavirus 2012 reported globally to six. In the UK there has been one confirmed imported case to date and the public health response around this case has been published [here](#). Further information on management and guidance of possible cases is available on the [HPA website](#).

## Acknowledgements

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This report was prepared by Hongxin Zhao, Helen Green and Richard Pebody. We are grateful to all who provided data for this report including the RCGP Research and Surveillance Centre, the HPA Real-time Syndromic Surveillance team, the HPA Respiratory Virus Unit, the HPA Modelling and Statistics unit, the HPA Dept. of Healthcare Associated Infection & Antimicrobial Resistance, HPA regional microbiology laboratories, NHS Direct, ONS, 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.

## 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](#) (including HPA/QSurveillance scheme, NHS Direct)

### 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](#))
- WHO 2012/13 [vaccine recommendations](#)