



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

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#### Summary

In week 07 2016 (ending 21 February 2016), influenza circulation with mainly A(H1N1)pdm09 continues with indicators starting to stabilise across surveillance schemes, including the number of respiratory outbreaks, GP ILI consultation rates, the proportion of laboratory samples positive for influenza and influenza admissions to ICU. Updated [guidance](#) on antiviral prescribing in secondary care when influenza A(H1N1)pdm09 is the dominant circulating strain has been published.

- [Community influenza surveillance](#)
  - During week 07, selected respiratory indicators, including GP influenza-like consultations remained stable, while other respiratory indicators including upper and lower respiratory tract infections continued to decrease.
  - Seventeen new acute respiratory outbreaks have been reported in the past 7 days. Two outbreaks were in schools where one tested positive for influenza A(H1N1)pdm09. Seven outbreaks were from care homes where two tested positive for influenza A(H1N1)pdm09. Four outbreaks were from hospitals where one tested positive for influenza A(not subtyped) and one tested positive for a mixed infection with influenza A(not subtyped) and influenza B. The remaining four outbreaks were from other settings where two tested positive for influenza A(not subtyped) and one tested positive for a mixed infection of influenza A(untyped) and influenza B.
- [Overall weekly influenza GP consultation rates across the UK](#)
  - In week 07, overall weekly influenza-like illness (ILI) GP consultation rate has decreased but remains above the baseline threshold in England (17.3 per 100,000). ILI rates have slightly increased or remained similar in Scotland (28.6 per 100,000) and Wales (12.1 per 100,000) and a decrease was noted in Northern Ireland (24.5 per 100,000)
  - Through the GP In Hours surveillance system, weekly ILI rates have remained stable and within seasonally expected levels in week 07.
- [Influenza-confirmed hospitalisations](#)
  - One hundred and thirty-one new admissions to ICU/HDU with confirmed influenza (fifty-five influenza A(H1N1)pdm09, seventy-four influenza A(unknown subtype) and two influenza A(H3N2)) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (119 NHS Trusts in England) in week 07, a rate of 0.32 per 100,000, compared to 0.31 in week 06. Ten new confirmed influenza deaths were also reported through this scheme.
  - One hundred and twenty-nine new hospitalised confirmed influenza cases (one hundred influenza A(H1N1)pdm09, twenty-one influenza A(unknown subtype), one influenza A(H3N2) and seven influenza B) were reported through the USISS sentinel hospital network across England (20 NHS Trusts), a rate of 1.68 compared to 1.40 per 100,000 the previous week.
  - Since week 40, thirty-seven confirmed influenza admissions have been reported (twenty-nine influenza A(H1N1)pdm09, seven influenza A(unknown subtype) and one influenza B) from the six Severe Respiratory Failure centres in the UK.
- [All-cause mortality data](#)
  - Up to week 07 2016 in England, excess mortality by date of death has been seen in 15-64 year olds in weeks 52-03 and 05-07; and in <5 year olds and 5-14 year olds in week 51 with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Scotland (0-4 year olds).
- [Microbiological surveillance](#)
  - Fifty-four samples tested positive for influenza (42 influenza A(H1N1)pdm09, 6 influenza A(untyped) and 6 influenza B) through GP sentinel schemes across the UK, with an overall positivity of 33.3%.
  - Four hundred and four influenza positive detections were recorded through the DataMart scheme (two hundred and sixty-two A(H1N1)pdm09, four A(H3), one hundred and one A(not subtyped) and thirty-seven influenza B). A positivity of 22.6% was seen in week 07, compared to 20.7% in week 06, with the highest positivity in 15-44 year olds (31.8%). This is above the all-age threshold for 2015/16 season of 7.4%.
- [Vaccination](#)
  - Up to week 04 2016 in 98.8% GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows: 45.1% in under 65 years in a clinical risk group, 42.3% in pregnant women, 71.0% in 65+ year olds, 35.4% in all 2 year olds, 37.7% in all 3 year olds and 30.1% in all 4 year olds.
  - Provisional data from the fourth monthly collection of influenza vaccine uptake by frontline healthcare workers show 49.5% were vaccinated by 31 January 2016 from 97.3% of Trusts, compared to 54.6% vaccinated in the previous season by 31 January 2015. The report is available [here](#).
  - Provisional data from the fourth monthly collection of influenza vaccine uptake children of school years 1 and 2 age show the proportion of children in England who received the 2015/16 live attenuated intranasal vaccine (LAIV) from 1 September 2015 to 31 January 2016 was as follows: 53.6% in children school year 1 age (5-6 years) and 52.1% in children school year 2 age (6-7 years).
  - Provisional data from the fourth monthly collection of influenza vaccine uptake in GP patients up to 31 January 2016 has been published. The [report](#) provides uptake at national, area team and CCG level.
- [International situation](#)
  - Globally, increasing levels of influenza activity continued to be reported in the temperate zones of the northern hemisphere with influenza A(H1N1)pdm09 as the most detected virus.

During week 07, selected respiratory indicators, including GP influenza-like consultations remained stable, while other respiratory indicators including upper and lower respiratory tract infections continued to decrease. Seventeen new acute respiratory outbreaks were reported in the past 7 days.

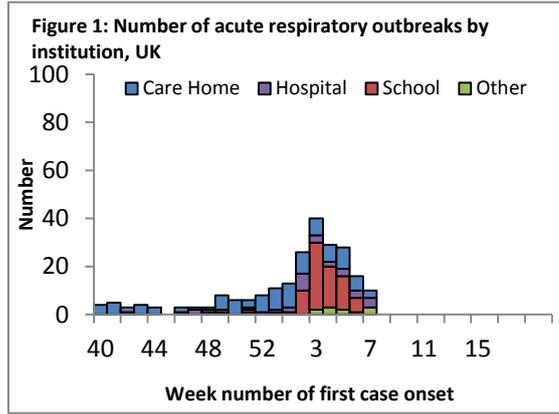
- PHE Real-time Syndromic Surveillance

- In week 07, GP consultations for influenza-like illness remained stable while other respiratory indicators, including upper and lower respiratory tract infections continued to decrease.
- For further information, please see the syndromic surveillance [webpage](#).

- Acute respiratory disease outbreaks

- Seventeen new acute respiratory outbreaks have been reported in the past 7 days. Two outbreaks were from schools where one tested positive for influenza A(H1N1)pdm09. Seven outbreaks were from care homes, where two tested positive for influenza A(H1N1)pdm09. Four outbreaks were from hospitals, where one tested positive for influenza A(not subtyped) and one tested positive for a mixed infection of influenza A(not subtyped) and influenza B. The remaining four outbreaks were from other settings where two tested positive for influenza A(not subtyped) and one tested positive for a mixed infection of influenza A(not subtyped) and influenza B.

-Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and [Respscidsc@phe.gov.uk](mailto:Respscidsc@phe.gov.uk).

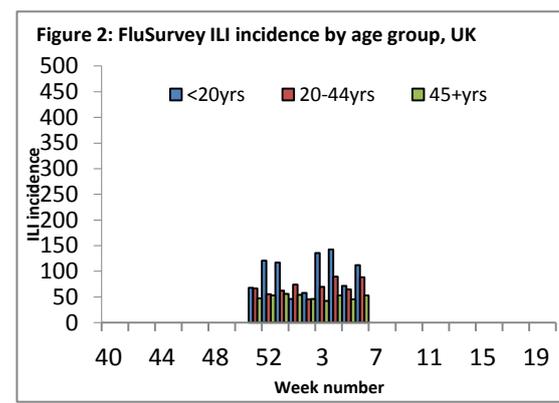


- FluSurvey

- Internet-based surveillance of influenza in the general population is undertaken through the FluSurvey. A project run jointly by PHE and the London School of Hygiene and Tropical Medicine.

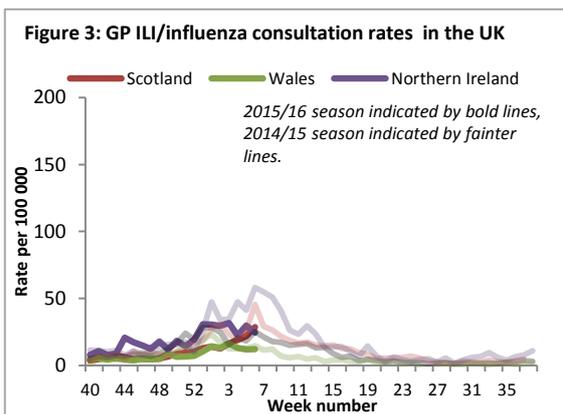
- Data was not available for week 07.

- If you would like to become a participant of the FluSurvey project please do so by visiting the <http://flusurvey.org.uk> website for more information.



In week 07, overall weekly influenza-like illness GP consultations have decreased in England, but remain above the pre-epidemic threshold.

- Influenza/Influenza-Like-Illness (ILI)



**NB:** As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 3 is an average of week 52 and week 53 data.

Northern Ireland

-The Northern Ireland influenza consultation rate has decreased at 24.5 per 100,000 in week 07 compared to 29.9 per 100,000 in week 06 (Figure 3). This remains below the pre-epidemic threshold (49.4 per 100,000).

-The highest rates were seen in the 65-74 year olds (31.3 per 100,000) and 45-64 year olds (29.6 per 100,000).

### Wales

-The Welsh influenza rate is at 12.1 per 100,000 in week 07, compared to 11.9 per 100,000 in week 06 (Figure 3). This remains above the pre-epidemic threshold (10.3 per 100,000).

-The highest rates were seen in 15-44 year olds (20.8 per 100,000) and 45-64 year olds (10.5 per 100,000).

### Scotland

-The Scottish ILI rate has increased to 28.6 per 100,000 in week 07 (Figure 3) compared to 21.9 per 100,000 in week 06. This remains below the pre-epidemic threshold (37.0 per 100,000).

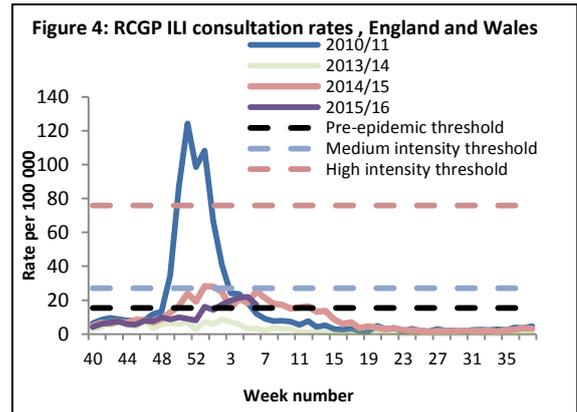
-The highest rates were seen in 45-64 year olds (39.2 per 100,000) and 15-44 year olds (31.6 per 100,000).

### RCGP (England and Wales)

- The weekly ILI consultation rate through the RCGP surveillance system has decreased to 17.3 per 100,000 in week 07 compared to 21.9 per 100,000 in week 06. This is above the pre-epidemic threshold (15.4 per 100,000) (Figure 4\*). By age group, the highest rates were seen in 15-44 year olds (22.1 per 100,000), 45-64 year olds (20.9 per 100,000) and 1-4 year olds (20.5 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.*

**NB:** As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 4 is an average of week 52 and week 53 data.



### GP In Hours Syndromic Surveillance System (England)

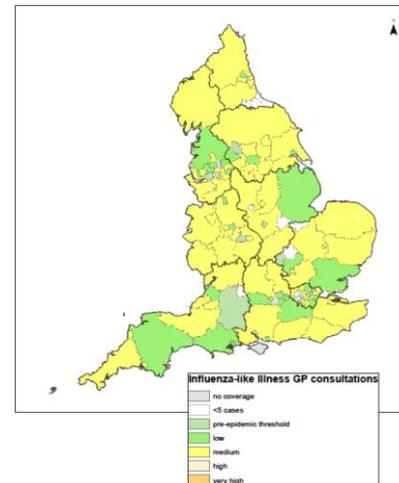
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system has decreased at 12.4 per 100,000 in week 07 (Figure 5).

Figure 5 represents a map of GP ILI consultation rates in Week 07 across England by Local Authorities, using influenza-like illness surveillance thresholds.

Thresholds are calculated using a standard methodology for setting ILI thresholds across Europe (the "Moving Epidemic Method" (MEM)) and are based on six previous influenza seasons (excluding the 2009/10 H1N1 pandemic)

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

Figure 5: Map of GP ILI consultation rates in Week 06



## Influenza confirmed hospitalisations

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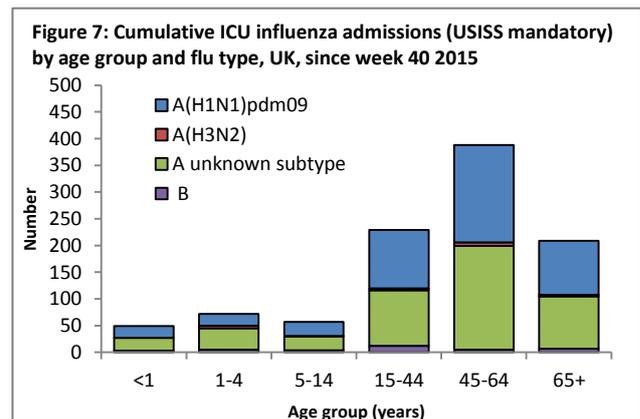
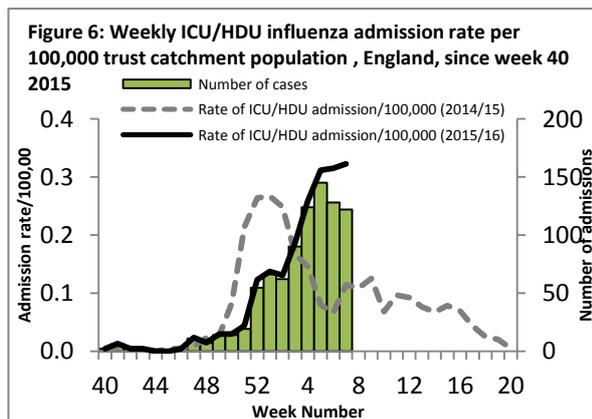
**In week 07, one hundred and thirty-one new admissions to ICU/HDU with confirmed influenza (55 influenza A(H1N1)pdm09, 74 influenza A(unknown subtype), 2 influenza A(H3N2)) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (119 Trusts in England). One hundred and twenty-nine new hospitalised confirmed influenza cases (100 influenza A(H1N1)pdm09, 21 influenza A(unknown subtype), 1 influenza A(H3N2) and 7 influenza B) were reported through the USISS sentinel hospital network across England (20 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 is 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 07)

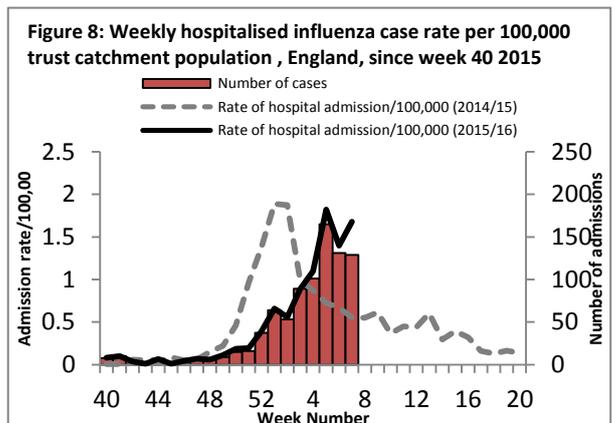
- In week 07, one hundred and thirty-one new admissions to ICU/HDU with confirmed influenza (55 influenza A(H1N1)pdm09, 74 influenza A(unknown subtype), 2 influenza A(H3N2)) were reported across the UK (119/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 6 and 7), a rate of 0.32 per 100,000, compared to a rate of 0.31 in the previous week. Ten new confirmed influenza deaths were also reported in week 07 2016. A total of 1,004 admissions (462 influenza A(H1N1)pdm09, 20 influenza A(H3N2), 486 influenza A (unknown subtype) and 36 influenza B) and 86 confirmed influenza deaths have been reported since week 40 2015.



**NB:** As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 6 is an average of week 52 and week 53 data.

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 07)

- In week 07, one hundred and twenty-nine new hospitalised confirmed influenza cases (100 influenza A(H1N1) pdm09, 21 influenza A(unknown subtype), 1 influenza A(H3N2) and 7 influenza B) were reported through the USISS sentinel hospital network from 20 NHS Trusts across England (Figure 8), a rate of 1.68 per 100,000 compared to 1.40 per 100,000 the previous week. A total of 895 hospitalised confirmed influenza admissions (657 influenza A(H1N1)pdm09), 16 influenza A(H3N2), 171 influenza A (unknown subtype) and 51 influenza B) have been reported since week 40.



**NB:** As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 8 is an average of week 52 and week 53 data.

- USISS Severe Respiratory Failure Centre confirmed influenza admissions, UK (week 07)

- In week 07, six new confirmed influenza admissions to the five Severe Respiratory Failure Centres in England were reported (5 influenza A(H1N1)pdm09 and 1 influenza A(unknown subtype)). Since week 40, thirty-seven confirmed influenza admissions have been reported (29 influenza A(H1N1)pdm09, 7 influenza A(unknown subtype) and 1 influenza B) from the six Severe Respiratory Failure centres in the UK.

**All-cause mortality data**

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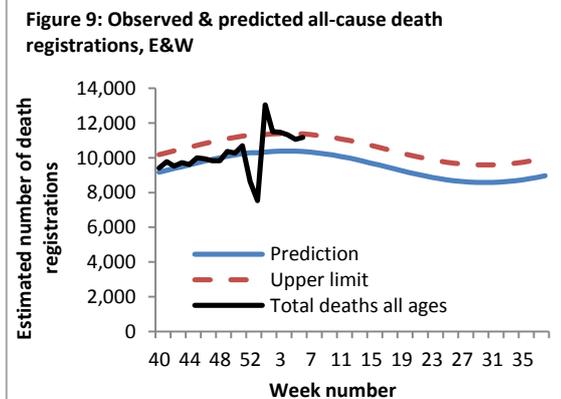
**Up to week 07 2016 in England, excess mortality by date of death has been seen in 15-64 year olds in weeks 52-03 and 05-07; and in <5 year olds and 5-14 year olds in week 51 and in 15-64 year olds with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Scotland (0-4 year olds).**

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 06 2016, an estimated 11,170 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is a slight increase compared to the 11,052 estimated death registrations in week 05 2016, and is below the 95% upper limit of expected death registrations for the time of year as calculated by PHE (Figure 9). The sharp drop in the number of deaths in week 53 corresponds to a week where there were bank holidays and fewer days when deaths were registered. Therefore this drop is likely to be artificial.



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

-Up to week 07 2016 in England, excess mortality by date of death above the upper 2 z-score threshold has been seen in 15-64 year olds in weeks 52 to 03 and weeks 05 to 07; and in <5 years olds and 5-14 year olds in week 51 after correcting ONS disaggregate data for reporting delay with the standardised [EuroMoMo](#) algorithm (Table 1). No significant excess was seen in other age groups. This data is provisional due to the time delay in registration; numbers may vary from week to week.

- In week 07 2016 in the devolved administrations, excess mortality above the threshold was seen in Scotland (0-4 year olds). No significant excess mortality was seen in Wales Due to technical changes, excess mortality data for Northern Ireland will next be reported in week 11 2016 (Table 2).

Table 1: Excess mortality by age group, England\*

Age group (years)	Excess detected in week 07 2016?	Weeks with excess in 2015/16
<5	×	51
5-14	×	51
15-64	✓	52-03,05-07
65+	×	NA

\* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

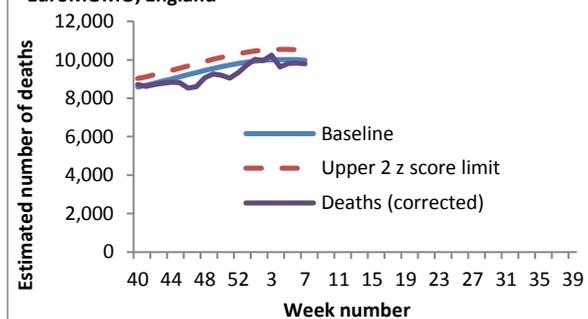
Table 2: Excess mortality by UK country\*

Country	Excess detected in week 07 2016?	Weeks with excess in 2015/16
England	✓	51-03,05-07
Wales	×	51,53,01,04
Scotland	✓	48,02,04,07
Northern Ireland	-	45,49-50,52-02,04-06

\* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

NB. Separate total and age-specific models are run for England which may lead to discrepancies between Tables 1 + 2

Figure 10: Excess mortality in all ages by week of death, EuroMOMO, England



## Microbiological surveillance

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In week 07 2016, fifty-four samples tested for influenza through the UK GP sentinel schemes were positive. Four hundred and four influenza positive detections were recorded through the DataMart scheme (two hundred and sixty-two A(H1N1)pdm09, four A(H3), one hundred and one A(not subtyped) and thirty-seven influenza B).

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

-In week 07, fifty-four samples tested positive for influenza through the UK GP sentinel swabbing schemes. Of the fifty-four samples, forty-two tested positive for influenza A(H1N1)pdm09, six tested positive for influenza A(untyped) and six influenza B (Table 3).

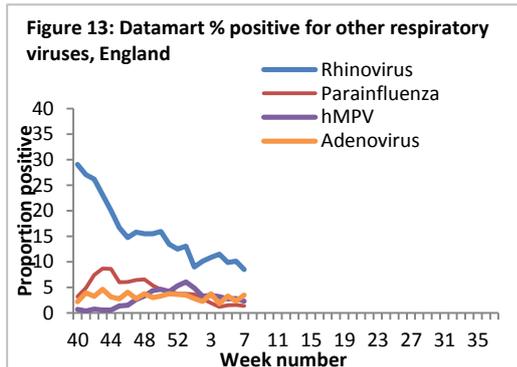
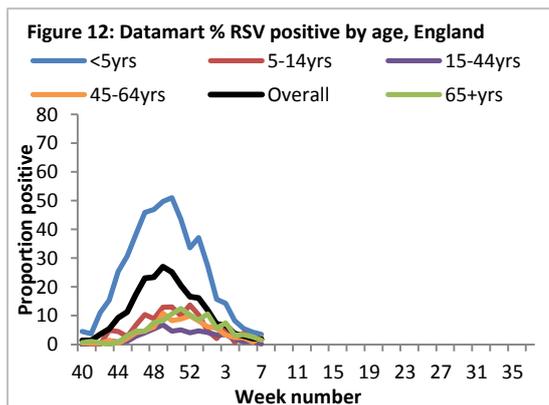
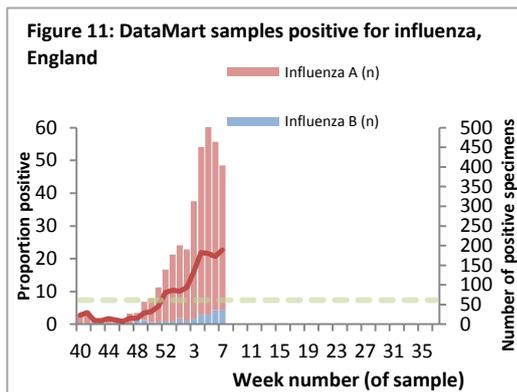
Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
03	45/180 (25%)	20/94 (21.3%)	8/12 (66.7%)	5/9 (-)
04	61/142 (43%)	17/97 (17.5%)	4/10 (40%)	7/17 (41.2%)
05	80/210 (38.1%)	20/96 (20.8%)	5/9 (-)	6/21 (28.6%)
06	58/150 (38.7%)	19/87 (21.8%)	7/14 (50%)	10/13 (76.9%)
07	32/85 (37.6%)	15/56 (26.8%)	2/7 (-)	5/14 (35.7%)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 07 2016, out of the 1,787 respiratory specimens reported through the Respiratory DataMart System, 404 samples (22.6%) were positive for influenza (262 A(H1N1)pdm09, 4 A(H3), 101 A(not subtyped) and 37 B) (Figure 11). The highest positivity was in the 15-44 year olds at 31.8%. The overall positivity for RSV remained at low levels, 1.8% in week 07 (Figure 12). Positivity for parainfluenza remained low at 1.4% in week 07. Positivity for rhinovirus decreased to 8.5% and positivity for hMPV remained low at 2.3%. Adenovirus positivity increased slightly to 3.5% (Figure 13).



\*The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP IILI consultations for the start of influenza activity in a standardised approach across Europe. The threshold to indicate a likelihood of influenza community circulation for Datamart % positive as calculated through the Moving Epidemic Method is 7.4% in 2015/16.

- Virus characterisation

Since the start of the 2015/16 winter influenza season in week 40 2015, the PHE Respiratory Virus Unit has characterised a total of 323 A(H1N1)pdm09 influenza viruses; 103 genetically and 39 both antigenically and genetically. The A(H1N1)pdm09 viruses genetically characterised to date all belong in the genetic subgroup 6B, which was the predominant genetic subgroup in the 2014/15 season. Some heterogeneity has been seen in the A(H1N1)pdm09 viruses genetically characterised to date this season, with some genetic subgroups starting to become evident. Of 259 viruses analysed by HI assays to date, greater than 90% were antigenically similar to the A/California/7/2009 Northern Hemisphere 2015/16 (H1N1)pdm09 vaccine strain. This data suggests that some antigenic drift variants appear to be circulating, but the majority of viruses antigenically characterised to date are similar to the (H1N1)pdm09 vaccine strain.

Genetic characterisation of 17 A(H3N2) influenza viruses since week 38 showed that they belong to genetic group 3C.2a, and are genetically similar to the majority of A(H3N2) viruses circulating in the 2014/15 season. Four A(H3N2) influenza viruses have been isolated and antigenically characterised since week 38 2015. These four viruses were antigenically similar to the A/Switzerland/9715293/2013 H3N2 Northern Hemisphere 2015/16 vaccine strain.

Of 19 influenza B viruses analysed genetically since week 40/2015, 6 viruses have been characterised as belonging to the B/Yamagata/16/88-lineage and 13 viruses as belonging to the B/Victoria/2/87 lineage. Seventeen influenza B viruses have been isolated and antigenically characterised since week 40 2015. One virus was characterised as belonging to the B/Yamagata/16/88-lineage and was antigenically similar to B/Phuket/3073/2013, the influenza B/Yamagata-lineage component of 2015/16 Northern Hemisphere trivalent and quadrivalent vaccines. Sixteen viruses were characterised as belonging to the B/Victoria/2/87 lineage and were antigenically similar to B/Brisbane/60/2008, the influenza B/Victoria-lineage component of 2015/16 Northern Hemisphere quadrivalent vaccines.

- Antiviral susceptibility

Since week 40 2014, 892 influenza A(H1N1)pdm09, six influenza A(H3N2) and 23 influenza B have been tested for oseltamivir susceptibility with four influenza A(H1N1)pdm09 virus and one influenza A(H3N2) found to be resistant in the UK. Two of the A(H1N1)pdm09 resistant samples were obtained from patients with underlying medical conditions undergoing oseltamivir treatment. The A(H3N2) resistant sample was from an immunocompromised patient receiving oseltamivir treatment, with an E119V amino acid change. 166 influenza A(H1N1)pdm09 and ten influenza B have also been tested for zanamivir susceptibility in the UK and all found to be sensitive.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 21 February 2016, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key causes of community acquired pneumonia (CAP) and the choice of antibiotics reflects the British Thoracic Society empirical guidelines for management of CAP in adults.

Table 4: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 12 weeks up to 21 February 2016, E&W

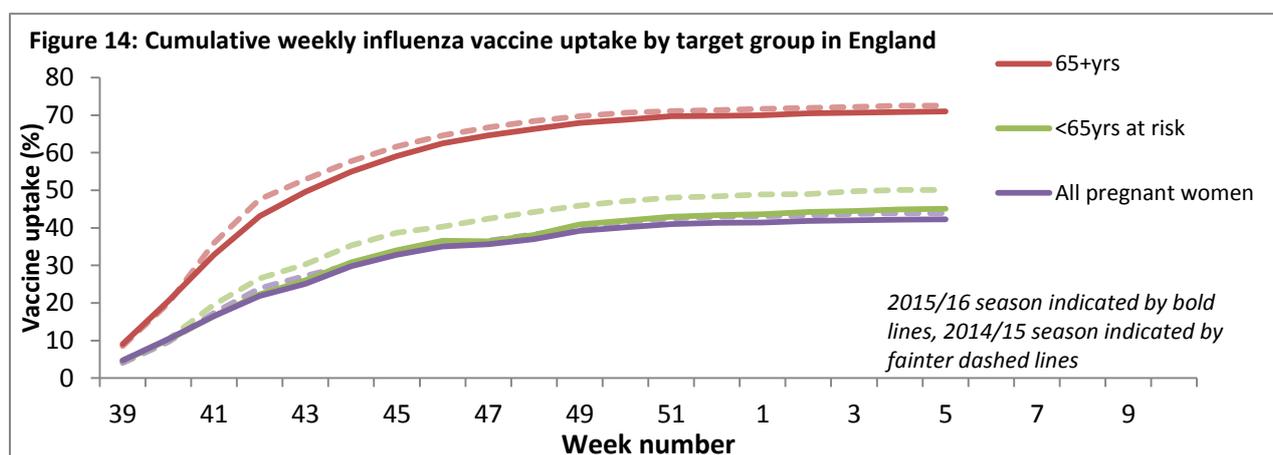
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	2,732	91
	Macrolides	3,061	83
	Tetracycline	2,949	84
<i>H. influenzae</i>	Amoxicillin/ampicillin	12,651	70
	Co-amoxiclav	12,103	93
	Macrolides	4,058	22
	Tetracycline	12,391	99
<i>S. aureus</i>	Methicillin	3,827	89
	Macrolides	3,784	71
MRSA	Clindamycin	350	49
	Tetracycline	415	91
MSSA	Clindamycin	2,211	78
	Tetracycline	3,119	93

\*Macrolides = erythromycin, azithromycin and clarithromycin

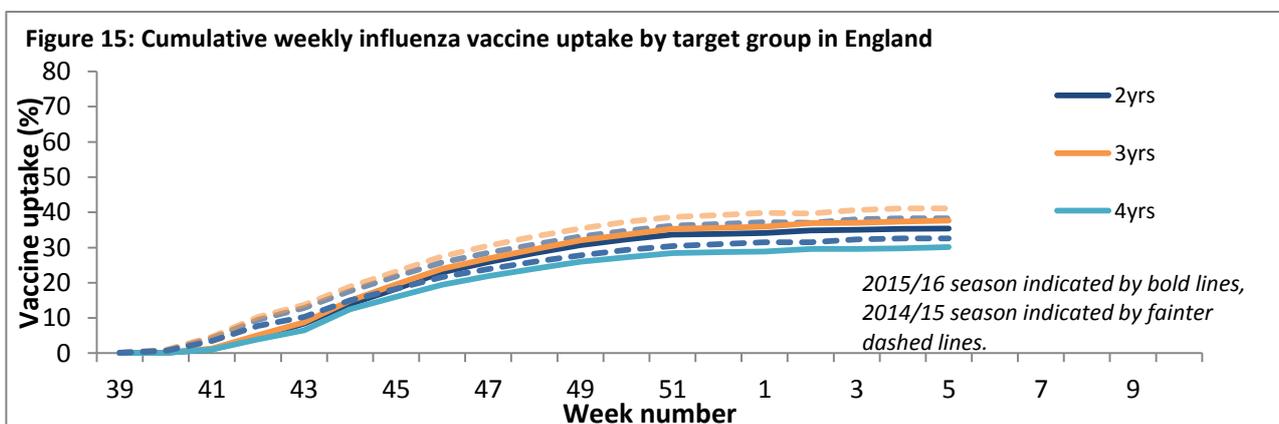
## Vaccination

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- Up to week 04 2016 in 98.8% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows (Figure 14):
  - 45.1% in under 65 years in a clinical risk group
  - 42.3% in pregnant women
  - 71.0% in 65+ year olds



- In 2015/16, all two-, three- and four-year-olds continue to be eligible for flu vaccination. In addition, the programme has been extended to children of school years 1 and 2 age. Up to week 04 2016 in 98.8% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows (Figure 15)
  - 35.4% in all 2 year olds
  - 37.7% in all 3 year olds
  - 30.1% in all 4 year olds



- Provisional data from the third monthly collection of influenza vaccine uptake by frontline healthcare workers show 49.5% were vaccinated by 31 January 2016 from 97.3% of Trusts, compared to 54.6% vaccinated in the previous season by 31 January 2015. The [report](#) provides uptake at national, area team and CCG level.
- Provisional data from the fourth monthly collection of influenza vaccine uptake children of school years 1 and 2 age show the proportion of children in England who received the 2015/16 live attenuated intranasal vaccine (LAIV) from 1 September 2015 to 31 January 2016 was as follows: 53.6% in children school year 1 age (5-6 years) and 52.1% in children school year 2 age (6-7 years).
- Provisional data from the fourth monthly collection of influenza vaccine uptake in GP patients up to 31 January 2016 has been published. The [report](#) provides uptake at national, area team and CCG level.

## International Situation

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**Globally, increasing levels of influenza activity continued to be reported in the temperate zones of the northern hemisphere with influenza A(H1N1)pdm09 as the most detected virus.**

- [Europe](#) updated on 19 February 2016 (Joint ECDC-WHO Influenza weekly update)

Influenza A(H1N1)pdm09 has been the predominant virus detected since the start of the season, accounting for 90% of sentinel surveillance detections of influenza-like illness (ILI) and acute respiratory infection (ARI) in the WHO European Region.

For week 06/2016, 44% of the specimens from sentinel sources tested positive for influenza virus. Of 37 countries in which 10 or more sentinel specimens were tested, 21 had positivity rates higher than 30%. Of the influenza-virus-positive specimens, 65% contained type-A viruses, with A(H1N1)pdm09 viruses accounting for 90% of those subtyped.

For week 06/2016, nine of 12 countries reporting data on severe acute respiratory infection (SARI) reported increased numbers of cases. These increases were associated with a predominance of influenza A(H1N1)pdm09 in tested SARI cases, mainly in the 15-64 year olds.

The ECDC mid-season [risk assessment](#) has now been published for this season 2015/16.

- [United States of America](#) Updated on 19 February 2016 (Centre for Disease Control report)

During week 06 2016, influenza activity increased in the United States. The most frequently identified type reported to be influenza A with influenza A (H1N1)pdm09 viruses predominating.

Nationwide during week 06, the proportion of outpatient visits for influenza-like illness (ILI) was 3.1%, which is above the national baseline of 2.1%.

The percent positive for laboratory confirmed influenza detections has increased, where 72.9% of positive influenza samples were of type A, of which 85.3% were influenza A(H1N1) pdm09.

During week 06, 6.9% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 7.3% for week 06. A total of thirteen influenza associated paediatric deaths have been reported during the 2015-2016 season.

- [Canada](#) Updated on 19 February 2016 (Public Health Agency report)

Overall in week 06, seasonal influenza activity increased from the previous week. An increase in outbreaks was noted for this week. Young/middle age adults are accounting for an increasing proportion of hospitalizations as reported by participating provinces and territories.

The percent positive for laboratory confirmed influenza detections increased from 20.6% in week 05 to 26.2% in week 06. Among subtyped influenza detections, influenza A(H1N1)) was the most common influenza A virus detected across Canada.

The national ILI consultation rate decreased from the previous week from 75.9 per 1,000 patient visits in week 05, to 50.9 per 1,000 patient visits in week 06. In week 05, the highest ILI consultation rate was found in those 0-4 years of age (86.1 per 1,000) and the lowest was found in the ≥65 years age group.

- [Global influenza update](#) Updated on 22 February 2016 (WHO website)

Globally, influenza activity in the northern hemisphere continued to increase. High levels of influenza activity have been reported in some countries in Europe. In North America, northern Africa, central and western Asia, increasing activity predominantly of influenza A(H1N1)pdm09 virus was observed. In the temperate

countries of northern Asia, activity was ongoing with various proportions of circulating seasonal influenza viruses.. WHO has released the [A\(H1N1\)pdm09 risk assessment](#).

Increasing influenza A(H1N1)pdm09 activity continued to be reported in northern , eastern and southern Europe. Belarus, Greece and Ireland reported high-intensity influenza activity and Finland, the Russian Federation and Ukraine reported very high activity. Influenza A(H1N1)pdm09 viruses predominated.

In North America, Canada and the United States of America reported increasing activity predominantly of influenza A(H1N1)pdm09 virus. Mexico reported low levels of A(H3N2) virus activity.

In northern Asia, influenza activity was increasing in the Republic of Korea mainly due to influenza A(H1N1)pdm09 virus while in northern China a mixture of influenza A(H1N1)pdm09, A(H3N2) and B viruses were detected. Influenza activity in Mongolia seemed to have peaked with influenza A(H1N1)pdm09 predominating.

In Western Asia, influenza activity remained at high levels in Israel and Jordan. Oman reported a decrease in influenza activity.

In East Africa in Mauritius increasing influenza A(H1N1)pdm09 activity was reported. In northern Africa, Algeria and Morocco reported increasing influenza A(H1N1)pdm09 virus activity during this period.

In tropical countries of the Americas, Central America and the Caribbean, influenza and other respiratory virus activity were overall at low levels in most countries. In Cuba and Jamaica, influenza activity increased during this period.

In tropical Asia, countries in Southern and South East Asia continued to report ongoing low influenza activity.

In the temperate countries of the southern hemisphere respiratory virus activity remained low.

Based on FluNet reporting, the WHO GISRS laboratories tested more than 154,579 specimens between 25 January 2016 and 07 February 2016. 38,419 were positive for influenza viruses, of which 31,846 (82.9%) were typed as influenza A and 6,573 (17.1%) as influenza B. Of the sub-typed influenza A viruses, 20,503 (86.6%) were influenza A(H1N1)pdm09 and 3,163 (13.4%) were influenza A(H3N2). Of the characterized B viruses, 595 (28.4%) belonged to the B-Yamagata lineage and 1,499 (71.6%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 10 February 2016 (WHO website)

### **Influenza A(H5N6)**

On [18 January 2016](#), the National Health and Family Planning Commission (NHFPC) of China notified WHO of 1 additional laboratory-confirmed case of human infection with avian influenza (H5N6) virus. A total of nine A(H5N6) have been reported so far around the world, with the first human infection reported in May 2014 in China's southwest province of Sichuan.

Since 2013 through to 20 January 2016, ten cases of avian influenza A(H5N6) have been detected of which nine were notified to [WHO](#) and one was reported in the scientific literature.<sup>1</sup> All nine cases notified to WHO had clinically severe disease. The case reported in the literature, a five-year-old female, was a mild case detected through routine surveillance activities.

### **Influenza A(H7N9)**

On [05 February 2016](#), the National Health and Family Planning Commission (NHFPC) of China notified WHO of 28 additional laboratory-confirmed cases of human infection with avian influenza A (H7N9) virus, including 5 deaths. For further updates and WHO travel and clinical management advice, please see the [WHO website](#).

Since the last WHO Influenza update on 18 December 2015, ten new laboratory-confirmed human cases of avian influenza A(H7N9) virus infection were reported to [WHO](#). Cases were reported from Guangdong, Jiangsu, Jiangxi and Zhejiang provinces of China with onsets between 24 November 2015 and 24 December 2015. All cases were exposed to live or slaughtered poultry. A total of 693 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 277 deaths have been reported to WHO.

### **Influenza A(H5N1)**

From 2003 through 20 January 2016, 846 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been officially reported to [WHO](#) from 16 countries. Of these cases, 449 have died. Various influenza A(H5) subtypes, such as influenza A(H5N1), A(H5N2), A(H5N3), A(H5N6), A(H5N8) and A(H5N9), continue to be detected in birds in West Africa, Europe and Asia, according to recent reports received by OIE. Since last month's report on detections of avian influenza A(H5) viruses in birds in France,

no human infections have been identified. Although the influenza A(H5) viruses might have the potential to cause disease in humans, so far no human cases of infection have been reported, with exception of the human infections with influenza A(H5N1) and A(H5N6) viruses in China. Overall, the public health risk assessment for avian influenza A(H5) viruses remains unchanged since the assessment of [17 July 2015](#).

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\)](#) latest update on 02 February 2016

Between [22 and 27 January 2016](#), the National IHR Focal Point for the Kingdom of Saudi Arabia notified WHO of 5 additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection.

On [24 January 2016](#), the National IHR Focal Point of Thailand notified WHO of 1 laboratory-confirmed case of Middle East respiratory syndrome coronavirus (MERS-CoV) infection. This is the country's second case of MERS-CoV infection (see DON published on 10 July 2015).

Between [11 and 14 January 2016](#), the National IHR Focal Point of the United Arab Emirates notified WHO of 2 additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection, including 1 death.

Up to 24 February 2016, a total of four cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (two imported and two linked cases) have been confirmed in the UK. On-going surveillance has identified 679 suspect cases in the UK that have been investigated for MERS-CoV and tested negative.

Globally, since September 2012, WHO has been notified of 1,638 laboratory-confirmed cases of infection with MERS-CoV, including at least 587 related deaths. Further information on management and guidance of possible cases is available [online](#). The latest ECDC MERS-CoV risk assessment can be found [here](#), where it is highlighted that risk of widespread transmission of MERS-CoV remains low.

## Acknowledgements

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### Weekly consultation rates in national sentinel schemes

- [Sentinel schemes operating across the UK](#)
- [RCGP scheme](#)
- Northern Ireland surveillance ([Public Health Agency](#))
- Scotland surveillance ([Health Protection Scotland](#))
- Wales surveillance ([Public Health Wales](#))
- [Real time syndromic surveillance](#)
- MEM threshold [methodology paper](#) and [UK pilot paper](#)

### Community surveillance

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

### Disease severity and mortality data

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

### Vaccination

- Seasonal influenza vaccine programme ([Department of Health Book](#))
- Childhood flu programme information for healthcare practitioners ([Public Health England](#))
- 2015/16 Northern Hemisphere seasonal influenza vaccine recommendations ([WHO](#))