



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 02 2016 (ending 17 January 2016), influenza activity was at similar or higher levels across surveillance schemes, including GP ILI consultation rates, the proportion of laboratory samples positive for influenza and influenza admissions to hospitals and ICU. The Department of Health has issued an [alert](#) on the prescription of antiviral medicines to the health service.

Community influenza surveillance

- During week 02, syndromic indicators for influenza across different systems have either increased slightly or remained stable and are currently within seasonally expected levels. Rates of lower respiratory tract infection and pneumonia decreased.
- Twenty-nine new acute respiratory outbreaks have been reported in the past 7 days. Fourteen outbreaks were in care homes. Eight outbreaks were from hospitals where one tested positive for influenza A(H1N1)pdm09 and three tested positive for influenza A(not subtyped). Seven outbreaks were from schools, where one tested positive for influenza A(not subtyped).

Overall weekly influenza GP consultation rates across the UK

- In week 02, overall weekly influenza-like illness (ILI) GP consultation rate has decreased and is below the baseline threshold in England (14.2 per 100,000). ILI rates have increased in Wales (14.6 per 100,000), Scotland (14.0 per 100,000) and a slight decrease was noted in Northern Ireland (30.5 per 100,000).
- Through the GP In Hours surveillance system, weekly ILI rates increased slightly but remain within seasonally expected levels in week 02.

Influenza-confirmed hospitalisations

- Fifty-nine new admissions to ICU/HDU with confirmed influenza (thirty-five influenza A(H1N1)pdm09 and twenty-four influenza A(unknown subtype)) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (127 Trusts in England) in week 02, a rate of 0.15 per 100,000 compared to 0.14 per 100,000 in week 01. Six new confirmed influenza deaths were also reported through this scheme.
- Forty-eight new hospitalised confirmed influenza cases (thirty-seven influenza A(H1N1)pdm09, three influenza A(H3N2), seven influenza A(not subtyped) and one influenza B) were reported through the USISS sentinel hospital network across England (23 Trusts), a rate of 0.55 compared to 0.65 per 100,000 the previous week.
- Since week 40, seventeen confirmed influenza admissions have been reported (thirteen influenza A(H1N1)pdm09 and four influenza A(unknown subtype) from the six Severe Respiratory Failure centres in the UK.

All-cause mortality data

- Up to week 02 2016 in England, excess mortality by date of death was seen in <5 year olds and 5-14 year olds in week 51 and in 15-64 year olds in week 52 with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Northern Ireland in week 02.

Microbiological surveillance

- Forty-four samples tested positive for influenza (40 A(H1N1)pdm09, 2 A(untyped) and 2 B) through GP sentinel schemes across the UK, with an overall positivity of 21.2%.
- One hundred and fifty influenza positive detections were recorded through the DataMart scheme (one hundred and twenty-six influenza A(H1N1)pdm09, five A(H3), thirteen A(not subtyped) and six influenza B). A positivity of 11.3% was seen in week 02, compared to 9.9% in week 01, with the highest positivity in 45-64 year olds (16.4%). This is above the all-age threshold for 2015/16 season of 7.4%.

Vaccination

- Up to week 02 2016 in 94.0% 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: 44.5% in under 65 years in a clinical risk group, 42.0% in pregnant women, 70.6% in 65+ year olds, 35.0% in all 2 year olds, 37.0% in all 3 year olds and 29.6% in all 4 year olds.
- Provisional data from the second monthly collection of influenza vaccine uptake by frontline healthcare workers show 44.1% were vaccinated by 30 November 2015 from 97.0% of Trusts, compared to 48.2% vaccinated in the previous season by 30 November 2014. The report is available [here](#).
- Provisional data from the second 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 30 November 2015 was as follows: 40.9% in children school year 1 age (5-6 years) and 39.3% in children school year 2 age (6-7 years).
- Provisional data from the second monthly collection of influenza vaccine uptake in GP patients up to 30 November 2015 has been published. The [report](#) provides uptake at national, area team and CCG level.

International situation

- Globally, influenza activity has increased in some temperate countries of the Northern hemisphere. High levels of influenza activity have been reported from some of the Western Asia countries.
- Influenza activity in Europe remains low, however a continued increase in the positivity of samples from sentinel sources

During week 02, syndromic indicators for influenza across different systems have either increased slightly or remained stable and are currently within seasonally expected levels. Twenty-nine new acute respiratory outbreaks were reported in the past 7 days.

- PHE Real-time Syndromic Surveillance

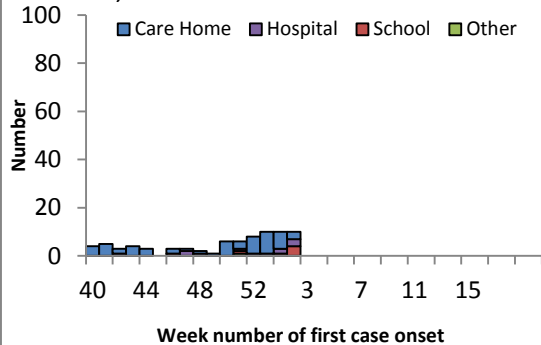
-GP consultation rates for influenza-like illness increased slightly during week 2 but remained within seasonally expected levels. Rates of lower respiratory tract infection and pneumonia decreased during week 2, and remain within seasonally expected levels.

- Acute respiratory disease outbreaks

- Twenty-nine new acute respiratory outbreaks have been reported in the past 7 days. Fourteen outbreaks were from care homes where two tested positive for rhinovirus and results were not available/not tested for the remaining twelve. Eight outbreaks were from hospitals, where one tested positive for influenza A(H1N1)pdm09, three positive for influenza A(not subtyped) and two positive for RSV. Seven outbreaks were from schools where one tested positive for influenza A(not subtyped) and results were not available/not tested for the remaining six.

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

Figure 1: Number of acute respiratory outbreaks by institution, UK



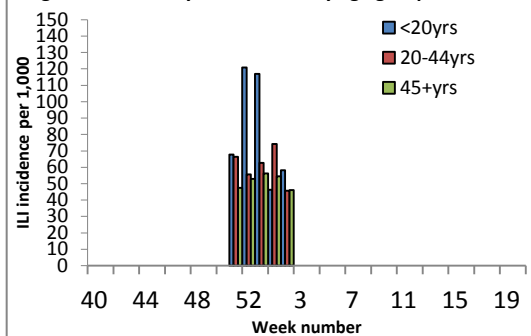
- FluSurvey

- 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.

- The overall ILI rate (all age groups) for week 02 was 46.5 per 1,000 (116/2,495 people reported at least 1 ILI), with the <20 age group reporting a slightly higher rate of 58.3 per 1,000.

- 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.

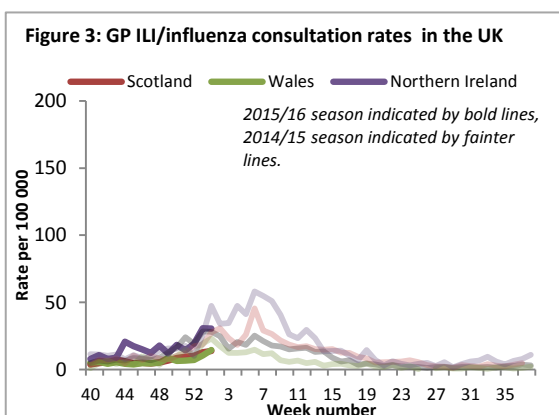
Figure 2: FluSurvey ILI incidence by age group, UK



Weekly consultation rates in national sentinel schemes

In week 02, overall weekly influenza-like illness GP consultations have remained within seasonally expected levels, with slight decreases in England, similar in Northern Ireland and slight increases in Wales and Scotland.

- 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 is similar at 30.5 per 100,000 in week 02 compared to 30.9 per 100,000 in week 01 (Figure 3). This remains below the pre-epidemic threshold (49 per 100,000).

-The highest rates were seen in the <1 year olds (55.4 per 100,000), 75+ year olds (48.6 per 100,000) and 15-44 year olds (36.2 per 100,000).

Wales

-The Welsh influenza rate has increased to 14.6 per 100,000 in week 02 compared to 10.5 per 100,000 in week 01 (Figure 3).

-The highest rates were seen in 45-64 year olds (21.7 per 100,000), 15-44 year olds (20.0 per 100,000) and in 75+ year olds (15.6 per 100,000).

Scotland

-The Scottish ILI rate has increased slightly to 14.0 per 100,000 in week 02 (Figure 3) compared to 12.9 per 100,000 in week 01. This remains below the pre-epidemic threshold (37 per 100,000).

-The highest rates were seen in 45-64 year olds (19.3 per 100,000) and 15-44 year olds (16.7 per 100,000).

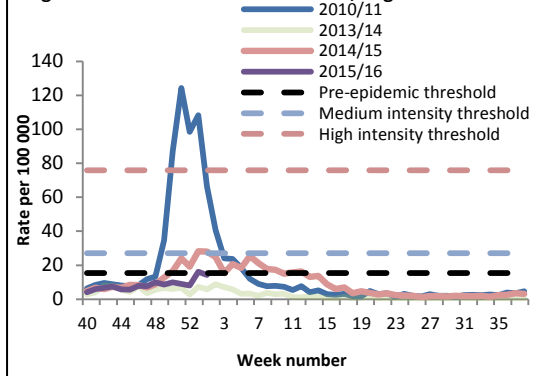
RCGP (England and Wales)

- The weekly ILI consultation rate through the RCGP surveillance system has decreased to 14.2 per 100,000 in week 02 compared to 16.1 per 100,000 in week 01. This is below the pre-epidemic threshold (15.4 per 100,000) (Figure 4*). By age group, the highest rates were seen in 15-44 year olds (17.3 per 100,000), 65-74 year olds (16.8 per 100,000) and 45-64 year olds (15.54 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.

Figure 4: RCGP ILI consultation rates, England and Wales



GP In Hours Syndromic Surveillance System (England)

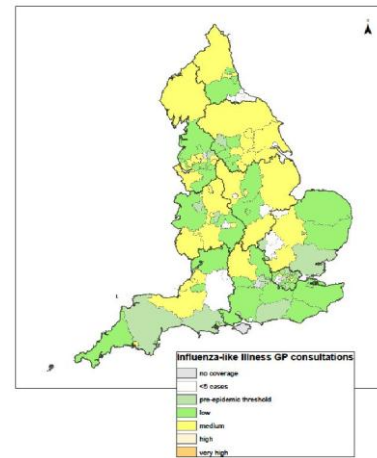
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system was low at 9.5 per 100,000 in week 02 (Figure 5).

Figure 5 represents a map of GP ILI consultation rates in Week 02 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 02



Influenza confirmed hospitalisations

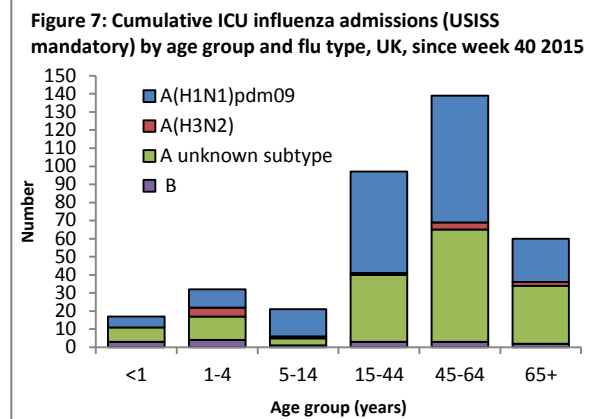
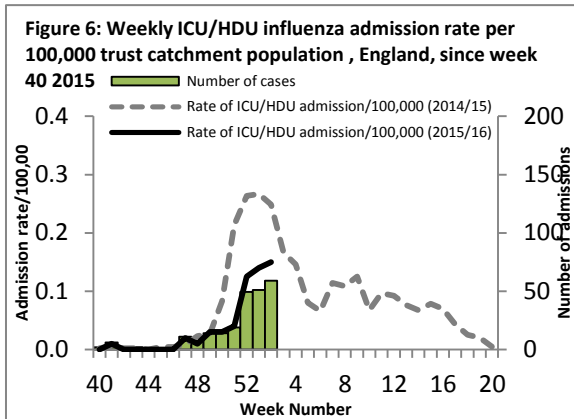
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In week 01, fifty-nine new admissions to ICU/HDU with confirmed influenza (35 influenza A(H1N1)pdm09 and 24 influenza A(unknown subtype)) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (127 Trusts in England). Forty-eight new hospitalised confirmed influenza cases (37 influenza A(H1N1)pdm09, 3 influenza A(H3N2), 7 influenza A(unknown subtype) and 1 influenza B) were reported through the USISS sentinel hospital network across England (23 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 02)

- In week 02, fifty-nine new admissions to ICU/HDU with confirmed influenza (35 influenza A(H1N1)pdm09 and 24 A(unknown subtype)) were reported across the UK (127/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 6 and 7), a rate of 0.15 per 100,000 compared to a rate of 0.14 per 100,000 in the previous week. Six new confirmed influenza deaths were also reported in week 02 2016. A total of 296 admissions (136 influenza A(H1N1)pdm09, 13 influenza A(H3N2), 135 influenza A (unknown subtype) and 12 influenza B) and 19 confirmed influenza deaths have been reported since week 40 2015.

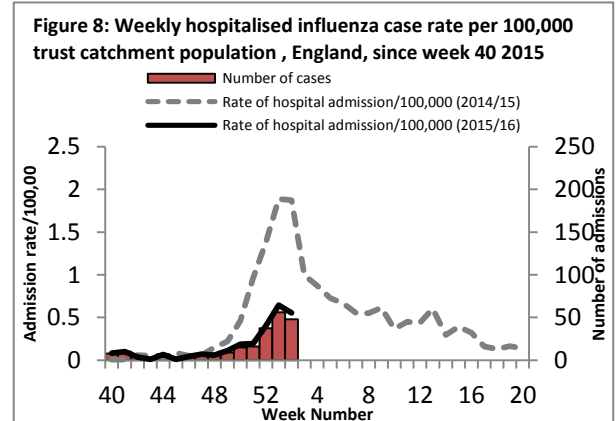


NB: As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 6 is an average of week 52 and week 53 data.

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 02)

- In week 02, forty-eight new hospitalised confirmed influenza cases (37 influenza A(H1N1)pdm09), 3 influenza A(H3N2), 7 influenza A(unknown subtype) and 1 influenza B) were reported through the USISS sentinel hospital network from 23 NHS Trusts across England (Figure 8), a rate of 0.55 per 100,000 compared to 0.65 per 100,000 the previous week. A total of 265 hospitalised confirmed influenza admissions (186 influenza A(H1N1)pdm09), 14 influenza A(H3N2), 45 influenza A (unknown subtype) and 20 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 02)

- In week 02, five new confirmed influenza admission to the five Severe Respiratory Failure Centres in England was reported (4 influenza A(H1N1)pdm09 and 1 influenza A(unknown subtype)). Since week 40, seventeen confirmed influenza admissions have been reported (13 influenza A(H1N1)pdm09 and 4 influenza A(unknown subtype)) from the six Severe Respiratory Failure centres in the UK.

All-cause mortality data

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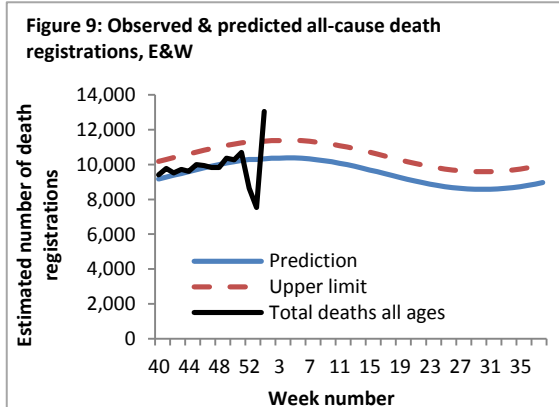
In week 02 2016, no statistically significant excess all-cause mortality by week of death was seen through the EuroMoMo algorithm in England overall and by age group. In the devolved administrations, significant excess was seen in Northern Ireland in week 02.

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 01 2015, an estimated 13,045 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is an increase compared to the 7,524 estimated death registrations in week 53 2015, and is above 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 02 2016 in England, excess mortality by date of death above the upper 2 z-score threshold was seen in <5 years olds and 5-14 year olds in week 51 and in 15-64 year olds in week 52 after correcting ONS disaggregate data for reporting delay with the standardised [EuroMoMo](#) algorithm (Figure 2, 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.

Table 1: Excess mortality by age group, England*

Age group (years)	Excess detected in week 02 2016?	Weeks with excess in 2015/16
<5	x	51
5-14	x	51
15-64	x	52
65+	x	NA

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

- In the devolved administrations, up to week 02 2016, excess mortality above the threshold was seen in Northern Ireland in weeks 52 2015 to week 02 2016. No significant excess mortality was seen in Wales up to week 02 2016 (Table 2).

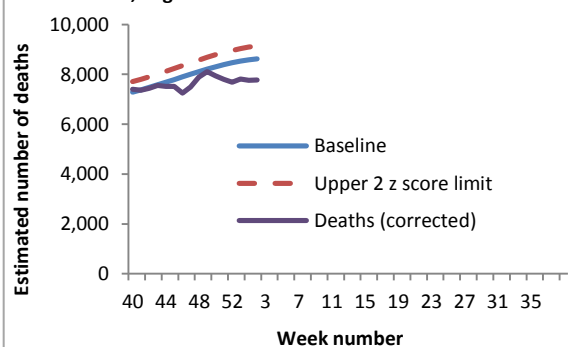
Table 2: Excess mortality by UK country*

Country	Excess detected in week 02 2016?	Weeks with excess in 2015/16
England	x	NA
Wales	x	NA
Scotland	x	48
Northern Ireland	x	52-02

* 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 65+ year olds by week of death, EuroMOMO, England



Microbiological surveillance

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In week 02 2015, forty-four samples tested for influenza through the UK GP sentinel schemes were positive. One hundred and fifty influenza positive detections were recorded through the DataMart scheme (one hundred and twenty-six influenza A(H1N1)pdm09, five A(H3), thirteen A(not subtyped) and six influenza B).

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

-In week 02, twenty-three samples were positive for influenza in England (23 influenza A(H1N1)pdm09), thirteen samples were positive in Scotland (9 influenza A(H1N1), 2 influenza A (untyped) and 2 influenza B), four samples were positive in Wales (4 influenza A(H1N1)) and four samples were positive in Northern Ireland (4 influenza A(H1N1)) (Table 3).

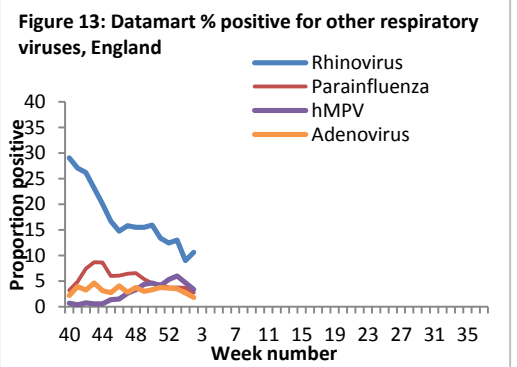
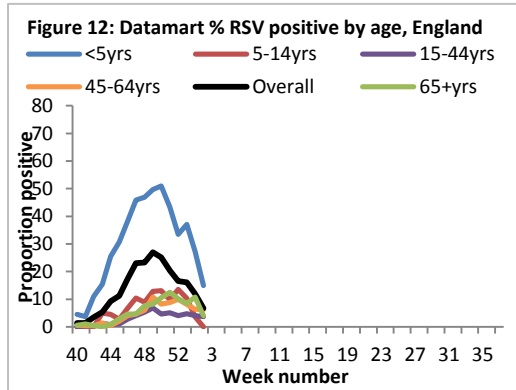
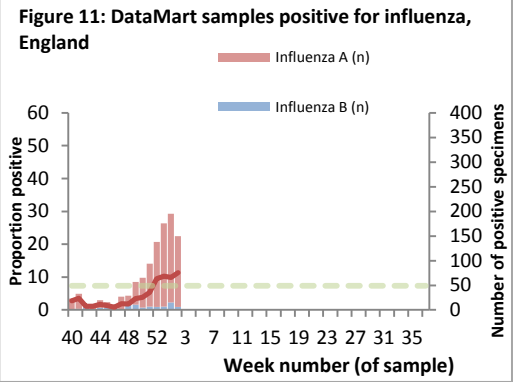
Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
51	16/125 (12.8%)	4/79 (5.1%)	1/11 (9.1%)	1/10 (10%)
52	16/89 (18%)	7/67 (10.4%)	4/6 (-)	1/4 (-)
53	14/61 (23%)	5/54 (9.3%)	2/8 (-)	1/7 (-)
1	18/122 (14.8%)	9/83 (10.8%)	2/7 (-)	2/4 (-)
2	23/126 (18.3%)	13/64 (20.3%)	4/9 (-)	4/9 (-)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 02 2016, out of the 1,325 respiratory specimens reported through the Respiratory DataMart System, 150 samples (11.3%) were positive for influenza (126 A(H1N1)pdm09, 5 A(H3), 13 A(not subtyped) and 6 B) (Figure 11). The highest positivity was in the 45-64 year olds at 16.4%. The overall positivity for RSV continued to decrease, with the highest positivity in children aged under 5 years at 15.0% in week 02 (Figure 12). Positivity for parainfluenza remained low at 2.7% in week 02. Positivity for rhinovirus increased slightly to 10.6% and positivity for hMPV decreased to 3.4%. Adenovirus remained low at 1.8% (Figure 13).



*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 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 86 A(H1N1)pdm09 influenza viruses; 63 genetically and 29 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 52 viruses analysed by HI assays, greater than 90% were antigenically similar to the A/California/7/2009 Northern Hemisphere 2015/16 (H1N1)pdm09 vaccine strain, suggesting from this data that no distinct antigenic drift variants appear to be circulating.

Genetic characterisation of eight 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.

Three 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 vaccines. Two 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, 242 influenza A(H1N1)pdm09, one influenza A(H3N2) and two influenza B have been tested for oseltamivir susceptibility with three influenza A(H1N1)pdm09 virus and one influenza A(H3N2) found to be resistant in the UK. One of the A(H1N1)pdm09 resistant samples was obtained from a patient 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. 26 influenza A(H1N1)pdm09 and two influenza B have also been tested for zanamivir susceptibility in the UK and were all found to be sensitive.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 17 January 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 17 January 2016, E&W

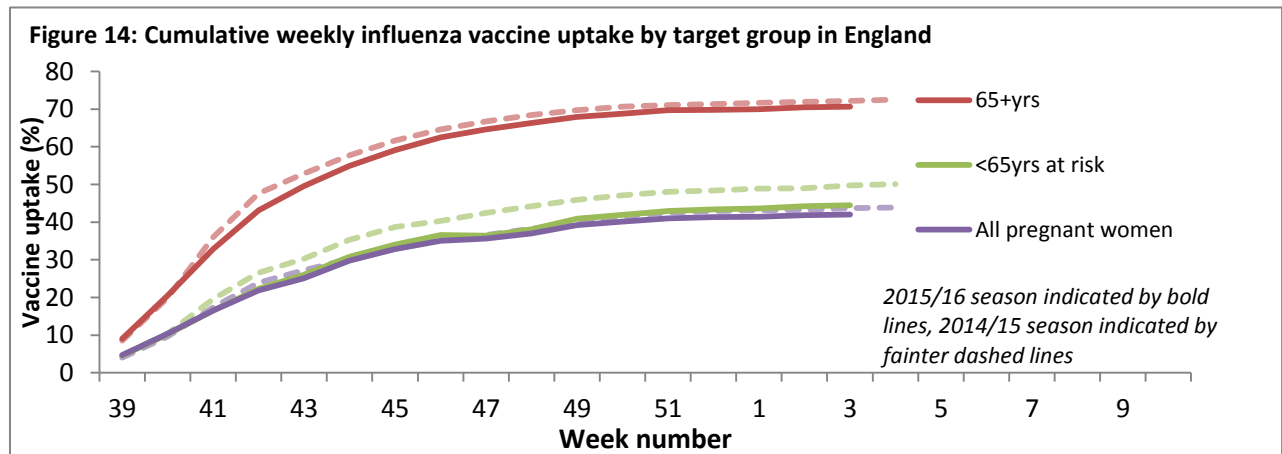
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	2,507	91
	Macrolides	2,868	83
	Tetracycline	2,769	84
<i>H. influenzae</i>	Amoxicillin/ampicillin	10,823	71
	Co-amoxiclav	10,373	92
	Macrolides	3,657	18
	Tetracycline	10,642	98
<i>S. aureus</i>	Methicillin	3,696	88
	Macrolides	3,635	73
MRSA	Clindamycin	386	50
	Tetracycline	435	91
MSSA	Clindamycin	2,053	79
	Tetracycline	2,998	93

*Macrolides = erythromycin, azithromycin and clarithromycin

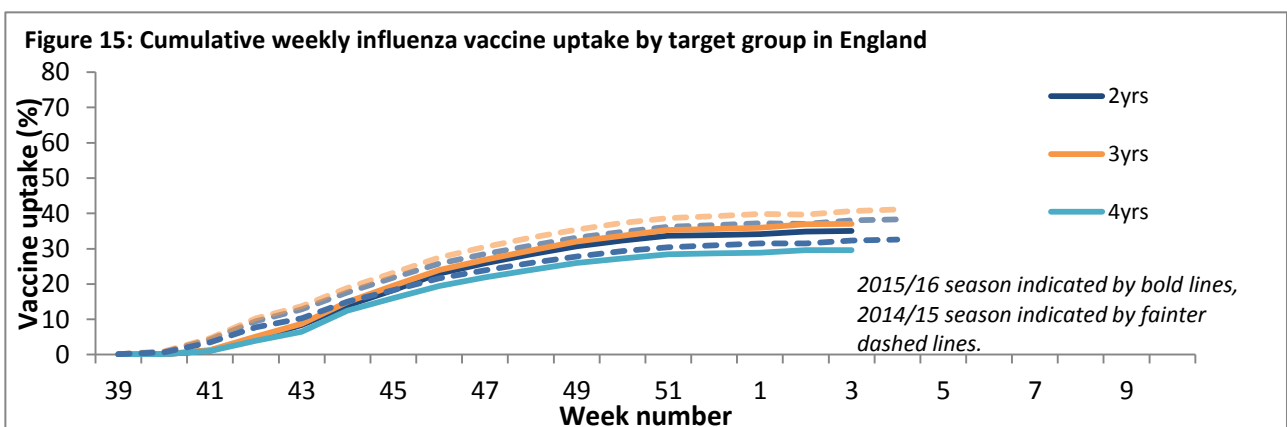
Vaccination

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- Up to week 02 2016 in 94.0% 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):
 - 44.5% in under 65 years in a clinical risk group
 - 42.0% in pregnant women
 - 70.6% 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 02 2016 in 94.0% 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)
 - 35.0% in all 2 year olds
 - 37.0% in all 3 year olds
 - 29.6% in all 4 year olds



- Provisional data from the second monthly collection of influenza vaccine uptake by frontline healthcare workers show 44.1% were vaccinated by 30 November 2015 from 97.0% of Trusts, compared to 48.2% vaccinated in the previous season by 30 November 2014. The [report](#) provides uptake at national, area team and CCG level.
- Provisional data from the second 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 30 November 2015 was as follows: 40.9% in children school year 1 age (5-6 years) and 39.3% in children school year 2 age (6-7 years).
- Provisional data from the second monthly collection of influenza vaccine uptake in GP patients up to 30 November 2015 has been published. The [report](#) provides uptake at national, area team and CCG level.

International Situation

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Globally, influenza activity has increased in some temperate countries of the Northern hemisphere. High levels of influenza activity have been reported from some of the Western Asia countries.

- [Europe](#) updated on 15 January 2016 (Joint ECDC-WHO Influenza weekly update)

In week 01/2016, of the 43 reporting countries, 35 reported low influenza activity and eight countries medium activity.

The proportion of influenza-virus positive specimens from sentinel sources continued to increase from 30% in week 53/2015 to 37% in week 01/2016. The proportion of influenza virus-positive sentinel surveillance specimens has been over 10% since week 51/2015. In week 01/2016, 77% of the influenza virus-positive specimens contained influenza A viruses, with a predominance (82%) among those subtyped of influenza A(H1N1)pdm09.

Overall, 6% of specimens from non-sentinel sources have tested positive for influenza virus since week 40/2015, with a proportion of 20% for week 01/2015.

Since week 40/2015, five countries have reported 363 hospitalized laboratory-confirmed cases. Among those admitted to ICUs, influenza type A viruses were detected in 95% of cases, with A(H1N1)pdm09 being the dominant subtype.

- [United States of America](#) Updated on 15 January 2016 (Centre for Disease Control report)

During week 01 2016, influenza activity increased slightly in the United States. The most frequently identified type reported to be influenza A with influenza A (H1N1)pdm09 viruses predominating.

Nationwide during week 01, the proportion of outpatient visits for influenza-like illness (ILI) was 2.0%, which is below the national baseline of 2.1%. Four of 10 regions reported ILI at or above region-specific baseline levels.

The percent positive for laboratory confirmed influenza detections was low.

During week 01, 6.4% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 7.0% for week 01. One influenza-associated paediatric death was reported in week 01. A total of seven influenza associated paediatric deaths have been reported during the 2015-2016 season.

- [Canada](#) Updated on 15 January 2016 (Public Health Agency report)

In week 01, seasonal influenza activity has increased in Canada.

The percent positive for laboratory confirmed influenza detections increased from 4.3% in week 52 to 6.0% in week 01. Among subtyped influenza detections, influenza A(H1N1) was the most common influenza A virus detected across Canada in weeks 51 and 52. To date, 83% of influenza detections have been influenza A and the majority of those subtyped have been A(H3) (63%).

The national influenza-like-illness (ILI) consultation rate has decreased from 41.5 per 1,000 visits in week 52 to 28.4 per 1,000 visits in week 01. In week 52, the highest ILI consultation rate was found in the 0-4 years of age and the lowest was found in the >65 years of age group.

To date this season, 54 laboratory-confirmed influenza-associated paediatric (≤ 16 years of age) hospitalizations have been reported by the Immunization Monitoring Program Active (IMPACT) network. Since the start of the 2015-16 season, 201 laboratory-confirmed influenza-associated hospitalizations have been reported. One hundred and seventy-six hospitalizations (88%) were due to influenza A and twenty-five

(12%) were due to influenza B. Among cases for which the subtype of influenza A was reported, 53% (40/96) were influenza A(H1N1). The majority (43%) of hospitalized cases were ≥65 years of age. Eighteen ICU admissions and ten deaths have been reported.

- [Global influenza update](#) Updated on 11 January 2015 (WHO website)

High levels of influenza activity was reported from some countries in Western Asia. Globally influenza activity was picking up in some temperate countries of the Northern Hemisphere, but in general remained low.

In Eastern Asia, influenza activity continued at low levels, except Mongolia where increased influenza activity was reported.

In Central Asia, influenza activity increased in a few countries, but in general remained low.

In Western Asia, influenza activity remained at high levels. Israel, Jordan and Oman reported increased influenza activity associated with influenza A(H1N1)pdm09 and influenza B viruses, and the Islamic Republic of Iran and Pakistan reported elevated influenza activity, predominantly due to influenza A(H1N1)pdm09. Bahrain and Qatar reported a decline in influenza activity.

In Europe influenza activity continued at low levels, except in some countries in Northern and Eastern Europe where an increase in influenza activity was observed.

In Northern Africa, influenza activity increased in a few countries, but in general remained low.

In tropical Africa, few influenza virus detections were reported.

In tropics of the Americas, respiratory virus activity was at low levels.

In tropical Asia, countries in Southern and South East Asia reported low influenza activity overall with the exception of Lao People's Democratic Republic and Thailand where influenza B viruses continue to be detected.

In the temperate countries of the Southern Hemisphere, respiratory virus activity was generally low in recent weeks.

Based on FluNet reporting, the WHO GISRS laboratories tested more than 35,732 specimens between 14 December 2015 and 27 December 2015. 4,383 were positive for influenza viruses, of which 3,900 (89.0%) were typed as influenza A and 483 (11.0%) as influenza B. Of the sub-typed influenza A viruses, 2,919 (93.3%) were influenza A(H1N1)pdm09 and 210 (6.7%) were influenza A(H3N2). Of the characterized B viruses, 46 (52.9%) belonged to the B-Yamagata lineage and 41 (47.1%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 19 January 2016 (WHO website)

Influenza A(H5N6)

On [8 January 2016](#), the National Health and Family Planning Commission (NHFPC) of China notified WHO of 2 additional laboratory-confirmed cases of human infection with avian influenza (H5N6) virus. A total of eight 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.

Influenza A(H7N9)

On [11 January 2016](#), the National Health and Family Planning Commission (NHFPC) of China notified WHO of 10 additional laboratory-confirmed cases of human infection with avian influenza A (H7N9) virus, including 3 deaths. For further updates and WHO travel and clinical management advice, please see the [WHO website](#).

Influenza A(H5N1)

From 2003 through 14 December 2015, 844 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. Influenza A(H5) viruses of various subtypes, such as influenza A(H5N1), A(H5N2), A(H5N6), A(H5N8) and A(H5N9) have been detected in birds in Africa, Asia, and Europe according to reports received by OIE. Although influenza A(H5) viruses have the potential to cause disease in humans, so far no human cases of infection with these viruses have been reported, with exception of the human infections with influenza A(H5N1) viruses and the four human infections with influenza A(H5N6) virus detected in China since 2014. Overall, the public health risk assessment for avian influenza A(H5) viruses remains unchanged since the assessment of [17 July 2015](#).

In recent weeks, highly pathogenic avian influenza A(H5) viruses of several subtypes have been detected in domestic birds in France. Based on preliminary data, at least one of these viruses has different origins

than the influenza A(H5) viruses that have infected the human cases reported in the past. WHO is in contact with the animal health authorities to better understand these viruses and to more accurately assess the public health risk.

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\)](#) latest update on 07 January 2016

On [3 January 2016](#), the National IHR Focal Point of Oman notified WHO of 1 additional case of Middle East Respiratory Syndrome-Coronavirus (MERS-CoV) infection.

Between [29 November and 17 December 2015](#), the National IHR Focal Point for the Kingdom of Saudi Arabia notified WHO of 4 additional cases of MERS-CoV infection, including two deaths.

On [23 December 2015](#), the Ministry of Health and Welfare in Korea declared that transmission of MERS-CoV in South Korea was over by WHO standards.

Up to 20 January 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 551 suspect cases in the UK that have been investigated for MERS-CoV and tested negative.

Globally, since September 2012, WHO has been notified of 1,626 laboratory-confirmed cases of infection with MERS-CoV, including at least 586 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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- [Real time syndromic surveillance](#)
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Disease severity and mortality data

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- [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](#))