PHE Weekly National Influenza Report

Summary of UK surveillance of influenza and other seasonal respiratory illnesses

11 February 2016 – Week 06 report (up to week 05 data)

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.

Summary

In week 05 2016 (ending 07 February 2016), influenza indicators continued to increase or stabilise 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. 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 05, GP consultations for influenza-like illness stabilised with highest rates remaining in the 15-44 and 45-64 year olds.
  - Forty new acute respiratory outbreaks have been reported in the past 7 days. Twenty-one outbreaks were in schools where two tested positive for influenza A(H1N1)pdm09. Sixteen outbreaks were from care homes where four tested positive for influenza A(not subtyped). Two outbreaks were from hospitals where both tested positive for influenza A(not subtyped). The fortieth outbreak was from an immigration and removal centre, where no results were available.
- Overall weekly influenza GP consultation rates across the UK
  - In week 05, overall weekly influenza-like illness (ILI) GP consultation rate has increased and is above the baseline threshold in England (21.5 per 100,000). ILI rates have decreased in Wales (13.1 per 100,000) and Northern Ireland (22.5 per 100,000) and increased in Scotland (19.2 per 100,000).
  - Through the GP In Hours surveillance system, weekly ILI rates have increased but remain within seasonally expected levels in week 05.
- Influenza-confirmed hospitalisations
  - One hundred and forty-eight new admissions to ICU/HDU with confirmed influenza (seventy-three influenza A(H1N1)pdm09,seventy-three influenza A(unknown subtype), one influenza A(H3N2) and one influenza B) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (145 NHS Trusts in England) in week 05, a rate of 0.31 per 100,000 compared to 0.23 per 100,000 in week 04. Thirteen new confirmed influenza deaths were also reported through this scheme.
  - One hundred and sixty-four new hospitalised confirmed influenza cases (one hundred and twenty-three influenza A(H1N1)pdm09, thirty-four influenza A(unknown subtype) and seven influenza B) were reported through the USISS sentinel hospital network across England (23 NHS Trusts), a rate of 1.8 compared to 1.1 per 100,000 the previous week.
  - Since week 40, twenty-four confirmed influenza admissions have been reported (eighteen influenza A(H1N1)pdm09, five 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 05 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 & 53 with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Northern Ireland (15-64 year olds) and Scotland (0-4 year olds) in week 04. No excess was seen in Wales in week 05.
- Microbiological surveillance
  - Forty-nine samples tested positive for influenza (39 A(H1N1)pdm09, 1 A(H3), 4 A(untyped) and 5 B) through GP sentinel schemes across the UK, with an overall positivity of 29.3%.
  - Three hundred and eighty-seven influenza positive detections were recorded through the DataMart scheme (two hundred and twenty-two A(H1N1)pdm09, two A(H3), one hundred and forty-four A(not subtyped) and nineteen influenza B). A positivity of 19.8% was seen in week 05, compared to 21.8% in week 04, with the highest positivity in 15-44 year olds (22.9%). This is above the all-age threshold for 2015/16 season of 7.4%.
- Vaccination
  - Up to week 04 2016 in 87.1% 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: 45.3% in under 65 years in a clinical risk group, 42.4% in pregnant women, 71.2% in 65+ year olds, 35.9% in all 2 year olds, 38.1% in all 3 year olds and 30.3% in all 4 year olds.
  - Provisional data from the third monthly collection of influenza vaccine uptake by frontline healthcare workers show 47.6% were vaccinated by 31 December 2015 from 95.4% of Trusts, compared to 52.6% vaccinated in the previous season by 31 December 2014. The report is available here.
  - Provisional data from the third 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 December 2015 was as follows: 50.6% in children school year 1 age (5-6 years) and 49.3% in children school year 2 age (6-7 years).
  - Provisional data from the third monthly collection of influenza vaccine uptake in GP patients up to 31 December 2015 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.

Community surveillance

| Back to top |

During week 05, a range of respiratory indicators continued to increase or stabilise. Forty new acute respiratory outbreaks were reported in the past 7 days.

- PHE Real-time Syndromic Surveillance

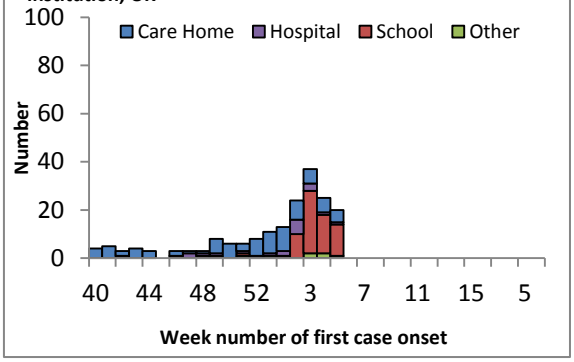
- In week 05, GP consultations for influenza-like illness stabilised with the highest rates remaining in the 15-44 and 45-64 years age groups. Consultations for other respiratory indicators, including upper and lower respiratory tract infections also stabilised during week 05, increases in pneumonia consultations were noted in the 75+ years age group. For further information, please see the syndromic surveillance webpage.

- Acute respiratory disease outbreaks

- Forty new acute respiratory outbreaks have been reported in the past 7 days. Twenty-one outbreaks were from schools where two tested positive for influenza A(H1N1)pdm09 and for the remaining results were not available/not tested. Sixteen outbreaks were from care homes, where four tested positive for influenza A(not subtyped). Two outbreaks were from hospitals and both tested positive for influenza A(not subtyped). The fortieth outbreak was from an immigration and removal centre with no test results available.

-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



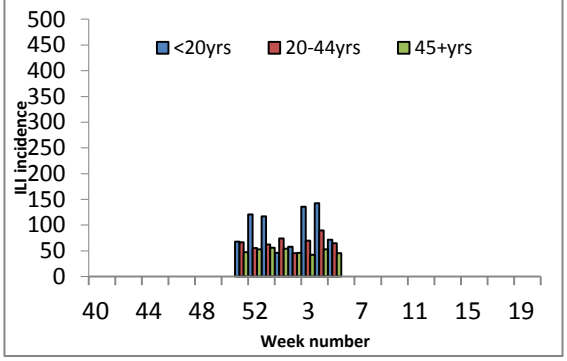
- FluSurvey

- 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 05 was 52.0 per 1,000 (127/2,444 people reported at least 1 ILI), with the <20 age group reporting a higher rate of 71.4 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



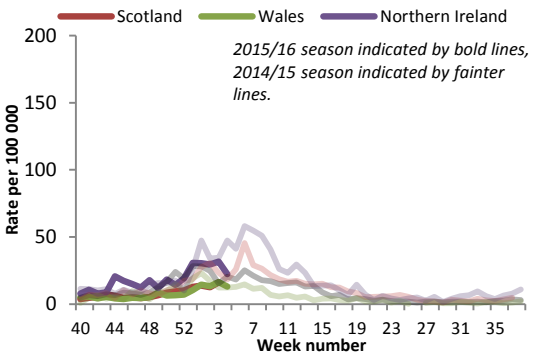
Weekly consultation rates in national sentinel schemes

| Back to top |

In week 05, overall weekly influenza-like illness GP consultations have increased in England. This is the third consecutive week that the ILI rate for England has been above the pre-epidemic threshold.

- Influenza/Influenza-Like-Illness (ILI)

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



Northern Ireland

-The Northern Ireland influenza consultation rate has decreased at 22.5 per 100,000 in week 05 compared to 31.7 per 100,000 in week 04 (Figure 3). This remains below the pre-epidemic threshold (49.4 per 100,000).

-The highest rates were seen in the <1 year olds (52.0 per 100,000), 45-64 year olds (32.5 per 100,000) and 1-4 year olds (30.3 per 100,000).

Wales

-The [illegible] per 1 [illegible] 100,0[illegible] [illegible] above the pre-epidemic threshold (10.3 per 100,000).

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.*

-The highest rates were seen in 5-14 year olds (20.1 per 100,000), 45-64 year olds (16.1 per 100,000) and 15-44 year olds (15.7 per 100,000).

Scotland

-The Scottish ILI rate has increased to 19.2 per 100,000 in week 05 (Figure 3) compared to 16.4 per 100,000 in week 04. This remains below the pre-epidemic threshold (37.0 per 100,000).

-The highest rates were seen in 45-64 year olds (24.7 per 100,000) and 15-44 year olds (24.2 per 100,000).

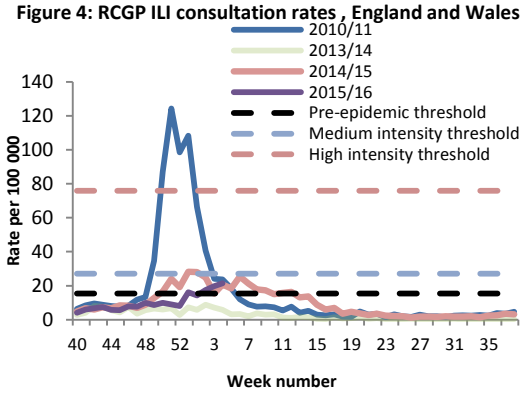
RCGP (England and Wales)

- The weekly ILI consultation rate through the RCGP surveillance system has increased to 21.5 per 100,000 in week 05 compared to 19.7 per 100,000 in week 04. This is above the pre-epidemic threshold (15.4 per 100,000) (Figure 4*). By age group, the highest rates were seen in 45-64 year olds (31.0 per 100,000), 15-44 year olds (24.8 per 100,000) and 1-4 year olds (24.6 per 100,000).

**The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe.*

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)

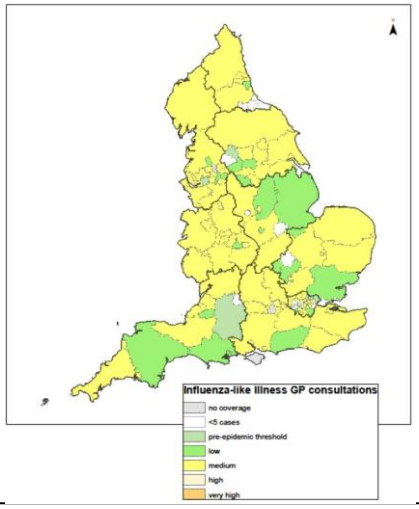
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system has increased at 14.1 per 100,000 in week 05 (Figure 5).

Figure 5 represents a map of GP ILI consultation rates in Week 05 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 05



Influenza confirmed hospitalisations

| Back to top |

In week 05, one hundred and forty-eight new admissions to ICU/HDU with confirmed influenza (73 influenza A(H1N1)pdm09, 73 influenza A(unknown subtype), 1 influenza A(H3N2) and 1 influenza B) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (145 Trusts in England). One hundred and sixty-four new hospitalised confirmed influenza cases (123 influenza A(H1N1)pdm09, 34 influenza A(unknown subtype) and 7 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 05)

- In week 05, one hundred and forty-eight new admissions to ICU/HDU with confirmed influenza (73 influenza A(H1N1)pdm09, 73 influenza A(unknown subtype), 1 influenza A(H3N2) and 1 influenza B) were reported across the UK (145/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 6 and 7), a rate of 0.31 per 100,000 compared to a rate of 0.23 per 100,000 in the previous week. Thirteen new confirmed influenza deaths were also reported in week 05 2016. A total of 753 admissions (363 influenza A(H1N1)pdm09, 16 influenza A(H3N2), 354 influenza A (unknown subtype) and 20 influenza B) and 66 confirmed influenza deaths have been reported since week 40 2015.

Figure 6: Weekly ICU/HDU influenza admission rate per 100,000 trust catchment population , England, since week 40 2015

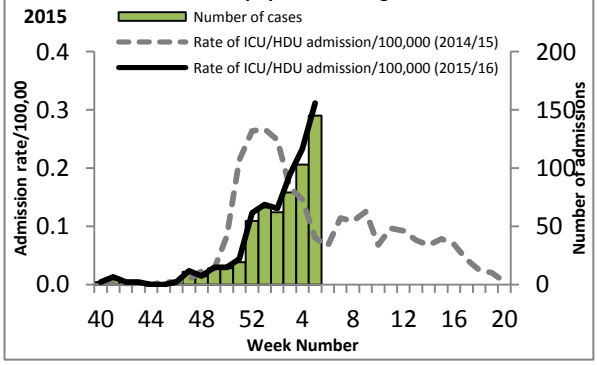
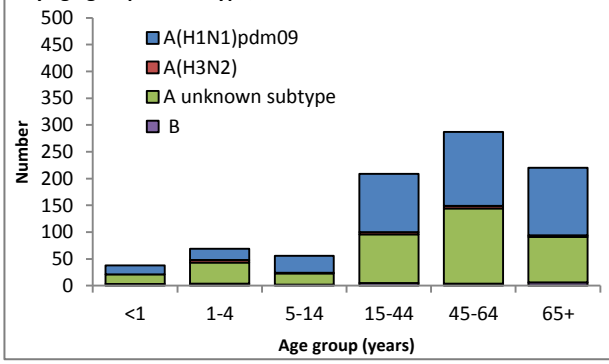


Figure 7: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2015



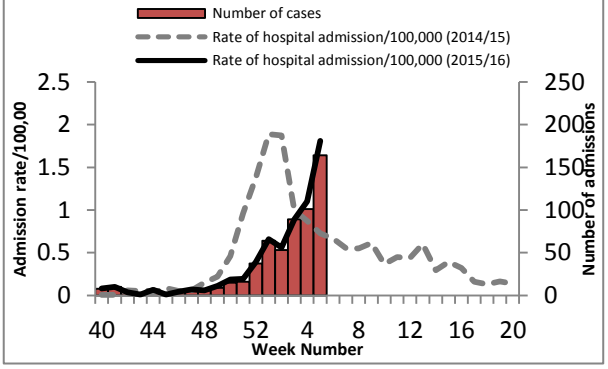
NB: *As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 6 is an average of week 52 and week 53 data.*

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 05)

- In week 05, one hundred and sixty-four new hospitalised confirmed influenza cases (123 influenza A(H1N1) pdm09, 34 influenza A(unknown subtype) and 7 influenza B) were reported through the USISS sentinel hospital network from 23 NHS Trusts across England (Figure 8), a rate of 1.8 per 100,000 compared to 1.1 per 100,000 the previous week. A total of 634 hospitalised confirmed influenza admissions (462 influenza A(H1N1pdm09), 14 influenza A(H3N2), 123 influenza A (unknown subtype) and 35 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.*

Figure 8: Weekly hospitalised influenza case rate per 100,000 trust catchment population , England, since week 40 2015



- USISS Severe Respiratory Failure Centre confirmed influenza admissions, UK (week 05)

- In week 05, four new confirmed influenza admission to the five Severe Respiratory Failure Centres in England was reported (3 influenza A(H1N1)pdm09 and 1 influenza B). Since week 40, twenty-four confirmed influenza admissions have been reported (18 influenza A(H1N1)pdm09, 5 influenza A(unknown subtype) and 1 influenza B) from the six Severe Respiratory Failure centres in the UK.

All-cause mortality data

| Back to top |

Up to week 05 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 & 53 with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Northern Ireland and Scotland in week 05. No excess was seen in Wales in week 05.

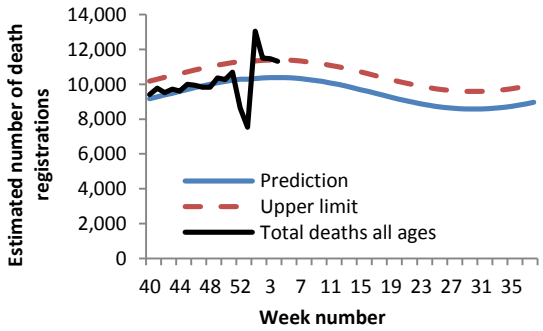
Seasonal mortality is seen each year in the UK, with a higher number of deaths in winter months compared to the summer. Additionally, peaks of mortality above this expected higher level typically occur in winter,

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 04 2016, an estimated 11,317 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is a slight decrease compared to the 11,473 estimated death registrations in week 03 2016, 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.

Figure 9: Observed & predicted all-cause death registrations, E&W



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

-Up to week 05 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 weeks 52 & 53 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 05 2016?	Weeks with excess in 2015/16
<5	×	51
5-14	×	51
15-64	×	52,53
65+	×	NA

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

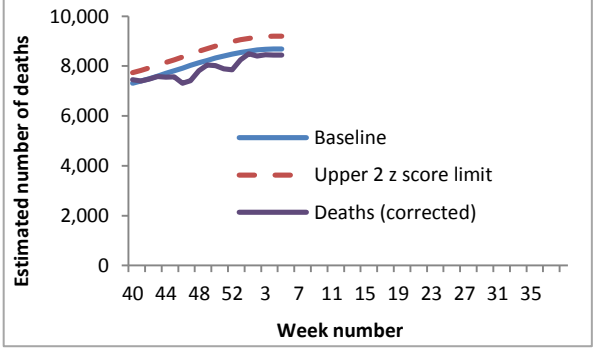
- In week 05 2016 in the devolved administrations, excess mortality above the threshold was seen in Scotland (0-4 year olds) and Northern Ireland (15-64 year olds). No significant excess mortality was seen in Wales (Table 2).

Table 2: Excess mortality by UK country*

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

** 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

| Back to top |

In week 05 2016, forty-nine samples tested for influenza through the UK GP sentinel schemes were positive. Three hundred and eighty-seven influenza positive detections were recorded through the DataMart scheme (two hundred and twenty-two A(H1N1)pdm09, two A(H3), one hundred and forty-four A(not subtyped) and nineteen influenza B).

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

-In week 05, thirty-three samples were positive for influenza in England (29 influenza A(H1N1)pdm09, 1 influenza A(H3) and 3 influenza B), eight samples were positive in Scotland (5 influenza A(H1N1)pdm09 and 3 influenza A (untyped)), six samples were positive in Wales (4 influenza A(H1N1) and 2 influenza B) and two samples were positive in Northern Ireland (1 influenza A(H1N1)pdm09 and 1 influenza A(untyped)) (Table 3).

Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
01	21/142 (14.8%)	9/83 (10.8%)	2/7 (-)	2/4 (-)
02	24/117 (20.5%)	17/97 (17.5%)	4/10 (40%)	4/9 (-)
03	42/177 (23.7%)	20/94 (21.3%)	8/12 (66.7%)	5/9 (-)
04	54/132 (40.9%)	16/96 (16.7%)	4/10 (40%)	7/17 (41.2%)
05	33/84 (39.3%)	8/57 (14%)	2/5 (-)	6/21 (28.6%)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 05 2016, out of the 1,955 respiratory specimens reported through the Respiratory DataMart System, 387 samples (19.8%) were positive for influenza (222 A(H1N1)pdm09, 2 A(H3), 144 A(not subtyped) and 19 B) (Figure 11). The highest positivity was in the 15-44 year olds at 22.9%. The overall positivity for RSV continued to decrease, with the highest positivity in children aged under 5 years at 6.1% in week 05 (Figure 12). Positivity for parainfluenza remained low at 1.3% in week 05. Positivity for rhinovirus decreased slightly to 9.7% and positivity for hMPV remained low at 2.7%. Adenovirus positivity increased to 3.3% (Figure 13).

Figure 11: DataMart samples positive for influenza, England

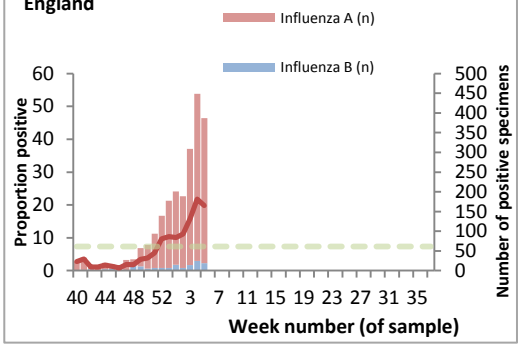


Figure 12: Datamart % RSV positive by age, England

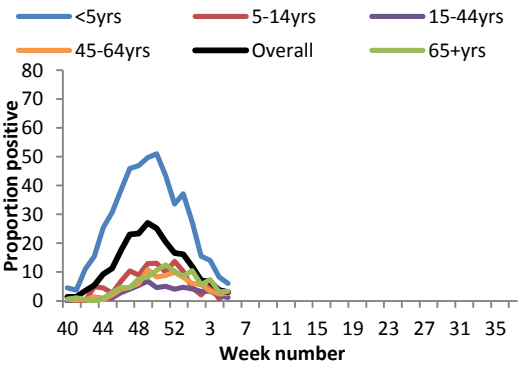
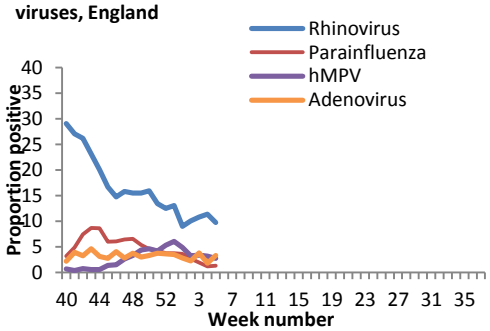


Figure 13: Datamart % positive for other respiratory viruses, England



**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 274 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 210 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 16A(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, 588 influenza A(H1N1)pdm09, six influenza A(H3N2) and nine 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. Two of the A(H1N1)pdm09 patients did not receive antiviral treatment. The A(H3N2) resistant sample was from an immunocompromised patient receiving oseltamivir treatment, with an E119V amino acid change. 106 influenza A(H1N1)pdm09 and five 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 07 February 2016, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenza, 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 07 February 2016, E&W

Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
S. pneumoniae	Penicillin	2,557	92
	Macrolides	2,899	83
	Tetracycline	2,802	85
H. influenzae	Amoxicillin/ampicillin	11,778	70
	Co-amoxiclav	11,289	93
	Macrolides	3,823	21
	Tetracycline	11,584	99
S. aureus	Methicillin	3,860	88
	Macrolides	3,807	72
MRSA	Clindamycin	386	47
	Tetracycline	450	90
MSSA	Clindamycin	2,220	79
	Tetracycline	3,135	93

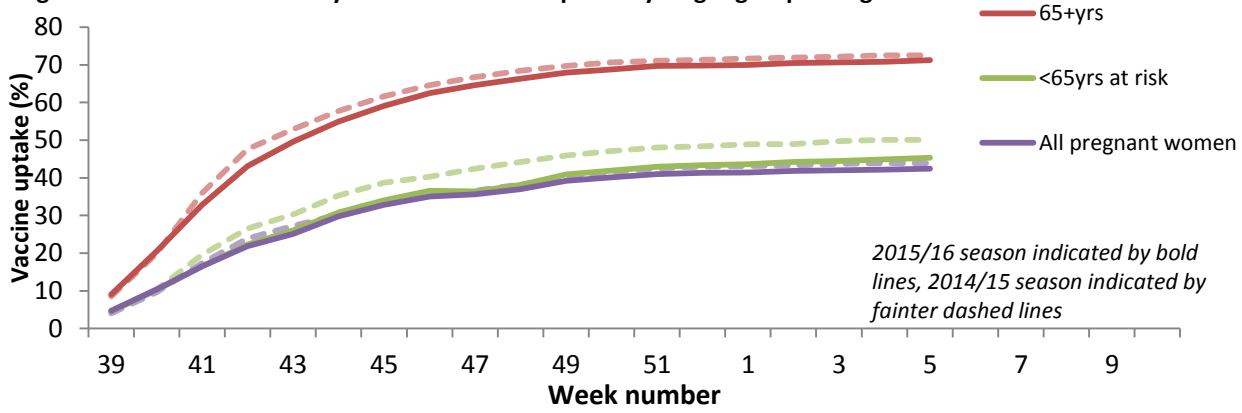
**Macrolides = erythromycin, azithromycin and clarithromycin*

Vaccination

| Back to top |

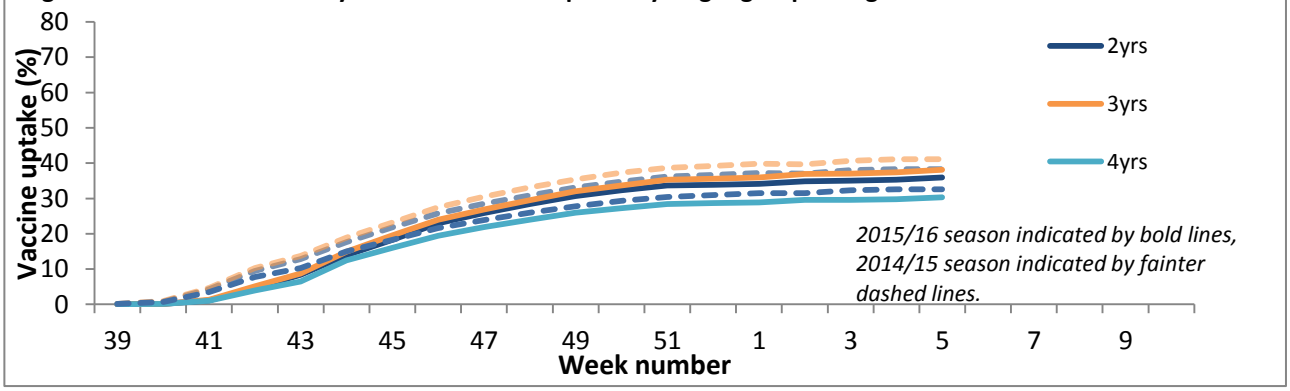
- Up to week 04 2016 in 87.1% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows (Figure 14):
  - 45.3% in under 65 years in a clinical risk group
  - 42.4% in pregnant women
  - 71.2% in 65+ year olds

Figure 14: Cumulative weekly influenza vaccine uptake by target group in England



- 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 87.1% 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)
  - 35.9% in all 2 year olds
  - 38.1% in all 3 year olds
  - 30.3% in all 4 year olds

Figure 15: Cumulative weekly influenza vaccine uptake by target group in England



- Provisional data from the third monthly collection of influenza vaccine uptake by frontline healthcare workers show 47.6% were vaccinated by 31 December 2015 from 95.4% of Trusts, compared to 52.6% vaccinated in the previous season by 31 December 2014. The report provides uptake at national, area team and CCG level.
- Provisional data from the third 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 December 2015 was as follows: 50.6% in children school year 1 age (5-6 years) and 49.3% in children school year 2 age (6-7 years).
- Provisional data from the third monthly collection of influenza vaccine uptake in GP patients up to 31 December 2015 has been published. The report provides uptake at national, area team and CCG level.

International Situation

| Back to top |

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 05 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 67% of sentinel surveillance detections of influenza-like illness (ILI) and acute respiratory infection (ARI) in the WHO European Region. The predominance of A(H1N1)pdm09 correlates with an increase in cases of severe disease, mainly in people aged 15–64.

For week 04/2016, eight of 12 countries reporting data on severe acute respiratory infection (SARI) indicated increasing numbers of cases. These increases were associated with a predominance of influenza A(H1N1)pdm09 in tested SARI cases.

For week 04/2016, 42% of the specimens from sentinel sources tested positive for influenza virus. Of 34 countries in which 10 or more sentinel specimens were tested, all had positivity rates higher than 17%; and 12 (Austria, Belgium, Denmark, Georgia, Ireland, Israel, Latvia, Luxembourg, the Netherlands, Portugal, Slovenia and Switzerland) had rates over 50%. Of the influenza-virus-positive specimens, 75% contained type-A viruses, with A(H1N1)pdm09 viruses accounting for 84% of those subtyped.

Since week 40/2015, type-A viruses have accounted for 77% of those detected, and A(H1N1)pdm09 for 83% of those subtyped. Although only 23% of the type-B influenza viruses have been subtyped, 93% were B/Victoria-lineage.

The ECDC mid-season risk assessment has now been published for this season 2015/16.

- United States of America Updated on 05 February 2016 (Centre for Disease Control report)

During week 04 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 04, the proportion of outpatient visits for influenza-like illness (ILI) was 2.2%, which is above the national baseline of 2.1%.

The percent positive for laboratory confirmed influenza detections has increased.

During week 04, 6.8% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was above the epidemic threshold of 7.2% for week 04. A total of nine influenza associated paediatric deaths have been reported during the 2015-2016 season.

- Canada Updated on 05 February 2016 (Public Health Agency report)

Overall in week 04, seasonal influenza activity increased from the previous week.

The percent positive for laboratory confirmed influenza detections increased from 12.1% in week 03 to 16.0% in week 04. Among subtyped influenza detections, influenza A(H1N1)) was the most common influenza A virus detected across Canada.

The national influenza-like-illness (ILI) consultation rate has increased from 16.0 per 1,000 visits in week 03 to 35.9 per 1,000 visits in week 04. In week 04, 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.

- Global influenza update Updated on 08 February 2016 (WHO website)

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.

WHO has released the A(H1N1)pdm09 risk assessment.

Increasing influenza A(H1N1)pdm09 activity continued to be reported in Europe. Some countries in northern and eastern Europe a sharp increase in influenza like illness (ILI) and an increase in severe cases due to influenza A(H1N1)pdm09. A few countries in Europe reported an increase in activity predominantly of influenza B virus.

In North America, a slight increase of influenza A(H1N1)pdm09 was reported, but overall levels were still low.

In eastern Asia, influenza activity was increasing in Japan and the Republic of Korea due to predominantly influenza A(H1N1)pdm09 virus. In North China, influenza A(H3N2) and B were the predominant circulating viruses detected.

In western Asia, influenza activity remained at high levels in Israel but appeared to have peaked in Jordan, Oman and Iran.

Few influenza virus detections were reported by countries in tropical Africa.

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. Puerto Rico and Guadeloupe reported increased influenza and ILI activities in recent weeks. In Costa Rica, influenza activity continued at high but decreasing levels.

In tropical Asia, countries in Southern and South East Asia continued to report on-going 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 65,732 specimens between 11 January 2016 and 24 January 2016. 20,839 were positive for influenza viruses, of which 17,413 (83.6%) were typed as influenza A and 3,428 (16.4%) as influenza B. Of the sub-typed influenza A viruses, 10,873 (81.9%) were influenza A(H1N1)pdm09 and 2,405 (18.1%) were influenza A(H3N2). Of the characterized B viruses, 509 (42.1%) belonged to the B-Yamagata lineage and 700 (57.9%) to the B-Victoria lineage.

- Avian Influenza latest update on 25 January 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.1 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 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.
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 29 January 2016

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.

Between 27 December 2015 and 13 January 2016, the National IHR Focal Point for the Kingdom of Saudi Arabia notified WHO of 4 additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection.

Up to 10 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 666 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

| Back to top |

This report was prepared by the Influenza section, Respiratory Diseases Department, Centre for Infectious Disease Surveillance and Control, Public Health England. We are grateful to all who provided data for this report including the RCGP Research and Surveillance Centre, the PHE Real-time Syndromic Surveillance team, the PHE Respiratory Virus Unit, the PHE Modelling and Statistics unit, the PHE Dept. of Healthcare Associated Infection & Antimicrobial Resistance, PHE regional microbiology laboratories, NHS Direct, Office for National Statistics, the Department of Health, Health Protection Scotland, National Public Health Service (Wales), the Public Health Agency Northern Ireland, the Northern Ireland Statistics and Research Agency, QSurveillance® and EMIS and EMIS practices contributing to the QSurveillance® database.

Related links

| Back to top |

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)