# PHE Weekly National Influenza Report

## Summary of UK surveillance of influenza and other seasonal respiratory illnesses

## 24 December 2015 – Week 52 report (up to week 51 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

**Influenza activity remains at low levels in week 51 (ending 20 December 2015)**

- Community influenza surveillance
  - During week 51 there were further decreases in bronchitis indicators, particularly in infants aged <1 year across, all syndromic surveillance systems. These decreases may signal that respiratory syncytial virus (RSV) activity has peaked, although is still circulating.
  - Ten new acute respiratory outbreaks have been reported in the past 7 days. Nine of them were in care homes, (three tested positive for RSV, one tested positive for hMPV and the other five were not tested/test results not available). One outbreak was in a school testing positive for influenza A(H1N1)pdm09.
- Overall weekly influenza GP consultation rates across the UK
  - In week 51, overall weekly influenza-like illness GP consultations was low in England (9.0 per 100,000), Wales (6.8 per 100,000), Scotland (9.7 per 100,000) and Northern Ireland (14.3 per 100,000).
  - Weekly influenza-like illness consultations rates also remain low in week 51 through the GP In Hours Surveillance system.
- Influenza-confirmed hospitalisations
  - Nineteen new admissions to ICU/HDU with confirmed influenza (eight influenza A(H1N1)pdm09, five influenza A(H3N2) and six influenza A(unknown subtype)) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (134 Trusts in England) in week 51, a rate of 0.04 compared to 0.03 per 100,000 the previous week and one confirmed death.
  - Ten new hospitalised confirmed influenza cases (six influenza A(H1N1pdm09), one influenza A(H3N2) and three influenza A(not subtyped)) were reported through the USISS sentinel hospital network across England (16 Trusts), a rate of 0.17 compared to 0.19 per 100,000 the previous week.
  - Since week 40, five confirmed influenza admissions have been reported (two influenza A(H1N1)pdm09 and three influenza A(unknown subtype) from the five Severe Respiratory Failure centres in England.
- All-cause mortality data
  - Up to week 50 2015, no statistically significant excess all-cause mortality by week of death was seen through the EuroMoMo algorithm in England overall and by age group and across the devolved administrations.
- Microbiological surveillance
  - Sixteen samples tested positive for influenza (15 A(H1N1)pdm09 and 1 A(H3)) through GP sentinel schemes across the UK.
  - Eighty-eight influenza positive detections were recorded through the DataMart scheme (sixty-one influenza A(H1N1)pdm09, two A(H3), eighteen A(not subtyped) and seven influenza B). A positivity of 5.5% was seen in week 51, an increase from 3.6% seen in week 51, with the highest positivity in 15-44 year olds (10.9%).
- Vaccination
  - Up to week 51 2015 in 84.9% 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: 42.9% in under 65 years in a clinical risk group, 41.0% in pregnant women, 69.7% in 65+ year olds, 33.7% in all 2 year olds, 35.3% in all 3 year olds and 28.4% 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 generally remained low in both hemispheres.
  - So far this season, Canada has seen increased influenza A(H3N2) and the United States of America have reported increases in influenza A(H1N1)pdm09 detections in week 49.
  - Influenza activity in Europe remains low and there is no indication that the influenza season has started. There has been more A(H1N1)pdm09 detections than A(H3N2) detections.

## Community surveillance

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**In week 51, there were decreases in a number of respiratory indicators particularly in infants aged <1 year across all syndromic surveillance systems. Ten new acute respiratory outbreaks were reported in the past 7 days.**

- PHE Real-time Syndromic Surveillance

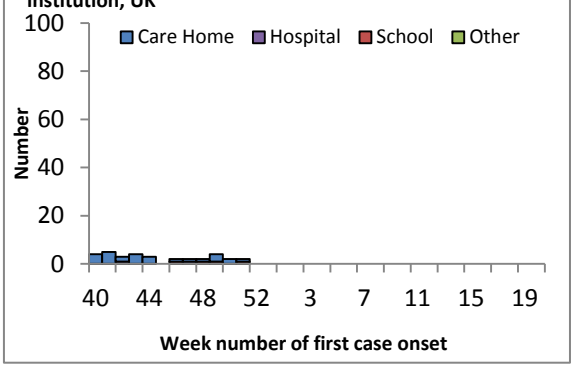
- During week 51 there were further decreases in bronchitis indicators, particularly in infants aged <1 year across, all syndromic surveillance systems. These decreases may signal that respiratory syncytial virus (RSV) activity has peaked, although is still circulating.

- Acute respiratory disease outbreaks

- Ten new acute respiratory outbreaks have been reported in the past 7 days. Nine of them were in care homes with three testing positive for RSV and one positive for hMPV, while the other five were not tested/test results not available. One outbreak occurred in a school which tested positive for influenza A(H1N1)pdm09.

-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**



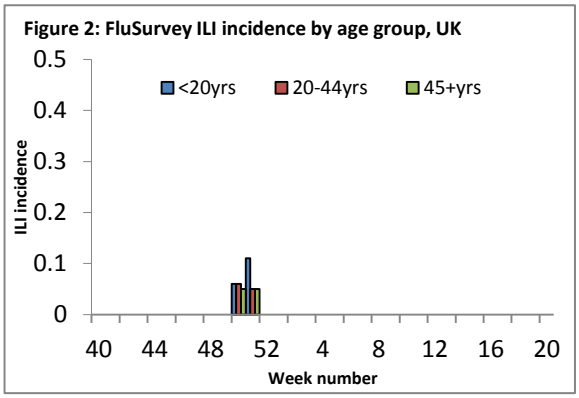

- FluSurvey

- 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 51 was 0.05 ( 124 / 2,357 people reported at least 1 ILI).

- 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

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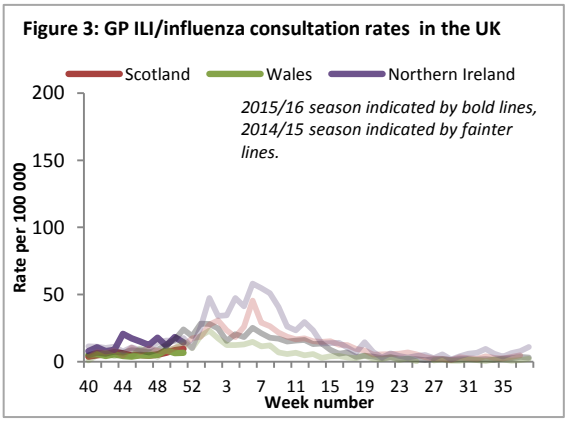
**In week 51 overall weekly influenza-like illness GP consultations were low in England, Wales, Scotland and Northern Ireland.**

- Influenza/Influenza-Like-Illness (ILI)

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




Northern Ireland

-The Northern Ireland influenza consultation rate was low at 14.3 per 100,000 in week 50 (Figure 3) and below the pre-epidemic threshold (49 per 100,000).

-The highest rates were seen in the 45-64 year olds (25.6 per 100,000), 15-44 year olds (14.2 per 100,000) and 5-14 year olds (12.3 per 100,000).

## Wales

-The Welsh influenza rate was low at 6.8 per 100,000 in week 51 (Figure 3).

-The highest rates were seen in 45-64 year olds (9.31 per 100,000) and 75+ year olds (8.59 per 100,000).

## Scotland

-The Scottish ILI rate was low at 9.7 per 100,000 in week 51 (Figure 3) and below the pre-epidemic threshold (37 per 100,000).

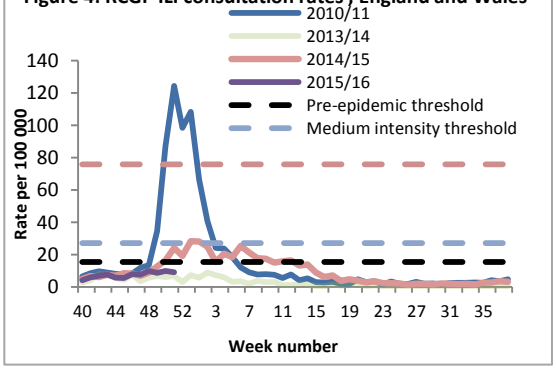
-The highest rates were seen in 45-64 year olds (12.6 per 100,000), 15-44 year olds (10.5 per 100,000) and 65-74 year olds (8.9 per 100,000).

## RCGP (England and Wales)

-The weekly ILI consultation rate through the RCGP surveillance system was low at 9.0 in week 51 and below the pre-epidemic threshold (15.4 per 100,000) (Figure 4*). By age group, the highest rates were seen in 45-64 year olds (12.8 per 100,000) and 15-44 year olds (10.2 per 100,000).

**The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe. The threshold to indicate a likelihood of influenza community circulation for as calculated through the Moving Epidemic Method is 15.4 per 100,000.*

**Figure 4: RCGP ILI consultation rates , England and Wales**




## GP In Hours Syndromic Surveillance System (England)

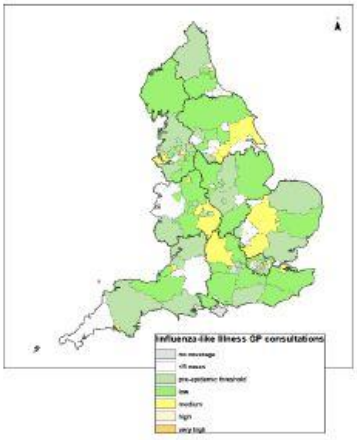
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system was low at 7.4 per 100,000 in week 50 (Figure 5).

Figure 5 represents a map of GP ILI consultation rates in Week 50 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 50**



## Influenza confirmed hospitalisations

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**In week 51, nineteen new admissions to ICU/HDU with confirmed influenza (eight influenza A(H1N1pdm09), five influenza A(H3N2) and six A(unknown subtype)) were reported through the national USISS mandatory ICU scheme across the UK (134 Trusts in England). Ten new hospitalised confirmed influenza cases (six influenza A(H1N1pdm09), one influenza A (H3N2) and three influenza A(not subtyped)) were reported through the USISS sentinel hospital network across England (16 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 51)

-In week 51, nineteen new admissions to ICU/HDU with confirmed influenza were reported across the UK (134/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 6 and 7), a rate of 0.04 per 100,000 compared to 0.03 per 100,000 the previous week and one new confirmed influenza death was reported in week 51 2015. A total of 83 admissions (27 influenza A(H1N1)pdm09, seven influenza A(H3N2), 30 influenza A unknown subtype and seven influenza B) and five 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**

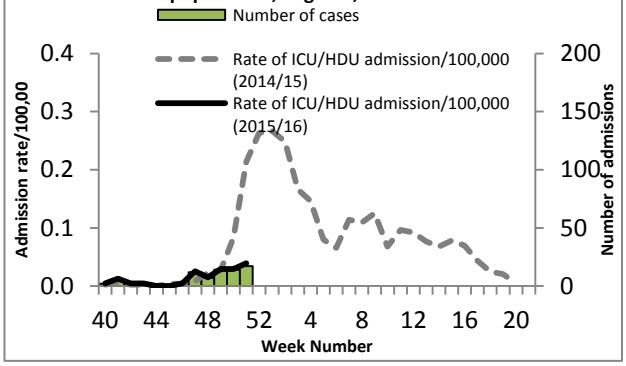
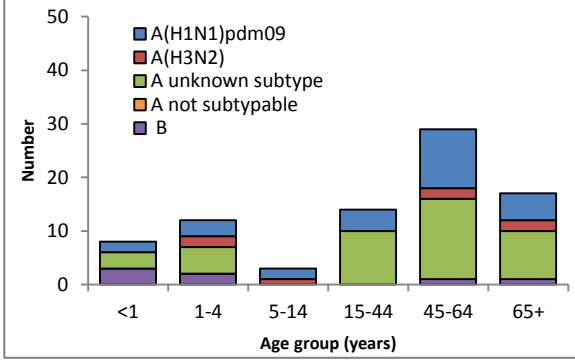


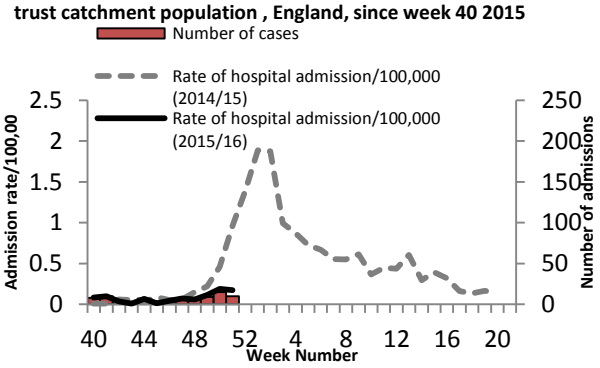

**Figure 7: Cumulative ICU influenza admissions (USISS mandatory) by age group and flu type, UK, since week 40 2015**




- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 51)

-In week 51, ten new hospitalised confirmed influenza cases (six influenza A(H1N1pdm09), one influenza A (H3N2) and three influenza A(not subtyped)) were reported through the USISS sentinel hospital network from 16 NHS Trusts across England (Figure 8), a rate of 0.17 per 100,000 compared to 0.19 per 100,000 the previous week. A total of 82 hospitalised confirmed influenza admissions (52 A(H1N1pdm09), nine A(H3N2), nine A unknown subtype and 12 B) have been reported since week 40.

**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, England (week 51)

-In week 51, one new confirmed influenza admissions to the five Severe Respiratory Failure Centres in England were reported. Since week 40, five confirmed influenza admissions have been reported (two influenza A(H1N1)pdm09 and three influenza A unknown subtype)

## All-cause mortality data

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**Up to week 50 2015, no statistically significant excess all-cause mortality by week of death was seen through the EuroMoMo algorithm in England overall and by age group and across the devolved administrations.**

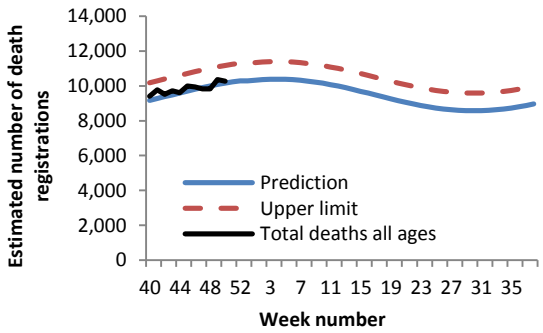
Seasonal mortality is seen each year in the UK, with a higher number of deaths in winter months compared to the summer. Additionally, peaks of mortality above this expected higher level typically occur in winter, most commonly the result of factors such as cold snaps and increased circulation of respiratory 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 50 2015, an estimated 10,269 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is a decrease compared to the 10,365 estimated death registrations in week 49, and is below the 95% upper limit of expected death registrations for the time of year as calculated by PHE (Figure 9).

**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 50 2015, no excess mortality by date of death above the upper 2 z-score threshold was seen in England after correcting ONS disaggregate data for reporting delay with the standardised EuroMoMo algorithm (Figure 10, Table 1), in any age group or subnationally. This data is provisional due to the time delay in registration; numbers may vary from week to week.

- No excess mortality above the threshold through the same standardised algorithm was seen across the Devolved Administrations in week 50 (Table 2).

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

| Age group (years) | Excess detected in week 50 2015? | Weeks with excess in 2015/16 |
|---|---|---|
| *<5* | × | NA |
| *5-14* | × | NA |
| *15-64* | × | NA |
| *65+* | × | NA |

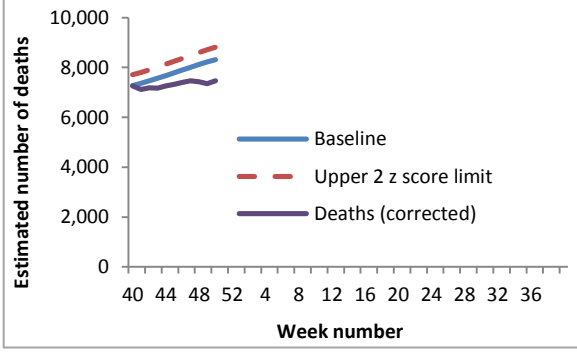
** Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold*

**Table 2: Excess mortality by UK country***

| Country | Excess detected in week 50 2015? | Weeks with excess in 2015/16 |
|---|---|---|
| *England* | × | NA |
| *Wales* | × | NA |
| *Scotland* | × | 48 |
| *Northern Ireland* | × | NA |

** Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold*
*NB. Separate total and age-specific models are run for England which may lead to discrepancies between Tables 1 + 2*

**Figure 10: Excess mortality in 65+ year olds by week of death, EuroMOMO, England**




## Microbiological surveillance

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**In week 51 2015, sixteen samples tested for influenza through the UK GP sentinel schemes were positive. Eighty-eight influenza positive detections were recorded through the DataMart scheme (sixty-one influenza A(H1N1)pdm09, two A(H3), eighteen A(not subtyped) and seven influenza B).**

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

-In week 51, sixteen samples were positive for influenza. Thirteen positive samples in England (12 A(H1N1)pdm09 and 1 A(H3)), one sample positive for (A(H1N1)pdm09) in Scotland, one sample positive for A(H1N1)pdm09 in Wales and one sample positive for A(H1N1)pdm09 in Northern Ireland (Table 3).

**Table 3: Sentinel influenza surveillance in the UK**

| Week | England | Scotland | Northern Ireland | Wales |
|---|---|---|---|---|
| 47 | 8/77 (10.4%) | 1/76 (1.3%) | 0/2 (-) | 0/1 (-) |
| 48 | 3/83 (3.6%) | 0/85 (0%) | 0/1 (-) | 0/1 (-) |
| 49 | 4/65 (6.2%) | 1/74 (1.4%) | 0/0 (-) | 0/3 (-) |
| 50 | 8/66 (12.1%) | 5/78 (6.4%) | 0/5 (-) | 0/3 (-) |
| 51 | 13/100 (13%) | 1/47 (2.1%) | 1/7 (-) | 1/10 (10%) |

**NB. Proportion positive omitted when fewer than 10 specimens tested**

- Respiratory DataMart System (England)

In week 51 2015, out of the 1615 respiratory specimens reported through the Respiratory DataMart System, 88 samples (5.4%) were positive for influenza (61 A(H1N1)pdm09, 2 influenza A(H3), 18 A(not subtyped) and 7 B, Figure 11). The highest positivity was in the 15-44 year olds, 10.9%. The overall positivity for RSV continued to decrease with the highest positivity in children aged under 5 years which started to decrease (from 50.6% in week 50 to 44.9% in week 51). (Figure 12). Positivity for parainfluenza decreased slightly to 4.4% in week 51. Positivity for rhinovirus decreased to 13.1%. hMPV decreased to 3.9%. Adenovirus remained low at 3.6% (Figure 13).

**Figure 11: DataMart samples positive for influenza, England**

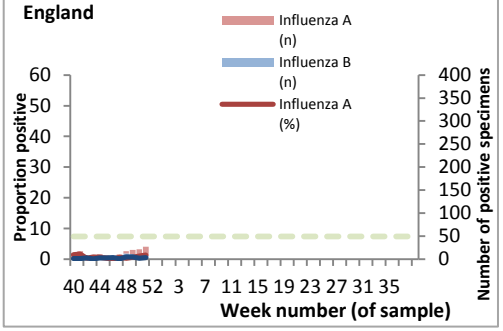



**Figure 12: Datamart % RSV positive by age, England**

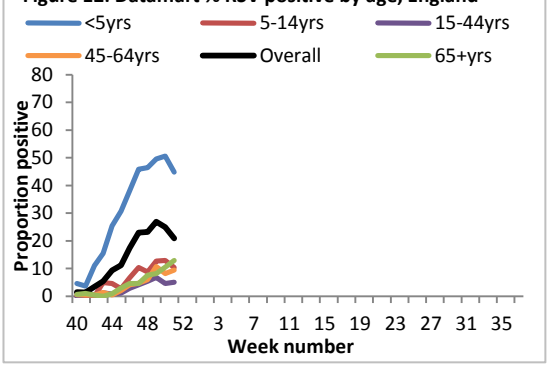
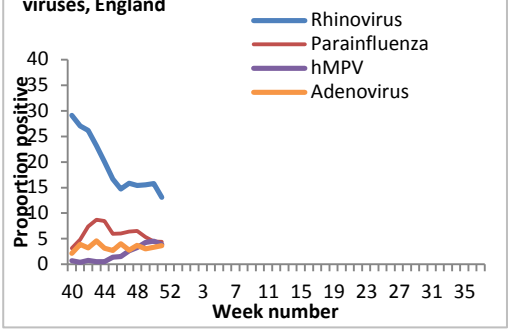



**Figure 13: Datamart % positive for other respiratory viruses, England**




**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

The PHE Respiratory Virus Unit has isolated and antigenically characterised 37 A(H1N1)pdm09 influenza viruses since the start of the 2015/16 winter influenza season in week 40 2015. These 37 viruses were antigenically similar to the A/California/7/2009 Northern Hemisphere 2015/16 (H1N1)pdm09 vaccine strain.

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. 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.

Two influenza B virus has been isolated and antigenically characterised since week 40 2015. These 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, 50 influenza A(H1N1)pdm09 and one influenza B have been tested for oseltamivir susceptibility, and 17 influenza A(H1N1)pdm09 and one influenza B have been tested for zanamivir susceptibility in the UK, and all were found to be sensitive.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 20 December 2015, 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 20 December 2015, E&W**

| Organism | Antibiotic | Specimens tested (N) | Specimens susceptible (%) |
|---|---|---|---|
| *S. pneumoniae* | Penicillin | 2,471 | 91 |
| | Macrolides | 2,843 | 82 |
| | Tetracycline | 2,743 | 83 |
| *H. influenzae* | Amoxicillin/ampicillin | 10,026 | 72 |
| | Co-amoxiclav | 9,577 | 92 |
| | Macrolides | 3,459 | 18 |
| | Tetracycline | 9,766 | 98 |
| *S. aureus* | Methicillin | 3,854 | 87 |
| | Macrolides | 3,790 | 72 |
| MRSA | Clindamycin | 417 | 48 |
| | Tetracycline | 469 | 89 |
| MSSA | Clindamycin | 2,075 | 78 |
| | Tetracycline | 3,128 | 93 |

**Macrolides = erythromycin, azithromycin and clarithromycin*

## Vaccination

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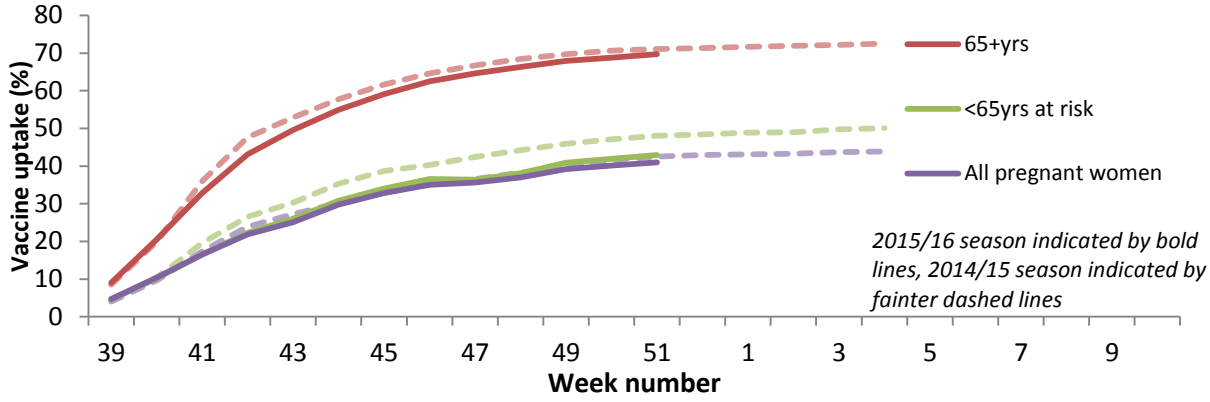
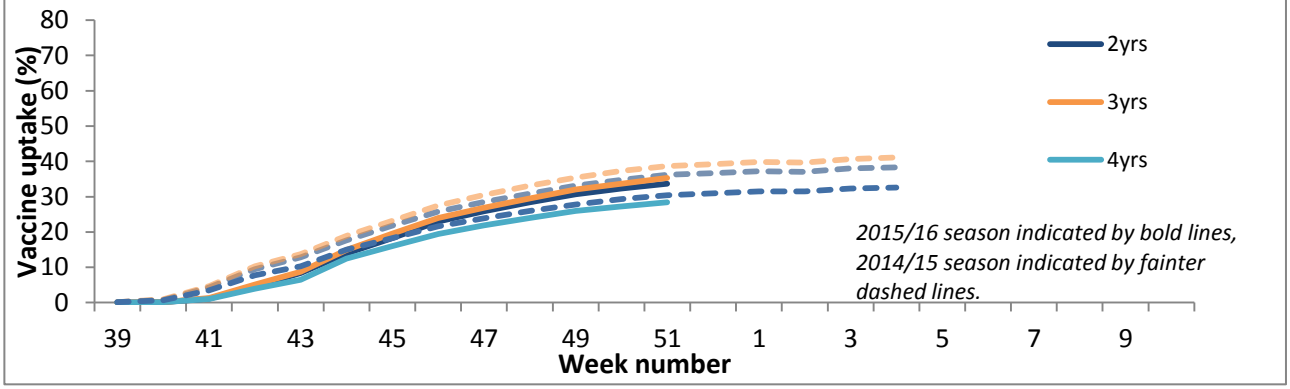
- Up to week 51 2015 in 84.9% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows (Figure 14)
    - 42.9% in under 65 years in a clinical risk group
    - 41.0% in pregnant women
    - 69.7% 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 50 2015 in 84.9% 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)
    - 33.7% in all 2 year olds
    - 35.3% in all 3 year olds
    - 28.4% in all 4 year olds

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




- 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 generally remained low in both hemispheres.**

- Europe updated on 18 December 2015 (Joint ECDC-WHO Influenza weekly update)

In week 50, influenza activity is low in most countries in the WHO European Region, with the majority reporting no activity or sporadic influenza virus detections.

For week 49/2015, 6% of specimens from sentinel sources, and increase from 4% in the previous week. This may indicate a slight increase in influenza activity, with sporadic cases in all parts of Europe.

Since week 40, approximately 2% of specimens from non-sentinel sources tested positive for influenza virus but the proportion was 4% for week 50.

Since week 40/2015, 98 cases have been reported, of which 74 were in intensive care units (ICUs). Of 74 positive cases of influenza in ICUs, 42 were type A viruses (not subtyped), 21 were A(H1N1)pdm09, seven influenza type B viruses and four A(H3N2).

For the 2015-2016 season so far, low numbers of viruses have been subtyped (type A) or ascribed to lineage (type B), A(H1N1)pdm09 viruses have been detected more often than A(H3N2) and B/Victoria lineage, more often than B/Yamagata in both sentinel and non-sentinel specimens than in the same period during the 2014–2015 season.

- United States of America Updated on 18 December 2015 (Centre for Disease Control report)

During week 49, influenza activity increased slightly in the United States but remained low overall. The most frequently identified type reported to be influenza A with influenza A (H1N1)pdm09 viruses predominating.

Nationwide during week 49, the proportion of outpatient visits for influenza-like illness (ILI) was 1.9%, which is below the national baseline of 2.1%. Four of 10 regions reported ILI at or above region-specific baseline levels.

During week 49, 6.0% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 6.7% for week 49.No influenza-associated paediatric death was reported in week 49. A total of three influenza associated paediatric deaths have been reported during the 2015-2016 season.

- Canada Updated on 18 December 2015 (Public Health Agency report)

In week 49, influenza activity increased in Canada, but remained low overall. So far this season, influenza A(H3N2) has been the most common subtype affecting Canadians.

The percent positive for influenza detections decreased from 0.88% in week 48 to 1.56% in week 49.To date, 90% of influenza detections have been influenza A and the majority of those subtyped have been A(H3) (83%).

The national influenza-like-illness (ILI) consultation rate has increased from 16.7 per 1,000 visits in week 48 to 21.0 per 1,000 visits in week 48. In week 47, the highest ILI consultation rate was found in the >65 age group and the lowest was found in the 20-64 of age group.

To date this season, 15 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, 91 laboratory-confirmed influenza-associated hospitalizations were reported from participating provinces and territories. The majority (52%) of patients were ≥65 years of age.

- Global influenza update Updated on 14 December 2015 (WHO website)

Globally, influenza activity generally remained low in both hemispheres.

In a few countries in Central Asia and Northern Europe, there were slight increases in influenza detections in recent weeks.

In Eastern Asia, the rest of Europe, North Africa and North America, influenza activity continued at low, inter-seasonal levels.

In western Asia, Oman reported increased influenza activity, predominantly due to influenza A(H1N1)pdm09 and influenza B viruses, while Bahrain reported a decline in influenza activity.

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

In tropical countries of the Americas, Central America and the Caribbean, respiratory virus activity remained at low levels, with the exception of Colombia, Costa Rica and Nicaragua.

In tropical Asia, countries in Southern and South East Asia reported low influenza activity overall except Thailand where activity mainly due to B viruses continued to be reported. Iran reported elevated influenza activity, predominantly influenza A(H1N1)pdm09.

In the temperate countries of the southern hemisphere, respiratory virus activity was generally low in recent weeks, with low levels of influenza A(H3N2) and B virus detections reported.

Based on FluNet reporting, the WHO GISRS laboratories tested more than 75,360 specimens between 16 November 2015 and 29 November 2015. 1,615 were positive for influenza viruses, of which 1,162 (72%) were typed as influenza A and 453 (28%) as influenza B. Of the sub-typed influenza A viruses, 408 (42.7%) were influenza A(H1N1)pdm09 and 548 (57.3%) were influenza A(H3N2). Of the characterized B viruses, 182 (74.9%) belonged to the B-Yamagata lineage and 61 (25.1%) to the B-Victoria lineage.

- Avian Influenza latest update on 14 December 2015 (WHO website)

**Influenza A(H7N9)** latest update on 17 December 2015
On 11 December 2015 the National Health and Family Planning Commission (NHFPC) of China notified WHO of 2 additional laboratory-confirmed cases of human infection with avian influenza A (H7N9) virus. 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 04 December 2015

Between 02 and 27 November 2015, the National IHR Focal Point for the Kingdom of Saudi Arabia notified WHO of 3 additional cases of Middle East Respiratory Syndrome-Coronovirus (MERS-CoV) infection, including two deaths.

On 12 October 2015, the National IHR Focal Point for the Republic of Korea provided follow-up information on a previously reported case of Middle East respiratory syndrome coronavirus (MERS-CoV) infection. The patient, who was diagnosed from hospital on 3 October following two consecutive negative PCR tests for MERS-CoV, was readmitted to hospital with fever on 11 October and tested positive again for MERS-CoV on 12 October. On 26 November 2015, the Korean Ministry of Health and Welfare announced the death of the readmitted patient.

Up to 23 December 2015, a total of four cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (two imported and two linked cases) have been confirmed in England. On-going surveillance has identified 513 suspect cases in the UK that have been investigated for MERS-CoV and tested negative.

Globally, since September 2012, WHO has been notified of 1,621 laboratory-confirmed cases of infection with MERS-CoV, including at least 584 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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## Related links

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**Weekly consultation rates in national sentinel schemes**

- Sentinel schemes operating across the UK
- RCGP scheme
- Northern Ireland surveillance (Public Health Agency)
- Scotland surveillance (Health Protection Scotland)
- Wales surveillance (Public Health Wales)
- Real time syndromic surveillance
- 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)