



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 10 2016 (ending 13 March 2016), influenza circulation with mainly A(H1N1)pdm09 continues with indicators stable across surveillance schemes, including the number of influenza admissions to hospital and ICU. A further increase in influenza B circulation has been noted this week. 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 10, respiratory indicators for influenza-like illness have risen, with the highest rates in the 15 to 44 years age group.
 - One hundred and eleven new acute respiratory outbreaks have been reported in the past 7 days. 71 outbreaks were from schools where one tested positive for influenza A(H1N1)pdm09 and one tested positive for influenza A(not subtyped). 12 outbreaks were from hospitals, where two tested positive for influenza A(not subtyped), one for influenza B and one mixed infection of influenza A(not subtyped) and RSV. 22 outbreaks were from care homes where one tested positive for influenza A(H1N1)pdm09, three for influenza A(not subtyped) and one influenza B. The remaining 6 outbreaks were from other settings such as nurseries and prisons, where 5 tested positive for influenza A(H1N1)pdm09 and one test result was not available.
- [Overall weekly influenza GP consultation rates across the UK](#)
 - In week 10, overall weekly influenza-like illness (ILI) GP consultation rate has increased and remains above the baseline threshold in England (26.5 per 100,000). In the devolved administrations, an increase in the ILI rate for Scotland (30.0 per 100,000) was noted, and ILI rates for Northern Ireland (29.0 per 100,000) and Wales (21.3 per 100,000) remained similar.
 - Through the GP In Hours surveillance system, weekly ILI rates have increased and are above baseline levels in week 10.
- [Influenza-confirmed hospitalisations](#)
 - Ninety new admissions to ICU/HDU with confirmed influenza (thirty-five influenza A(H1N1)pdm09, thirty-eight influenza A(unknown subtype) and seventeen influenza B) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (109 NHS Trusts in England) in week 10, a rate of 0.35 per 100,000, the same rate as in week 09. Fifteen new confirmed influenza deaths were also reported through this scheme.
 - One hundred and fifty-two new hospitalised confirmed influenza cases (seventy influenza A(H1N1)pdm09, nineteen influenza A(unknown subtype), eight influenza A(H3N2) and fifty-five influenza B) were reported through the USISS sentinel hospital network across England (19 NHS Trusts), a rate of 1.95 per 100,000 compared to 2.29 per 100,000 the previous week.
 - Since week 40, fifty-four confirmed influenza admissions have been reported (forty-seven influenza A(H1N1)pdm09, six 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 10 2016 in England, excess mortality by date of death has been seen in 15-64 year olds from week 52 to 03 and 05 to 10; in <5 year olds in weeks 51 and 05, and 5-14 year olds in week 51 with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Northern Ireland (15-64 year olds) in week 10 2016.
- [Microbiological surveillance](#)
 - Ninety-five samples tested positive for influenza (56 influenza A(H1N1)pdm09, 8 influenza A(untyped), 1 influenza A(H3) and 30 influenza B) through GP sentinel schemes across the UK, with an overall positivity of 46.3%, compared to 39.5% in previous week.
 - Five hundred and thirty-five influenza positive detections were recorded through the DataMart scheme (two hundred and sixty A(H1N1)pdm09, seven A(H3), one hundred and twenty-two A(not subtyped) and one hundred and forty-six influenza B). A positivity of 26.6% was seen in week 10, compared to 24.5% in week 09, with the highest positivity in 5-14 year olds (32.9%). This is above the all-age threshold for 2015/16 season of 7.4%.
- [Vaccination](#)
 - Up to week 04 2016 (31 January 2016) in 98.8% GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows: 45.1% in under 65 years in a clinical risk group, 42.3% in pregnant women, 71.0% in 65+ year olds, 35.4% in all 2 year olds, 37.7% in all 3 year olds and 30.1% in all 4 year olds.
 - Provisional data from the fifth monthly collection of influenza vaccine uptake by frontline healthcare workers show 50.8% were vaccinated by 29 February 2016 from 96.6% of Trusts, compared to 54.9% vaccinated in the previous season by 28 February 2015. The report is available [here](#).
 - Provisional data from the fourth monthly collection of influenza vaccine uptake children of school years 1 and 2 age show the proportion of children in England who received the 2015/16 live attenuated intranasal vaccine (LAIV) from 1 September 2015 to 31 January 2016 was as follows: 53.6% in children school year 1 age (5-6 years) and 52.1% in children school year 2 age (6-7 years).
 - [WHO](#) have published their recommendations for the composition of the 2016/17 northern hemisphere influenza vaccine.
- [International situation](#)
 - Globally, high levels of influenza activity continued to be reported in the Northern Hemisphere with influenza A(H1N1)pdm09 as the most detected virus and an increase in the proportion of influenza B viruses has been noted.

During week 09, GP influenza-like consultations reported through the syndromic surveillance system, remained stable. One hundred and eleven new acute respiratory outbreaks were reported in the past 7 days.

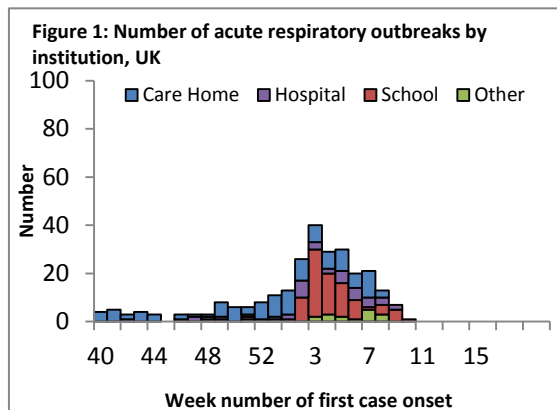
- PHE Real-time Syndromic Surveillance

- In week 10, GP consultations for respiratory indicators including upper respiratory tract infections, influenza-like illness and pharyngitis increased. The highest rates for influenza-like illness were in the 15-44 year olds.
- For further information, please see the syndromic surveillance [webpage](#).

- Acute respiratory disease outbreaks

- 111 new acute respiratory outbreaks have been reported in the past 7 days. 71 outbreaks were from schools where one tested positive for influenza A(H1N1)pdm09 and one tested positive for influenza A(not subtyped). 12 outbreaks were from hospitals, where two tested positive for influenza A(not subtyped), one for influenza B and one mixed infection of influenza A(not subtyped) and RSV. 22 outbreaks were from care homes where one tested positive for influenza A(H1N1)pdm09, three for influenza A(not subtyped) and one influenza B. The remaining 6 outbreaks were from other settings such as nurseries and prisons, where 5 tested positive for influenza A(H1N1)pdm09 and one test result was not available.

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

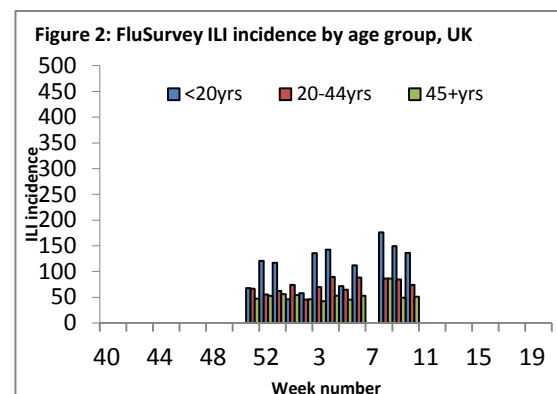


- FluSurvey

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

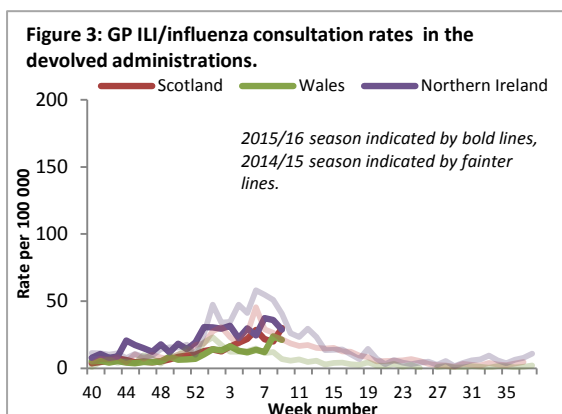
- The overall ILI rate (all age groups) for week 10 was 60.6 per 1,000 (153/2,431 people reported at least 1 ILI), with the <20 age group reporting a higher rate of 136.4.5 per 1,000.

- 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.



In week 09, overall weekly influenza-like illness GP consultations have remained above baseline threshold in England and Wales and have remained stable in Scotland and Northern Ireland.

- 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 remained similar at 29.0 per 100,000 in week 10 compared to 36.1 per 100,000 in week 09 (Figure 3). This remains below the baseline threshold (49.4 per 100,000).

-The highest rates were seen in the 45-64 year olds (40.8 per 100,000) and 15-44 year olds (37.4 per 100,000).

Wales

-The Welsh influenza rate remains similar to the previous week at 21.3 in week 10 compared to 23.8 in week 09 (Figure 3). This remains above the baseline threshold (10.3 per 100,000).

-The highest rates were seen in 15-44 year olds (31.2 per 100,000) and 45-64 year olds (25.0 per 100,000).

Scotland

-The Scottish ILI rate increased at 30.0 per 100,000 in week 10 (Figure 3) compared to 20.1 per 100,000 in week 09. This remains below baseline threshold (37.0 per 100,000).

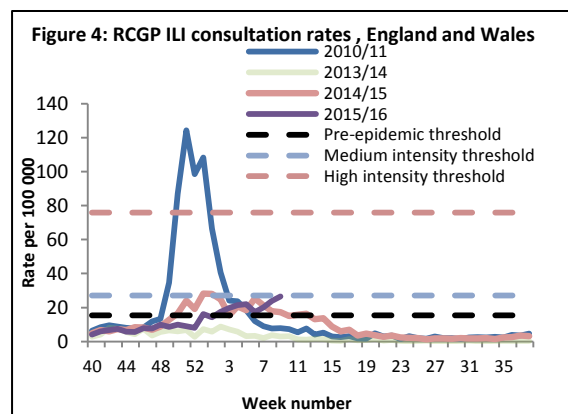
-The highest rates were seen in 15-44 year olds (39.9 per 100,000) and in 45-64 year olds (37.4 per 100,000).

RCGP (England and Wales)

- The weekly ILI consultation rate through the RCGP surveillance is 26.5 per 100,000 in week 10 compared to 23.8 per 100,000 in week 09. This is above the baseline threshold (15.4 per 100,000) (Figure 4*). By age group, the highest rates were seen in 15-44 year olds (34.8 per 100,000) and 45-64 year olds (28.3 per 100,000).

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

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



GP In Hours Syndromic Surveillance System (England)

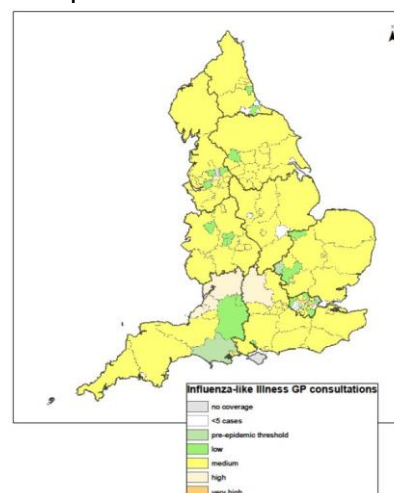
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system has increased at 17.2 per 100,000 in week 10 (Figure 5).

Figure 5 represents a map of GP ILI consultation rates in Week 10 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 10



Influenza confirmed hospitalisations

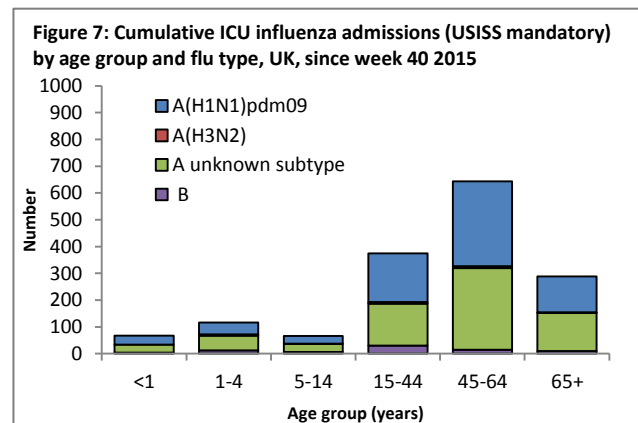
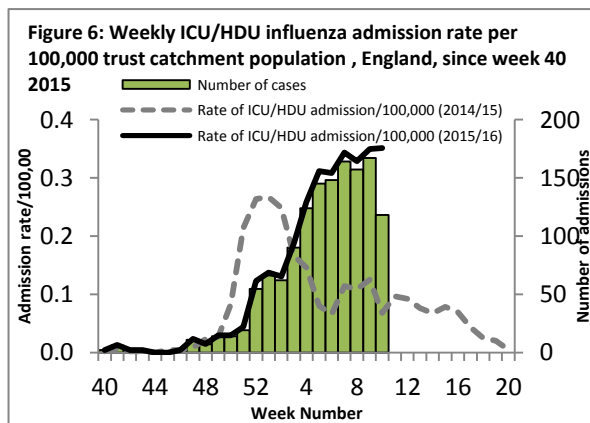
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In week 10, ninety new admissions to ICU/HDU with confirmed influenza (35 influenza A(H1N1)pdm09, 38 influenza A(unknown subtype) and 17 influenza B) were reported through the USSS mandatory ICU/HDU surveillance scheme across the UK (109 Trusts in England). One hundred and fifty-two new hospitalised confirmed influenza cases (70 influenza A(H1N1)pdm09, 19 influenza A(unknown subtype), 8 influenza A(H3N2) and 55 influenza B) were reported through the USSS sentinel hospital network across England (19 Trusts).

A national mandatory collection (USSS 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 (USSS 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 10)

- In week 10, ninety new admissions to ICU/HDU with confirmed influenza (35 influenza A(H1N1)pdm09, 38 influenza A(unknown subtype) and 17 influenza B) were reported across the UK (109/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 6 and 7), a rate of 0.35 per 100,000, the same rate as in the previous week. Fifteen new confirmed influenza deaths were also reported in week 10 2016. A total of 1,557 admissions (739 influenza A(H1N1)pdm09, 23 influenza A(H3N2), 716 influenza A (unknown subtype) and 79 influenza B) and 139 confirmed influenza deaths have been reported since week 40 2015.

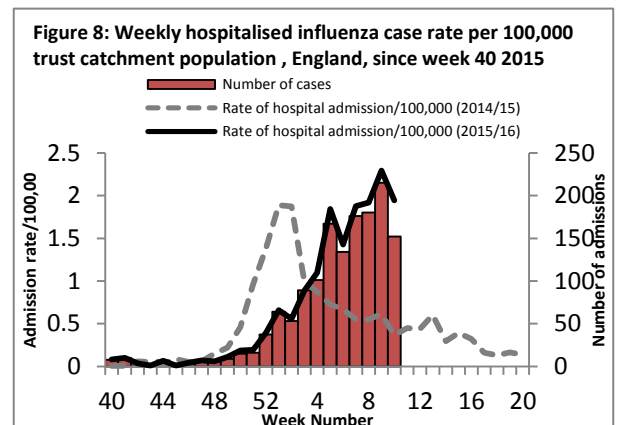


NB: As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 6 is an average of week 52 and week 53 data.

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 10)

- In week 10, one hundred and fifty-two new hospitalised confirmed influenza cases (70 influenza A(H1N1) pdm09, 19 influenza A(unknown subtype), 8 influenza A(H3N2) and 55 influenza B) were reported through the USISS sentinel hospital network from 19 NHS Trusts across England (Figure 8), a rate of 1.95 per 100,000 compared to 2.29 per 100,000 the previous week. A total of 1,477 hospitalised confirmed influenza admissions (1,020 influenza A(H1N1)pdm09), 30 influenza A(H3N2), 260 influenza A (unknown subtype) and 167 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 10)

- In week 10, three new confirmed influenza admissions to the six Severe Respiratory Failure Centres in the UK were reported (3 influenza A(H1N1)pdm09). Since week 40, fifty-four confirmed influenza admissions have been reported (47 influenza A(H1N1)pdm09, 6 influenza A(unknown subtype) and 1 influenza B) from the six Severe Respiratory Failure centres in the UK.

All-cause mortality data

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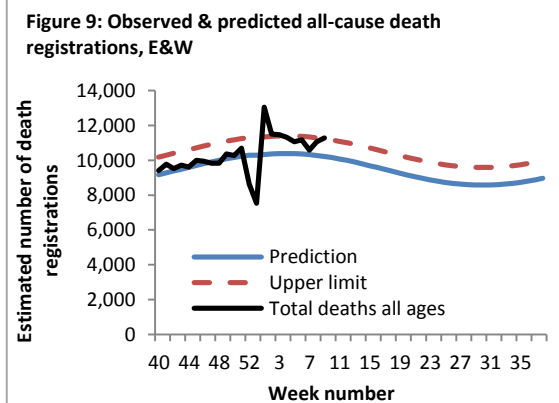
Up to week 10 2016 in England, excess mortality by date of death has been seen in 15-64 year olds from week 52 to 03 and week 05 to 10; in <5 year olds in weeks 51 and 05 and in 5-14 year olds in week 51 with the EuroMoMo algorithm. In the devolved administrations, significant excess was noted in Northern Ireland (15-64 year olds) for week 10 2016.

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 09 2016, an estimated 11,285 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is an increase compared to the 11,056 estimated death registrations in week 08 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.



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

-Up to week 10 2016 in England, excess mortality by date of death above the upper 2 z-score threshold has been seen in 15-64 year olds from week 52 to 03 and week 05 to 10; in <5 years olds in weeks 51 and 05, and in 5-14 year olds in week 51 after correcting ONS disaggregate data for reporting delay with the standardised [EuroMoMo](#) algorithm (Table 1). No significant excess was seen in other age groups. This data is provisional due to the time delay in registration; numbers may vary from week to week.

- In the devolved administrations, significant excess mortality above the threshold was seen in Northern Ireland (15-64 year olds) in week 10 2016 (Table 2).

Table 1: Excess mortality by age group, England*

| Age group (years) | Excess detected in week 10 2016? | Weeks with excess in 2015/16 |
|-------------------|----------------------------------|------------------------------|
| <5 | × | 51 |
| 5-14 | × | 51 |
| 15-64 | ✓ | 52-03,05-10 |
| 65+ | × | NA |

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

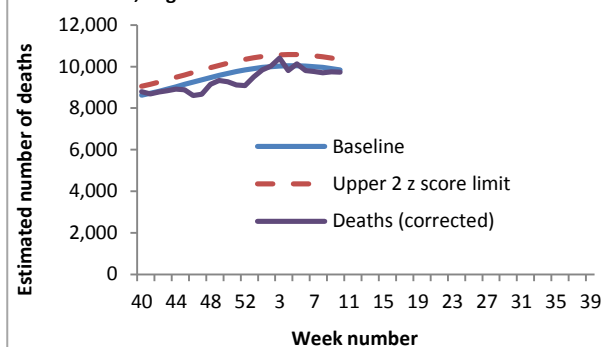
Table 2: Excess mortality by UK country*

| Country | Excess detected in week 10 2016? | Weeks with excess in 2015/16 |
|------------------|----------------------------------|------------------------------|
| England | ✓ | 51-03, 05-10 |
| Wales | × | 51,53,04-05 |
| Scotland | × | 48,02,04,07,09 |
| Northern Ireland | ✓ | 45,49-50,52-02,07,09-10 |

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

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

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



Microbiological surveillance

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In week 10 2016, ninety-five samples tested for influenza through the UK GP sentinel schemes were positive. Five hundred and thirty-five influenza positive detections were recorded through the DataMart scheme (two hundred and sixty A(H1N1)pdm09, seven A(H3), one hundred and twenty-two A(not subtyped) and one hundred and forty-six influenza B).

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

-In week 10, ninety-five samples tested positive for influenza through the UK GP sentinel swabbing schemes. Of the ninety-five samples, fifty-six tested positive for influenza A(H1N1)pdm09, eight tested positive for influenza A(untyped), one tested positive for influenza A(H3) and thirty for influenza B (Table 3).

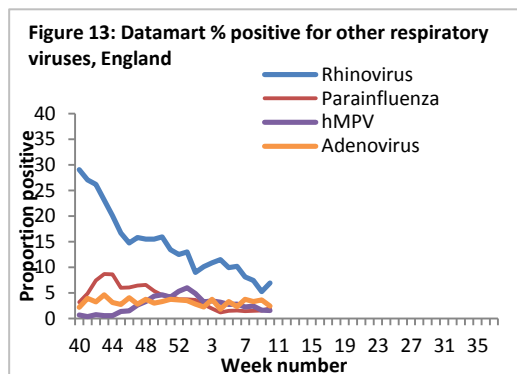
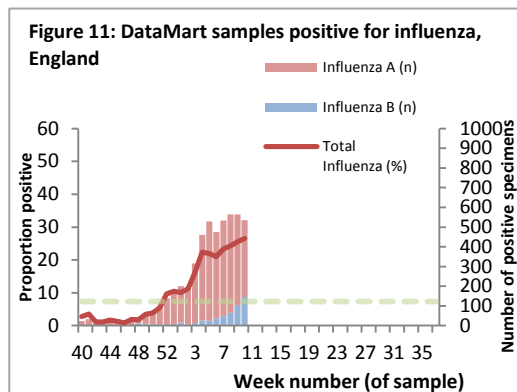
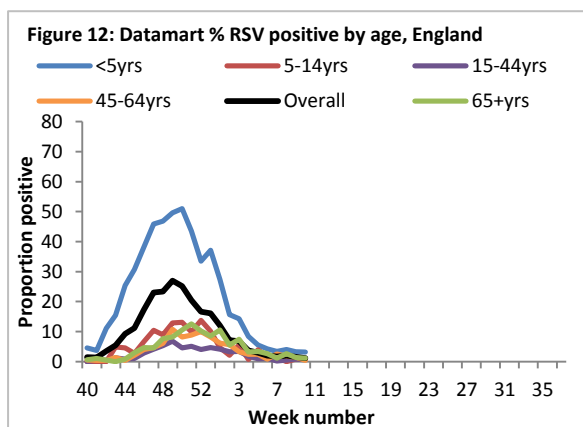
Table 3: Sentinel influenza surveillance in the UK

| Week | England | Scotland | Northern Ireland | Wales |
|------|----------------|----------------|------------------|---------------|
| 06 | 58/152 (38.2%) | 20/88 (22.7%) | 7/14 (50%) | 10/13 (76.9%) |
| 07 | 53/132 (40.2%) | 26/82 (31.7%) | 4/9 (-) | 5/14 (35.7%) |
| 08 | 71/166 (42.8%) | 22/103 (21.4%) | 6/14 (42.9%) | 7/11 (63.6%) |
| 09 | 57/150 (38%) | 31/92 (33.7%) | 5/10 (50%) | 12/14 (85.7%) |
| 10 | 68/129 (52.7%) | 11/55 (20%) | 11/14 (78.6%) | 5/7 (-) |

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 10 2016, out of the 2,012 respiratory specimens reported through the Respiratory DataMart System, 535 samples (26.6%) were positive for influenza (260 A(H1N1)pdm09, 7 A(H3), 122 A(not subtyped) and 146 B) (Figure 11). The highest positivity was in the 5-14 year olds at 32.9%. The overall positivity for RSV remained at low levels, 1.1% in week 10 (Figure 12). Positivity for parainfluenza remained low at 2.4% in week 10. Positivity for rhinovirus remained low at 6.9% and positivity for hMPV remained low at 1.5%. Adenovirus positivity decreased to 2.4% (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 609 A(H1N1)pdm09 influenza viruses; 194 genetically and 54 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 evident. Of 469 viruses analysed by HI assays to date, the majority were antigenically similar to the A/California/7/2009 Northern Hemisphere 2015/16 (H1N1)pdm09 vaccine strain. Antigenic characterisation data suggests that some antigenic drift variants appear to be circulating, but the majority of viruses antigenically characterised to date are similar to the (H1N1)pdm09 vaccine strain. Genetic characterisation of 17 A(H3N2) influenza viruses since week 38 showed that they belong to genetic group 3C.2a, and are genetically similar to the majority of A(H3N2) viruses circulating in the 2014/15 season. Four A(H3N2) influenza viruses have been isolated and antigenically characterised since week 38 2015. These four viruses were antigenically similar to the A/Switzerland/9715293/2013 H3N2 Northern Hemisphere 2015/16 vaccine strain. Of 32 influenza B viruses analysed genetically since week 40/2015, 7 viruses have been characterised as belonging to the B/Yamagata/16/88-lineage and 25 viruses as belonging to the B/Victoria/2/87 lineage. Twenty-eight 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. Twenty-seven 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 2015, 1377 influenza A(H1N1)pdm09, seven influenza A(H3N2) and 32 influenza B have been tested for oseltamivir susceptibility with eight influenza A(H1N1)pdm09 virus and one influenza A(H3N2) found to be resistant in the UK. Six of the 8 A(H1N1)pdm09 resistant samples were obtained from patients undergoing oseltamivir treatment, while the remaining two cases had no exposure to oseltamivir. All A(H1N1)pdm09 resistance is due to the H275Y amino acid substitution. The A(H3N2) resistant sample was from an immunocompromised patient receiving oseltamivir treatment, with an E119V amino acid change. 265 influenza A(H1N1)pdm09 and 19 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 13 March 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 13 March 2016, E&W

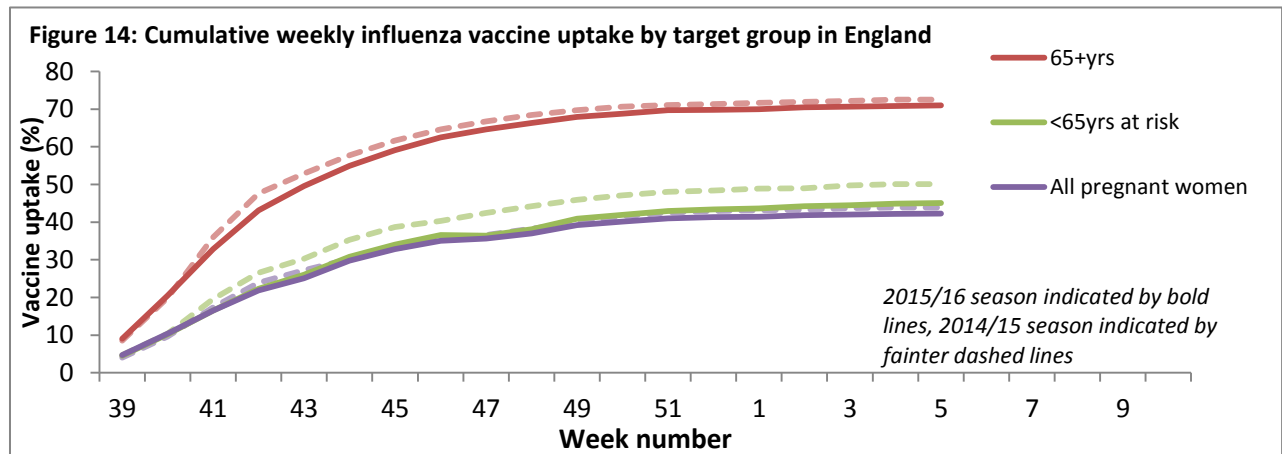
| Organism | Antibiotic | Specimens tested (N) | Specimens susceptible (%) |
|----------------------|------------------------|----------------------|---------------------------|
| <i>S. pneumoniae</i> | Penicillin | 2,892 | 92 |
| | Macrolides | 3,193 | 82 |
| | Tetracycline | 3,063 | 84 |
| <i>H. influenzae</i> | Amoxicillin/ampicillin | 13,832 | 70 |
| | Co-amoxiclav | 13,230 | 93 |
| | Macrolides | 4,364 | 23 |
| | Tetracycline | 13,550 | 99 |
| <i>S. aureus</i> | Methicillin | 3,945 | 89 |
| | Macrolides | 3,898 | 71 |
| MRSA | Clindamycin | 363 | 42 |
| | Tetracycline | 422 | 87 |
| MSSA | Clindamycin | 2,260 | 78 |
| | Tetracycline | 3,220 | 93 |

*Macrolides = erythromycin, azithromycin and clarithromycin

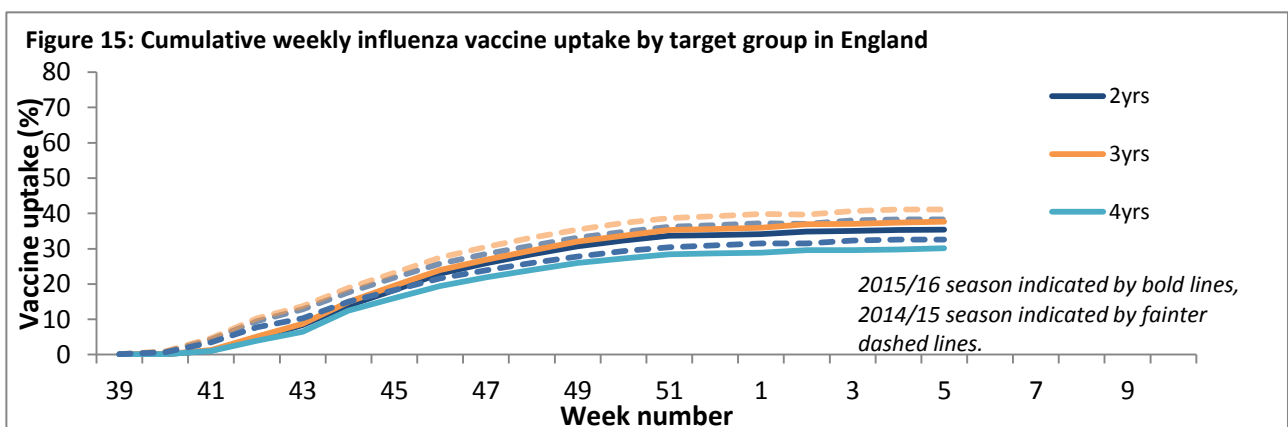
Vaccination

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



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



- Provisional data from the fifth monthly collection of influenza vaccine uptake by frontline healthcare workers show 50.8% were vaccinated by 29 February 2016 from 96.6% of Trusts, compared to 54.9% vaccinated in the previous season by 28 February 2015. The [report](#) provides uptake at national, area team and CCG level.
- Provisional data from the fourth monthly collection of influenza vaccine uptake children of school years 1 and 2 age show the proportion of children in England who received the 2015/16 live attenuated intranasal vaccine (LAIV) from 1 September 2015 to 31 January 2016 was as follows: 53.6% in children school year 1 age (5-6 years) and 52.1% in children school year 2 age (6-7 years).
- Provisional data from the fourth monthly collection of influenza vaccine uptake in GP patients up to 31 January 2016 has been published. The [report](#) provides uptake at national, area team and CCG level.

International Situation

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Globally, high levels of influenza activity continued to be reported in the Northern Hemisphere with influenza A(H1N1)pdm09 as the most detected virus and an increase in the proportion of influenza B viruses has been noted.

- [Europe](#) updated on 11 March 2016 (Joint ECDC-WHO Influenza weekly update)

For week 09/2016, 25 of the 46 Member States in the WHO European Region that uploaded epidemiological data reported widespread influenza activity.

Thirty-seven countries reported influenza virus detections in 44% of specimens from sentinel sources, which has slightly decreased compared to previous weeks. Influenza B virus constituted 55% of detections in sentinel samples, compared to 47% for the previous week, indicating a gradual shift towards influenza B. Influenza A(H1N1)pdm09 remained the predominant virus detected through sentinel surveillance, accounting for 87% of the A viruses subtyped.

Cases of severe disease were fewer than in previous weeks, but varied between countries. Most severe cases were associated with A(H1N1)pdm09 and were in people aged 15–64 years.

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

- [United States of America](#) Updated on 11 March 2016 (Centre for Disease Control report)

During week 09 2016, influenza activity remained elevated in the United States. The most frequently identified type reported to be influenza A with influenza A (H1N1)pdm09 viruses predominating.

Nationwide during week 09, the proportion of outpatient visits for influenza-like illness (ILI) was 3.5%, which is above the national baseline of 2.1%.

The percent positive for laboratory confirmed influenza detections has increased.

During week 09, 7.0% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 7.2% for week 09. Two influenza-associated paediatric deaths was reported in week 09. A total of twenty influenza associated paediatric deaths have been reported during the 2015-2016 season.

- [Canada](#) Updated on 11 March 2016 (Public Health Agency report)

Overall in week 09, seasonal influenza activity continued to increase with greater geographic spread, adults over 45 years of age accounted for the largest proportion of hospitalisations.

The percent positive for laboratory confirmed influenza detections increased slightly from 33% in week 08 to 34% in week 09. Among subtyped influenza detections, influenza A(H1N1)pdm09 was the most common influenza A virus detected across Canada.

The national ILI consultation rate increased from the previous week from 51.7 per 1,000 patient visits in week 08, to 63.3 per 1,000 patient visits in week 09. In week 09, the highest ILI consultation rate was found in children 0-4 years of age (137.0 per 1,000) and the lowest was found in the ≥65 years age group.

- [Global influenza update](#) Updated on 07 March 2016 (WHO website)

In the Northern Hemisphere, high levels of influenza activity continued with influenza A(H1N1)pdm09 predominating and an increase in the proportion of influenza B viruses detected. In the Southern Hemisphere and in tropical countries influenza activity was generally low. WHO has released the [A\(H1N1\)pdm09 risk assessment](#).

In Europe ongoing high levels of influenza activity continued to be reported, although in some countries activity seemed to have peaked already. Influenza A(H1N1)pdm09 accounted for most virus detections with an increase in the proportion of influenza B detections. In Russian Federation and Ukraine, elevated SARI activity continued but at lower levels compared to previous weeks.

In North America, influenza activity increased further with influenza A(H1N1)pdm09 predominating in Canada and United States of America and A(H3N2) in Mexico.

In Northern/Temperate Asia, influenza activity remained high but seemed to have peaked already in some countries.

In Western Asia, influenza activity continued to decrease. Oman reported ongoing low levels of both influenza A(H1N1)pdm09 and influenza B viruses.

In Africa influenza A(H1N1)pdm09 activity was reported in northern Africa.

In tropical countries of the Americas, Central America and the Caribbean, influenza and other respiratory virus activity were overall at low levels, except Jamaica, and Puerto Rico with high but decreasing influenza activity.

In South East Asia, ongoing low influenza activity was reported during this period.

In the temperate countries of the Southern Hemisphere influenza activity remained low at inter-seasonal level.

Based on FluNet reporting, the WHO GISRS laboratories tested more than 158,158 specimens between 08 February 2016 and 21 February 2016. 42,727 were positive for influenza viruses, of which 33,745 (79.0%) were typed as influenza A and 8,982 (21.0%) as influenza B. Of the sub-typed influenza A viruses, 19,269 (87.7%) were influenza A(H1N1)pdm09 and 2,709 (12.3%) were influenza A(H3N2). Of the characterized B viruses, 589 (24.4%) belonged to the B-Yamagata lineage and 1,821 (75.6%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 25 February 2016 (WHO website)

Influenza A(H5) viruses

Since 2003, a total of 846 laboratory-confirmed cases of human infection with avian influenza A(H5N1) virus, including 449 deaths, have been reported to WHO from 16 countries. In addition, a total of 10 laboratory-confirmed cases of human infection with avian influenza A(H5N6) virus, including 6 deaths, have been detected in China since 2013. Although other influenza A(H5) viruses have the potential to cause disease in humans, no human cases have been reported so far. According to reports received by the World Organisation for Animal Health (OIE), various influenza A(H5) subtypes, such as influenza A(H5N1), A(H5N2), A(H5N6), A(H5N8) and A(H5N9), continue to be detected in birds in West Africa, Europe and Asia. Overall, the public health risk assessment for avian influenza A(H5) viruses remains unchanged since the assessment of [17 July 2015](#).

Influenza A(H7N9)

On [23 February 2016](#), the Department of Health (DH), Hong Kong Special Administrative Region (SAR) notified WHO of an additional laboratory-confirmed case of human infection with avian influenza A (H7N9) virus.

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

Since the last WHO Influenza update on 20 January 2016, 28 new laboratory-confirmed human cases of avian influenza A(H7N9) virus infection were reported to [WHO](#). The majority of cases were exposed to live poultry or live poultry markets. A total of 722 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 286 deaths have been reported to WHO.

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\)](#) latest update on 14 March 2016

Between [26 February and 08 March 2016](#), the National IHR Focal Point for the Kingdom of Saudi Arabia notified WHO of 25 additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection, including 4 fatal cases.

On [21 February 2016](#), the National IHR Focal Point of Qatar notified WHO of 1 additional case of Middle East respiratory syndrome coronavirus (MERS-CoV) infection.

Up to 16 March 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 696 suspect cases in the UK that have been investigated for MERS-CoV and tested negative.

Globally, since September 2012, WHO has been notified of 1,677 laboratory-confirmed cases of infection with MERS-CoV, including at least 597 related deaths. Further information on management and guidance of possible cases is available [online](#). The latest ECDC MERS-CoV risk assessment can be found [here](#), where it is highlighted that risk of widespread transmission of MERS-CoV remains low.

Acknowledgements

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Weekly consultation rates in national sentinel schemes

- [Sentinel schemes operating across the UK](#)
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- 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](#)
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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](#))