



PHE Weekly National Influenza Report

Summary of UK surveillance of influenza and other seasonal respiratory illnesses

14 November 2019 – Week 46 report (up to week 45 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.

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Summary – Week 45 (ending 10 November 2019)

- During week 45, all influenza activity indicators are **Below baseline**.
- The impact of flu on healthcare services is **Below baseline** for hospitalisations and for ICU/HDU influenza admissions.
- Respiratory Syncytial Virus (RSV) is circulating in the <5 year olds in England.

Community

- 42 new acute respiratory outbreaks have been reported in the past 7 days. 28 outbreaks were reported from care homes where 2 tested positive for influenza A(unknown subtype). One outbreaks was reported from a hospital with no test results. 12 outbreaks were reported from schools with no test results. The remaining outbreak was from the Other settings category, with no test results.

Primary Care

- The rate of influenza-like illness (ILI) was **Below baseline** threshold levels. The overall weekly ILI GP consultation rate was 4.6 per 100,000 registered population in participating GP practices for England, similar to 4.5 per 100,000 in the previous week.
- In the devolved administrations, ILI rates were **Below baseline** threshold levels for Northern Ireland, Scotland and Wales.

GP ILI
Consultations
England



Secondary Care

- Hospitalisation rate observed for laboratory confirmed influenza was **Below baseline** levels, with a rate of 0.83 per 100,000 trust catchment population for England (16 NHS Trusts) compared to 0.57 per 100,000 in the previous week.
- ICU/HDU admission rate observed for laboratory confirmed influenza was **Below baseline** levels, with a rate of 0.02 per 100,000 trust catchment population for England (132/143 NHS Trusts) compared to 0.02 per 100,000 the previous week.
- There were no laboratory confirmed influenza admissions reported from the 6 Severe Respiratory Failure centres in the UK.

Hospitalisation



ICU/HDU



All-cause mortality

- In week 44 2019, no statistically significant excess all-cause mortality by week of death was seen overall and by age group in England. In the devolved administrations, no statistically significant excess all-cause mortality for all ages was observed in Wales and Northern Ireland in week 44 and for Scotland in week 42 2019.

Microbiological surveillance

- **Primary care:** 14 samples tested positive for influenza (2 influenza A(H1N1)pdm09, 10 influenza A(H3), one influenza A(unknown subtype) and one co-infection of influenza A(H3N2) and influenza B) through the UK GP sentinel swabbing schemes in week 45 2019, with an overall positivity of 12.9%
- **Secondary care:** There were 48 detections recorded through the DataMart scheme (2 influenza A(H1N1)pdm09, 23 influenza A(H3), 20 influenza A(not subtyped) and 3 influenza B). The overall influenza percent positivity was 2.7% and **Below baseline** threshold level.
- **Virus Characterisation:** 25 influenza A(H3N2) viruses have been characterised since week 40, of which 21 belong to the same subclade as that in this season's vaccine.

Secondary
Care



Vaccination

- **Weekly uptake:** Up to week 45 2019, in 79.0% of GP practices reporting for the main collection, the provisional proportion of people in England who had received the 2019/20 influenza vaccine in targeted groups was: 26.7% in under 65 years in a clinical risk group, 30.0% in pregnant women and 61.5% in 65+ year olds. In 78.9% of GP practices reporting for the childhood collection, the provisional proportion vaccinated was: 10.7% in 2 year olds and 10.6% in 3 year olds.
- Influenza vaccine uptake data in primary school age children will be collected through the school delivery programme and be published in the monthly report on 21 November 2019.

International situation

- In the temperate zone of the northern hemisphere, influenza activity remained at inter-seasonal levels in most countries; however continued to increase across the countries of the Arabian Peninsula. In the temperate zones of the southern hemisphere, influenza activity was low in most countries, with influenza B virus detections continuing to be reported by Chile. Worldwide, seasonal influenza A viruses accounted for the majority of detections.

Key	
Arrows (vs previous week):	Colour (intensity according to MEM threshold):
↑ Increase	Green Below Baseline
↓ Decrease	Yellow Above Baseline/Low
↔ Stable/No trend	Orange Medium
	Red High
	Purple Very High

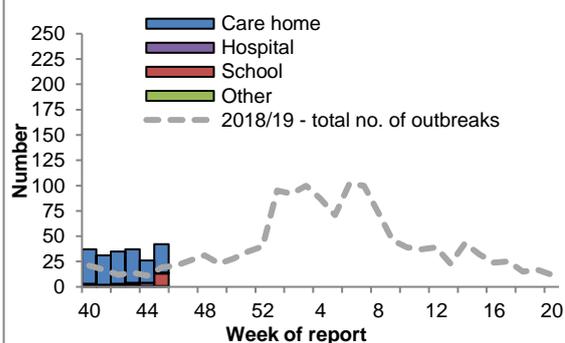
42 new acute respiratory outbreaks were reported in the past 7 days, with 2 confirmed with influenza. ILI rates observed through internet based surveillance were low for week 45.

- Acute respiratory disease outbreaks

- 42 new acute respiratory outbreaks have been reported in the past 7 days. 28 outbreaks were reported from care homes where 2 tested positive for influenza A(unknown subtype) and 4 tested positive for rhinovirus. One outbreak was reported from a hospital with no test results available. 12 outbreaks were reported from schools with no test results available. The remaining outbreak was from the Other settings category with no test results available.

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

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



- Medical Officers of Schools Association (MOSA) & PHE surveillance scheme

- Boarding schools in England within the MOSA network are recruited each season to report various respiratory related illnesses including influenza like illnesses (ILI). For the 2019/20 season, 17 MOSA schools have agreed to participate in the scheme, including a total of 4,000 boarders.

- The overall rate (all boarders) for week 45 was 3.1 per 1,000 boarders.

- If you are a MOSA school and would like to participate in this scheme, please email mosa@phe.gov.uk for more information.

- FluSurvey

- Internet-based surveillance of influenza-like illness in the general population is undertaken through FluSurvey. A project run by PHE to monitor ILI activity in the community.

- Data will be reported from week 46.

- If you would like to become a participant of the FluSurvey project please do so by visiting the <https://flusurvey.net/en/accounts/register/> website for more information.

- FluDetector

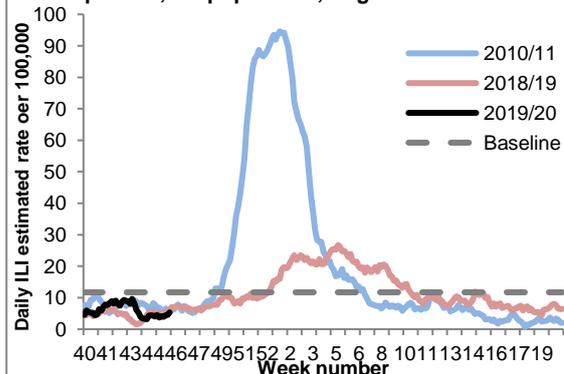
- Internet-based surveillance of influenza-like illness in the general population is also undertaken through FluDetector (<https://fludetector.cs.ucl.ac.uk>), a model assessing internet-based search queries for ILI.

- Daily ILI rate estimates are based on uniformly averaged search query frequencies for a week-long period (including the current day and the six days before it).

- The daily ILI rate estimates for week 45 were below the baseline threshold of 11.7 per 100,000, with an overall weekly rate of 5.4 per 100,000 compared to 4.0 per 100,000 in week 44 (Figure 2).

-For more information on i-sense and the work carried out on early warning sensing systems for infectious disease visit <https://www.i-sense.org.uk/>

Figure 2: Daily estimated ILI Google search query rates per 100,000 population, England



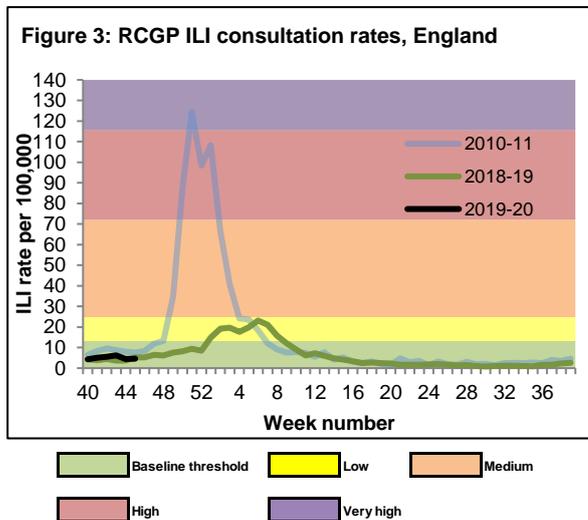
In week 45, the overall weekly influenza-like illness (ILI) GP consultation rate remained below baseline threshold levels in England. In the devolved administrations, ILI rates were below their respective baselines.

- GP ILI consultations in the UK

RCGP (England)

- The weekly ILI consultation rate through the RCGP surveillance was 4.6 per 100,000 registered population in participating GP practices in week 45 compared to 4.5 per 100,000 in week 44. This is below the baseline threshold (12.7 per 100,000) (Figure 3*). By age group, the highest rates were seen in the <1 year olds (15.8 per 100,000) and in the 15-44 year olds (5.9 per 100,000).

*The Moving Epidemic Method (MEM) 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 (based on 10 seasons excluding 2009/10) in a standardised approach across Europe. For MEM intensity threshold values, please visit: <https://www.gov.uk/guidance/sources-of-uk-flu-data-influenza-surveillance-in-the-uk#clinical-surveillance-through-primary-care>



UK

- In week 44, overall weekly ILI consultation rates across the countries of the UK were all below their respective baseline threshold levels (Table 1).

- By age group, the highest rates were seen in the 45-64 year olds in Scotland (7.1 per 100,000) , in the 65-74 year olds in Wales (4.3 per 100,000) and in the 15-44 year olds in Wales and Northern Ireland (6.2 and 9.1 per 100,000 respectively).

Table 1: GP ILI consultations in the UK for all ages with MEM thresholds applied*

GP ILI consultation rates (all ages)	Week number																
	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4
England (RCGP)	4.3	5.0	5.5	6.2	4.5	4.6											
Wales	1.7	4.0	4.2	6.2	1.7	4.2											
Scotland	5.5	6.2	4.4	4.0	7.9	5.1											
Northern Ireland	3.9	4.8	4.6	5.1	6.5	7.2											

*The Moving Epidemic Method (MEM) 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 (based on 10 seasons excluding 2009/10), in a standardised approach across Europe. For MEM threshold values for each country, please visit: <https://www.gov.uk/guidance/sources-of-uk-flu-data-influenza-surveillance-in-the-uk#clinical-surveillance-through-primary-care>

GP In Hours Syndromic Surveillance System (England)

The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system is 4.6 per 100,000 in week 45 2019 (Figure 4).

GP In Hours consultations for influenza-like illness remain within seasonal expectations, however increases were noted in asthma consultations, with the highest increases noted in adults aged 45+.

NHS 111 calls for difficulty breathing increased further in children aged less than 1 year, line with seasonal RSV activity. Increases were also noted in sore throat calls.

GP Out of Hours consultations and Emergency Department (ED) attendances for bronchitis/bronchiolitis continued to increase, particularly in young children (aged under 1 year), however were in line with increasing levels of RSV activity in the community in week 45.

- Figure 4 represents a map of GP ILI consultation rates in week 45 across England by PHE centres, with influenza-like illness surveillance MEM thresholds applied.

ILI thresholds were calculated separately for each of the nine PHE Centres to allow for differences between areas e.g. background ILI rates are historically higher in London than other areas of England and based upon previous influenza seasons from 2012/13 on wards. ILI thresholds should be interpreted with caution and reference made to other GP surveillance systems incorporating more historical data.

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

Figure 4: Map of GP ILI consultation rates in week 45

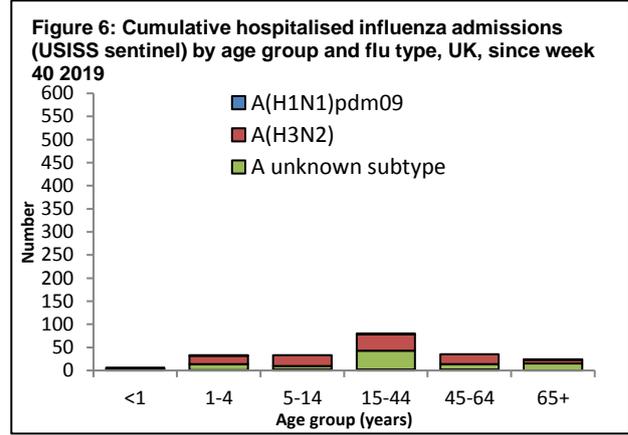
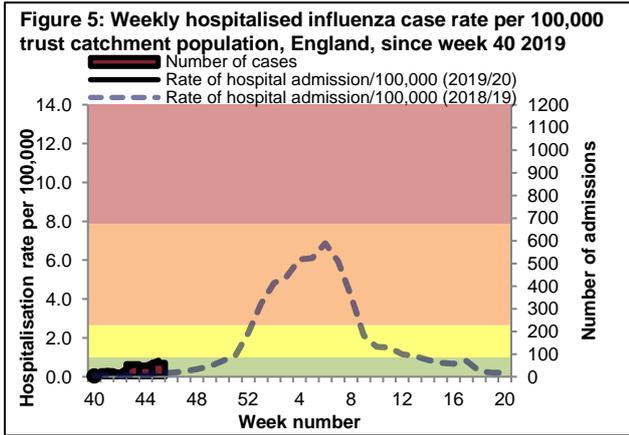


In week 45 2019, there were 62 hospitalised confirmed influenza cases (4 influenza A(H1N1)pdm09, 25 influenza A(H3N2) and 33 influenza A(unknown subtype)) reported through the USISS sentinel hospital network across England (16 Trusts). There were nine new admissions to ICU/HDU with confirmed influenza (one influenza A(H1N1)pdm09, one influenza A(H3N2), six influenza A(unknown subtype) and one influenza B) reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (134/143 Trusts in England).

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 45)

In week 45, there were 62 hospitalised laboratory confirmed influenza cases (4 influenza A(H1N1)pdm09, 25 influenza A(H3N2), 33 influenza A(unknown subtype)) reported from 16 NHS Trusts across England through the USISS sentinel hospital network, with a rate of 0.83 per 100,000 trust catchment population (Figures 5 and 6) compared to 0.57 per 100,000 in week 44. This is below the baseline impact threshold of 0.99 per 100,000.

A total of 211 hospitalised confirmed influenza admissions (109 influenza A(H3N2), 91 influenza A(unknown subtype), four influenza A(H1N1)pdm09 and seven influenza B) have been reported in England since week 40 2019 via the sentinel scheme.

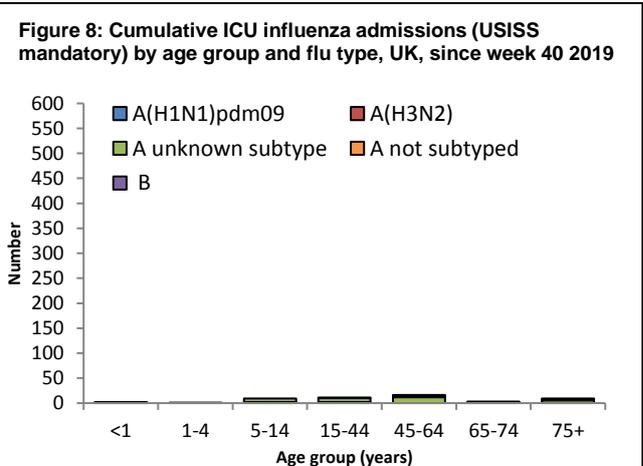
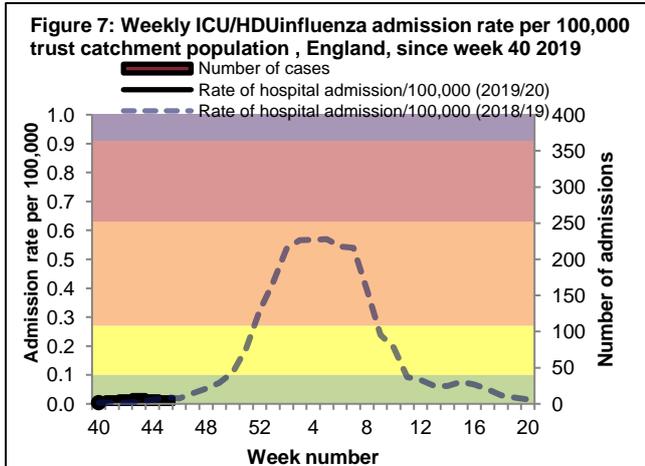


Baseline threshold
 Low
 Medium
 High
 Very high

- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 45)

In week 45, there were nine new admissions to ICU/HDU with confirmed influenza (one influenza A(H1N1)pdm09), one influenza A(H3N2), six influenza A(unknown subtype) and one influenza B) reported across the UK (134/143 Trusts in England) through the USISS mandatory ICU scheme, with a rate of 0.02 per 100,000 (Figures 7 and 8) compared to the same rate week 44. This is below the baseline impact threshold of 0.10 per 100,000. No influenza laboratory confirmed deaths were reported to have occurred in ICU/HDU week 45 in the UK.

A total of 51 new admissions (five influenza A(H1N1)pdm09), three influenza A(H3N2), 38 influenza A(unknown subtype) and five influenza B) and one confirmed death have been reported in the UK since week 40 2019.



Baseline threshold
 Low
 Medium
 High
 Very high

*The Moving Epidemic Method (MEM) has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for ICU/HDU admission rates for the start of influenza activity (based on 7 seasons) in a standardised approach across Europe. For MEM threshold values, please visit: <https://www.gov.uk/guidance/sources-of-uk-flu-data-influenza-surveillance-in-the-uk#disease-severity-and-mortality-data>

- USISS Severe Respiratory Failure Centre confirmed influenza admissions, UK (week 45)

- In week 45, there were no new admissions for laboratory confirmed influenza among the 6 Severe Respiratory Failure (SRF) centres in the UK.

All-cause mortality data

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In week 45 2019, no statistically significant excess all-cause mortality by week of death was observed overall and by age group in England, through the EuroMOMO algorithm. In the devolved administrations, no statistically significant excess all-cause mortality for all ages was observed in Wales and Northern Ireland in week 45 2019 and for Scotland in week 43.

- All-cause death registrations, England and Wales

- In week 44 2019, an estimated 10,164 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is a slight increase compared to the 10,021 estimated death registrations in week 43 2019.

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

- In week 45 2019 in England, no statistically significant excess mortality by week of death above the upper 2 z-score threshold was seen overall, by age group and sub-nationally (all ages), after correcting ONS disaggregate data for reporting delay with the standardised EuroMOMO algorithm. This data is provisional due to the time delay in registration; numbers may vary from week to week.

- In the devolved administrations, no statistically significant excess all-cause mortality for all ages observed in Wales and Northern Ireland in week 45 2019 and for Scotland in week 43 (Table 2).

Table 2: Excess mortality by UK country, for all ages*

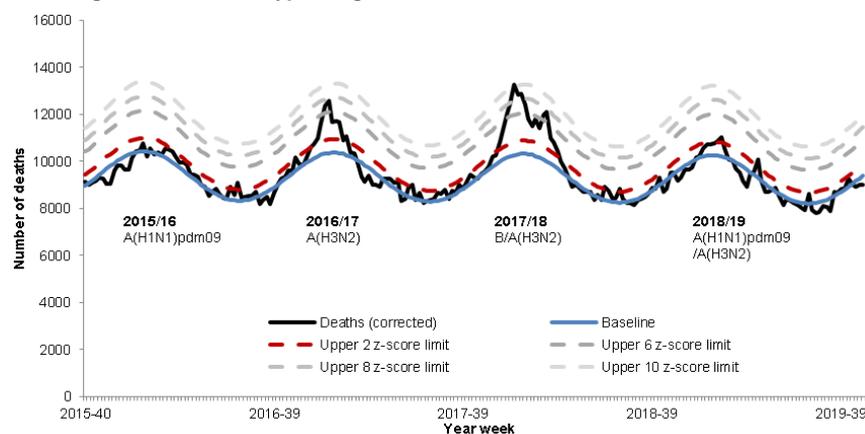
Country	Excess detected in week 45 2019?	Weeks with excess in 2019/20
England	x	NA
Wales	x	NA
Northern Ireland	x	NA

Country	Excess detected in week 43 2019?	Weeks with excess in 2019/20
Scotland	x	41

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

* NA refers to no excess seen

Figure 9: Weekly observed and expected number of all-age all-cause deaths, with the dominant circulating influenza A subtype, England, 2015 to week 44 2019



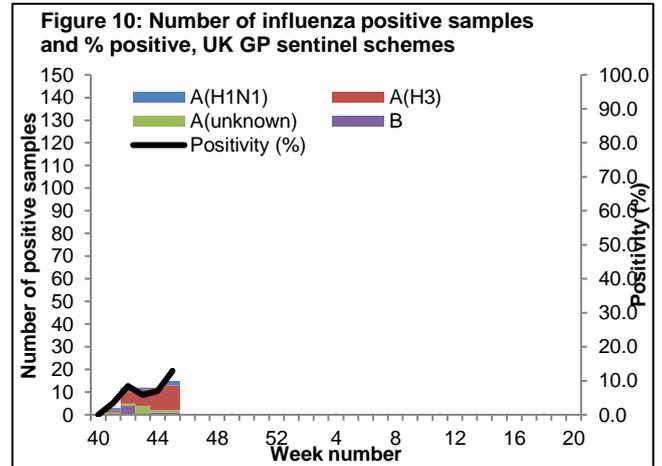
*Note: Delays in receiving all registered deaths from April 2018, following changes in IT systems at ONS, may result in some delays in the model to adjust for most recent deaths.

In week 45 2019, 14 samples tested positive for influenza with an overall positivity of 12.9%, through the UK GP sentinel schemes. 48 positive detections were recorded through the DataMart scheme (2 influenza A(H1N1)pdm09, 23 influenza A(H3), 20 influenza A(not subtyped) and 3 influenza B) with a positivity of 2.7%, this is below the baseline threshold of 9.7%.

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

In week 45 2019, 14 samples tested positive for influenza (2 influenza A(H1N1)pdm09, 10 influenza A(H3), one influenza A(unknown subtype) and one co-infection of influenza A(H3N2) and influenza B), with an overall positivity of 12.9% compared to 7.0% in the previous week, through the UK GP sentinel swabbing schemes (Figure 10).

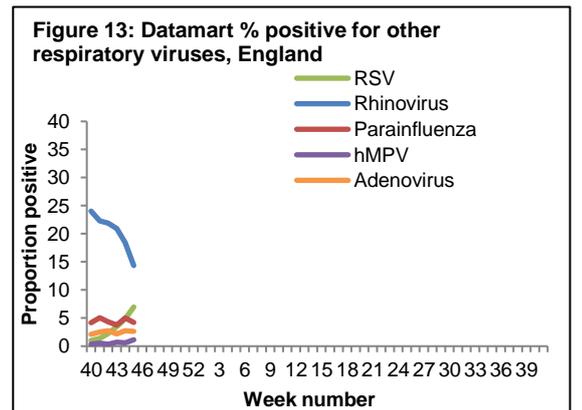
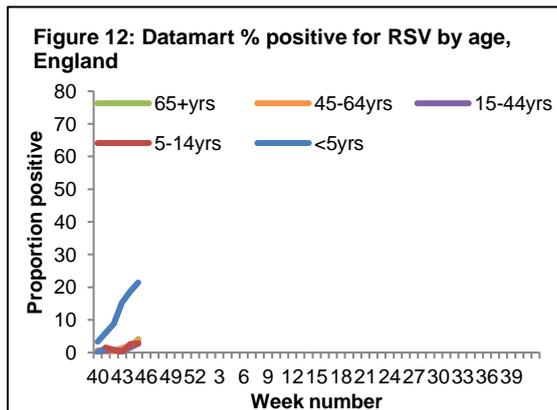
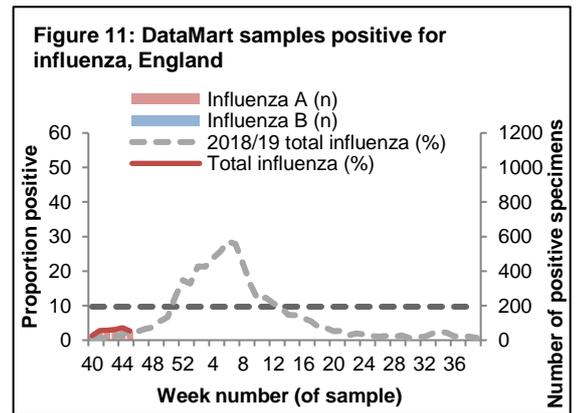
Since week 40, a total of 51 samples (4 influenza A(H1N1)pdm09, 33 influenza A(H3N2), 8 influenza A(unknown subtype), 3 influenza B, one co-infection of influenza A(H3N2) and B and two co-infections of influenza A(H1N1)pdm09 and B) tested positive for influenza through this scheme.



- Respiratory DataMart System (England)

In week 45 2019, out of the 1,781 respiratory specimens reported through the Respiratory DataMart System, 48 samples were positive for influenza (2 influenza A(H1N1)pdm09, 23 influenza A(H3), 20 influenza A(not subtyped) and 3 influenza B) (Figure 11), with an overall positivity of 2.7%, which is below the MEM baseline threshold for this season of 9.7%.

RSV positivity continued to increase from 4.9% in week 44 to 7.0% in week 45. The highest positivity for RSV by age group was seen in the <5 year olds at 21.4% in week 45 compared to 18.6% in the previous week. Rhinovirus and parainfluenza positivity decreased slightly at 14.3% and 4.2% respectively in week 45. Adenovirus and human metapneumovirus (hMPV) positivity were low at 2.7% and 1.1% respectively in week 45 2019 (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 9.7% in 2019/20.

- Virus characterisation

PHE characterises the properties of influenza viruses through one or more tests, including [genome sequencing](#) (genetic analysis) and [haemagglutination inhibition \(HI\)](#) assays (antigenic analysis). These data are used to compare how similar the currently circulating influenza viruses are to the strains included in seasonal influenza vaccines, and to monitor for changes in circulating influenza viruses. The interpretation of genetic and antigenic data sources is complex due to a number of factors, for example, not all viruses can be cultivated in sufficient quantity for antigenic characterisation, so that viruses with sequence information may not be able to be antigenically characterised as well. Occasionally, this can lead to a biased view of the properties of circulating viruses, as the viruses which can be recovered and analysed antigenically, may not be fully representative of majority variants, and genetic characterisation data does not always predict the antigenic characterisation

The PHE Respiratory Virus Unit has characterised 25 influenza A(H3N2) viruses detected since week 40. Genetic characterisation of these A(H3N2) influenza viruses shows that 21 belong to the genetic clade 3C.3a, and four fall into a cluster within the 3C.2a1 subclade, designated 3C.2a1b. The Northern Hemisphere 2019/20 influenza A(H3N2) vaccine strain belongs in genetic subclade 3C.3a.

One influenza B virus has been characterised to date, where sequencing of the haemagglutinin (HA) gene shows this virus belongs within genetic clade 1A of the B/Victoria lineage, clustering in a subgroup characterised by deletion of three amino acids in the HA. The N. Hemisphere 2019/20 B/Victoria-lineage quadrivalent and trivalent vaccine component virus (a B/Colorado/06/2017-like virus), is a double deletion subgroup virus.

At this early stage of the influenza season, it is too early to predict which lineages will dominate throughout the season, and a close watch will be kept on the proportion of different viruses circulating to assist with the evaluation of vaccine effectiveness.

- Antiviral susceptibility

Influenza positive samples are screened for mutations in the virus neuraminidase gene known to confer oseltamivir and/or zanamivir resistance. Additionally, testing of influenza A(H1N1)pdm09, A(H3N2), and influenza B virus isolates for neuraminidase inhibitor susceptibility (oseltamivir and zanamivir) is performed at PHE-RVU using a functional assay. The data summarized below combine the results of both testing methods. The samples tested are routinely obtained for surveillance purposes, but diagnostic testing of patients suspected to be infected with neuraminidase inhibitor-resistant virus is also performed.

Since week 40 2019, five influenza A (H1N1) viruses and 11 influenza A (H3N2) viruses were tested for both antiviral agents, oseltamivir and zanamivir, and all viruses are sensitive.

- Antimicrobial susceptibility

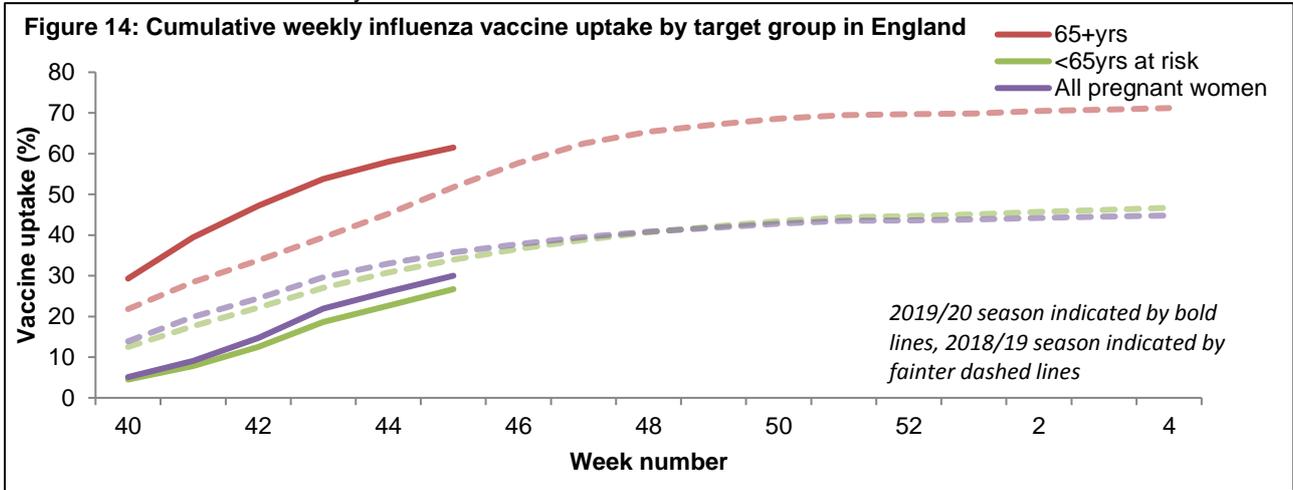
-Table 4 shows in the 12 weeks up to 10 November 2019, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key causes of community-acquired 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 10 November 2019, E&W

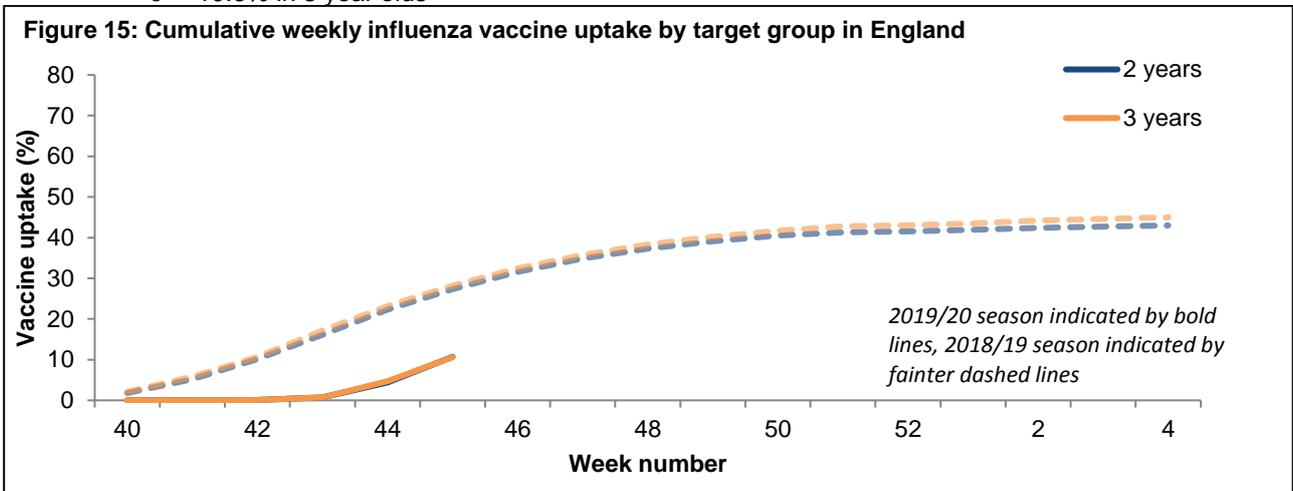
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	3029	86
	Macrolides	3321	80
	Tetracycline	3276	81
<i>H. influenzae</i>	Amoxicillin/ampicillin	12276	68
	Co-amoxiclav	13716	82
	Macrolides	2398	9
	Tetracycline	13718	98
<i>S. aureus</i>	Methicillin	6844	92
	Macrolides	7681	65
MRSA	Clindamycin	386	44
	Tetracycline	498	78
MSSA	Clindamycin	4453	73
	Tetracycline	5954	93

*Macrolides = erythromycin, azithromycin and clarithromycin

- Up to week 45 2019 in 79.0% of GP practices reporting weekly to Immform for the main collection, the provisional proportion of people in England who had received the 2019/20 influenza vaccine in targeted groups was as follows (Figure 14):
 - 26.7% in under 65 years in a clinical risk group
 - 30.0% in pregnant women
 - 61.5% in 65+ year olds



- In 2019/20, all 2 and 3 year olds continue to be eligible for influenza vaccination through their GPs. Up to week 45 2019, in 78.9% of GP practices reporting weekly to Immform for the childhood collection, the provisional proportion of children in England who had received the 2019/20 influenza vaccine in targeted groups was as follows (Figure 15):
 - 10.7% in 2 year olds
 - 10.6% in 3 year olds



- In addition, the childhood programme has been extended to all children of primary school age (Reception to school year 6). The data for the school programme, including the 4 year olds will be included in the monthly report to be published on 21 November 2019.

In the temperate zone of the northern hemisphere, influenza activity remained at inter-seasonal levels in most countries; however continued to increase across the countries of the Arabian Peninsula. In the temperate zones of the southern hemisphere, influenza activity was low in most countries, with influenza B virus detections continuing to be reported by Chile. Worldwide, seasonal influenza A viruses accounted for the majority of detections.

- [Europe](#) updated on 08 November 2019 (Joint ECDC-WHO Europe Influenza weekly update)

Overall in week 44, influenza activity was low throughout the European Region and both influenza A and B viruses detected.

For week 44 2019, of 47 Member States and areas reporting on intensity, 44 reported baseline and 3 reported low intensity (across the Region). Of the same Member States reporting on geographic spread, 31 reported no activity, 15 reported sporadic cases and one reported local spread.

For week 44 2019, 17 (2.7%) of 626 sentinel specimens tested positive for an influenza virus; 13 were influenza type A (5 A(H1N1)pdm09 and 8 A(H3N2)), and 4 were influenza type B.

For the season overall, more influenza type A (n=49, 59.8%) than type B (n=33, 40.2%) viruses have been detected. Of 48 subtyped A viruses, 19 (39.6%) were A(H1N1)pdm09 and 29 (60.4%) were A(H3N2). Of 11 influenza type B viruses ascribed to a lineage, all were B/Victoria.

Since week 40/2019, 42 laboratory-confirmed influenza cases from ICUs have been reported. 38 were infected with influenza type A and 4 with influenza type B. Of 5 subtyped influenza A viruses, 4 were A(H1N1)pdm09 and 1 A(H3N2). None of the influenza B viruses were ascribed to a lineage.

Since week 40/2019, 15 laboratory-confirmed influenza cases from other wards have been reported by Ireland and Ukraine; of these 13 were infected by influenza type A viruses, with 6 subtyped as A(H3N2), and 2 by influenza type B viruses.

For week 44 2019, pooled estimates from the EuroMOMO project of all-cause mortality from 22 countries or areas show mortality levels are within normal expected ranges.

- [United States of America](#) updated on 08 November 2019 (Centre for Disease Control report)

During week 44, influenza activity increased but remained low in the United States with influenza A(H3N2) and B/Victoria viruses circulating the most however influenza A(H1N1)pdm09 viruses is also circulating in some regions.

During week 44, 3.2% of laboratory tested respiratory specimens were positive for influenza. This is higher than the previous week.

Nationwide during week 44, 2.1% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI), which is below the national baseline of 2.4%.

- [Canada](#) updated on 08 November 2019 (Public Health Agency report)

At national level, influenza activity remains at interseasonal levels across the country in week 44, with influenza A(H3N2) being the most common influenza virus circulating in Canada.

In weeks 44, a total of 107 laboratory detections of influenza were reported, of which 84% (90) were influenza A, with 23/39 subtyped influenza A detections being influenza A(H3N2). The percentage of tests positive for influenza remains at interseasonal levels, at 1.9% in week 43.

In week 44, 1.0% of visits to healthcare professionals were due to ILI, respectively.

To date this season, 45 influenza-associated hospitalisations have been reported with the majority of cases being aged greater than 65 years and associated with influenza A(H3N2).

- [Global influenza update](#) updated on 11 November 2019 (based on data up to 27 October 2019) (WHO website)

In the temperate zone of the northern hemisphere, influenza activity remained at inter-seasonal levels in most countries; however continued to increase across the countries of the Arabian Peninsula. In the temperate zones of the southern hemisphere, influenza activity was low in most countries, with influenza B virus detections continuing to be reported by Chile.

Worldwide, seasonal influenza A viruses accounted for the majority of detections.

Respiratory illness indicators started to increase in some countries of the WHO European region, Eastern Asia and in North America, but influenza detections remain below seasonal thresholds.

In Western Asia, influenza activity was reported across the countries of the Arabian Peninsula. In Bahrain, Kuwait and Saudi Arabia, influenza activity continued to increase with detections of predominately influenza A(H1N1)pdm09 and B viruses. Influenza activity remained elevated in Oman and Qatar, with co-circulation of all seasonal influenza subtypes in the former and influenza A(H3N2) viruses in the latter.

In the Caribbean countries and tropical countries of South America, influenza activity remained low overall. Increased detections of influenza B and A(H3N2) viruses were reported in Cuba and Jamaica.

In Central American countries, influenza activity continued to increase in El Salvador and Nicaragua, with influenza A(H1N1)pdm09 and A(H3N2) predominately detected, respectively.

In Western Africa, influenza activity remained elevated. Increased influenza virus detections were reported in Côte d'Ivoire and Ghana, with influenza A(H3N2) and B/Victoria lineage predominating.

In Middle Africa, influenza detections of predominantly influenza B/Victoria lineage and influenza A(H1N1)pdm09 continued to be reported in Cameroon.

In Eastern Africa, influenza detections were low across reporting countries. In the French island La Réunion ILI consultations remained elevated with influenza A(H1N1)pdm09 virus most frequently detected.

In Southern Asia, influenza detections were low across reporting countries except for Iran (Islamic Republic of) where influenza season appeared to have started with increased detections of predominantly influenza A(H1N1)pdm09. South East Asia, influenza activity was reported in some countries. Influenza activity continued to be reported in Lao PDR, with detections of predominately influenza B/Victoria lineage and influenza A(H3N2) viruses. Increased influenza virus detections were reported in Malaysia in recent weeks, with influenza A(H1N1)pdm09 and B most frequently detected

The WHO GISRS laboratories tested more than 77,099 specimens between 14 October 2019 and 27 October 2019. 4,227 were positive for influenza viruses, of which 2,939 (69.5%) were typed as influenza A and 1,288 (39.05%) as influenza B. Of the sub-typed influenza A viruses, 924 (42.7%) were influenza A (H1N1)pdm09 and 1,239 (57.3%) were influenza A (H3N2). Of the characterized B viruses, 27 (4.8%) belonged to the B-Yamagata lineage and 534 (95.2%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 27 September 2019 (WHO website)

Influenza A(H5) viruses

Between [25 June 2019 to 27 September 2019](#), one new laboratory-confirmed human case of influenza A(H5N6) virus infection was reported to WHO.

A total of 24 laboratory-confirmed cases of human infection with influenza A(H5N6) virus have been reported to WHO from China since 2014.

According to reports received by the World Organization for Animal Health (OIE), various influenza A(H5) subtypes continue to be detected in birds in Africa, Europe and Asia.

Influenza A(H7N9)

Between [25 June 2019 and 27 September 2019](#), no new laboratory-confirmed human case of influenza A(H7N9) virus infection were reported to WHO from China. Publicly available reports from animal health authorities in China of influenza A(H7N9) virus detections in animals in recent months indicate virus detections in two provinces from samples taken in the first half of the year. 5 Overall, the risk assessment has not changed.

For more information on A(H5), A(H7N9), A(H9N2) and A(H1)v viruses, please see the September 2019 report: [Antigenic and genetic characteristics of zoonotic influenza viruses and candidate vaccine viruses developed for potential use in human vaccines.](#)

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\)](#) latest update on 13 November 2019

Up to 13 November 2019, a total of five cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (three imported and two linked cases) have been confirmed in the UK. On-going surveillance has identified 1,702 suspected cases in the UK since September 2012 that have been investigated for MERS-CoV and tested negative.

On [7 October 2019](#), the National IHR Focal Point of the United Arab Emirates (UAE) notified WHO of one laboratory-confirmed case of Middle East respiratory syndrome coronavirus (MERS-CoV) infection.

Between [1 and 30 September 2019](#), the National IHR Focal Point of Saudi Arabia reported 4 additional laboratory-confirmed cases of MERS-CoV infection with one associated death.

Globally, since September 2012 and up to 08 October 2019, [WHO](#) has been notified of 2,470 laboratory-confirmed cases of infection with MERS-CoV, including 851 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 very low.

Acknowledgements

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Related links

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Sources of flu data

- [Clinical surveillance through primary care in the UK](#)
- [Outbreak reporting](#)
- [FluSurvey](#)
- [MOSA](#)
- [Real time syndromic surveillance](#)
- MEM threshold [methodology paper](#) and [UK pilot paper](#)

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](#))
- 2019/20 Northern Hemisphere seasonal influenza vaccine recommendations ([WHO](#))