



PHE Weekly National Influenza Report

Summary of UK surveillance of influenza and other seasonal respiratory illnesses

07 November 2019 – Week 45 report (up to week 44 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 44 (ending 03 November 2019)

- During week 44, 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

- 26 new acute respiratory outbreaks have been reported in the past 7 days. 22 outbreaks were reported from care homes where 3 tested positive for influenza A(unknown subtype). Three outbreaks were reported from hospitals, where all three tested positive for influenza A(unknown subtype). The remaining outbreak was from a school with no test results available.

Primary Care

- The rate of influenza-like illness (ILI) was **Below baseline** threshold levels. The overall weekly ILI GP consultation rate was 4.5 per 100,000 registered population in participating GP practices for England, a decrease compared to 6.2 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 0.56 per 100,000 trust catchment population for England (18 NHS Trusts) compared to 0.62 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:** Eight samples tested positive for influenza (6 influenza A(H3) , one influenza A(unknown subtype) and one influenza B) through the UK GP sentinel swabbing schemes in week 44 2019, with an overall positivity of 8.8%
- **Secondary care:** There were 68 detections recorded through the DataMart scheme (5 influenza A(H1N1)pdm09, 27 influenza A(H3), 32 influenza A(not subtyped) and 4 influenza B). The overall influenza percent positivity was 3.7% and **Below baseline** threshold level.

Secondary
Care



Vaccination

- Weekly uptake: Up to week 44 2019, in 94.2% 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: 22.6% in under 65 years in a clinical risk group, 26.1% in pregnant women and 58.0% in 65+ year olds. In 93.8% of GP practices reporting for the childhood collection, the provisional proportion vaccinated was: 4.4% in 2 year olds and 4.7% 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 continued to account for the majority of detections, although the proportion of influenza B viruses increased in recent weeks.

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

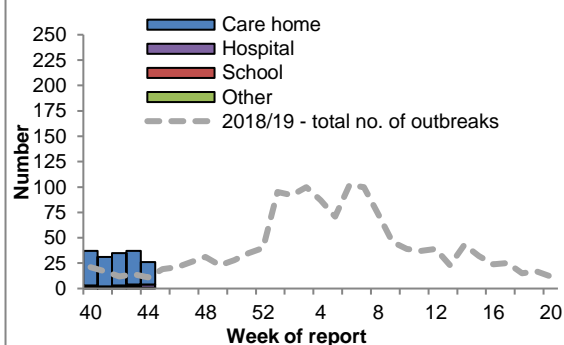
26 new acute respiratory outbreaks were reported in the past 7 days, with 6 confirmed with influenza. ILI rates observed through internet based surveillance were not available for week 44.

- Acute respiratory disease outbreaks

- 26 new acute respiratory outbreaks have been reported in the past 7 days. 22 outbreaks were reported from care homes where 3 tested positive for influenza A(unknown subtype) and 2 tested positive for rhinovirus. Three outbreaks were reported from hospitals, where all three tested positive for influenza A(unknown subtype). The remaining outbreak was from a school where no test results were available.

-Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and respscisc@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).

- Data will be reported from week 45.

- 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 45.

- 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

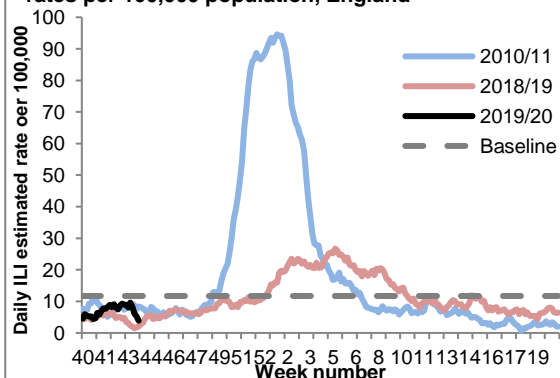
- Internet-based surveillance of influenza-like illness in the general population is also undertaken through FluDetector (<https://fludetector.cs.ucl.ac.uk>), a model assessing internet-based search queries for ILI.

- 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 43 were below the baseline threshold of 11.7 per 100,000, with an overall weekly rate of 3.9 per 100,000 compared to 9.0 per 100,000 in week 42 (Figure 2). Data for week 44 is not available.

-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



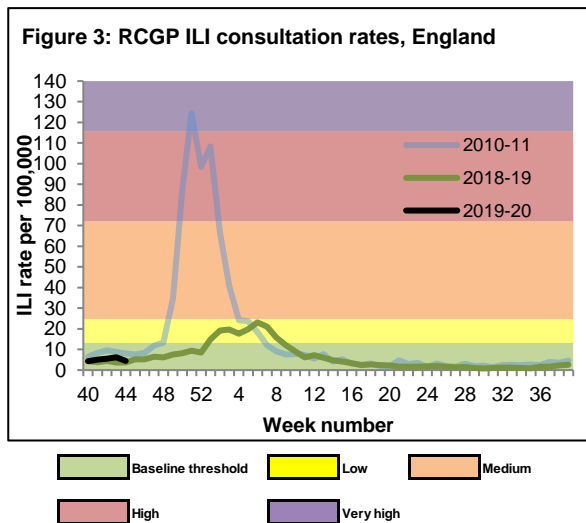
In week 44, the overall weekly influenza-like illness (ILI) GP consultation rate remained below baseline threshold levels in England. In the devolved administrations, ILI rates were below their respective baselines.

- GP ILI consultations in the UK

RCGP (England)

- The weekly ILI consultation rate through the RCGP surveillance was 4.5 per 100,000 registered population in participating GP practices in week 44 compared to 6.2 per 100,000 in week 43. 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 (10.7 per 100,000) and in the 15-44 year olds (6.0 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 (9.3 per 100,000) , in the 65-74 year olds in Wales (4.3 per 100,000) and in the 15-44 year olds in Northern Ireland (8.4 per 100,000).

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												
Wales	1.7	4.0	4.2	6.2	1.7												
Scotland	5.5	6.2	4.4	4.0	7.5												
Northern Ireland	3.9	4.8	4.6	5.1	6.5												

*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 4.1 per 100,000 in week 44 2019 (Figure 4).

GP In Hours consultations for influenza-like illness and upper respiratory tract infections remain within seasonal expectations, however increases were noted in lower respiratory tract infection consultations in children aged <1 years during week 44.

NHS 111 calls for coughs and difficulty breathing continued to increase in all ages, but in particularly in children aged less than 1 year in week 44, in line with seasonal rises in RSV activity.

GP Out of Hours consultations and Emergency Department (ED) attendances for bronchitis/bronchiolitis continued to increase, particularly in young children, however were in line with increasing levels of RSV activity in the community in week 44.

- Figure 4 represents a map of GP ILI consultation rates in week 44 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 44

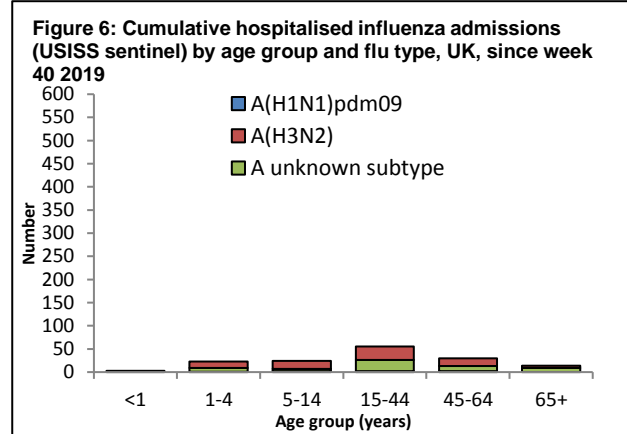
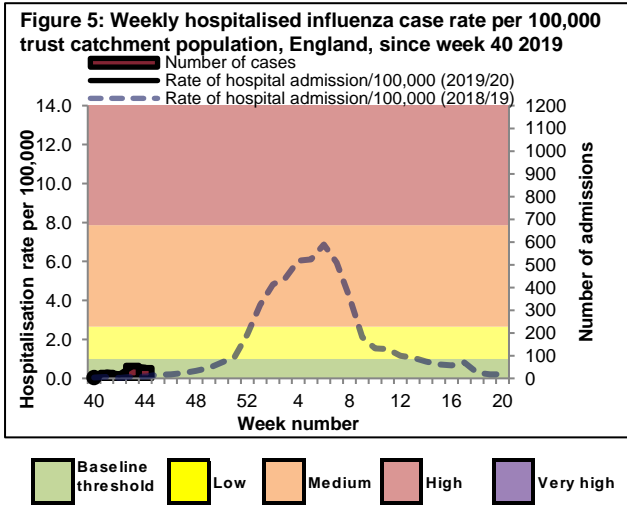


In week 44 2019, there were 46 hospitalised confirmed influenza cases (28 influenza A(H3N2), 16 influenza A(unknown subtype) and two influenza B) reported through the USISS sentinel hospital network across England (18 Trusts). There were 11 new admissions to ICU/HDU with confirmed influenza (one influenza A(H1N1)pdm09 and 10 influenza A(unknown subtype)) reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (132/143 Trusts in England).

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 44)

In week 44, there were 46 hospitalised laboratory confirmed influenza cases (28 influenza A(H3N2), 16 influenza A(unknown subtype) and two influenza B) reported from 18 NHS Trusts across England through the USISS sentinel hospital network, with a rate of 0.56 per 100,000 trust catchment population (Figures 5 and 6) compared to 0.62 per 100,000 in week 43. This is below the baseline impact threshold of 0.99 per 100,000.

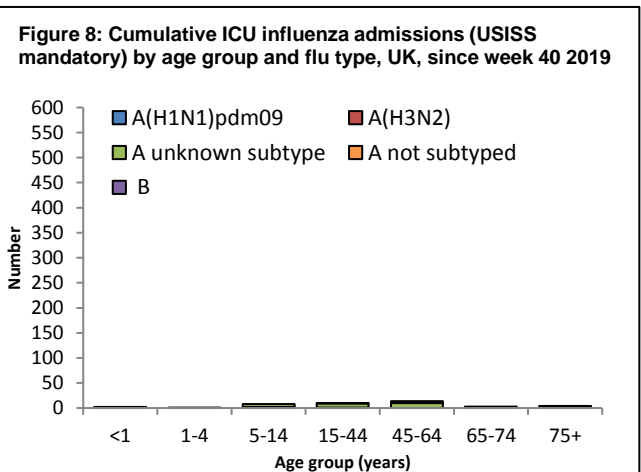
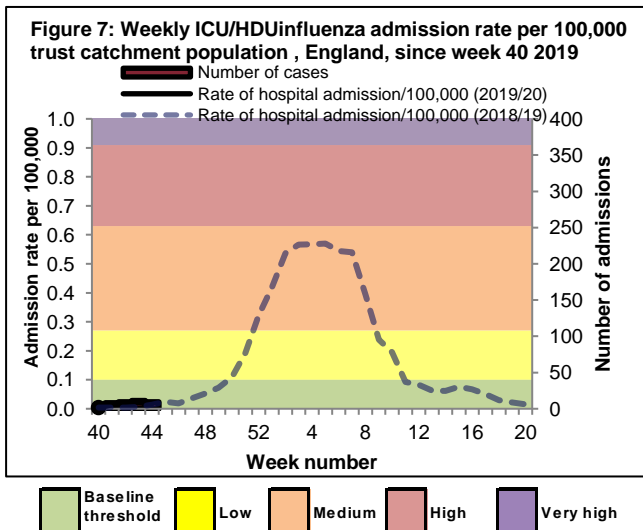
A total of 149 hospitalised confirmed influenza admissions (84 influenza A(H3N2), 58 influenza A(unknown subtype) and seven influenza B) have been reported in England since week 40 2019 via the sentinel scheme.



- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 44)

In week 44, there were 11 new admissions to ICU/HDU with confirmed influenza (one influenza A(H1N1)pdm09 and 10 influenza A(unknown subtype)) reported across the UK (132/143 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 43. 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 44 in the UK.

A total of 42 new admissions (four influenza A(H1N1)pdm09), one influenza A(H3N2), 33 influenza A(unknown subtype) and 4 influenza B) and one confirmed death have been reported in the UK since week 40 2019.



*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 44)

- In week 44, 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 44 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 44 2019 and for Scotland in week 42.

- All-cause death registrations, England and Wales

- In week 43 2019, an estimated 10,021 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is a slight decrease compared to the 10,156 estimated death registrations in week 42 2019.

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

- In week 44 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 44 2019 and for Scotland in week 42 (Table 2).

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

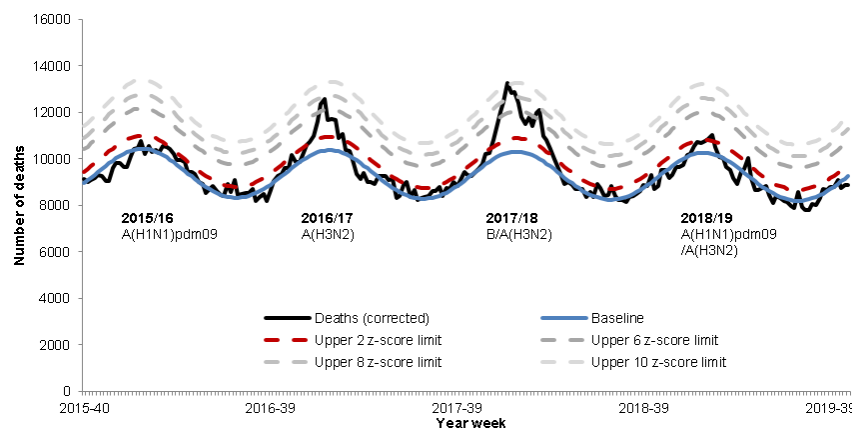
Country	Excess detected in week 44 2019?	Weeks with excess in 2019/20
England	x	NA
Wales	x	NA
Northern Ireland	x	NA

Country	Excess detected in week 42 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

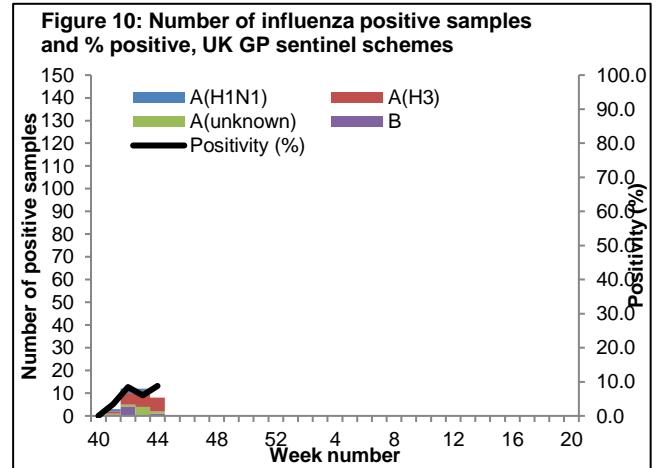


*Note: Delays in receiving all registered deaths from April 2018, following changes in IT systems at ONS, may result in some delays in the model to adjust for most recent deaths.

In week 44 2019, 8 samples tested positive for influenza with an overall positivity of 8.8%, through the UK GP sentinel schemes. 68 positive detections were recorded through the DataMart scheme (5 influenza A(H1N1)pdm09, 27 influenza A(H3), 32 influenza A(not subtyped) and 4 influenza B) with a positivity of 3.7%, this is below the baseline threshold of 9.7%.

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

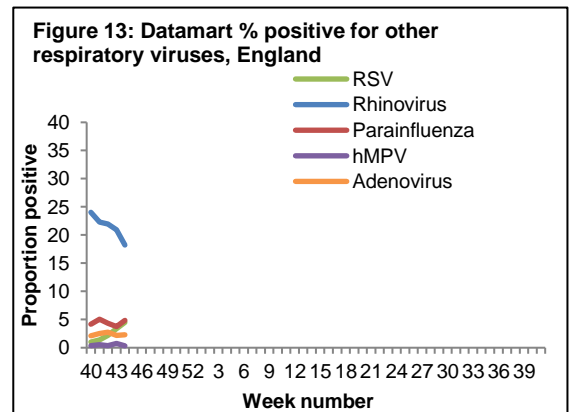
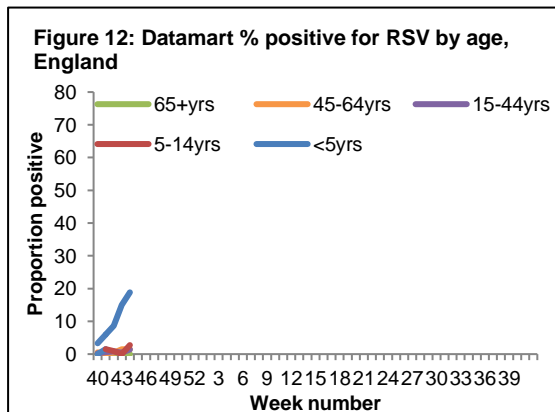
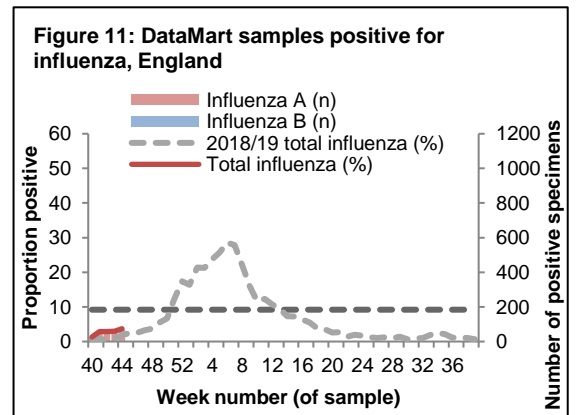
In week 44 2019, 8 samples tested positive for influenza (6 influenza A(H3), one influenza A(unknown subtype) and one influenza B), with an overall positivity of 8.8% compared to 6.0% in the previous week, through the UK GP sentinel swabbing schemes (Figure 10).



- Respiratory DataMart System (England)

In week 44 2019, out of the 1,834 respiratory specimens reported through the Respiratory DataMart System, 68 samples were positive for influenza (5 influenza A(H1N1)pdm09, 27 influenza A(H3), 32 influenza A(not subtyped) and 4 influenza B) (Figure 11), with an overall positivity of 3.7%, which is below the MEM baseline threshold for this season of 9.7%.

RSV positivity remains low but has increased from 3.4% in week 43 to 4.5% in week 44. The highest positivity for RSV by age group was seen in the <5 year olds at 18.8% in week 44 compared to 15.0% in the previous week. Rhinovirus positivity has decreased slightly at 18.2% in week 44, compared to 20.9% in the previous week. Parainfluenza positivity increased slightly to 4.8% in week 44. Adenovirus and human metapneumovirus (hMPV) positivity were low at 2.3% and 0.3% respectively in week 44 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 22 influenza A(H3N2) viruses detected since week 40. Genetic characterisation of these A(H3N2) influenza viruses shows that 18 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, three influenza A (H1N1) viruses and three influenza A (H3N2) viruses were tested for both antiviral agents, oseltamivir and zanamivir, and all viruses are sensitive.

- Antimicrobial susceptibility

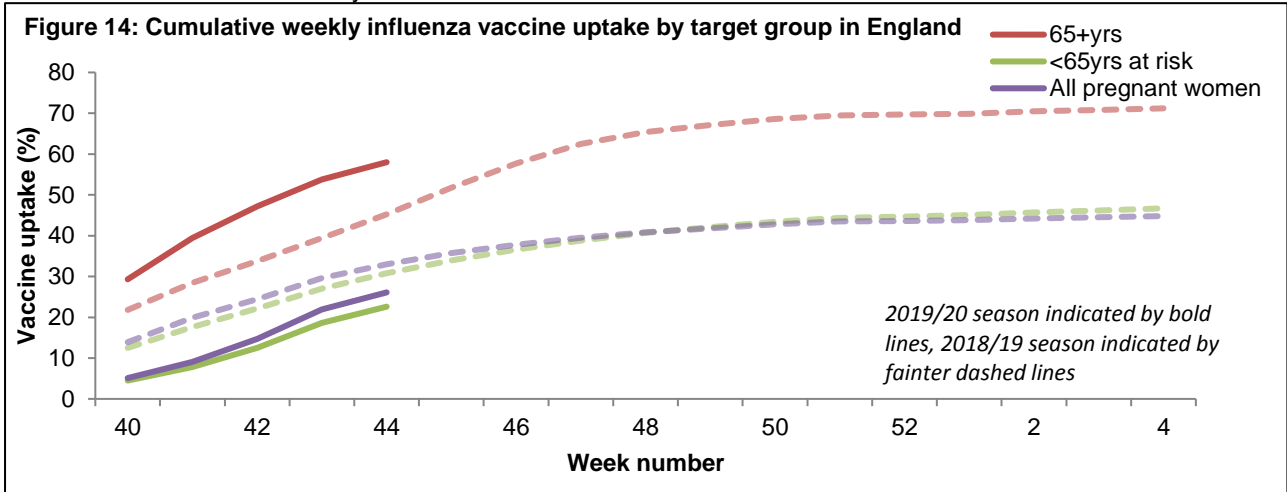
-Table 4 shows in the 12 weeks up to 03 November 2019, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key causes of community acquired 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 03 November 2019, E&W

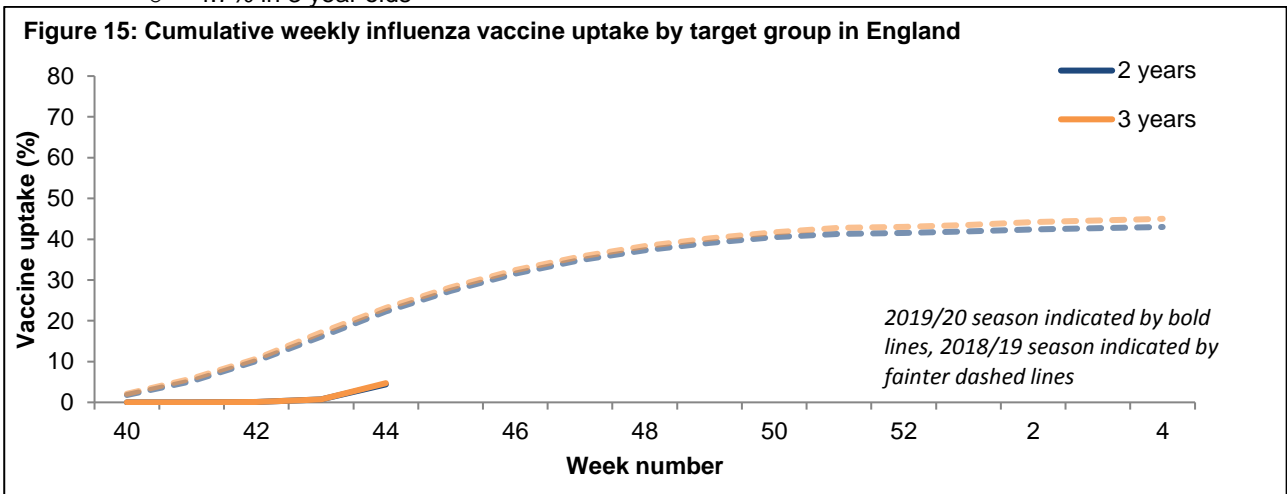
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	2859	86
	Macrolides	3105	80
	Tetracycline	3077	81
<i>H. influenzae</i>	Amoxicillin/ampicillin	11733	68
	Co-amoxiclav	13092	82
	Macrolides	2262	8
	Tetracycline	13064	98
<i>S. aureus</i>	Methicillin	6696	92
	Macrolides	7504	66
MRSA	Clindamycin	378	44
	Tetracycline	484	78
MSSA	Clindamycin	4351	73
	Tetracycline	5819	93

*Macrolides = erythromycin, azithromycin and clarithromycin

- Up to week 44 2019 in 94.2% 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):
 - 22.6% in under 65 years in a clinical risk group
 - 26.1% in pregnant women
 - 58.0% 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 44 2019, in 93.8% 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):
 - 4.4% in 2 year olds
 - 4.7% 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 continued to account for the majority of detections, although the proportion of influenza B viruses increased in recent weeks.

- [Europe](#) updated on 01 November 2019 (Joint ECDC-WHO Europe Influenza weekly update)

Overall in week 43, influenza activity was low throughout the European Region and both influenza A and B viruses detected.

For week 43 2019, of 42 Member States and areas reporting on intensity, 36 reported baseline and 6 reported low intensity (across the Region). Of the same Member States reporting on geographic spread, 27 reported no activity and 15 reported sporadic cases (across the Region).

For week 43 2019, 11 (2.2%) of 504 sentinel specimens tested positive for an influenza virus; 9 were influenza type A [2 A(H1N1)pdm09 and 7 A(H3N2)], and 2 were influenza type B.

For the season overall, slightly more influenza type A (n=30, 61.2%) than type B (n=19, 38.8%) viruses have been detected. Of 29 subtyped A viruses, 12 (41.4%) were A(H1N1)pdm09 and 17 (58.6%) were A(H3N2). Of 9 influenza type B viruses ascribed to a lineage, all were B/Victoria.

Since week 40/2019, 30 laboratory-confirmed influenza cases from ICUs have been reported. 26 were infected with influenza type A and 4 with influenza type B. Of 3 subtyped influenza A viruses, 2 were A(H1N1)pdm09 and 1 A(H3N2). None of the influenza B viruses were ascribed to a lineage.

Since week 40/2019, 10 laboratory-confirmed influenza cases from other wards have been reported by Ireland and Ukraine; of these 8 were infected by influenza type A viruses, with 4 subtyped as A(H3N2), and 2 by influenza type B viruses.

For week 43 2019, pooled estimates from the EuroMOMO project of all-cause mortality from 23 countries or areas show mortality levels are within normal expected ranges.

- [United States of America](#) updated on 01 November 2019 (Centre for Disease Control report)

During week 43, influenza activity increased slightly but remained low in the United States with influenza A(H3N2) and B/Victoria viruses circulating.

During week 43, 2.4% of laboratory tested respiratory specimens were positive for influenza. This is slightly higher than the previous week.

Nationwide during week 43, 1.9% 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%.

Based on National Center for Health Statistics (NCHS) mortality surveillance data available on October 31, 2019, 5.1% of the deaths occurring during the week ending October 19, 2019 (week 42) were due to P&I. This percentage is below the epidemic threshold of 5.8% for week 42.

- [Canada](#) updated on 01 November 2019 (Public Health Agency report)

At national level, influenza activity remains at interseasonal levels across the country in week 43, with influenza A(H3N2) being the most common influenza virus circulating in Canada.

In weeks 43, a total of 96 laboratory detections of influenza were reported, of which 82% (79) were influenza A, with 12/18 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 43, 0.9% of visits to healthcare professionals were due to ILI, respectively.

In weeks 43, less than five influenza-associated hospitalisations were reported by participating provinces and territories. To date this season, 32 influenza-associated hospitalisations have been reported with the majority of cases being aged greater than 65 years of age and associated with influenza A(H3N2).

- [Global influenza update](#) updated on 28 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 continued to account for the majority of detections, although the proportion of influenza B viruses increased in recent weeks.

In Western Asia, influenza activity continued to increase across the countries of the Arabian Peninsula, with influenza A(H3N2) viruses predominating in Qatar and all seasonal influenza subtypes co-circulating in Kuwait and Oman.

In the Caribbean countries and tropical countries of South America, influenza activity remained low overall. 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 (influenza A(H3N2) and B/Victoria lineage), Guinea (influenza B/Victoria lineage), Mauritania (all seasonal influenza subtypes), Niger (influenza A(H3N2)) and Togo (influenza A(H3N2) and B).

In Middle Africa, influenza detections of predominantly influenza B/Victoria lineage and influenza A(H1N1)pdm09 were reported in Cameroon and South Sudan, respectively.

In Eastern Africa, influenza detections were low across reporting countries. Increases in influenza A(H1N1)pdm09 virus detections were reported in Kenya and La Réunion.

In Southern Asia, influenza detections were low across reporting countries. In South East Asia, influenza activity was reported in some countries with influenza B/Victoria-lineage and influenza A(H3N2) predominating.

In Oceania, influenza activity was low. In Australia ILI and weekly notifications of laboratory confirmed influenza are further decreasing but not yet at inter-seasonal levels.

In South Africa, influenza and ILI activity remained below seasonal threshold.

In temperate South America, influenza activity was low in most countries. In Chile, influenza activity of predominately B viruses continued to be reported, though decreased.

The WHO GISRS laboratories tested more than 102,881 specimens between 30 September 2019 and 13 October 2019. 5,005 were positive for influenza viruses, of which 3,030 (60.5%) were typed as influenza A and 1,975 (39.5%) as influenza B. Of the sub-typed influenza A viruses, 595 (35.6%) were influenza A (H1N1)pdm09 and 1,076 (64.4%) were influenza A (H3N2). Of the characterized B viruses, 71 (14.1%) belonged to the B-Yamagata lineage and 433 (85.9%) 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. 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 06 November 2019

Up to 06 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 1,685 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](#))