



PHE Weekly National Influenza Report

Summary of UK surveillance of influenza and other seasonal respiratory illnesses

16 January 2020 – Week 03 report (up to week 02 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 02 (ending 12 January 2020)

- During week 02, influenza activity continues but shows signs of having peaked in some indicators.
- The impact of flu on healthcare services is now at **low intensity** levels for hospitalisations and ICU/HDU influenza admissions. The Department of Health & Social Care has issued an [alert](#) on the prescription of antiviral medicines by GPs.

Community

- 69 new acute respiratory outbreaks have been reported in the past 7 days. 55 outbreaks were reported from care homes where 14 tested positive for influenza A. 11 outbreaks were reported from hospitals where 6 tested positive for influenza A. The remaining three outbreaks were from the Other settings category with no test results available.

Primary Care

- The overall weekly influenza-like illness (ILI) rate decreased but continued to be **Above baseline** threshold levels and was at 14.7 per 100,000 registered population in participating GP practices for England, a decrease from 16.6 per 100,000 in the previous week.
- In the devolved administrations, ILI rates were at baseline levels in Scotland and Northern Ireland; and moderate levels in Wales for week 02.

GP ILI
Consultations
England



Secondary Care

- Hospitalisation rate observed for laboratory confirmed influenza was at **low impact levels**, with a rate of 2.43 per 100,000 trust catchment population for England (20 NHS Trusts) compared to 4.33 per 100,000 in the previous week.
- ICU/HDU admission rate observed for laboratory confirmed influenza was at **low impact levels**, with a rate of 0.21 per 100,000 trust catchment population for England (136/143 NHS Trusts) compared to 0.36 per 100,000 the previous week.
- There was one new laboratory confirmed influenza (1 influenza A(not subtyped)) admission reported from the 6 Severe Respiratory Failure centres in the UK.

Hospitalisation



ICU/HDU



All-cause mortality

- In week 02 2020, 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 for week 02 2020. No excess was noted for Scotland in week 52 2019.

Microbiological surveillance

- **Primary care:** 41 samples tested positive for influenza (6 influenza A(H1N1)pdm09, 29 influenza A(H3), 3 influenza A(not subtyped) , 2 influenza B and one co-infection of influenza A(H3) and B), through the UK GP sentinel swabbing schemes in week 02 2020, with an overall influenza positivity of 24.4%.
- **Secondary care:** There were 347 influenza detections recorded through the DataMart scheme (64 influenza A(H1N1)pdm09, 121 influenza A(H3), 149 influenza A(not subtyped) and 13 influenza B). The overall influenza percent positivity was 12.4% and **Above baseline** threshold level.
- **Virus Characterisation:** 620 influenza A(H3N2) viruses have been genetically and/or antigenically characterised since week 40. 511 of 615 genetically characterised belong to the same subclade as the H3N2 component in this season's vaccine. 27 A(H1N1)pdm09 viruses have been characterised and are similar to the A(H1N1)pdm09 strain in this season's vaccine.

Secondary
Care



Vaccination

- **Weekly uptake:** Up to week 02 2020, in 94.3% 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: 41.8% in under 65 years in a clinical risk group, 41.9% in pregnant women and 71.1% in 65+ year olds. In 93.4% of GP practices reporting for the childhood collection, the provisional proportion vaccinated was: 39.2% in 2 year olds and 39.4% in 3 year olds.
- Provisional data from the second monthly collection of influenza vaccine uptake by frontline healthcare workers show 61.5% were vaccinated by 30 November 2019, compared to 61.0% vaccinated in the previous season by 30 November 2018.
- Provisional data from the second monthly collection of influenza vaccine uptake for children of school years reception to year 6 shows 46.4% in school year reception age, 45.8% in school year 1 age, 45.0% in school year 2 age, 43.7% in school year 3 age, 43.2% in school year 4 age, 41.3% in school year 5 and 39.7% in school year 6 age were vaccinated by 30 November 2019.

International situation

- In the temperate zone of the northern hemisphere, influenza activity and respiratory illness indicators continued to increase in most countries. In the temperate zones of the southern hemisphere, influenza activity remained to interseasonal levels. Worldwide, seasonal influenza A(H3N2) viruses accounted for the majority of detections.

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

69 new acute respiratory outbreaks were reported in the past 7 days, with 20 confirmed with influenza.

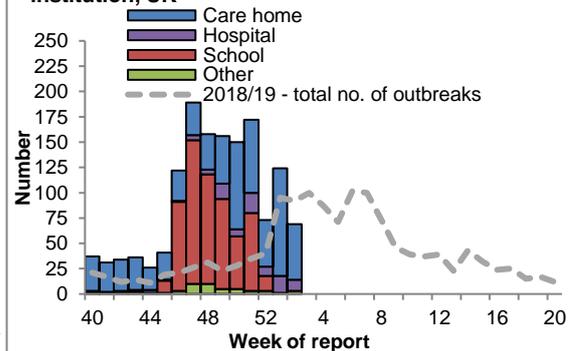
- Acute respiratory disease outbreaks

- 69 new acute respiratory outbreaks have been reported in the past 7 days. 55 outbreaks were reported from care homes where 14 tested positive for influenza A(not subtyped), one for rhinovirus, 2 for respiratory syncytial virus (RSV) and one for seasonal coronavirus. 11 outbreaks were reported from hospitals where 6 tested positive for influenza A(not subtyped). The remaining three outbreaks were 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

* Due to reporting/publication changes during the festive period, adjustments have been made to include 7 days' worth of outbreaks for weeks 51-01. As such, Figure 1 may differ to the ones previously published for the mentioned weeks.

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 02 was 0.0 per 1,000 boarders compared to 3.5 per 1,000 boarders in week 50, when schools were last open. Since week 40, three outbreaks have been reported with a total of 15 ILI cases.

- 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.

- The overall ILI rate (all age groups) for week 02 was 25.5 per 1,000 (48/1,879 people reported at least 1 ILI), with the highest rate seen in the <20 year olds (40.0 per 1,000).

- 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

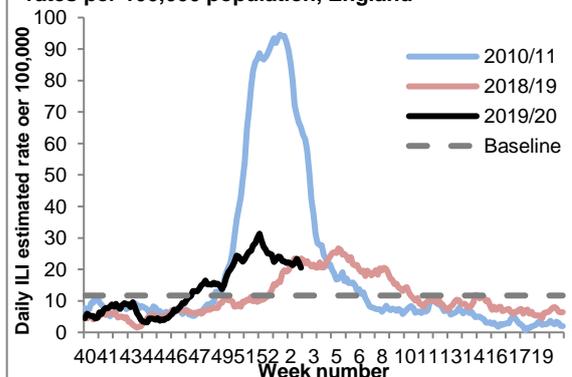
- Internet-based surveillance of influenza-like illness in the general population is also undertaken through FluDetector (<https://fludetector.cs.ucl.ac.uk>), a model assessing internet-based search queries for ILI.

- 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 02 decreased slightly but remained above the baseline threshold of 11.7 per 100,000, with an overall weekly rate of 20.6 per 100,000 compared to 22.1 per 100,000 in week 01 (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



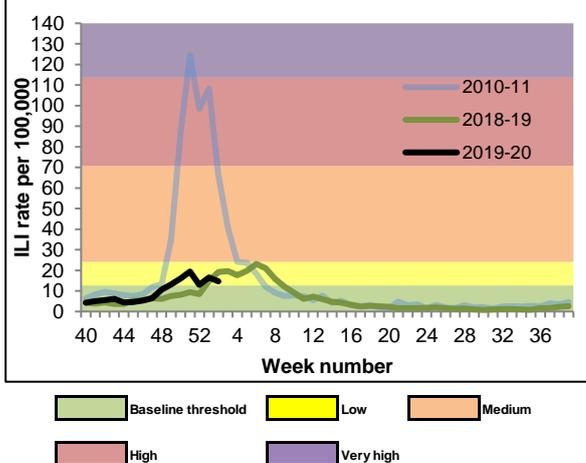
In week 02, the overall weekly influenza-like illness (ILI) GP consultation rate decreased, but remains above the baseline threshold in England. In the devolved administrations, ILI rates were at baseline levels in Scotland and Northern Ireland; and moderate levels in Wales for week 02.

RCGP (England)

- The weekly ILI consultation rate through the RCGP surveillance was 14.7 per 100,000 registered population in participating GP practices in week 02 compared to 16.6 per 100,000 in week 01. This is above the baseline threshold (12.7 per 100,000) (Figure 3*). By age group, the highest rates were seen in the 45-64 year olds (21.0 per 100,000) and in the 65-74 year olds (15.2 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>

Figure 3: RCGP ILI consultation rates, England



UK

- In week 02, overall weekly ILI consultation rates were at baseline levels in Scotland and Northern Ireland, and moderate levels in Wales (Table 1).

- By age group, the highest rates were seen in the 45-64 year olds in Scotland and Northern Ireland (27.6 and 19.6 per 100,000 respectively) .Rates by age group were not available for Wales.

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	5.3	6.5	10.6	13.1	16.0	19.4	12.9	16.6	14.7		
Wales	1.7	4.0	4.2	6.2	1.7	4.2	3.7	10.1	10.6	8.5	24.4	23.8	37.1	34.5	21.2		
Scotland	5.1	6.2	4.4	4.0	7.9	5.0	7.0	11.8	12.3	14.0	19.4	22.0	15.4	12.1	19.9		
Northern Ireland	3.9	4.8	4.6	5.1	6.5	7.2	6.9	14.2	28.2	29.2	24.8	21.3	10.4	15.9	13.4		

*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 14.5 per 100,000 in week 02 2020 (Figure 4). GP In Hours consultations for ILI decreased but remained at medium intensity levels nationally in week 02 2020.

During week 02, NHS 111 cold/flu calls decreased further and are now at low intensity levels.

GP out-of-hours contacts for ILI decreased and were at low intensity levels in week 02.

Emergency Department (ED) attendances for ILI also decreased in week 02.

Figure 4 represents a map of GP ILI consultation rates in week 02 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 02

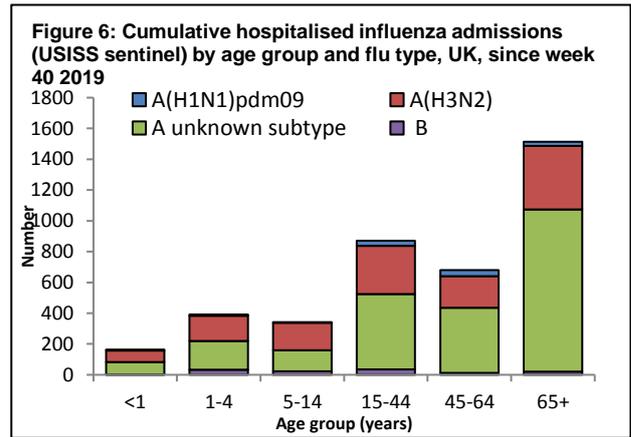
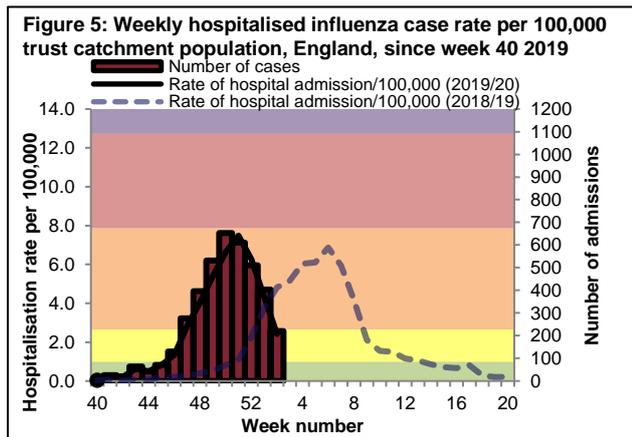


In week 02 2020, there were 220 hospitalised confirmed influenza cases (16 influenza A(H1N1)pdm09, 38 influenza A(H3N2), 145 influenza A(not subtyped) and 21 influenza B) reported through the USISS sentinel hospital network across England (20 Trusts). There were 118 new admissions to ICU/HDU with confirmed influenza (6 influenza A(H1N1)pdm09, 18 influenza A(H3N2), 88 influenza A(not subtyped) and 6 influenza B) reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (136/143 Trusts in England).

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 02)

In week 02, there were 220 hospitalised laboratory confirmed influenza cases (16 influenza A(H1N1)pdm09), 38 influenza A(H3N2), 145 influenza A(not subtyped) and 21 influenza B) reported from 20 NHS Trusts across England through the USISS sentinel hospital network, with a rate of 2.43 per 100,000 trust catchment population (Figures 5 and 6) compared to 4.33 per 100,000 in week 01. This is now at low impact levels.

A total of 3,960 hospitalised confirmed influenza admissions (116 influenza A(H1N1)pdm09, 1,346 influenza A(H3N2), 2,371 influenza A(not subtyped), and 127 influenza B) have been reported in England since week 40 2019 via the sentinel scheme.

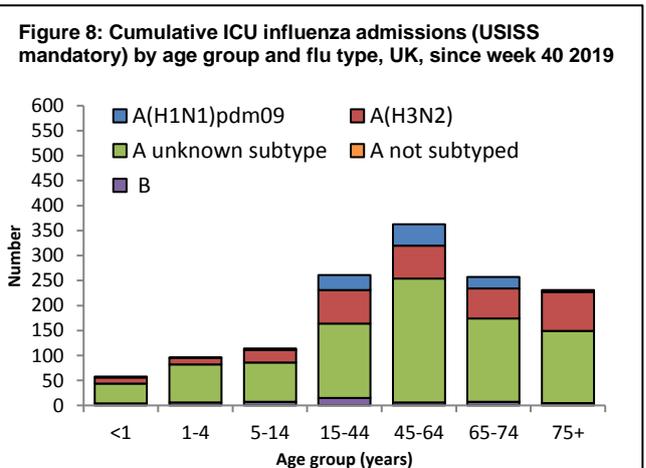
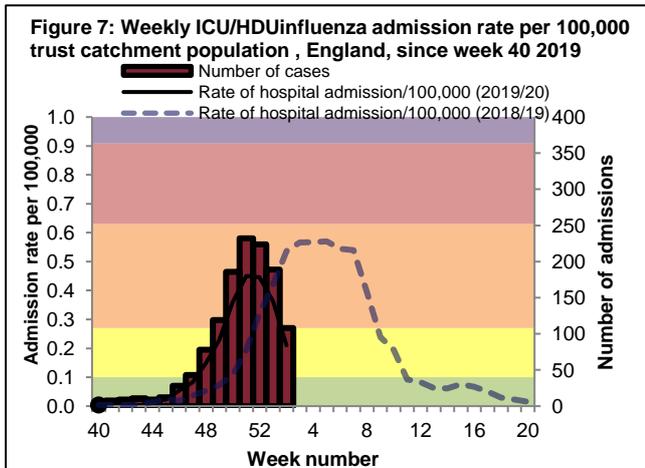


■ Baseline threshold ■ Low ■ Medium ■ High ■ Very high

- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 02)

In week 02, there were 118 new admissions to ICU/HDU with confirmed influenza (6 influenza A(H1N1)pdm09), 18 influenza A(H3N2), 88 influenza A(not subtyped) and 6 influenza B) reported across the UK (136/143 Trusts in England) through the USISS mandatory ICU scheme, with a rate of 0.21 per 100,000 (Figures 7 and 8) compared to 0.36 per 100,000 in week 01. This is now in the low impact threshold of 0.27 per 100,000. Six influenza laboratory confirmed deaths were reported to have occurred in ICU/HDU week 02 in the UK.

A total of 1,380 new admissions (106 influenza A(H1N1)pdm09), 321 influenza A(H3N2), 903 influenza A(not subtyped) and 50 influenza B) and 65 confirmed deaths 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 02)

- In week 02, there was one new admission with laboratory confirmed influenza (1 influenza A(not subtyped)) among the 6 Severe Respiratory Failure (SRF) centres in the UK. Since week 40 2019, a total of 19 confirmed influenza admissions (2 influenza A(H1N1)pdm09, 5 influenza A(H3N2), 10 influenza A(unknown subtype) and 2 influenza B) have been reported among the 6 centres in the UK.

All-cause mortality data

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In week 02 2020, 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 02 2020. No excess was noted for Scotland in week 52 2019.

- All-cause death registrations, England and Wales

- In week 01 2020, an estimated 12,254 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is an increase compared to the 7,533 estimated death registrations in week 52 2019.

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

- In week 02 2020 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 02 2020. No excess was noted for Scotland in week 52 2019 (Table 2).

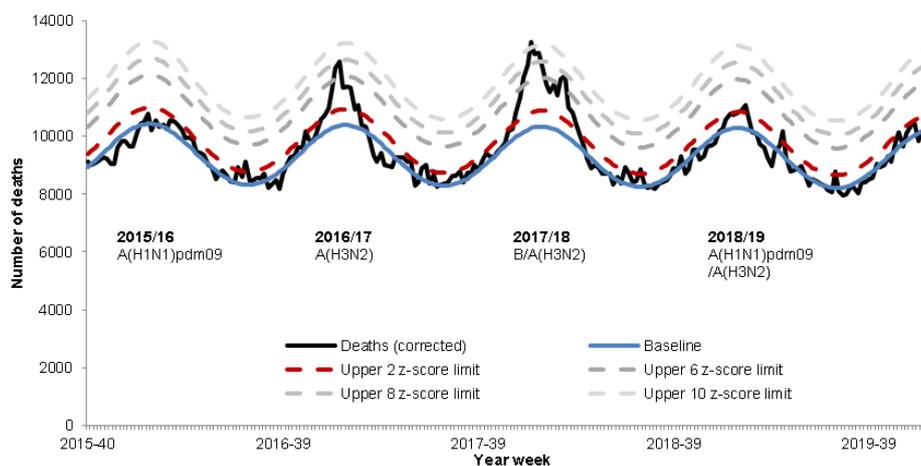
Table 2: Excess mortality by UK country, for all ages*

Country	Excess detected in week 02 2020?	Weeks with excess in 2019/20
England	x	47
Wales	x	NA
Northern Ireland	x	49-51
Country	Excess detected in week 52 2019?	Weeks with excess in 2019/20
Scotland	x	41,46, 49-51

* 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 02 2020



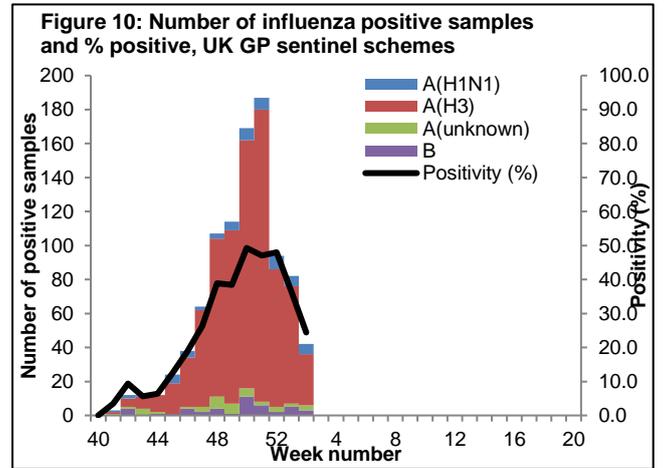
*Note: Delays in receiving all registered deaths from April 2018, following changes in IT systems at ONS, may result in some delays in the model to adjust for most recent deaths.

In week 02 2020, 41 samples tested positive for influenza (6 influenza A(H1N1)pdm09, 29 influenza A(H3), 3 influenza A(not subtyped), 2 influenza B and one co-infection of influenza A(H3) and B) with an overall positivity of 24.4%, through the UK GP sentinel schemes. 347 positive detections were recorded through the DataMart scheme (64 influenza A(H1N1)pdm09, 121 influenza A(H3), 149 influenza A(not subtyped) and 13 influenza B) with a positivity of 12.4%, which remains above the baseline threshold of 9.7%.

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

In week 02 2020, 41 samples tested positive for influenza (6 influenza A(H1N1)pdm09, 29 influenza A(H3), 3 influenza A(not subtyped), 2 influenza B and one co-infection of influenza A(H3) and B) with an overall positivity of 24.4% compared to 36.4% in the previous week, through the UK GP sentinel swabbing schemes (Figure 10).

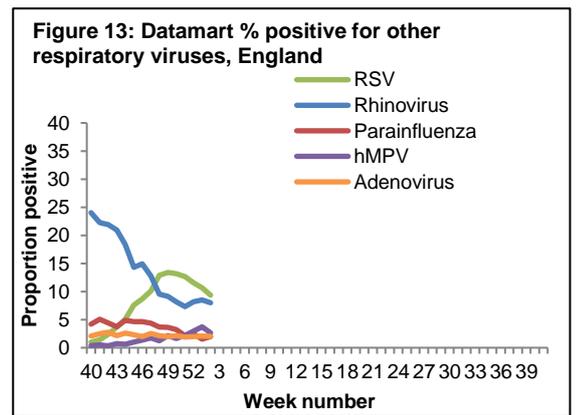
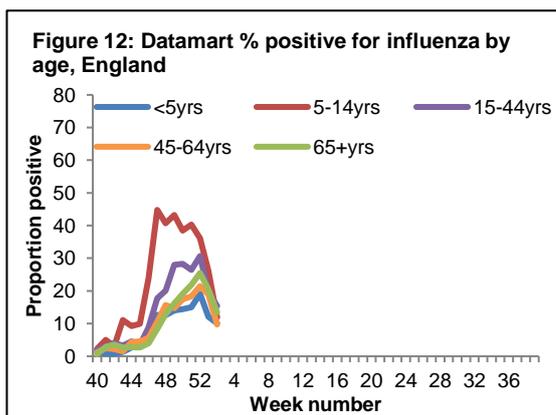
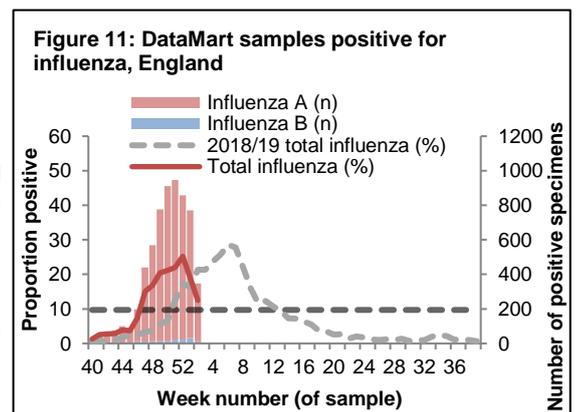
Since week 40, a total of 933 samples (50 influenza A(H1N1)pdm09, 811 influenza A(H3N2), 39 influenza A(not subtyped), 33 influenza B, five co-infection of influenza A(H3) and B, three co-infections of influenza A(H1N1)pdm09 and B, three co-infections of influenza A(H1N1)pdm09, influenza A(H3) and influenza B and one co-infection of influenza A(H1N1)pdm09 and influenza A(H3)) tested positive for influenza through this scheme.



- Respiratory DataMart System (England)

In week 02 2020, out of the 2,793 respiratory specimens reported through the Respiratory DataMart System, 347 samples were positive for influenza (64 influenza A(H1N1)pdm09, 121 influenza A(H3), 149 influenza A(not subtyped) and 13 influenza B) (Figure 11), with an overall positivity of 12.4%, a decrease from 25.2% in the previous week. This remains above the MEM baseline threshold for this season of 9.7%. The highest positivity was seen among the 5-14 year olds at 11.9% in week 02 (Figure 12).

RSV positivity decreased further from 10.7% in week 01 to 9.4% in week 02. RSV positivity also decreased in the <5 year old age group at 22.0% in week 02. Rhinovirus, adenovirus and parainfluenza remained low at 8.0%, 2.0% and 2.0% respectively in week 02. Human metapneumovirus (hMPV) positivity decreased slightly at 2.6% in week 02 2020 (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 620 influenza A(H3N2) viruses detected since week 40. Genetic characterisation of 615 of these shows that 511 belong to the genetic clade 3C.3a, and 104 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. Two hundred and forty A(H3N2) viruses have been antigenically characterised and are similar to the A/Kansas/14/2017-like Northern Hemisphere 2019/20 (H3N2) vaccine strain. Difficulties remain with detection and typing of A(H3N2) viruses by HI assays due to observed receptor binding changes, particularly with viruses from the 3C.2a1 subclade and these are under-represented in the antigenic characterisation data.

A total of 27 A(H1N1)pdm09 viruses have been genetically characterised to date and all fall in clade 6B.1A, as does the A(H1N1)pdm09 N. Hemisphere 2019/20 vaccine strain. Nine A(H1N1)pdm09 viruses have been antigenically characterised and are similar to the A/Brisbane/02/2018-like N. Hemisphere 2019/20 A(H1N1)pdm09 vaccine strain.

Fifteen influenza B viruses have been characterised to date, where sequencing of the haemagglutinin (HA) gene shows this virus belongs in genetic clade 1A of the B/Victoria lineage, clustering in a subgroup within this clade 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) belongs in genetic clade 1A, clustering in a subgroup with two deletions in the HA.

Different lineages may dominate during the season, and a close watch will be kept on the proportion of different viruses circulating to assist with the evaluation of vaccine effectiveness.

Table 3: Viruses characterised by PHE Reference Laboratory, 2019/20

Virus type/subtype	No. viruses characterised			
	Genetic and antigenic	Genetic only	Antigenic only	Total
A(H1N1)pdm09	9	18	0	27
A(H3N2) 3C.2a1	0	104	0	104
A(H3N2) 3C.3a	235	276	5	516
A(H3N2) total	235	380	5	620
B/Yamagata-lineage	0	0	0	0
B/Victoria-lineage	0	15	0	15

- 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, 43 influenza A (H1N1) viruses, 610 influenza A (H3N2) and 16 influenza B viruses were tested for their susceptibility for oseltamivir, all but two influenza A(H3N2) viruses are sensitive. 26 influenza A (H1N1) viruses, 601 influenza A (H3N2) and 15 influenza B viruses were tested for their susceptibility for zanamivir and all were sensitive.

- Antimicrobial susceptibility

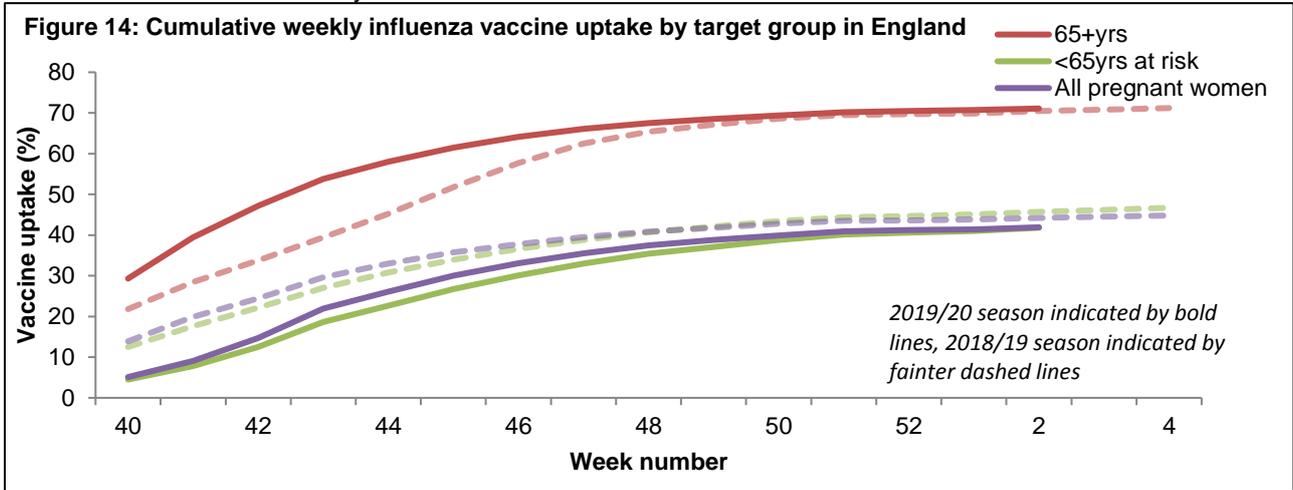
-Table 4 shows in the 12 weeks up to 12 January 2020, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key causes of community-acquired 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 12 January 2020, E&W

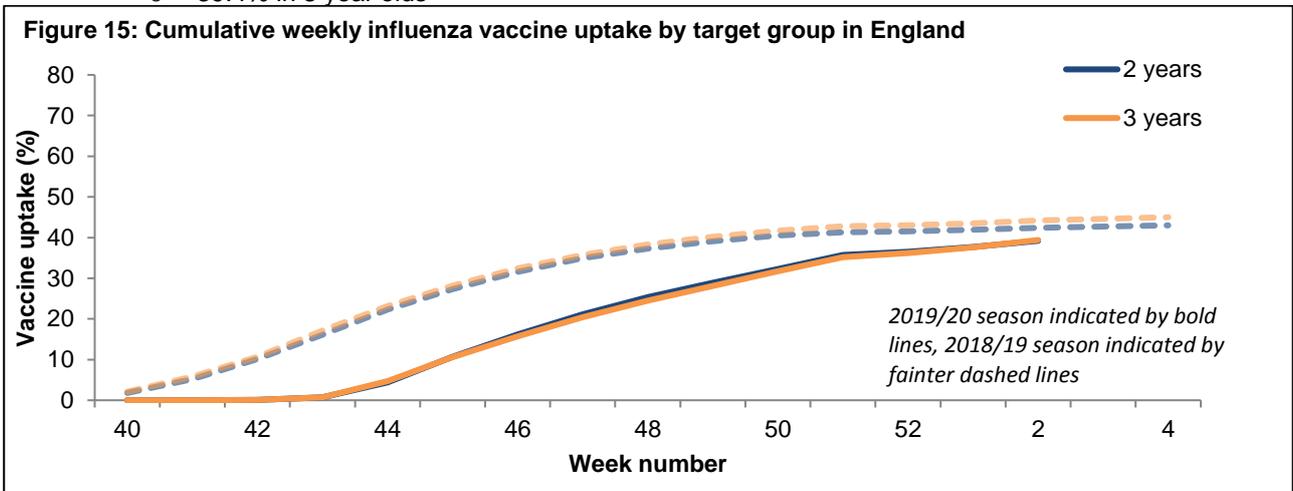
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	4269	88
	Macrolides	4649	83
	Tetracycline	4602	84
<i>H. influenzae</i>	Amoxicillin/ampicillin	16205	67
	Co-amoxiclav	17737	82
	Macrolides	3328	6
	Tetracycline	17895	98
<i>S. aureus</i>	Methicillin	7151	92
	Macrolides	7978	66
MRSA	Clindamycin	416	43
	Tetracycline	514	81
MSSA	Clindamycin	4736	72
	Tetracycline	6244	92

*Macrolides = erythromycin, azithromycin and clarithromycin

- Up to week 02 2020 in 94.3% 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):
 - 41.8% in under 65 years in a clinical risk group
 - 41.9% in pregnant women
 - 71.1% 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 02 2020, in 93.4% 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):
 - 39.2% in 2 year olds
 - 39.4% in 3 year olds



- Provisional data from the second monthly collection of the influenza vaccine uptake by frontline healthcare workers show 61.5% were vaccinated by 30 November 2019 from 97.5% of all organisations, compared to 61.0% vaccinated in the previous season by 30 November 2018. The report provides uptake at national, NHS England local team and Trust-level.

- Provisional data from the second monthly collection of influenza vaccine uptake for children of school years Reception, 1, 2, 3, 4, 5 and 6 age (from a sample of 98.7% of all Local Authorities in England) show the provisional proportion of children in England who received the 2019/20 influenza vaccine via school, pharmacy or GP practice by 30 November 2019 in targeted groups in Table 5.

School Year	% Vaccine uptake (up to 30 November)	
	2019/20	2018/19
Reception (4-5 years)	46.4	49.6
Year 1 (5-6 years)	45.8	49.4
Year 2 (6-7 years)	45.0	47.7
Year 3 (7-8 years)	43.7	46.8
Year 4 (8-9 years)	43.2	45.2
Year 5 (9-10 years)	41.3	43.7
Year 6 (10-11 years)	39.7	-

- : Year 6 were not part of the programme in 2018/19

International Situation

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In the temperate zone of the northern hemisphere, influenza activity and respiratory illness indicators continued to increase in most countries. In the temperate zones of the southern hemisphere, influenza activity remained to interseasonal levels. Worldwide, seasonal influenza A(H3N2) viruses accounted for the majority of detections.

- [Europe](#) updated on 10 January 2020 (Joint ECDC-WHO Europe Influenza weekly update)

Overall in week 01, influenza activity continued across the region, the distribution of A and B viruses varied between Member States and areas.

For week 01 2020, of 41 Member States and areas reporting on intensity, 19 reported at baseline levels, 18 reported low intensity, 3 reported medium intensity and 1 reported high intensity. Of 41 Member States and areas reporting on geographic spread, 5 reported no activity, 14 reported sporadic cases, 4 reported local spread (across the Region), 5 reported regional spread and 13 reported widespread activity.

For week 01 2020, 433 (27%) of 1 609 sentinel specimens tested positive for an influenza virus; 60% were type A and 40% were type B. Of 238 subtyped A viruses, 58% were A(H3N2) and 42% were A(H1N1)pdm09. Of 22 type B viruses ascribed to a lineage, all but one were B/Victoria.

For the season to date, more influenza type A (n=2 454, 67%) than type B (n=1 213, 33%) viruses have been detected. Of 2 357 subtyped A viruses, 1 390 (59%) were A(H3N2) and 967 (41%) were A(H1N1)pdm09. Of 262 influenza type B viruses ascribed to a lineage, 97% were B/Victoria and 3% were B/Yamagata.

Since week 40 2019, more influenza type A (n=1 376, 95%) than type B (n=70, 5%) viruses were detected among laboratory confirmed influenza ICU cases. Of 425 subtyped influenza A viruses, 69% were A(H3N2) and 31% A(H1N1)pdm09. No influenza B viruses were ascribed to a lineage. Of 231 cases with known age, 52% were 15-64 years old and 39% were 65 years and older.

Since week 40 2019, more influenza type A (n=2 019, 95%) than type B (n=108, 5%) viruses were detected among laboratory confirmed influenza cases in wards other than ICU. Of 390 subtyped influenza A viruses, 81% were A(H3N2) and 19% A(H1N1)pdm09. No influenza B viruses were ascribed to a lineage. Of 2, 127 cases with known age, 43% were 65 years and older and 27% were 15-64 years old.

- [United States of America](#) updated on 10 January 2020 (Centre for Disease Control report)

During week 01, influenza activity remains high among key indicators however are not high in severity (hospitalisation and deaths) indicator.

Nationwide during week 01, 5.8% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI), which is above the national baseline of 2.4%.

During week 01, 23.3% of respiratory specimens tested by clinical laboratories were influenza positive.

The overall hospitalisation rate for the season increased to 14.6 per 100,000. This is similar to what has been seen at this time in recent seasons.

Based on National Centre for Health Statistics (NCHS) mortality surveillance data available on 09 January 2020, 5.8% of the deaths occurring during the week ending 28 December 2019 (week 52) were due to P&I. This percentage is below the epidemic threshold of 6.9% for week 52.

32 influenza-associated paediatric deaths occurring during the 2019-2020 season have been reported to CDC. 21 deaths were associated with influenza B viruses. Five of these had the lineage determined and all were B/Victoria viruses. 11 deaths were associated with influenza A viruses. Six of these had subtyping performed and all were A(H1N1)pdm09 viruses.

- [Canada](#) updated on 10 January 2020 (Public Health Agency report)

At national level, influenza activity continued to increase during week 51 to week 01. Influenza A(H3N2), A(H1N1) and B continue to co-circulate. Although influenza A remains the predominant circulating type, influenza B continues to circulate at higher levels than usual. In addition, while A(H3N2) remains the predominant subtype for the season to date, the proportion of A(H1N1) appears to be increasing.

The percentage of tests positive for influenza increased from 21% in week 51 to 28% in week 52, then decreased slightly to 27% in week 01. This is higher than the average (23%) for week 01 over the past five seasons.

Over the three-week period of weeks 51, 52, and 01, the percentage of visits to healthcare professionals due to influenza-like illness (ILI) continued to increase to 3.0% in week 01 which is slightly below the average for this time of year (3.4%).

To date this season, 560 influenza-associated hospitalisations have been reported with the majority of cases being aged greater than 65 years and children under 5 years and associated with influenza A(H3N2).

To date this season, 370 paediatric hospitalizations have been reported by the IMPACT network; 54% (201) of cases were associated with influenza B and 46% (169) with influenza A. The largest proportion of hospitalizations (65%) were among children under 5 years of age.

- [Global influenza update](#) updated on 06 January 2020 (based on data up to 22 December 2019) (WHO website)

In the temperate zone of the northern hemisphere, influenza activity and respiratory illness indicators continued to increase in most countries. In the temperate zones of the southern hemisphere, influenza activity remained to interseasonal levels. Worldwide, seasonal influenza A(H3N2) viruses accounted for the majority of detections.

In the countries of North America, ILI and influenza activity further increased. All seasonal influenza subtypes co-circulated in Canada and the United States of America (USA), though the proportion of influenza B viruses was higher than in previous years for this period of the influenza season. Influenza B viruses accounted for half of the detections in Canada and influenza B/Victoria viruses were the predominant influenza type detected in the US, followed by influenza A(H1N1)pdm09.

In Europe, influenza activity continued to increase across the region. In Northern Europe, influenza detections and syndromic surveillance indicators increased. Influenza A detections predominated in most reporting countries.

In Central Asia, influenza activity increased with influenza A and B viruses co-circulating in all reporting countries except Uzbekistan where only influenza B viruses were reported.

In Northern Africa, influenza activity was low overall, though Morocco and Tunisia reported influenza B virus detections in recent weeks.

In Western Asia, influenza activity remained elevated overall. Influenza activity continued to increase in Iraq, Israel, Jordan, Turkey and Yemen, with detections of predominately influenza A(H1N1)pdm09 and a small proportion of B viruses (except in Yemen reporting predominantly influenza A(H1N1)pdm09). In Bahrain, influenza activity remained elevated with all seasonal influenza subtypes co-circulating. Detections of predominantly influenza B/Victoria lineage were reported as slightly increased in Lebanon. In Oman, Qatar and Saudi Arabia, influenza activity was reported as decreased with co-circulation of influenza A and B viruses.

In East Asia, ILI and influenza activity continued to increase overall.

In the Caribbean and Central American countries, influenza activity was low in general, except for Cuba that continued to report detections of predominately influenza B/Victoria lineage viruses.

In Western Africa and Eastern Africa, influenza activity and detections were generally low.

In Middle Africa, SARI and influenza activity increased in Democratic Republic of Congo with co-circulation of influenza A(H1N1)pdm09 and B/Victoria viruses.

In Southern Asia, influenza detections were low across reporting countries except for the Islamic Republic of Iran where influenza activity of predominantly influenza A(H1N1)pdm09 viruses continued to be reported though at lower levels from the peak of activity recorded in week 49 of 2019.

In South East Asia, influenza activity was reported in some countries. Influenza activity continued to be reported in the Lao People's Democratic Republic with co-circulation of all seasonal influenza subtypes. Increased influenza activity was reported in Malaysia with influenza A(H1N1)pdm09 most frequently detected.

The WHO GISRS laboratories tested more than 96,024 specimens between 09 December 2019 and 22 December 2019. 20,706 were positive for influenza viruses, of which 14,225 (68.7%) were typed as influenza A and 6,481 (31.3%) as influenza B. Of the sub-typed influenza A viruses, 3,210 (28.9%) were influenza A (H1N1)pdm09 and 7,890 (71.1%) were influenza A (H3N2). Of the characterized B viruses, 45 (1.5%) belonged to the B-Yamagata lineage and 2,962 (98.5%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 25 November 2019 (WHO website)

Influenza A(H5) viruses

Between [27 September 2019 to 25 November 2019](#), no new laboratory-confirmed human cases of influenza A(H5) virus infection were reported to WHO.

According to reports received by the World Organisation for Animal Health (OIE), various influenza A(H5) subtypes continue to be detected in birds in Africa, Europe and Asia. Overall, the risk assessment has not changed.

Influenza A(H7N9)

Between [27 September 2019 and 25 November 2019](#), no new laboratory-confirmed human case of influenza A(H7N9) virus infection were reported to WHO. Two were reported from China and one was reported from India, all three cases were in children.

Publicly available reports from animal health authorities in China indicate no influenza A(H7N9) virus detections in animals among samples collected in July and August of this year. Overall, the risk assessment has not changed.

Influenza A(H9N2)

Between [27 September and 25 November 2019](#), three new laboratory-confirmed human cases of influenza A(H9N2) virus infection were reported.

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 15 January 2020

Up to 15 January 2020, 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 1,744 suspected cases in the UK since September 2012 that have been investigated for MERS-CoV and tested negative.

On [29 December 2019](#), the National IHR Focal Point of the United Arab Emirates (UAE) reported one laboratory-confirmed case of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) to WHO.

On [5 December 2019](#), the National IHR Focal Point for Qatar reported three laboratory-confirmed cases of Middle East respiratory syndrome (MERS-CoV) infection to WHO.

Globally, since September 2012 and up to 29 December 2019, [WHO](#) has been notified of 2,494 laboratory-confirmed cases of infection with MERS-CoV, including 858 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.

- [Other respiratory viruses](#) latest update on 05 January 2020

On [13 January 2020](#), the Thailand's Ministry of Public Health (MoPH) reported the first imported case of lab-confirmed novel coronavirus (2019-nCoV) from Wuhan, Hubei Province, China.

On [31 December 2019](#), the WHO China Country Office was informed of cases of pneumonia of unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China. As of 3 January 2020, a total of 44 patients with pneumonia of unknown etiology have been reported to WHO by the national authorities in China

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](#))