

Current level of influenza activity: *Medium seasonal activity*

Trend: *Increasing*

Confirmed cases since 2019 week 40: 423 (99% influenza A and 1% influenza B. Of the influenza A cases, 7% were A(H1N1)pdm09, 80% were A(H3N2) and 12% were A(not typed).

Key points – Wales

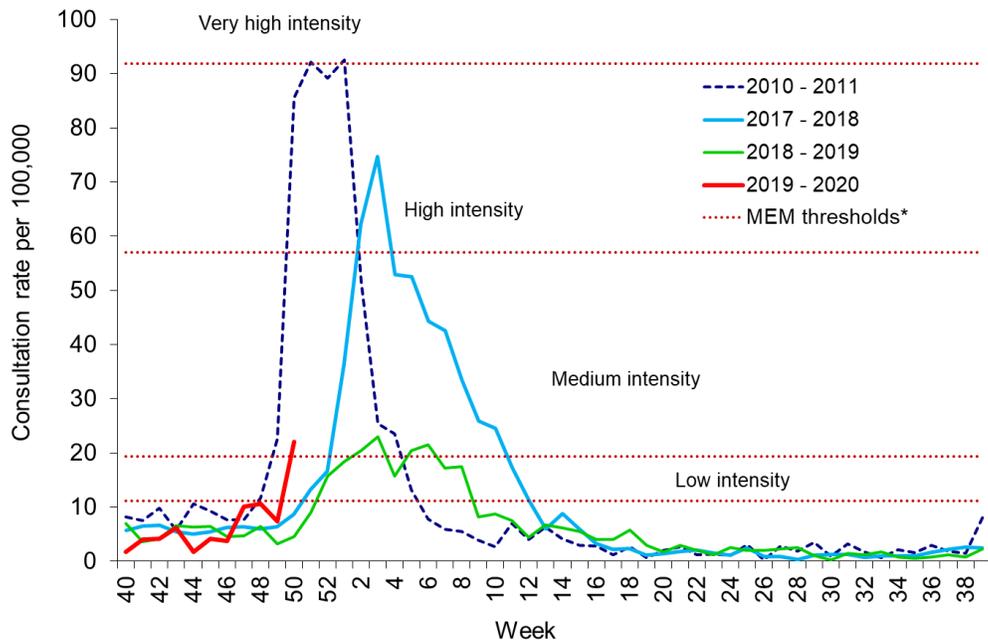
Surveillance indicators suggest that influenza is circulating in Wales.

The sentinel GP consultation rate for influenza-like illness (ILI) increased during week 50 (ending 15/12/2019) and is at medium intensity. During week 50, 207 cases of influenza were confirmed. Influenza was the most commonly detected cause of Acute Respiratory Infection (ARI) but other causes of ARI continue to be detected. Respiratory Syncytial Virus (RSV) continues to be detected in high numbers, confirmed cases in children under five years of age increased this week and RSV activity is now at high intensity levels.

- The Sentinel GP consultation rate for influenza-like illness (ILI) in Wales during week 50 was 22.0 consultations per 100,000 practice population (Table 1).
- The ILI consultation rate increased compared to week 49 (7.4 per 100,000 practice population) and is now above the medium intensity threshold (Figure 1).
- The total number of consultations with Out of Hours (OOH) doctors in Wales reported to Public Health Wales during week 50 was 12,159. Out of all consultations with OOH doctors during week 50, 23.6% were due to respiratory-related conditions, which is an increase from the previous week (Figure 7). The percentage of calls to NHS Direct Wales which were 'influenza-related' (cold/flu, cough, fever, headache and sore throat) during week 50 increased to 22.4% (Figure 8).
- Fifteen surveillance samples from patients with ILI, collected by sentinel GPs during week 50, had been received by Public Health Wales Microbiology as at 18/12/2019, six samples tested positive for influenza A(H3N2) (three patients aged 10-14 years, two patients aged 15-24 years and one patient aged 45 to 64 years), two samples for rhinovirus, three samples for RSV, two samples for enterovirus, and three samples were negative for all routinely tested respiratory pathogens (Figure 3).
- During week 50, 627 specimens were tested by Public Health Wales Microbiology from hospitalised and non-sentinel GP patients with ARI. The following numbers of patients tested positive: 12 influenza A(H1N1)pdm09, 168 influenza A(H3N2), 27 influenza A(not subtyped), 140 RSV, 79 rhinovirus, 21 parainfluenza, 18 enterovirus, 23 human metapneumovirus, 23 adenovirus and 10 mycoplasma (Figure 4). The proportion of samples from hospital patients positive for influenza was 33%, which is above the baseline MEM threshold. 62 respiratory specimens were tested from patients in intensive care units (ICU), three specimens were positive for influenza A (Figure 5).
- The RSV season reached high intensity levels during week 50. Seventy-one (54%) of 132 samples from children younger than five years with ARI tested positive for RSV during week and there were 42.1 confirmed cases per 100,000 in this age-group (Figure 6). The average duration of seasonal activity is 11-13 weeks and week 50 was the eighth week of the current season.
- During week 50, no ARI outbreaks were reported to the Public Health Wales Health Protection team.
- At the end of week 50, uptake of influenza vaccine was: 65.9% in those aged 65 years and older, 37.5% in patients aged six months to 64 years at clinical risk, and 37.1% in children aged two and three years old. In the 798 primary schools visited thus far as part of the universal childhood influenza programme, uptake was 69.3%.

Influenza activity in Wales

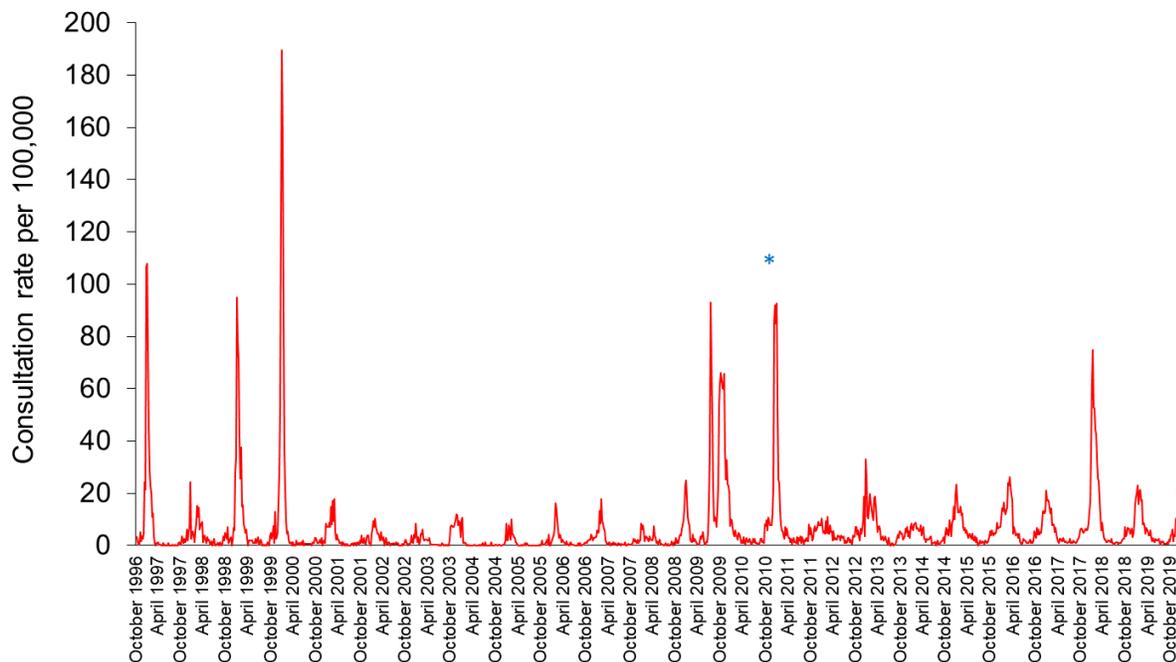
Figure 1. Clinical consultation rate per 100,000 practice population in Welsh sentinel practices (as of 15/12/2019).



A technical issue is currently affecting data submitted from sentinel practices utilising a specific brand of GP software. As a result, since week 47, data from affected practices has been excluded from calculations of the weekly ILI consultation rate. Weekly rates from week 47 onwards are based on data from approximately 20 practices.

* The Moving Epidemic Method (MEM) threshold calculated for Wales ILI consultation rates is 11.1 per 100,000. MEM thresholds used in this chart are based on influenza from 2010-11 to 2018-19 seasons.

Figure 2. Clinical consultation rate per 100,000 practice population in Welsh sentinel practices (week 48 1996 – week 50 2019).



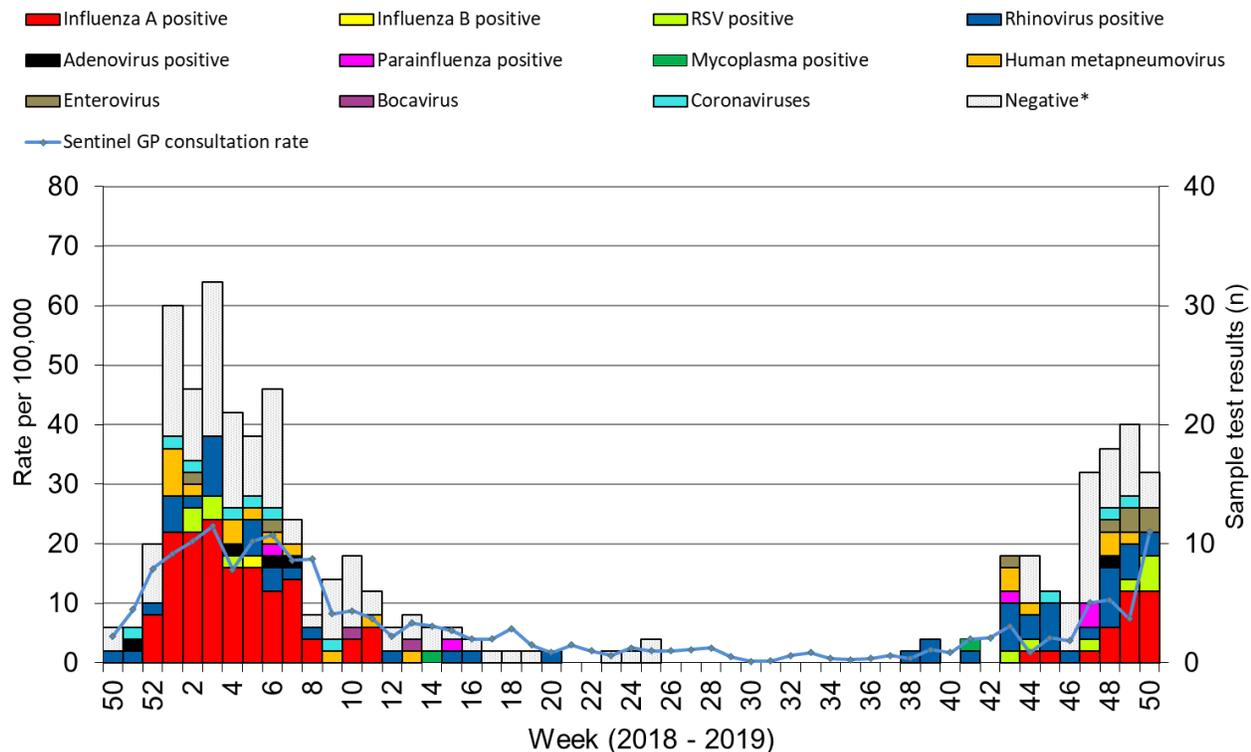
* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for influenza in Welsh sentinel practices, week 45 – week 50 2019 (as of 15/12/2019).

Age group	45	46	47	48	49	50
< 1	0.0	0.0	-	-	-	-
1 - 4	0.0	0.0	-	-	-	-
5 - 14	2.3	0.0	-	-	-	-
15 - 24	2.1	0.0	-	-	-	-
25 - 34	7.9	3.9	-	-	-	-
35 - 44	8.3	4.1	-	-	-	-
45 - 64	4.6	3.7	-	-	-	-
65 - 74	2.1	6.4	-	-	-	-
75+	2.4	9.8	-	-	-	-
Total	4.2	3.7	10.1	10.6	7.4	22.0

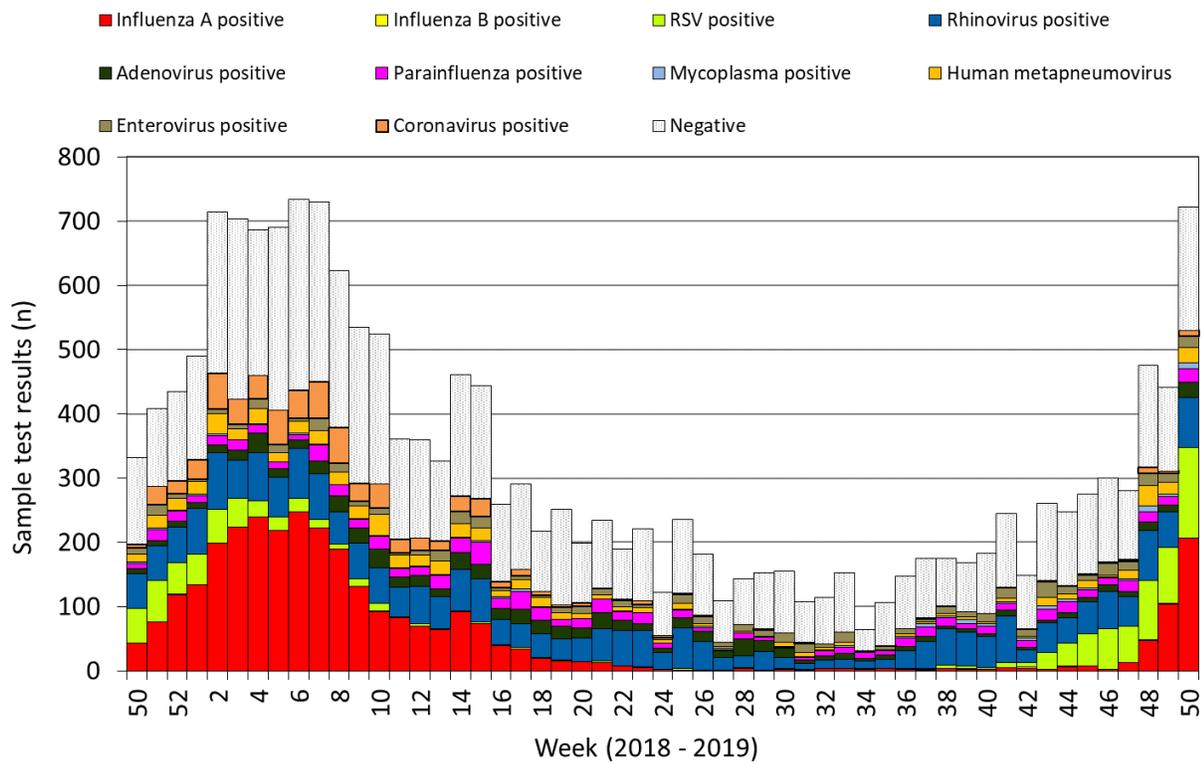
Due to the technical issue currently affecting data submitted from sentinel practices utilising a specific brand of GP software, no age breakdown is available for weeks 47 to 50.

Figure 3. Specimens submitted for virological testing by sentinel GPs as of 08/12/2019, by week of sample collection, week 50 2018 - week 50 2019.



* Tested negative for influenza, adenovirus, rhinovirus, RSV, parainfluenza, mycoplasma, human metapneumovirus, enterovirus, bocavirus and coronaviruses.

Figure 4. Specimens submitted for virological testing for hospital patients and non-sentinel GPs as of 15/12/2019 by week of sample collection, week 50 2018 – week 50 2019.



Combined data for tests carried out in Public Health Wales Microbiology: Cardiff laboratory, provided by Public Health Wales Microbiology Cardiff Specialist Virology Centre.

Figure 5. Specimens submitted for virological testing for ICU patients, by week of sample collection, week 50 2018 to week 50 2019.

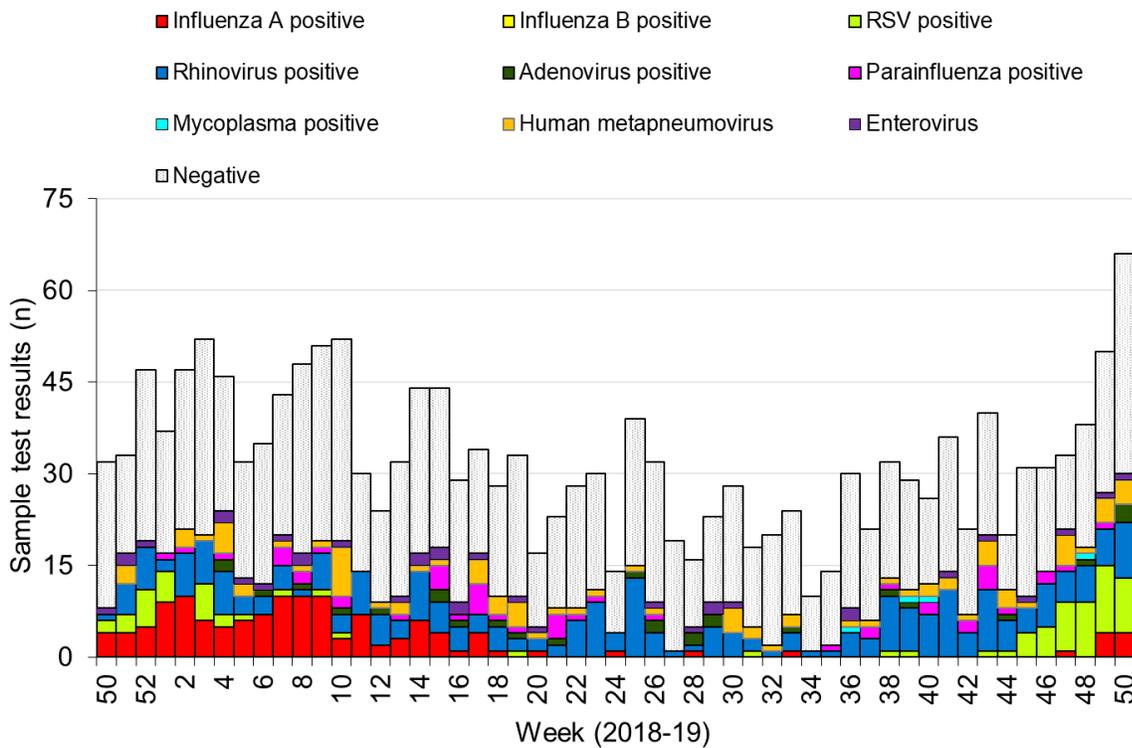
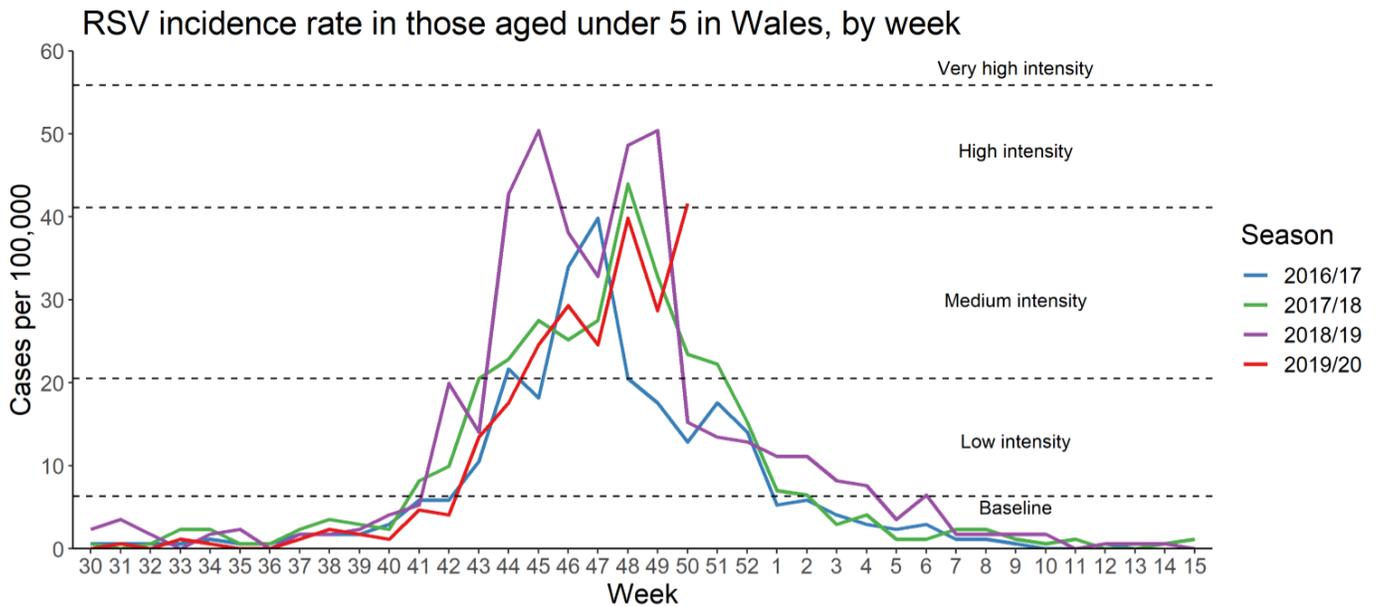


Figure 6. RSV incidence rate per 100,000 population aged under five years, week 30 2016 to week 50 2019.



Out of Hours consultations and calls to NHS Direct Wales

Figure 7. Weekly total consultations to Out of Hours services in Wales and numbers of respiratory-related diagnoses (as of 15/12/2019).

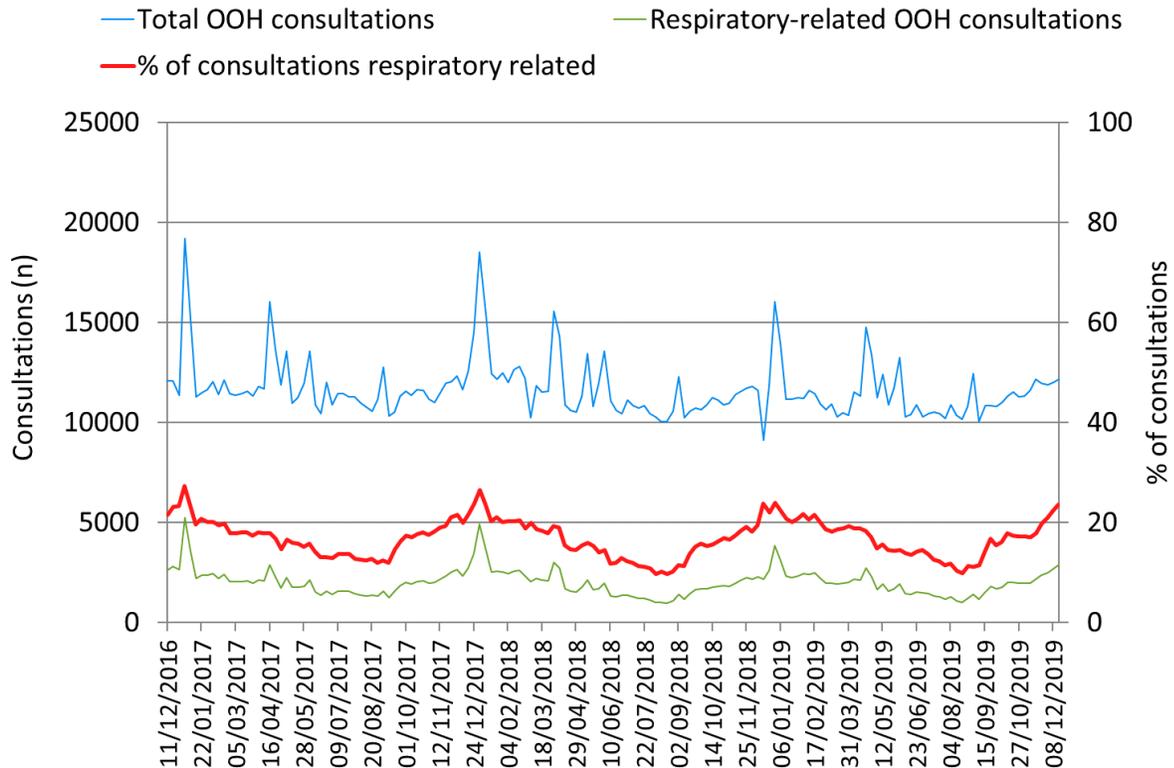
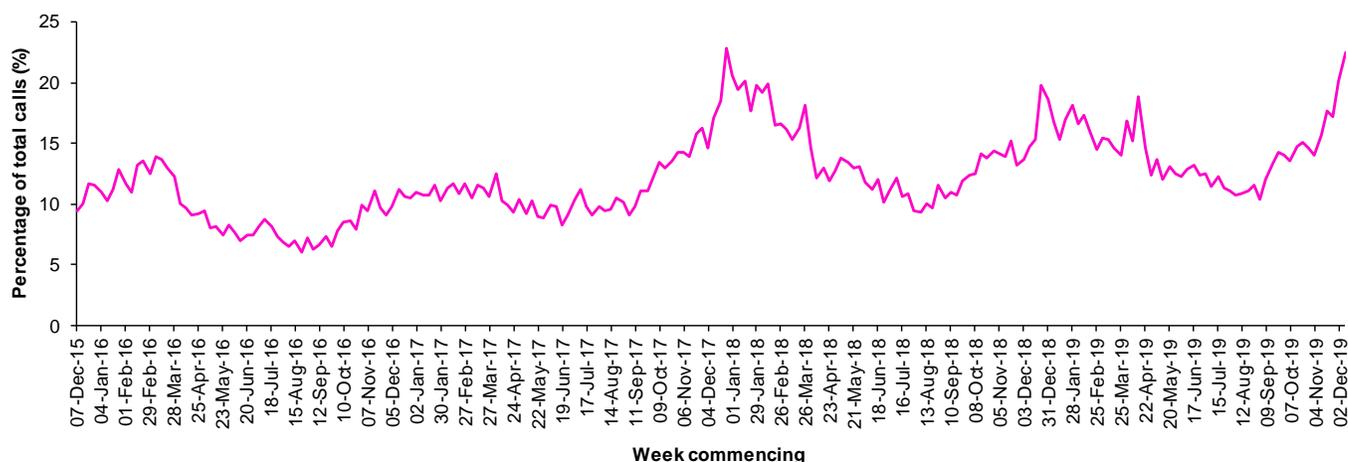


Figure 8. Influenza related calls to NHS Direct Wales¹ (as a percentage of total calls) from week 50 2015 - week 50 2019 (as of 15/12/2019).



¹ Data supplied by Health Statistics and Analysis Unit, Welsh Government. Flu related calls are the sum of calls recorded as 'cold/flu', 'cough', 'headache', 'fever' and 'sore throat'. Following changes to the NHS Direct calls system, including the start of the 111 pilot, there has been a change in the way in which denominator data are calculated for this chart, NHS Direct Wales now count the total number of nurse triaged calls (ie calls which could have symptom data recorded against them), note that 111 includes out-of-hours calls.

Influenza Vaccine Uptake in Wales

Table 2. Uptake of influenza immunisations in GP Practice patients, school children and NHS staff in Wales 2019/20 (as of 15/12/2019).

Influenza immunisation uptake in the 2019/20 season	
People aged 65y and older	65.9%
People younger than 65y in a clinical risk group	37.5%
Children aged two & three years	37.1%
Children aged four to ten years*	69.2%
NHS staff	48.1%
NHS staff who have direct patient contact	50.5%

* In school sessions carried out so far.

The end of season report Influenza in Wales 2018/19 is available to download and contains a full breakdown of vaccination uptake amongst eligible groups.

Link to report: <http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=55714>

Key points – Influenza activity in the UK and Europe

- As of week 49, influenza activity has continued to increase for several indicators in the UK. GP ILI consultations increased in Northern Ireland to 29.2 per 100,000 and remain at medium levels, consultations also increased in Scotland to 14.1 per 100,000 reaching medium intensity. The weekly ILI GP consultation rate in England reported through the RCGP system increased to 13.1 per 100,000, crossing the MEM threshold for baseline activity (12.7 per 100,000). The syndromic surveillance indicator for influenza reported through the GP In Hours Syndromic Surveillance system was 10.5 per 100,000 in week 49.
- During week 49, 66 samples tested positive for influenza (two influenza A(H1N1)pdm09, 59 influenza A(H3) and four influenza A(unknown subtype)) through UK GP sentinel swabbing schemes. Five hundred and forty-six (17.9%) of the 3,044 respiratory test results reported through Public Health England's DataMart scheme tested positive for influenza (12 influenza A(H1N1)pdm09, 410 influenza A(H3), 113 influenza A(not subtyped) and eleven influenza B). UK summary data are available from the [Public Health England National Influenza Report](#).
- The WHO and the European Centre for Disease Prevention and Control (ECDC) reported that as of week 49, influenza activity continued to increase in parts of the WHO European Region. During week 49, a total of 1,196 sentinel specimens were tested for influenza, 254 of which were positive (72 influenza A(H1N1)pdm09, 117 influenza A(H3N2), nine influenza A(not typed) and 56 influenza B).
Source: Flu News Europe: <http://www.flunewseurope.org/>

World update

- The WHO reported on 09/12/2019 that in the temperate zones of the northern hemisphere, influenza activity started to increase in most countries. Activity was low overall in the Caribbean and Central American countries, except for Jamaica and Honduras. In tropical South American countries, influenza activity remained low. In tropical Africa, influenza activity remained elevated in some countries of Western Africa. In Southern Asia influenza activity was low across reporting countries, but continued to increase in Iran. In South East Asia, influenza activity continued to be reported in Lao PDR and Viet Nam. In the temperate zone of the southern hemisphere, influenza activity returned to inter-seasonal levels. Worldwide, seasonal influenza A(H3N2) viruses accounted for the majority of detections.
- Based on FluNet reporting (as of 06/12/2019), during the time period from 11/11/2019 – 24/11/2019, National Influenza Centres and other national influenza laboratories from 119 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 92,883 specimens during that time period, 7,914 were positive for influenza viruses, of which 5,629 were typed as influenza A (2,682 influenza A(H1N1)pdm09, 1,069 influenza A(H3N2) and 1,878 influenza A(not subtyped)) and 2,285 influenza B (of the characterised influenza B viruses 34 belonged to the B-Yamagata lineage and 1,014 to the B-Victoria lineage).
Source: WHO influenza update: http://www.who.int/influenza/surveillance_monitoring/updates/en/

Update on influenza activity in North America

- The USA Centers for Disease Control and Prevention (CDC) report that during week 49 (ending 07/12/19) influenza activity remains elevated and continues to increase. Nationally, 3,436 (11.3%) out of 30,510 specimens have tested positive for influenza in week 49, of these positives 1,083 (31.5%) were influenza A and 2,353 (68.5%) were influenza B. Further characterisation has been carried out on 1,508 specimens by public health laboratories, and 631 tested positive for influenza, 283 (44.8%) were influenza A (221 influenza A(H1N1)pdm09 (83.7%), 43 influenza A(H3N2) (16.3%), and subtyping was not performed on 19 specimens) and 348 influenza B (55.2%).
Source: CDC Weekly US Influenza Surveillance Report: <http://www.cdc.gov/flu/weekly/>
- The Public Health Agency of Canada reported that during week 49, influenza activity continues to increase. The percentage of visits to healthcare professionals due to ILI was 1.3%, which is slightly below average for this time of year. The percentage of tests positive for influenza increased to 9.1% and is above the seasonal threshold of 8.0%.
Source: Public Health Agency of Canada <https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance/weekly-influenza-reports.html>

Middle East respiratory syndrome coronavirus (MERS-CoV) – latest update from WHO and ECDC

- On 05/12/19 WHO reported 15 additional cases of Middle East Respiratory Syndrome coronavirus (MERS-CoV), with six associated deaths. Globally, 2,484 laboratory confirmed cases of human infection with MERS-CoV, including 857 associated deaths, have officially been reported to WHO since September 2012.
Source: WHO Global Alert and Response website: <http://www.who.int/csr/don/archive/year/2019/en/>
- The majority of the MERS cases continue to be reported from the Middle East, and specifically from Saudi Arabia. Rapid risk assessments of the situation from ECDC, which contain epidemiological updates and advice for travellers and healthcare workers, are available from: <https://ecdc.europa.eu/en/middle-east-respiratory-syndrome-coronavirus>
- Further updates and advice for healthcare workers and travellers are available from WHO: <http://www.who.int/emergencies/mers-cov/en/> and from NaTHNaC: <https://travelhealthpro.org.uk/news/237/mers-cov-update-travelhealthpro-country-pages>

Human infection with avian influenza A(H7N9), China – latest update from WHO

- The latest WHO Influenza at Human-Animal Interface summary (25/06/2019 to 27/09/2019) reports that no new cases of avian influenza A(H7N9) were reported. Since February 2013, a total of 1,568 laboratory-confirmed cases of human infection with avian influenza A(H7N9), including at least 616 deaths, have been reported:
http://www.who.int/influenza/human_animal_interface/HAI_Risk_Assessment/en/
http://www.fao.org/ag/againfo/programmes/en/empres/H7N9/Situation_update.html
- The risk of international spread of avian influenza A(H7N9) is considered to be low at present. However, it is important that clinicians are aware of the possibility of human infection with animal influenza, in persons presenting with severe acute respiratory disease, while travelling or soon after returning from an area where avian influenza is a concern. Updates are available from the WHO Global Alert and Response website: <http://www.who.int/csr/don/en/>

Links:

Public Health Wales influenza surveillance webpage:

<http://www.publichealthwales.org/flu-activity>

GP Sentinel Surveillance of Infections Scheme:

<http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=27918>

NICE influenza antiviral usage guidance:

<http://www.nice.org.uk/Guidance/TA158>

Wales influenza information:

<http://www.wales.nhs.uk/sitesplus/888/page/43745>

England influenza surveillance:

<https://www.gov.uk/government/collections/seasonal-influenza-guidance-data-and-analysis>

Scotland influenza surveillance:

<https://www.hps.scot.nhs.uk/a-to-z-of-topics/influenza/#data>

Northern Ireland influenza surveillance:

<https://www.publichealth.hscni.net/directorate-public-health/health-protection/seasonal-influenza>

European Centre for Communicable Disease:

<http://ecdc.europa.eu/>

European influenza information:

<http://flunewseurope.org/>

Advice on influenza immunisation (for NHS Wales users)

<http://nww.immunisation.wales.nhs.uk/home>

For further information on this report, please email Public Health Wales using:

surveillance.requests@wales.nhs.uk