

Current level of influenza activity: *Medium seasonal activity*

Trend: *Increasing*

Confirmed cases since 2019 week 40: 728 (99% influenza A and 1% influenza B. Of the influenza A cases, 8% were A(H1N1)pdm09, 80% were A(H3N2) and 12% were A(not typed).

Key points – Wales

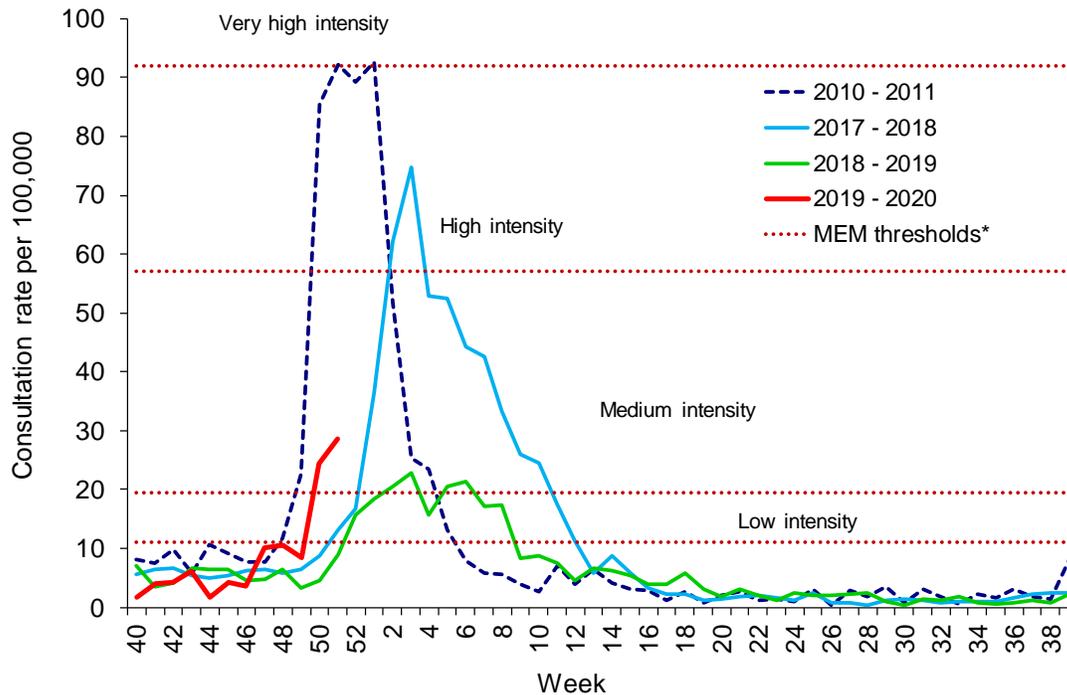
Surveillance indicators suggest that influenza is circulating in Wales.

The sentinel GP consultation rate for influenza-like illness (ILI) increased during week 51 (ending 22/12/2019) but remains at medium intensity. During week 51, 293 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 decreased this week and RSV activity is now back at medium intensity levels.

- The Sentinel GP consultation rate for influenza-like illness (ILI) in Wales during week 51 was 28.6 consultations per 100,000 practice population (Table 1).
- The ILI consultation rate increased compared to week 50 (24.4 per 100,000 practice population) and remains above the medium intensity threshold.
- The total number of respiratory-related consultations with Out of Hours (OOH) doctors in Wales reported to Public Health Wales during week 51 was 3,283. This represents 24.8% of all 13,321 reported consultations with OOH doctors and is an increase on the number and proportion reported last 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 51 decreased slightly to 22.2% (Figure 8).
- Twenty-three surveillance samples from patients with ILI, collected by sentinel GPs during week 51, had been received by Public Health Wales Microbiology as at 24/12/2019. One sample tested positive for influenza A(H1N1)pdm09 (a patient aged 45-64 years from North Wales), six samples for influenza A(H3N2) (one patient aged 5-14 years, two patients aged 15-24 years and one patient aged 45 to 64 years all from North Wales, one patient aged 5-14 years from South East Wales and one patient aged 45-64 years from Mid & West Wales), one patient for influenza B (a patient aged 25-34 years from North Wales), one patient for both influenza A(H3N2) and Bocavirus (a patient aged 65-74 years from North Wales), one sample for both parainfluenza and human metapneumovirus. 13 samples were negative for all routinely tested respiratory pathogens (Figure 3).
- During week 51, 746 specimens were tested by Public Health Wales Microbiology from hospitalised and non-sentinel GP patients with ARI. The following numbers of patients tested positive: 28 influenza A(H1N1)pdm09, 232 influenza A(H3N2), 33 influenza A(not subtyped), three influenza B, 192 RSV, 79 rhinovirus, 26 adenovirus, 15 parainfluenza, 19 human metapneumovirus, nine enterovirus and five mycoplasma (Figure 4). The proportion of samples from hospital patients positive for influenza was 40%, which is above the baseline MEM threshold. Fifty-nine respiratory specimens were tested from patients in intensive care units (ICU), ten specimens were positive for influenza A (Figure 5).
- The RSV season decreased to medium intensity levels during week 51. Sixty (47%) of 129 samples from children younger than five years with ARI tested positive for RSV during week 51 and there were 35.1 confirmed cases per 100,000 in this age-group (Figure 6). The average duration of seasonal activity is 11-13 weeks and week 51 was the ninth week of the current season.
- During week 51, seven ARI outbreaks were reported to the Public Health Wales Health Protection team, three outbreaks were in residential homes, two were in a school or nursery, one in a hospital and one in the community.
- At the end of week 51, uptake of influenza vaccine was: 66.8% in those aged 65 years and older, 39.1% in patients aged six months to 64 years at clinical risk, and 40.5% in children aged two and three years old. In the 1,099 primary schools visited thus far as part of the universal childhood influenza programme, uptake was 68.3%.

Influenza activity in Wales

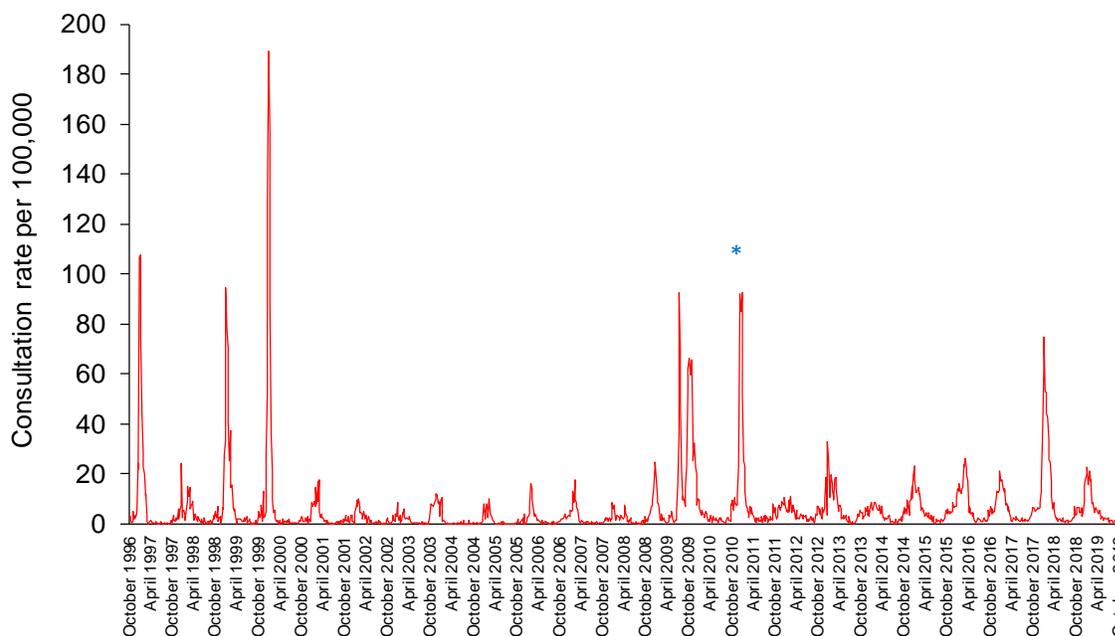
Figure 1. Clinical consultation rate per 100,000 practice population in Welsh sentinel practices (as of 22/12/2019).



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 51 2019).



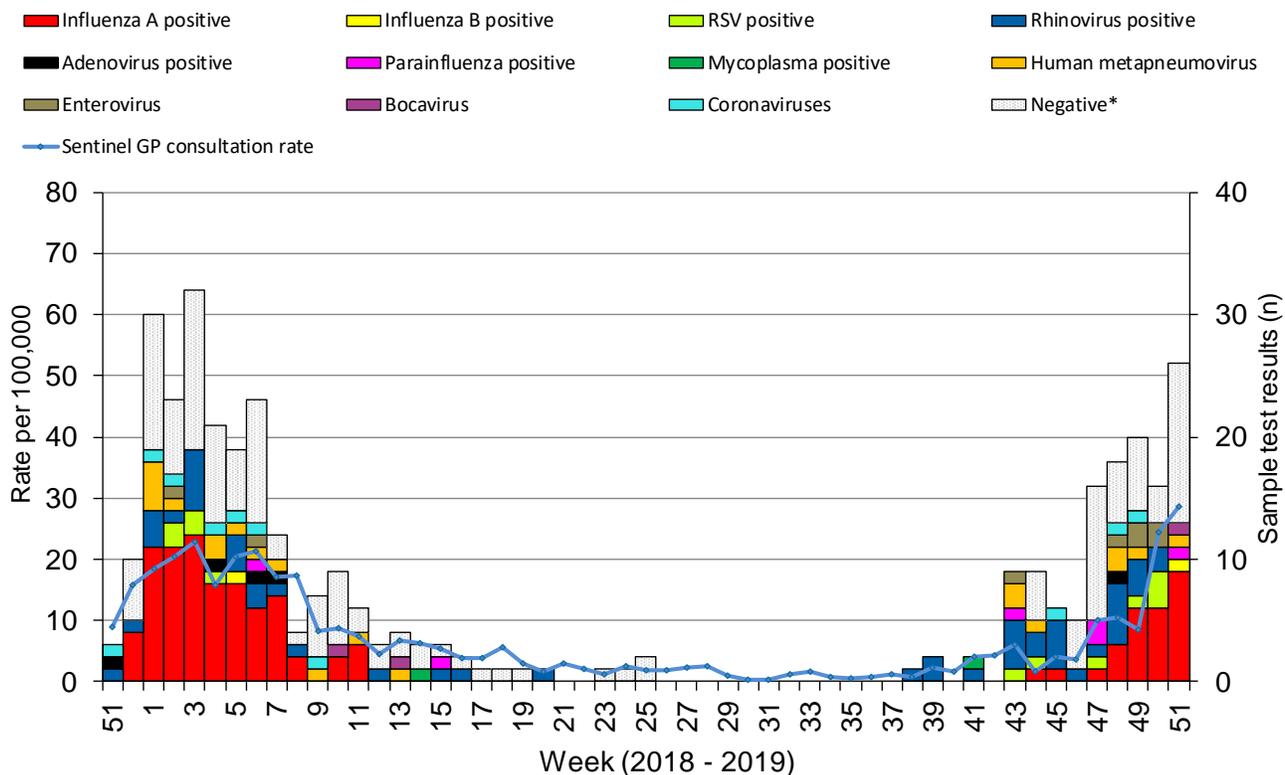
* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for influenza in Welsh sentinel practices, week 46 – week 51 2019 (as of 22/12/2019).

Age group	46	47	48	49	50	51
< 1	0.0	-	-	-	-	-
1 - 4	0.0	-	-	-	-	-
5 - 14	0.0	-	-	-	-	-
15 - 24	0.0	-	-	-	-	-
25 - 34	3.9	-	-	-	-	-
35 - 44	4.1	-	-	-	-	-
45 - 64	3.7	-	-	-	-	-
65 - 74	6.4	-	-	-	-	-
75+	9.8	-	-	-	-	-
Total	3.7	10.1	10.6	8.5	24.4	28.6

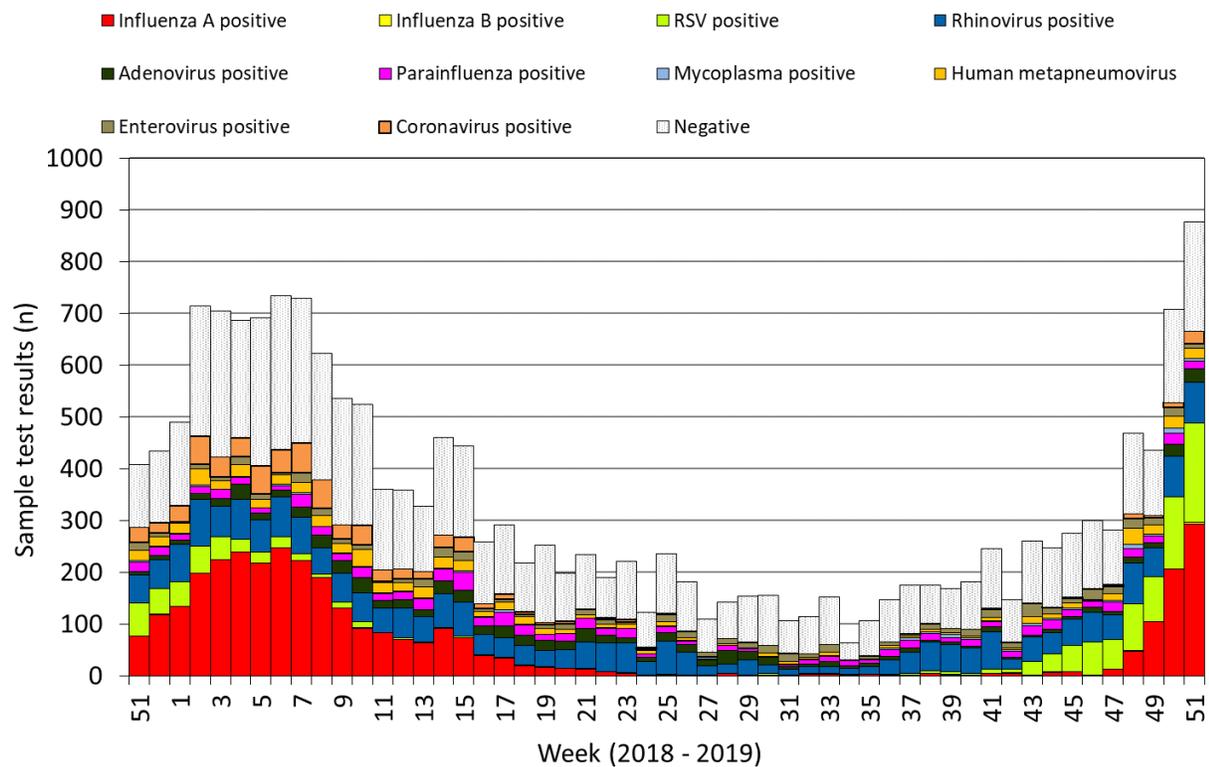
Due to the technical issue currently affecting data submitted from sentinel practices utilising a specific brand of GP software, no age breakdown is available for weeks 47 to 51.

Figure 3. Specimens submitted for virological testing by sentinel GPs as of 22/12/2019, by week of sample collection, week 51 2018 - week 51 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 23/12/2019 by week of sample collection, week 51 2018 to week 51 2019.



Combined data for tests carried out in Public Health Wales Microbiology: Cardiff laboratory, provided by Public Health Wales Microbiology Cardiff Specialist Virology Centre. This chart summarises individual test results, patients who are positive for multiple infections within a given week will appear multiple times.

Figure 5. Specimens submitted for virological testing for ICU patients, by week of sample collection, week 51 2018 to week 51 2019.

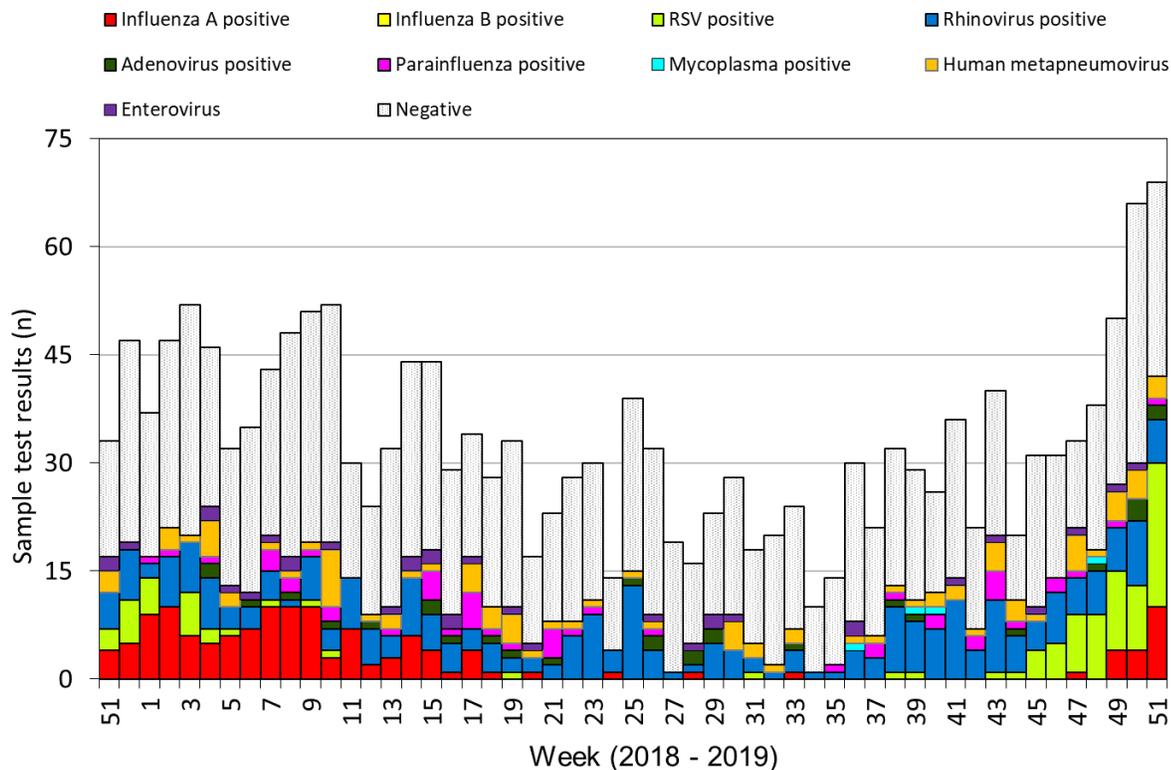
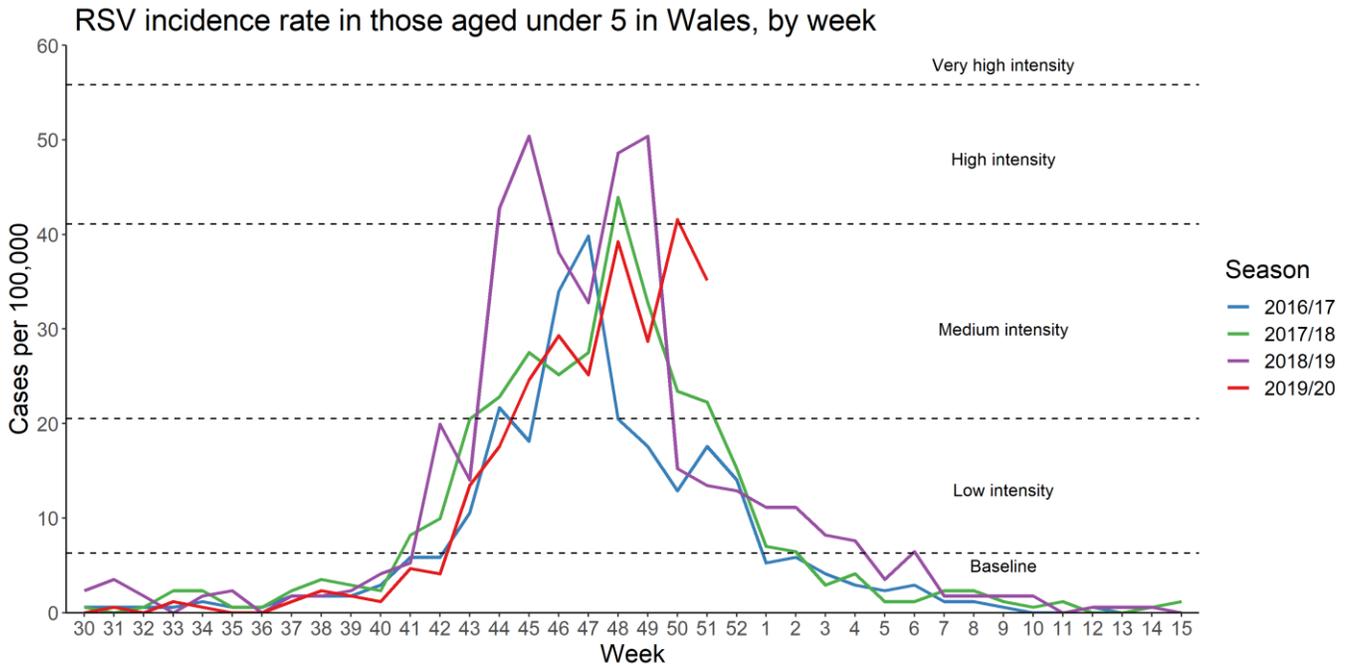


Figure 6. RSV incidence rate per 100,000 population aged under five years, week 30 2016 to week 51 2019.



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 22/12/2019).

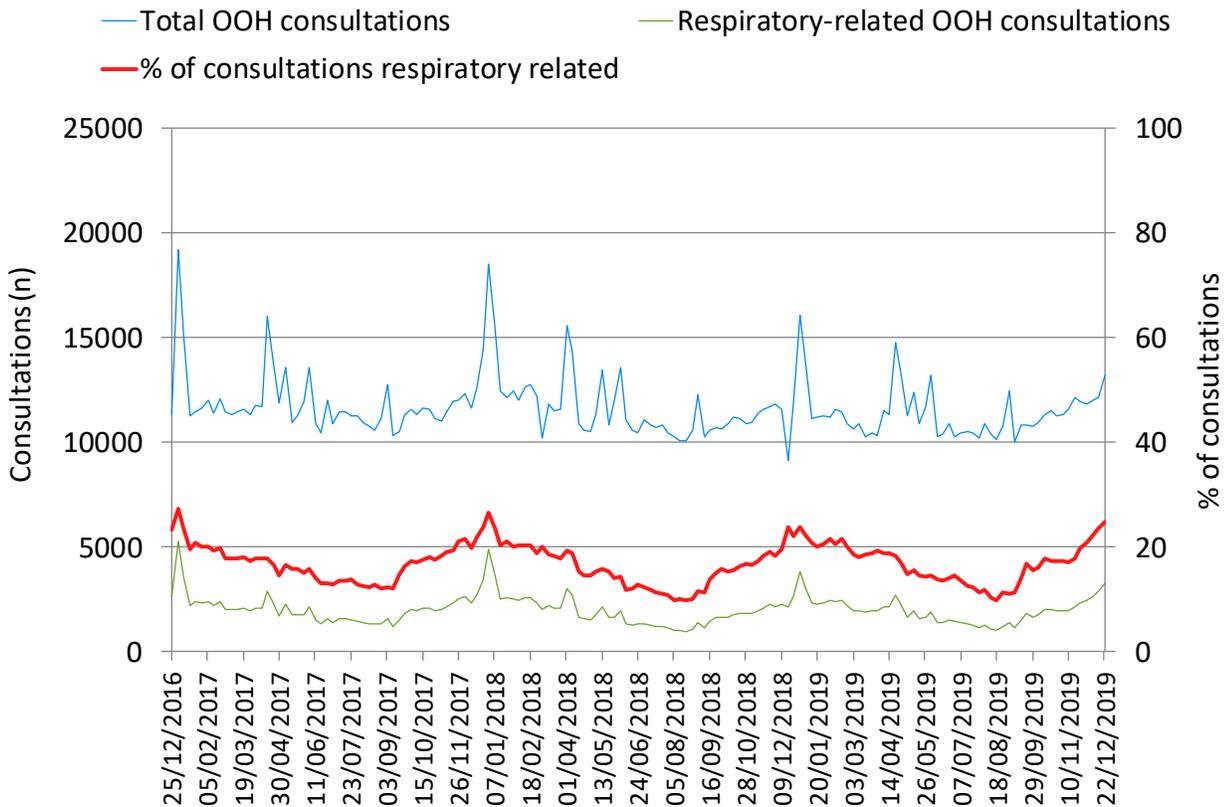
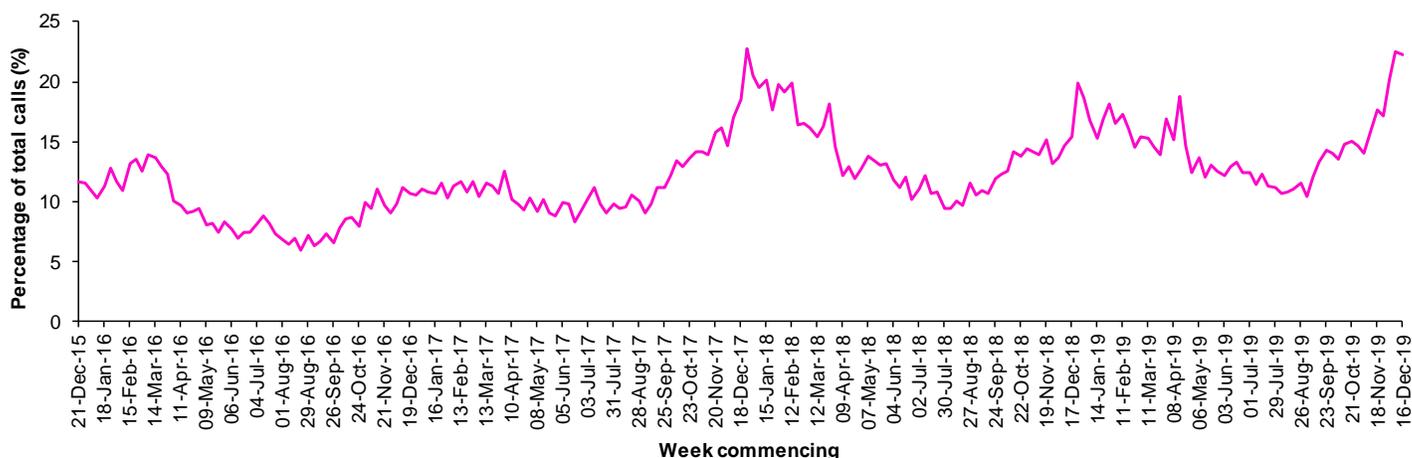


Figure 8. Influenza related calls to NHS Direct Wales¹ (as a percentage of total calls) from week 50 2015 - week 50 2019 (as of 15/12/2019).



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	66.8%
People younger than 65y in a clinical risk group	39.1%
Children aged two & three years	40.5%
Children aged four to ten years*	68.3%
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 50, influenza activity has continued to increase for several indicators in the UK. GP ILI consultations decreased in Northern Ireland to 24.8 per 100,000 but remain at medium levels, consultations increased in Scotland to 19.0 per 100,000 but remains below baseline activity. The weekly ILI GP consultation rate in England reported through the RCGP system increased to 16.0 per 100,000 and remains above 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 14.0 per 100,000 in week 50.
- During week 50, 94 samples tested positive for influenza (two influenza A(H1N1)pdm09, 66 influenza A(H3), 21 influenza A(unknown subtype), three influenza B and two co-infections of influenza A(not subtyped and influenza B) through UK GP sentinel swabbing schemes. Seven hundred and twenty-nine (20.2%) of the 3,605 respiratory test results reported through Public Health England's DataMart scheme tested positive for influenza (13 influenza A(H1N1)pdm09, 516 influenza A(H3), 191 influenza A(not subtyped) and nine 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 50, influenza activity continued to increase across the WHO European Region. During week 50, a total of 1,413 sentinel specimens were tested for influenza, 366 of which were positive (118 influenza A(H1N1)pdm09, 123 influenza A(H3N2), 35 influenza A(not typed) and 90 influenza B).
Source: Flu News Europe: <http://www.flunewseurope.org/>

World update

- The WHO reported on 20/12/2019 that in the temperate zones of the northern hemisphere, respiratory illness indicators and influenza activity continued to increase in most countries. Activity was low overall in the Caribbean and Central American countries, except for Cuba. In tropical South American countries, influenza activity remained low. In tropical Africa, influenza activity remained elevated in some countries of Middle and Western Africa. In Southern Asia influenza activity was low across reporting countries, but was high in Iran. In South East Asia, influenza activity continued to be reported in Lao PDR and the Philippines. 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 19/12/2019), during the time period from 25/11/2019 – 08/12/2019, National Influenza Centres and other national influenza laboratories from 112 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 86,210 specimens during that time period, 9,438 were positive for influenza viruses, of which 7,067 were typed as influenza A (1,216 influenza A(H1N1)pdm09, 2,809 influenza A(H3N2) and 3,042 influenza A(not subtyped)) and 2,371 influenza B (of the characterised influenza B viruses 25 belonged to the B-Yamagata lineage and 458 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 50 (ending 14/12/19) influenza activity continues to increase and has been elevated for six weeks now. Nationally, 5,515 (16.3%) out of 33,918 specimens have tested positive for influenza in week 50, of these positives 1,735 (31.5%) were influenza A and 3,780 (68.5%) were influenza B. Further characterisation has been carried out on 1,413 specimens by public health laboratories, and 733 tested positive for influenza, 282 (38.5%) were influenza A (231 influenza A(H1N1)pdm09 (87.2%), 34 influenza A(H3N2) (12.8%), and subtyping was not performed on 17 specimens) and 451 influenza B (61.5%).
Source: CDC Weekly US Influenza Surveillance Report: <http://www.cdc.gov/flu/weekly/>
- The Public Health Agency of Canada reported that during week 50, influenza activity continued 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 is 7.8%, which is higher than the average for this time of year.
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 18/12/19 WHO reported 10 additional cases of Middle East Respiratory Syndrome coronavirus (MERS-CoV), with one associated death. Globally, 2,494 laboratory confirmed cases of human infection with MERS-CoV, including 858 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 (28/09/2019 to 25/11/2019) 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:

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