

19 May 2009 (Data for week 20: week ending 15 May 2009)

This is the influenza update report for week 20 of the 2008/2009-season. This update is based on interpretation of flu activity data from the Scottish national surveillance systems flu spotter and SERVIS (more information on these systems is available at <http://www.hps.scot.nhs.uk/resp/influenzaseason.aspx#background>), in addition to other data sources e.g. routine laboratory information, calls to NHS 24 and respiratory outbreak information from NHS boards.

Summaries from other UK, European and international surveillance systems are also provided as these give additional useful detail and insight on global influenza activity.

## Summary Scotland

### Influenza A (H1N1) in Scotland

The current situation (as of 19 May 2009 at 12 noon):

For the latest information please visit <http://www.hps.scot.nhs.uk/resp/swineinfluenza.aspx>

|                          |    |
|--------------------------|----|
| Number of positive cases | 10 |
| Number of probable cases | 0  |
| Number of possible cases | 6  |

While there are a small number of confirmed Influenza A (H1N1) (formerly called "Swine Flu") cases in Scotland, this is against a background of low seasonal influenza activity. Surveillance indicators suggest levels of influenza throughout Scotland are within baseline activity. The WHO Pandemic Alert Level is at 5 (with person-to-person transmission in at least two countries within one WHO region). HPS will continue to produce weekly Influenza updates for the foreseeable future.

## Seasonal Influenza Surveillance

Reports from the Scottish FluSpotter scheme for week 20 indicates a low consultation rate for influenza like illness (ILI) with rates of 7 per 100,000 population which is the same as the previous week. This activity level is below the lower end of the 'Normal season' range (50 - 600 consultations per 100,000 population). This is at a comparable level to the same week in previous flu seasons and well below levels at time of circulating flu in a normal season (Figure 1).

The Scottish Enhanced Respiratory Virus Infection Surveillance (SERVIS) scheme gives age related epidemiological information on consultations for influenza like illness (ILI) and acute respiratory infections (ARI).

The ILI and ARI rates per 100,000 population for week 20 are shown in Table 1. The rates for acute respiratory infection (ARI) were up in all categories compared with week 19, with the average up to 251 per 100,000 population, up from 218 per 100,000 population in week 19. This is still within normal seasonal limits. The rates for acute respiratory infection (ARI) was highest in the 0-4 year age group at 1016 per 100,000 population in week 20 (previously 846 in week 19). ARI rates were lowest in the 15-64 year age group at 187 per 100,000 population (previously 192 in week 19). (Figure 2).

There is a modest increase in the overall ARI rates across all categories within the previous week. **However it should be noted that figure is still low and within the expected levels for this time of year.**

### Fluspotter threshold levels

|            |                        |
|------------|------------------------|
| 0 - 50     | = Baseline             |
| 50 - 600   | = Normal seasonal      |
| 600 - 1000 | = Higher than expected |
| >1000      | = Exceptional          |

Figure 1: Fluspotter consultation rate for ILI per 100,000 population 2005/06-2008/09 (up to week 20) by week.

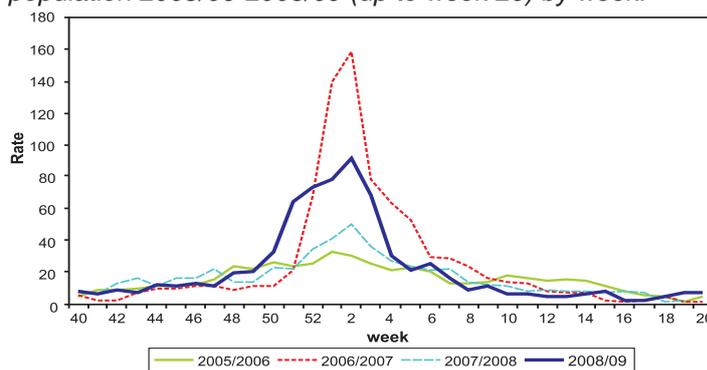


Figure 2: SERVIS consultation rate for ARI per 100,000 population for 2008/09 to week 20 split by age range.

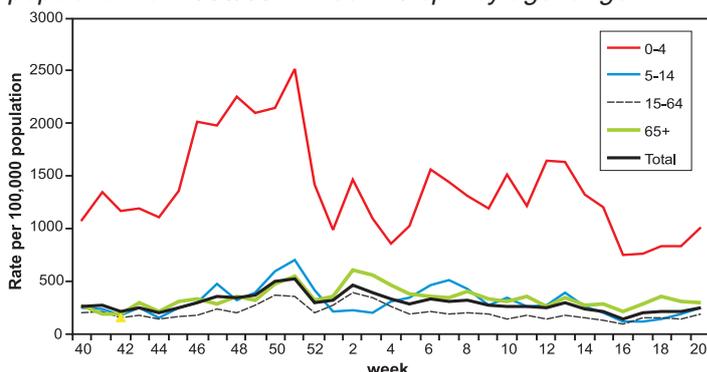


Table 1: Week 20 2008/2009

| Age band yrs | Age specific rates for ILI per 100,000 population | Age specific rates for ARI per 100,000 population |
|--------------|---|---|
| 0 - 4        | 0   | 1016  |
| 5 - 14       | 0   | 255   |
| 15 - 64      | 0   | 188   |
| 65 +         | 0   | 299   |
| <b>Total</b> | <b>0</b>  | <b>251</b>  |

## Outbreaks

No outbreaks of seasonal influenza have been reported to HPS from any of the NHS board regions during week 20.

## Virology

The West of Scotland Specialist Virology Centre carries out multiplex PCR testing for a range of respiratory viruses and subtypes and further characterises respiratory samples (nasal and throat washes or mouth gargles) from SERVIS practices and from some routinely submitted samples from community and hospital sources.

No samples were submitted from SERVIS sentinel practices in week 20. Of the six samples reported from hospital and community NHS sources, one was positive for Influenza A (H3 – seasonal flu), one was positive for Influenza B and three were positive for RSV.

## NHS24

In a joint HPS/HPA & NHS24 project, NHS24 calls are being monitored for the fourth consecutive winter to assess the volume of calls for a variety of symptoms, which are categorised into four major respiratory presentations: colds and flu; fever; cough, and difficulty in breathing. Similar information has been utilised in England for several years via calls made to NHS Direct, which has proven a useful resource. At present the system's usefulness in Scotland is limited by lack of historical data and there is a requirement for further evaluation to determine the added benefit the system provides. As such, information presented should be regarded in this context and considered with caution. (Fever calls are used as a proxy for influenza in the 0 – 4 year age group as communication difficulties can make influenza diagnosis less certain in this age group).

The most recent data provided by NHS 24 is for week 20 (week ending 17 May 2009) and shows that the proportion of calls for cold/flu, cough, difficulty breathing and fever (all ages) were 1.7%, 2.5%, 3.7% and 3.2%, respectively.

'Cold/flu': there is an increase on levels seen this time last year. However 'Cough', 'Difficulty breathing' and 'Fever': are below levels seen this time last year.

Total weekly call rate per 100,000 population: 334 in week 20/2009 compared to 412 in week 19/2008.

Key message for week 20 (03-10 May 2009)

The proportion of cold/flu calls are 1.71% (compared to 1.79% in week 19) but remain well above the level expected for this time of year. The age groups 15 - 64 years continue to account for the highest proportions of cold/flu calls. **There is a difficulty in interpreting the levels reported as a higher call volume has been reported and this may represent callers concerned about the current situation regarding Influenza A (H1N1) and therefore may represent the 'worried well'.**

## Summaries: UK

### England and Wales

Seasonal Flu

The latest HPA seasonal flu report was for weeks 14 & 15 (15 April 2009) and can be viewed at: [http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb\\_C/1222154877315](http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1222154877315)

Influenza A (H1N1)

There are 107 confirmed cases in the UK, and 139 cases under laboratory investigation, as of 19 May 2009. For more information visit: <http://www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListName/Page/1240732817665?p=1240732817665>

### Northern Ireland

Seasonal Flu

During week 19 2009, influenza activity increased slightly in Ireland. Influenza-like illness (ILI) consultation rates increased, but are well below baseline thresholds. Four non-sentinel specimens tested by the NVRL were positive for influenza A(H3) during week 19 2009 (these were from one person). For more information: <http://www.ndsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaSurveillanceReports/>

Influenza A (H1N1)

One confirmed case of influenza A(H1N1) infection was reported in Ireland in week 18. The person had mild symptoms, was not hospitalised and has recovered. No further cases were reported in Ireland in week 19. <http://www.ndsc.ie/hpsc/A-Z/EmergencyPlanning/AvianPandemicInfluenza/SwineInfluenza/>

## Summary: Europe

Summary of report for week 19(04 May – 10 May 2009); released 15 May 2009; Issue 305.

**Summary:** In week 19/2009, influenza activity remained at baseline levels, with sentinel virus detections being low, in almost all of Europe. While the Northern Hemisphere influenza season is coming to an end, more than 200 cases of new influenza A(H1N1) virus infections have been reported in European region countries.

**Epidemiological situation - week 19/2009:** For the intensity indicator, the national network levels of influenza-

like illness (ILI) and/or acute respiratory infection (ARI) were low in almost all countries that reported this indicator. Only Albania and two of seven regions (Siberian and Urals) of the Russian Federation reported medium intensity. For the geographical spread indicator, the Russian Federation reported local activity whereas all other countries reported sporadic or no activity.

**Cumulative epidemiological situation - 2008-2009 season (weeks 40/2008-19/2009):** Consultation rates for ILI and/or ARI rose above baseline levels as of week 49/2008 in most western and central European countries following a general west to east progression. High influenza intensity, with peak activity following a general west to east progression, has been reported in 15 countries since week 51/2008. Generally, the highest consultation rates have been in the 0-4 and 5-14 age groups, but Ireland, UK, Norway and Romania have reported their highest ILI consultation rates in the 15-64 age group. In most countries the seasonal epidemic appears to be over, with consultation rates for ILI and/or ARI having returned to baseline levels.

**Virological situation - week 19/2009:** The total number of respiratory specimens collected by sentinel physicians in week 19/2009 was 630, of which 36 (5.7%) were positive for influenza virus: 20 type A (one subtype H3, three subtype H3N2, one subtype H1, two subtype H1N1, two subtype new H1, two subtype new H1N1 and nine not subtyped) and 16 type B. In addition, 130 non-sentinel source specimens (e.g. specimens collected for diagnostic purposes in hospitals) were reported positive for influenza virus: 82 type A (20 subtype H3, seven subtype H3N2, three subtype H1, one subtype H1N1, one subtype novel H1, six subtype novel H1N1 and 44 not subtyped) and 48 type B.

**Cumulative virological situation - 2008-2009 season (weeks 40/2008-19/2009):** Of 30924 virus detections (sentinel and non-sentinel) since week 40/2008, 25815 (83%) were type A (11630 subtype H3, 1407 subtype H1 and 12778 not subtyped) and 5109 (17%) were type B. Based on the antigenic and/or genetic characterisation of 3696 influenza viruses reported to EISS up to week 19/2009, 2564 (69%) were reported as A/Brisbane/10/2007 (H3N2)-like, 166 (4%) as A/Brisbane/59/2007 (H1N1)-like, 30 (1%) as B/Florida/4/2006-like (B/Yamagata/16/88 lineage), 935 (25%) as B/Malaysia/2506/2004-like (B/Victoria/2/87 lineage) and one as A/California/4/2009 (H1N1)-like. More detailed antigenic and genetic analyses have shown that B/Victoria/2/87 lineage viruses resembled either B/Malaysia/2506/2004-like or B/Brisbane/60/2008-like, the prototype vaccine strain recommended by WHO for inclusion in the 2009-10 vaccine (WER 2009; 84(9): 65-76).

Influenza isolates from 20 countries were assessed for antiviral drug susceptibility. All influenza A(H3N2) viruses tested were sensitive to oseltamivir and zanamivir, but resistant to M2 inhibitors. Ninety-eight percent of influenza A(H1N1) viruses analysed were resistant to oseltamivir while all those tested against zanamivir were sensitive.

One A(H1N1) virus was M2 inhibitor resistant, but sensitive to the neuraminidase inhibitors. The small number of influenza B viruses tested were sensitive to oseltamivir and zanamivir. By genetic analysis, the new A(H1N1) viruses have been assessed as being sensitive to oseltamivir and zanamivir.

**Comment:** Seasonal influenza activity in Europe is coming to an end, with most influenza virus detections having occurred between weeks 48/2008 and 15/2009 (a 20-week period). However, a new A(H1N1) subtype influenza virus strain with pandemic potential has emerged in North America and spread to many countries. The World Health Organisation has raised the pandemic alert level to phase five. For further details please see the WHO website.

As of 14 May, 229 confirmed cases have been reported in 17 European region countries (222 in EU/EFTA countries and 7 in non-EU/EFTA countries). Outside of the United States and Mexico, no sustained community transmission has been recorded so far. For more information please go to the dedicated web pages of ECDC or WHO. European Member States have been requested to continue to perform seasonal influenza surveillance until further notice. As of week 18/2009, countries are able to report detections of the new virus to the EISS platform.

Influenza A has been the dominant virus type circulating in Europe, mostly characterised antigenically and/or genetically as A(H3N2). Of the influenza B viruses that were characterised, the majority were B/Victoria lineage. With the exception of these B/Victoria lineage viruses, the viruses circulating are similar to the three components - A(H1N1), A(H3N2) and B/Yamagata lineage - included in the 2008/2009 Northern Hemisphere influenza vaccine. The mismatch of these B/Victoria/2/87 lineage viruses with the current vaccine is unlikely to be of public health significance because of limited circulation of influenza B viruses and the dominant circulation of influenza A(H3N2) viruses which matched the strain included in the vaccine. From a public health perspective, the vaccine used this season is therefore expected to have been effective. [http://www.ecdc.europa.eu/en/Health\\_topics/novel\\_influenza\\_virus/2009\\_Outbreak/](http://www.ecdc.europa.eu/en/Health_topics/novel_influenza_virus/2009_Outbreak/)

WHO Europe site: <http://www.euro.who.int/influenza/ah1n1>

## Summary: USA, Canada and Elsewhere

### USA

Currently there are 5123 confirmed cases of Influenza A (H1N1) and 5 deaths resulting from infection with Influenza A (H1N1) in the USA. Further information can be viewed at: <http://www.cdc.gov/h1n1flu/>

### Canada

The last flu report is for week 18 (03-09 May 2009) and is given at: <http://www.phac-aspc.gc.ca/fluwatch/index.html>

## WHO

Currently the WHO is reporting 9830 cases of Influenza A (H1N1) in 40 countries.

Mexico has reported 3648 laboratory confirmed human cases of infection, including 72 deaths. The United States has reported 5123 laboratory confirmed human cases, including 5 deaths. Canada has reported 496 laboratory confirmed human cases, including one death. Costa Rica has reported 9 laboratory confirmed human cases, including 1 death.

The following countries have reported laboratory confirmed cases with no deaths - Argentina (1), Australia (1), Austria (1), Belgium (5), Brazil (8), Chile (4), China (7), Colombia (11), Denmark (1), Ecuador (1), El Salvador (6), Finland (2), France (14), Germany (14), Guatemala (3), India (1), Ireland (1), Israel (7), Italy (9), Japan (159), Malaysia (2), Netherlands (3), New Zealand (9), Norway (2), Panama (59), Peru (2), Poland (1), Portugal (1), Republic of Korea (3), Spain (103), Sweden (3), Switzerland (1), Thailand (2), Turkey (2) and the United Kingdom (102).

For more information visit: <http://www.who.int/en/>

## Avian Influenza

The Ministry of Health of Egypt has reported a new confirmed human case of avian influenza. The case is a 5-year old female from Tama District, Sohag Governorate. Her symptoms began on 7 May and she was admitted in Sohag Fever Hospital on 9 May where she received oseltamivir. She is in a stable condition.

The case was confirmed by the Egyptian Central Public Health Laboratories on 10 May 2009.

Investigations into the source of infection indicate close contact with dead and sick poultry

For the latest information please go to: [http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

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