

Rapid communications

THE INFLUENZA SEASON HAS STARTED IN A NUMBER OF EUROPEAN COUNTRIES

J MS Arkema (a.arkema@nivel.nl)¹, A Meijer^{1,2}, W J Paget¹, V van Casteren³, O Hungnes⁴, A Mazick⁵, J Van Der Velde^{1,6}

1. European Influenza Surveillance Scheme (EISS) Co-ordination Centre, Netherlands Institute for Health Services Research (NIVEL), Utrecht, the Netherlands

2. Centre for Infectious Disease Control, National Institute of Public Health and the Environment, Bilthoven, The Netherlands

3. Scientific Institute of Public Health, Brussels, Belgium

4. Norwegian Institute of Public Health, Oslo, Norway

5. Statens Serum Institut, Copenhagen, Denmark

6. Radboud University Nijmegen Medical Centre, Department of Public Health, Nijmegen, the Netherlands

Increased influenza activity was reported in 13 European countries in week 2 of 2008: Austria, Bulgaria, France, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Slovenia, Spain, Switzerland and the UK. Based on historical trends, influenza activity is expected to increase in more countries in the coming weeks and to move gradually eastwards and northwards in Europe [1]. Influenza activity is mainly associated with type A influenza virus, subtype H1, which usually causes only mild- to medium-intensity influenza epidemics.

At the end of 2007, some countries started to report consultation rates for influenza-like illness (ILI) or acute respiratory infection (ARI) above levels usually seen outside the period of seasonal increased influenza activity (baseline level) (i.e. Austria, Bulgaria and Northern Ireland in week 50 of 2007 and Spain in week 51 of 2007). In the first week of 2008, there were seven countries with influenza activity above the baseline level (England, Ireland, Italy, Luxembourg, Slovenia, Spain and Switzerland) and this number increased to 14 in week 2 of 2008 (Austria, Bulgaria, England, France, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Northern Ireland, Portugal, Slovenia, Spain and Switzerland). In many other countries (Estonia, Latvia, Lithuania, Romania and Sweden), consultation rates have been increasing but are still below the baseline level threshold.

Differences in ILI consultation rates according to age are seen when winter seasons are analysed by the dominant virus type/subtype. In influenza B epidemics, rates in schoolchildren are usually the highest; in influenza A(H1N1) epidemics, rates are highest in pre-schoolchildren, while in A(H3N2) epidemics there is no clear consistent pattern [2]. So far this winter, consultation rates in four countries (England, Ireland, Spain and Switzerland) have been the highest in the 15-64 age group compared to other groups (see Figure for an example).

The total number of positive specimens per week for Europe as a whole has increased from around 200 in week 50 of 2007 to 714 in week 2 of 2008. Since the start of the 2007-08 season, 2,379 laboratory-confirmed cases of influenza have been detected across Europe, of which 82% (n=1,961) were influenza A and 18% (n=418) influenza B. Based on (sub)typing data of all influenza virus detections since week 40 of 2007 (n=2,379), 1,075 (45%) were type A not subtyped, 855 (36%) were A(H1) – of which 265

were A(H1N1) – 31 (1%) were A(H3) – of which 15 were A(H3N2) – and 416 (18%) were B.

In the 2000-01 season, the last in which A(H1N1) dominated, [3], influenza B viruses were detected in 17% of cases, and started to circulate and peaked later than the influenza A viruses. So far this season, the percentage of influenza B viruses has stayed at around 15% for Europe as a whole. However, in some countries influenza B viruses currently account for more than 50% of the detections.

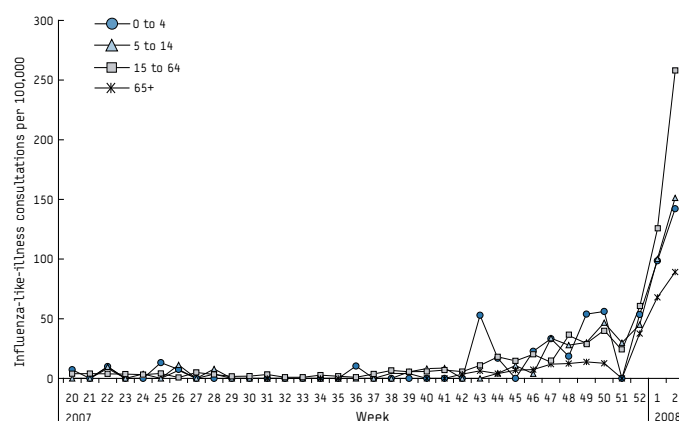
Of all influenza viruses detected up to week 2 of 2008, 490 have been antigenically and/or genetically characterised:

- 380 were A/Solomon Island/3/2006 (H1N1)-like
- 20 were A/New Caledonia/20/99 (H1N1)-like
- 8 were A/Brisbane/10/2007 (H3N2)-like
- 2 were A/Wisconsin/67/2005 (H3N2)-like
- 71 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage)
- 9 were B/Malaysia/2506/2004-like (B/Victoria/2/87 lineage)

In conclusion, the predominant virus strain circulating in Europe so far is a new strain of the influenza A(H1N1) virus, a

FIGURE

Switzerland - Season 2007/2008. Influenza-like-illness consultations per 100,000 population by age group



virus that usually affects pre-school children but is also currently affecting 15-64 year-olds in four European countries. Reassuringly, A(H1N1) viruses are usually associated with milder infection rates and illnesses [4]. Furthermore, the World Health Organization has included the new drift variant A/Solomon Island/3/2006 (H1N1)-like strain in this season's vaccine to provide most optimal protection against A(H1N1) viruses circulating this year [5].

EISS has monitored influenza activity in Europe since 1996 [6]. The surveillance scheme was established in 1996 with seven participating countries and now includes 35 countries, including all European Union member states. An update of influenza activity in Europe is published online at <http://www.eiss.org> every Friday [7].

References

1. Paget J, Marquet R, Meijer A, van d, V. Influenza activity in Europe during eight seasons (1999-2007): an evaluation of the indicators used to measure activity and an assessment of the timing, length and course of peak activity (spread) across Europe. *BMC Infect Dis.* 2007;7(1):141.
2. Elliot AJ. Do children drive the spread of influenza-like illness in the community? (Abstract p124). In: *Options for the Control of Influenza VI*, Toronto, Canada 2007.
3. Manuguerra J, Mosnier A, Paget W-J. Monitoring of influenza in the EISS European network member countries from October 2000 to April 2001. *Euro Surveill* 2001;6(9):127-135. Available from: <http://www.eurosurveillance.org/em/v06n09/0609-221.asp>
4. Simonsen L. Impact of influenza vaccination on seasonal mortality in the US elderly population. *Arch Intern Med.* 2005;165:265-272.
5. Recommended composition of influenza vaccines for use in the 2007-2008 influenza season. *Wkly Epidemiol Rec.* 2007;82:69-76. Available from: <http://www.who.int/csr/disease/influenza/20078anorthreport.pdf>
6. Paget WJ, Meerhoff TJ, Meijer A. Epidemiological and virological assessment of influenza activity in Europe during the 2003-2004 season. *Euro Surveill* 2005;10(4):107-111. Available from: <http://www.eurosurveillance.org/em/v10n04/1004-221.asp>
7. The influenza season has started in a number of European countries. *EISS Weekly Electronic Bulletin* 2008; 18 January 2008: 249. Available from: <http://www.eiss.org> (accessed 17 January 2008).

This article was published on 24 January 2008.

Citation style for this article: Arkema JM, Meijer A, Paget WJ, van Casteren V, Hungnes O, Mazick A, Van Der Velden J. The influenza season has started in a number of European countries. *Euro Surveill.* 2008;13(4):pii=8021. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=8021>