






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Eurosurveillance, Volume 8, Issue 24, 10 June 2004

Articles

Citation style for this article: Goddard NL, Paynter S, Paget WJ. Outbreak of influenza A(H1N1) in a school in southern England. Euro Surveill. 2004;8(24):pii=2484. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=2484>

Outbreak of influenza A(H1N1) in a school in southern England

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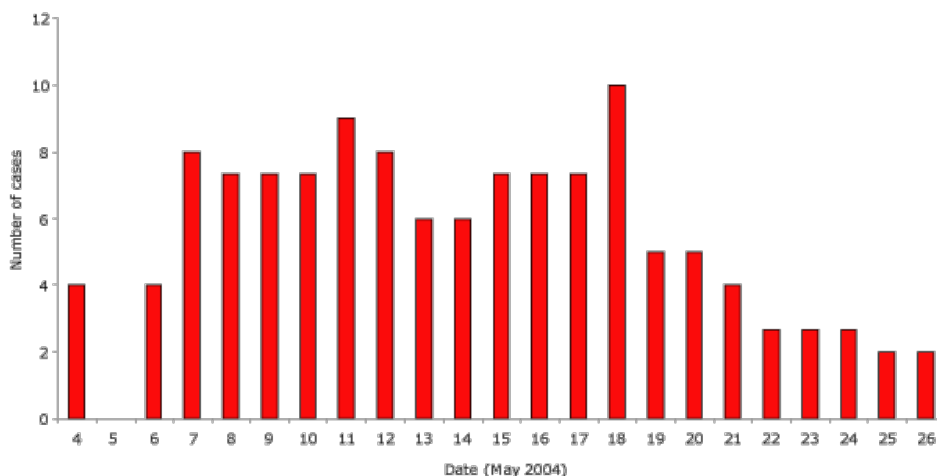
An outbreak of influenza A (subtype H1N1) has occurred in a primary school in West Sussex, southern England [1]. The first cases of illness occurred during the first week of May 2004. One child was admitted to hospital during that week with symptoms of fever, confusion, headache, and conjunctivitis.

Staff reported the outbreak to the local health authorities when substantial numbers of children developed symptoms of fever, nausea, vomiting, cough, and sore throat. Information collected through a questionnaire distributed to parents whose children had been absent from school suggested a respiratory viral illness with a serial interval of one to three days, and duration of one to seven days.

Initial direct immunofluorescence testing of throat swabs by the local laboratory proved negative, but a serology specimen was positive for influenza A by single high titre. The throat swabs were referred to the national Enteric, Respiratory, and Neurological Virus Laboratory (ERNVL), where influenza A(H1N1) was detected by polymerase chain reaction.

The epidemic curve (Figure) suggests that the outbreak is now over, as low numbers of cases were being reported by 26 May 2004. Overall, 125/216 (58%) of children aged between four and eight years were affected, with attack rates ranging from 44% in the reception class (aged between four and five years) to 74% in grade one (aged between five and six years).

Figure. Epidemic curve for influenza A (H1N1) school outbreak (averaged over weekends), West Sussex, England, 4-26 May 2004.



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It is unusual to see an outbreak associated with influenza A(H1N1) occurring this late in the season. Further genetic characterisation of the virus is being undertaken.

Influenza A(H1N1) epidemiology

Influenza activity associated with subtype A(H1N1) has been low in Europe and in the United Kingdom (UK) in recent years. The last substantial activity associated with this subtype in the UK occurred during the 1997/98 and 2000/01 influenza seasons when approximately 40% of the isolates characterised in each season by ERNVL were A(H1N1). Children aged under 15 years were predominantly affected in 1997/98, and children aged under 5 years and adults aged between 15 and 44 years during 2000/01.

During 2001/02 a new subtype, influenza A(H1N2) emerged as a recombinant of previously circulating influenza A(H1N1) and A(H3N2) viruses. Since this time only sporadic isolates of influenza A(H1N1) and A(H1N2) have circulated in the UK and in Europe.

Outbreaks attributable to influenza have also remained low over recent years; an outbreak of influenza A(H1N1) that occurred in a primary school was reported in January 1998 (eight children), and outbreaks of A(H1N untyped) were reported in January 2002 (400/1250 children in Scotland) and March 2003 (one child who was part of a mixed outbreak of H1 and H3N2 in a school).

Influenza activity in England is currently within in the range of baseline activity, having peaked early during the 2003/04 season in week 46/2003. Between weeks 30/2003 and 20/2004 only one isolate of influenza (H1N1) and two isolates of (H1N untyped) from hospital derived specimens in children aged under five years were detected by ERNVL, compared with 1404 detections of influenza A(H3), and five detections of influenza B.

The European Influenza Surveillance Scheme (EISS) has detected 13 776 influenza virus isolates during the 2003/04 season (data collected since week 40 of 2003, database query 7 June 2004). Of these, 99% were influenza A virus isolates and 1% were influenza B virus isolates. Among the influenza A isolates, 3791 were N-subtyped and 3755 (99.1%) were influenza A(H3N2). There were only 22 (0.6%) isolates of influenza A(H1N1) and these were detected in Italy (8), Portugal (7), France (4), Belgium (1), England (1) and Switzerland (1).

Reference:

1. HPA. Outbreak of influenza A(H1N1) in a school in West Sussex. *Commun Dis Rep CDR Weekly* 2004; **14**(23): news. (<http://www.hpa.org.uk/cdr/PDFfiles/2004/cdr2304.pdf>)

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