EID Weekly Updates:

Emerging and Reemerging Infectious Diseases, Region of the Americas

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Main Updates index

2003-2004 Flu Season in North America

In 2003-2004 season an increased influenza activity has been detected earlier than in previous seasons. The predominant virus circulating in North America is similar to A/ Fujian/411/2002. In the USA CDC has antigenically characterized 108 influenza A (H3N2) viruses and found that 19 (18%) were similar antigenically to the vaccine strain A/Panama/2007/99 (H3N2), and 89 (82%) were similar to the drift variant, A/Fujian/411/2002 (H3N2). In Canada 70% of the influenza viruses antigenetically characterized (n=87) corresponded to A/Fujian/411/02(H3N2)-like.

The A/Fujian strain predominated in Australia and New Zealand during the recent Southern Hemisphere influenza season;it is a drift variant related to the vaccine strain, A/Panama/2007/99.

The effectiveness of influenza vaccine depends primarily on the age and immunocompetence of the vaccine recipient and the degree of similarity between the viruses in the vaccine and those in circulation. According to the Recommendations of the Advisory Committee on Immunization Practices (ACIP), the effectiveness of the vaccine, as measured in number of prevented cases of illness, is as follows: for healthy adults younger than 65 years old, 70-90% effective; in children from 1 to 15 years 77-99% effective; in non-institutionalized persons over 65 years of age 58% effective and 30-40% in institutionalized persons. The vaccine can also be effective in preventing secondary complications and in reducing the risk for influenza-related hospitalization and death. Among adults 65 or older living outside nursing homes or similar chronic-care facilities, influenza vaccine is 30%-70% effective in preventing hospitalization for pneumonia and influenza. Among elderly persons residing in nursing homes, the vaccine can be 50%-60% effective in preventing hospitalization or pneumonia, and 80% effective in preventing death.

Vaccine effectiveness depends, in part, on the match between vaccine strains and circulating viruses and cannot be determined by laboratory testing. Although vaccine effectiveness against A/Fujian/411/2002-like viruses may be less than that

against A/Panama/2007/99-like viruses, it is expected that the current vaccine will offer some cross-protective immunity against the A/Fujian/411/2002-like viruses and reduce the severity of disease.

For the season 2004 in the southern hemisphere WHO has advised the inclusion of similar viruses to the strain / Fujian/411/2002 in the vaccine against influenza.

Sources

- *Influenza: Reports and Surveillance Methods in the United States*. Centers for Disease Control and Prevention of the United States (CDC), National Center for Infectious Diseases.
- Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunizations Practices (ACIP). *Morbidity and Mortality Weekly Report (MMWR)*, 2003. 25 (RR08); 1-36.
- *FluWatch, November 16 to November 22, 2003 (Week 47)*, Health Canada website: English | français
- World Health Organization (WHO) (2003) Recommended Composition of Influenza Virus Vaccines for Use in the 2003–2004 Influenza Season. *Weekly Epidemiological Record / Relevé épidémiologique hebdomadaire* (WER/REH) 78 (9): 58-64.

Circulation of Human metapneumovirus in the United States could complicate management of respiratory infections this winter

In accordance with a study conducted by researchers of the Yale University Medical School in New Haven, Connecticut, the human metapneumovirus is circulating in the United States and can be a major cause of respiratory infections. The human metapneumovirus (hMPV) was discovered in The Netherlands in 1999. Researchers studying respiratory samples noted that the virus, previously thought to affect only avian populations, had been circulating undetected among humans for 20 years. The hMPV has since been identified in Australia, Canada, the United States, and the United Kingdom. It is believed that the distribution is more widespread, but that it yet is to be reported from other areas of the world. While respiratory syncytial (RSV), parainfluenza and influenza viruses account for most bronchiolitis and pneumonia cases among children in the United States, 15% to 34% of the causes are unknown. During the study period (Oct. 30, 2001 – Feb.28, 2002) 357 specimens from 296 children under five yearso of age were found negative to the aforementioned viruses (VRS, Influenza A or B, Parainfluenza 1-3 and adenovirus). Upon further analysis, 20 samples from 19 individuals were later found to be positive for hMPV by reverse polymerase chain reaction. All of the hMPV infections occurred between January and February 2002. Overall, hMPV was responsible for 6.4% of respiratory infections due to a previously unknown cause in children in New Haven, Connecticut.

For more information, see Esper, F.; Boucher, D.; Weibel, C. et al. (2003) Human Metapneumovirus Infection in the United States: Clinical Manifestations Associated with Newly Emerging Respiratory Infection in Children. *Pediatrics* 111 (6): 1407-1410.

Source: Infectious Diseases News. Emerging Diseases: U.S. Patients not immune to

hMPV.

Call for Abstracts, International Conference of Emerging Infectious Diseases, Atlanta 2004: Deadline Extended

The *International Conference on Emerging Infectious Diseases 2004* (ICEID 2004) is calling for late-breaker abstracts. Abstracts should address new, reemerging, or drug-resistant infectious diseases that affect human health. The late-breaker abstract submission website will open on December 10, 2003, and close promptly on January 16, 2004, at 5 p.m., Eastern Standard Time. Information about submitting a late-breaker abstract is available at the conference site.

ICEID 2004 will be held February 29—March 3, 2004, at the Marriott Marquis Hotel in Atlanta, Georgia. Co-sponsors include CDC, Council of State and Territorial Epidemiologists, American Society for Microbiology, Association of Public Health Laboratories, CDC Foundation, and World Health Organization.

Registration information is available via the conference site or via CDC, or via e-mail to meetinginfo@asmusa.org or dsy1@cdc.gov.

Source: MMWR 52 (47): 1161.