Epidemiological Update

Increase of influenza activity in North America

25 January 2013

This update to the 14 January 2013 Epidemiological Alert provides an overview of the current influenza status in North America.

Influenza activity in the United States of America and Canada has continued in intensity during the second and third epidemiological weeks (EW) of 2013. Outpatient visits for influenza like illness (ILI) has in both countries been above the expected average, likely due the co-circulation of other respiratory viruses. In the United States of America hospitalizations associated to influenza and deaths caused by pneumonia and influenza have continued to increase. The most affected group in both countries is reported to be adults of ≥ 65 years of age.

The Pan American Health Organization (PAHO) / World Health Organization (WHO) reiterates the series of recommendations to Member States preparing for an upcoming influenza season in order to face the possible increased circulation of the influenza virus.

Influenza Status in North America

In North America, the increased influenza circulation seen since EW 48 of 2012 continues to take place.

In the **United States of America**, 47 out of 50 states have reported widespread geographic distribution of influenza activity,[1] however the severity of the influenza activity is concentrated in the Northeastern Region as compared to the rest of the country. National experts have rated the severity of this influenza season as moderate to severe, signifying that is above the expected average.

The proportion of ILI consultations began to increase above the national baseline (2.2%) in epidemiological week (EW) 49 of 2012. In EW 3 of 2013 it has continued above the expected (4.3%) although with a decreasing tendency for a third week. This increment could be related to the circulation of other respiratory viruses such as respiratory syncytial virus, which causes signs and symptoms that are indistinguishable from those caused by influenza. Mortality due to pneumonia and influenza exceeded the epidemic threshold (7.3%) in EW 1 of 2013 and has continued to increase during EW 3 during which the percentage of deaths due to pneumonia and influenza was 9.8%. Regarding influenza associated hospitalizations, the age group most affected was that of adults aged ≥ 65 years, followed by the group of 0-4 years old.

The predominant virus in this season has been influenza A(H3N2) (characterized as A/Victoria/361/2011-like), followed by influenza B (Yamagata and Victoria lineages) and to a lesser extent influenza A(H1N1)pdm09) (A/California/7/2009-like). Three of these four strains are included in the 2012-2013 influenza vaccine of the northern hemisphere. With regards to antiviral resistance, of the subset of influenza cases analyzed this season, the majority (99.9%) are susceptible to oseltamivir and all are susceptible to zanamivir.

[1] Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

In **Canada**, as in the United States of America, influenza activity began to increase starting in EW 48 of 2012. From EW 1 to EW 3 of 2013, the ILI rate was slightly above what is expected for this time of year, due in part the early start of the influenza season and the co-circulation of other respiratory viruses such as respiratory syncytial virus. During EW 3, the highest rates of ILI was among persons between 5 to 19 years of age.

The predominant virus circulating in this season in Canada is influenza A(H3N2) (A/Victoria/361/2011), followed by influenza B (Yamagata and Victoria lineages) and influenza A(H1N1)pdm09 (A/California/07/09). Three of these four strains are included in the 2012-2013 influenza vaccine of the northern hemisphere. With regards to antiviral resistance, of the subset of influenza cases analyzed this season, all are susceptible to oseltamivir and zanamivir.

In **Mexico**, influenza activity began in EW 41 of 2012, and currently remains low and localized. The percentage of national health service visits for ILI and severe acute respiratory infection (SARI) remains below 1%. However, during this season, cases of acute respiratory infections have increased by 2.6% compared to the previous influenza season.

With regards to the laboratory data and according to the samples analyzed each week, the proportion of positive influenza samples exceeded 10% in EW 40 and had continued to increase with a peak of 37.5% in EW 50 of 2012. This proportion has been declining and was down to 23% by EW 3 of 2013. The predominant virus in Mexico is influenza type B (Yamagata and Victoria lineage), followed by influenza A (H3N2). Three of these four strains are included in the 2012-2013 influenza vaccine of the northern hemisphere. The types and subtypes of influenza strains identified are susceptible to oseltamivir.

Recommendations

In light of this situation, PAHO/WHO recommends to Member States that might face increased circulation of influenza viruses to ensure adequate clinical management of patients, the implementation of prevention and control measures, while enhancing the preparedness of their health services to cope with a potential influx of patients. PAHO/WHO does not recommend any travel restrictions including screening at points of entry.

PAHO/WHO reiterates the recommendations made in the 13 March 2012 Epidemiological Alert.

Epidemiological and Laboratory Surveillance

Routine influenza surveillance activities should be continued, and should include both epidemiologic and laboratory surveillance. Epidemiological surveillance should include out-patient ILI and hospital admissions for SARI. In the latter cases, samples of clinical and epidemiological significance should be taken and analyzed within the capacity of the national laboratory system.

To understand, identify and characterize influenza virus circulation, PAHO/WHO recommends following SARI surveillance guidelines, as indicated in the SARI Surveillance Protocol.

All specimens that cannot be subtyped and those with inconclusive or unexpected subtyping results should be forwarded, as soon as possible, to the WHO Collaborating Center for influenza, the United States Centers for Disease Control and Prevention for additional testing.

Response and Organization of Health Services

Health services have to prepare for a possible increase in the number of patients with respiratory symptoms. For this, detailed guidelines to assist countries in their preparation were elaborated by PAHO/WHO in 2009 and are available at: http://new.paho.org/hq/index.php?option=com_content&view=article&id=3353&Itemid=2470&to=2256&lang=en.

One element of utmost impact on health services organization is the availability of a proper triage system. Its objective is to identify suspected cases in a timely manner in order to reduce the risk of viral transmission in outpatient and clinical care services (patients and health workers).

General measures for triage in primary care are: a) to identify a space that is adequate for dealing with cases of respiratory infection; b) to make available personal protection equipment to health personnel, according to the complexity of care, and c) to rigorously implement standard and droplet precautions in clinical care.

Patient Management

Influenza should be suspected in any febrile patient, hospitalized with respiratory symptoms.

Some population groups are more susceptible to developing complications from influenza infection, and require special attention. Such groups include children less than 5 years of age, adults over 65 years of age, pregnant women, and individuals with underlying clinical conditions. In these cases antiviral treatment (e.g. oseltamivir) at the onset of symptoms should be considered.

Treatment should be initiated even in the absence of influenza laboratory confirmation. Treatment success rates are highest when treatment is administered early. For additional information, refer to: http://new.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=8223&Itemid=

Infection Control

Adequate measures must be implemented to prevent and control infections in all situations (standard and droplet precautions). When implementing aerosol generating procedures (such as bronchoscopy or any other procedure that produces respiratory tract aspiration), it is necessary for health care personnel to utilize particulate- filtering face piece respirators (N95, FFP2 or equivalent), eye protection, gown and gloves. Also, the procedure should take place in room that can be naturally or mechanically ventilated, according to WHO Guidelines.[2]

Information for the Public

The public should be made aware of the fact that the primary form of influenza transmission is through interpersonal contact. The following should be highlighted:

- Hand washing hands is the most effective way of reducing transmission.
- Disseminating knowledge of "respiratory etiquette" can also help prevent transmission of the virus.

[2] http://www.who.int/csr/resources/publications/infection_control/en/index.html

- Individuals with fever should avoid leaving their homes to go to work or to other public places until the fever has subsided.

Vaccination

For countries considering initiating or expanding seasonal influenza vaccination programs, WHO recommends that pregnant women be given the highest priority.

Additional risk groups to be considered for vaccination, in no particular order of priority, are children aged 6–59 months, the elderly, individuals with specific chronic medical conditions, and health-care workers. Countries with existing influenza vaccination programs targeting any of these additional groups should continue to do so and should incorporate immunization of pregnant women into such programs.

References

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