



Indiana Emergency Medical Services for Children Pediatric Flu Provider Resource

Influenza

Influenza symptoms consist of fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills, fatigue, and sometimes diarrhea and vomiting. Influenza illness in infants and children may present similarly to other seasonal viruses and so may be difficult to distinguish clinically. For example, sore throat or myalgia may not be reported by young children; however, they may experience diarrhea. Infants may not exhibit fever. In addition, complications are possible among children ranging from mild-to-moderate otitis media, sinusitis, myositis, and febrile seizures to more severe presentations, such as myocarditis or encephalitis. Severe complications although infrequent do occur and can include pneumonia, invasive bacterial co-infection, and exacerbation of underlying medical conditions, such as asthma. Patients who present initially with uncomplicated influenza may progress to more severe illness, in some cases, within 24 hours. Careful monitoring instructions for caregivers are advised.

CDC Resource: http://www.cdc.gov/h1n1flu/guidance/diagnostic_tests.htm

<http://www.cdc.gov/flu/>

2011-2012 Seasonal Flu

Flu activity most commonly peaks in the U.S. in January or February; however, seasonal flu activity can begin as early as October and continue as late as May. CDC recommends a yearly flu vaccine for everyone 6 months of age and older. Infectious Disease specialists recommend vaccination as soon as it becomes available.

CDC Resource: <http://www.cdc.gov/flu/about/season/>

Pandemic Flu

Pandemic Flu occurs when an outbreak of influenza quickly spreads to a large portion of the world. This occurs when people are not vaccinated or the vaccine is not protective against the strain of influenza causing the outbreak.

Resource: www.pandemicflu.gov

H1N1

H1N1 is a particular type of Influenza A strain which is sometimes called swine flu. This virus spreads from coughs and sneezes or by touching contaminated surfaces. The H1N1 pandemic of 2009-2010 disproportionately affected children and young adults. If you are responsible for planning for possible pandemics, please keep in mind the unique needs of the pediatric population.

Situation Update Resource: <http://www.cdc.gov/h1n1flu/>

H5N1

H5N1, Highly Pathogenic Avian Influenza, remains endemic in six nations: Bangladesh, China, Egypt, India, Indonesia, and Vietnam. The United Nations urges heightened readiness and surveillance against a possible major resurgence of the H5N1 spreading in Asia and beyond.

FAO Resource: <http://www.fao.org/avianflu/en/index.html>

Preparation

Each year, 5% to 20% of U.S. residents acquire an influenza virus infection, and many will seek medical care in ambulatory and emergency healthcare settings. Healthcare-associated influenza infections can occur in any healthcare setting and most often occur when influenza is circulating within the community. Steps to prepare for an upcoming influenza season include: healthcare personnel vaccination, instituting proper respiratory hygiene and cough etiquette, appropriate management and planning for ill healthcare personnel, and use of proper infection control measures.

Vaccinating patients and healthcare personnel early and maintaining adequate supply of vaccine is recommended. Management of ill patients including masking upon entrance to the facility when flu-like symptoms exist is also recommended. Screening visitors for symptoms of acute respiratory illness prior to entering the hospital or ambulatory setting, as well as limiting visitors during times of high incidence of flu-like illness is recommended. Flu activity can be monitored through the use of appropriate surveillance techniques or in collaboration with local and state health departments.

CDC Resource: <http://www.cdc.gov/h1n1flu/guidance/>

<http://www.cdc.gov/flu/professionals/infectioncontrol/>

Prevention

Flu vaccination prevents influenza and is recommended for everyone 6 months of age and older. Anyone 6 months of age and older should consult with their physician regarding flu vaccination as soon as the 2011 - 2012 vaccines are available. People at high risk of serious flu complications include young children, pregnant women, people with chronic health conditions such as asthma, diabetes, heart and lung disease, and persons 65 years of age and older. Vaccination is important for health care workers and persons who live with or care for high risk populations. Children younger than 6 months are at high risk of serious flu illness, but are too young to be vaccinated. Caregivers and siblings of young infants less than 6 months of age should be vaccinated to protect against the spread of flu. The United States Food and Drug Administration (FDA) have selected the three strains of influenza (flu) virus for inclusion in the 2011 - 2012 seasonal flu vaccine based on recommendations from the World Health Organization (WHO). WHO recommended that the Northern Hemisphere's 2011 – 2012 seasonal influenza vaccine contain the following three vaccine virus strains:

- an A/California/7/2009 (H1N1)-like virus;
- an A/Perth/16/2009 (H3N2)-like virus; and
- A B/Brisbane/60/2008-like virus.

Other prevention measures include frequent hand washing with an alcohol-based hand rub. Proper respiratory etiquette, such as covering one's nose and mouth with a tissue while sneezing, and washing one's hands after throwing the tissue in the trash should be instituted. If a person exhibits flu-like illness, the CDC recommends staying home for at least 24 hours after the fever is gone, except to get medical care or for other necessities. Fever should be gone without the use of a fever-reducing medication or anti-pyretics. Any person with flu-like symptoms or pending testing results

should be treated as potentially infectious and placed in isolation. Please consult your local institution's isolation policies and procedures.

CDC Resource: <http://www.cdc.gov/flu/>

<http://www.cdc.gov/flu/protect/preventing.htm>

<http://www.cdc.gov/flu/professionals/vaccination/>

Treatment

When a decision is made to use antiviral treatment for influenza, treatment should be initiated as soon as possible. Antiviral treatment is most effective when administered as early as possible in the course of illness. According to the CDC, treatment is recommended when symptoms are complicated, require hospitalization, or underlying medical conditions are exacerbated. Antiviral dosage can be determined by age and weight for treatment of uncomplicated influenza. Typical duration of antiviral treatment is approximately 5 days. Hospitalized patients with severe illness, such as those with severe lower respiratory tract disease who require intensive care unit admission and patients with evidence of prolonged viral replication and shedding may require longer treatment courses.

CDC resource: http://www.cdc.gov/h1n1flu/recommendations_pediatric_supplement.htm#ad

This year the FDA updated the Tamiflu label to include:

Tamiflu (oseltamivir phosphate) for Oral Suspension: Label Change-New Concentration (6 mg/mL)

Patients may potentially receive either concentration (6 mg/mL or 12 mg/mL) from their pharmacy during the 2011 - 2012 influenza season. The lower concentration of Tamiflu is less likely to become frothy when shaken, which helps to ensure an accurate measurement. A change in the measurements of the oral dosing device from milligrams (mg = weight) to milliliters (mL = volume) has also been instituted for the 2011 – 2012 influenza season.

Resource:

<http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm262432.htm>

School and Day Care Settings

Each year, 20,000 children under the age of 5 are hospitalized due to flu-related complications, accounting for more vaccine preventable disease than any other combined preventable diseases. Flu vaccination is the single best prevention mechanism to prevent flu related complications. Conducting school-located influenza vaccination clinics is recommended as one of the ways to vaccinate high risk populations. More information is Available at:

<http://www.cdc.gov/flu/school/planners.htm>.

Requesting children to cover their nose and mouth while coughing and sneezing, to utilize good hand washing, and avoid touching their eyes, nose, and mouth are also prevention measures which may be instituted to prevent the spread of flu.

According to the CDC, children with flu-like symptoms should be asked to seek medical care at their primary care physician, and should be fever free for 24 hours before returning to school.

CDC Resource: <http://www.cdc.gov/flu/school/>

Testing

Testing currently consist of nasopharyngeal rapid influenza diagnostic tests (RIDTs), direct immunofluorescence assays (DFAs), and real-time reverse transcriptase polymerase chain reaction (rRT-PCR) tests. If identification of H1N1 influenza virus infection is required, testing with an rRT-PCR assay, specific for H1N1 influenza or viral culture should be performed. RIDTs have a widely variable sensitivity and when negative, cannot rule out influenza infection. DFAs can distinguish between Influenza A & B, but cannot distinguish A subtypes. RRT-PCR tests may not be readily available and can take some time to obtain results depending on location and availability. If specific H1N1 testing is requested, rRT-PCRs are able to distinguish A subtypes.

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