**Pediatric Influenza In The Emergency Department Setting**

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This issue of Pediatric Emergency Medicine Practice presents a critical appraisal of the most current literature on influenza in children. Recent studies on clinical presentation, diagnosis, and treatment are reviewed, and recommendations for the evaluation and management of suspected influenza and its complications are provided. Special attention is given to the management of influenza in the febrile young child and the risk of concomitant serious bacterial infection (SBI). This review also discusses the novel influenza A (H1N1) pandemic of 2009 and the most recent recommendations for the 2010-2011 season. For a more detailed and systematic look at the critically ill neonate, see the full text article at [www.ebmedicine.net](http://www.ebmedicine.net).

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<th>Key Points</th>
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<td>Influenza can present in children as a classic influenza-like illness (ILI) or with symptoms associated with common complications. Invasive pneumococcal disease after a respiratory viral infection is also well documented, especially in the 2-week period after influenza infection.11</td>
<td>Common influenza-related complications include otitis media, bronchiolitis, and bacterial pneumonia. Early treatment that addresses these complications is important in order to avoid further complications. A diagnosis of influenza as the primary illness does not necessarily rule out the need for imaging of the chest or possible antibacterial treatment for children of all ages.</td>
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<td>Although fever and associated symptoms such as rhinorrhea, cough, and sneezing often have a viral etiology, consider an SBI such as urinary tract infection (UTI), bacteremia, or meningitis, especially in patients in the first 3 months of life.</td>
<td>The RSV-SBI Study Group of the AAP’s Pediatric Emergency Medicine Collaborative Research Committee conducted a 3-year multicenter study involving 809 febrile infants 60 days or younger who were tested for influenza in 5 EDs. Almost 12% (95 patients) had an SBI.16 The decision to forego blood, CSF, and especially urine testing should not be made simply because an influenza infection is documented. Moreover, because testing for influenza in the ED may result in false-positive or false-negative results, emergency clinicians should use their clinical skills with laboratory findings to guide their investigation and treatment of young children with fever.</td>
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<td>Currently available diagnostic tests for identifying influenza infection include viral culture, reverse transcriptase-polymerase chain reaction (RT-PCR) assay, and rapid antigen testing. Viral culture and RT-PCR are considered the criterion standards for influenza testing. Although they take longer to process than the newer rapid diagnostic tests and require more expertise by laboratory personnel, they provide confirmation of the diagnosis and can differentiate between influenza subtypes.</td>
<td>Although use of rapid testing has increased significantly in the ED setting in recent years and has helped to identify epidemics early in their course, emergency clinicians must be aware of the rate of false-positive—and, even more so, false-negative test results. Since viral culture and RT-PCR are the criterion standards for influenza testing, local protocols in many centers recommend using these techniques when sending samples from very young or very sick children for further analysis.</td>
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<td>Communicating with local agencies and keeping up-to-date with the most recent recommendations from the CDC will help the emergency clinician to identify specific strains of influenza circulating within a particular region. This information may also help to determine appropriate diagnostic and treatment decisions for children.</td>
<td>Every year, different strains of influenza appear and affect communities at slightly different times during the influenza season. Chemoprophylaxis as well as treatment of influenza in the ED should follow the guidelines for antiviral therapy published annually by the CDC. Treatment recommended during the novel influenza A (H1N1) pandemic is no longer applicable.</td>
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<td>Antibiotics are often prescribed inappropriately for children with uncomplicated influenza. Although antibiotic treatment has been found to be ineffective in preventing otitis media in children with viral upper respiratory tract infections, the drugs are commonly prescribed for children with this condition, even with a positive test for a viral agent such as influenza and without a concomitant clinical bacterial presentation.33</td>
<td>In a large, retrospective cohort study of otherwise healthy children in Tennessee, influenza accounted for 10% to 30% of the excess use of antibiotics during the winter of 2001-2002.35 Judicious use of antibiotics is important for all children, especially in the ED, where follow-up is uncertain. Overprescription of antibiotics can lead to the induction of microbial resistance, increased costs, and increased risk of adverse events that can complicate the clinical picture.</td>
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REFERENCES


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