



TALKING POINTS: Deaths in Children from Influenza Complications

- Influenza-related deaths in children are tragic.
- Nine child deaths from laboratory confirmed influenza-related complications have been officially reported to CDC so far during the 2008-09 flu season.
- Six child deaths from laboratory confirmed influenza-related complications were reported during MMWR week 6 (February 8-14, 2009).
 - These deaths occurred in Arkansas, Colorado, Florida, North Carolina [2], and Pennsylvania.
 - One death reported during MMWR week 6 occurred during week 8 of the 2006-07 season (week ending February 24, 2007), bringing the total number of reported pediatric deaths occurring during that season to 78.
 - The remaining five deaths occurred during January 25 through February 14, 2009.
- Bacterial coinfections were confirmed in six (66.7%) of the nine children who died from influenza-associated complications this season.
 - *Staphylococcus aureus* was identified in four (66.7%) of the six children. *Citrobacter freundii* was identified in one child, and streptococcus pneumoniae was identified in the remaining child.
 - Two of the *S. aureus* isolates were sensitive to methicillin and two were methicillin resistant.
 - The six children with bacterial coinfections were five years of age or older.
 - An increase in the number of influenza-associated pediatric deaths with bacterial coinfections was first recognized during the 2006-07 influenza season and this increase continued during the 2007-08 season.
 - In January 2008, interim testing and treatment recommendations were released regarding influenza and bacterial coinfections in children and are available at (<http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00268>).
- Because of confidentiality issues, CDC does not discuss or give details on individual cases. (Additional questions may be referred to the departments of health for each state).
- These deaths are a somber reminder of the importance of protecting children from the flu – especially those at high risk from serious flu-related complications.

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- Children aged 6 months through 8 years need to get two doses of influenza vaccine if they have not been vaccinated previously at any time. Studies have shown that young children who receive only one dose of vaccine the first time they are vaccinated have reduced or no protection.
- During the past 5 years that CDC has tracked deaths among children with influenza infections, the number of deaths reported to CDC each year has ranged from 46 to 153 deaths.
 - During the 2007-08 flu season, a total of 88 influenza-related deaths in children were reported to CDC.
 - During the 2006-07 season, a total of 78 influenza-related deaths in children were reported to CDC.
 - During the 2005-06 season, 46 deaths in children under age 18 were reported to CDC
 - During the 2004-05 season, 47 deaths in children under age 18 were reported to CDC.
 - During the 2003-04 season (the first year that CDC collected information on pediatric flu deaths), 153 flu-associated deaths in children under age 18 were reported to CDC.
- More flu-related deaths will likely occur this winter among children; however, at this time, neither childhood deaths nor hospitalizations exceed what we have seen in recent prior years for this point in the season. Meanwhile, CDC will continue to monitor and investigate all reported influenza-related deaths among children.
- Children at highest risk from flu complications include:
 - Children younger than 5 years old, including children younger than 6 months of age who are too young to be vaccinated.
 - Children (of any age) with chronic medical conditions like asthma, diabetes or heart disease.
- Vaccination remains the best method for preventing influenza and its potentially severe complications in children and adults – even in years where there is a suboptimal match between vaccine and circulating strains of influenza viruses. For more information, go to <http://www.cdc.gov/flu/about/qa/vaccineeffect.htm>.
- At this time, vaccination efforts should continue to occur.
 - CDC recommends vaccination for all children 6 months through 18 years of age, and household members and others in close contact with children younger than 5 years old, especially contacts and caregivers of children younger than 6 months old, since these children are at very high risk of influenza complications but are too young to be vaccinated themselves.
- There are two different types of influenza vaccine:
 - **The "flu shot"**— an inactivated vaccine (containing killed virus) that is given with a needle, usually in the arm. The flu shot can be given to people 6 months of age and older, including healthy people, pregnant women and people with chronic medical conditions.
 - **The nasal-spray flu vaccine** — a vaccine made with live, weakened flu viruses that do not cause the flu (sometimes called LAIV for “live attenuated influenza vaccine” or FluMist®). LAIV (FluMist®) is approved for use in healthy* people 2-49 years of age who are not pregnant.

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Vaccination providers should ask the parents or guardians of children younger than 5 years of age about wheezing and should not use nasal spray flu vaccine on children younger than 5 years of age who have wheezing in the past year. The vaccine should not be used in anyone 2 years or older with asthma.

For more information, go to <http://www.cdc.gov/flu/protect/keyfacts.htm>

* "Healthy" indicates persons who do not have an underlying medical condition that predisposes them to influenza complications.

- It also is important to remember that the flu vaccine is not perfect, and every year some vaccinated people still get sick from influenza. So, multiple strategies should be used at the same time to reduce, as much as possible, the risk of influenza and its complications, including:
 - The appropriate use of influenza antiviral medications.
 - Hand hygiene and cough etiquette (washing your hands often and covering coughs and sneezes).
 - Stay home from work and/or school when you are sick to avoid spreading your illness to others.
- Flu antiviral drugs are an important second line of defense against influenza and can be used to treat flu and to prevent flu.
 - Early treatment of high-risk adults infected with the flu has been shown to reduce the risk of death, but less information is available for children. Regardless, early antiviral treatment of high-risk children or any child who is moderately or severely ill with the flu may help. Unfortunately, no influenza antiviral medications are FDA-approved for children less than 1 year old. Parents should consult with their doctor about the use of antiviral medications if they think their child may have flu.
 - Antiviral medications can also be used to prevent the flu. Providers may consider giving antivirals to a person who may not respond to the flu vaccine because they have a severely weakened immune system or because they were exposed to someone else with flu illness, are unvaccinated, or may not be adequately protected after vaccination, and are at higher risk of complications.
 - More information on the use of antiviral medications and interim guidance on the choice of medications given emerging resistance to one medication among influenza A (H1N1) strains can be found at <http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00279>
- Flu-related deaths in children less than 18 years old should be reported through the Nationally Notifiable Disease Surveillance System (NNDSS). The number of flu-associated deaths among children reported during the 2008-09 flu season will be updated each week and can be found at <http://www.cdc.gov/flu/weekly>.

For more information, visit www.cdc.gov/flu, or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).