

Children with neurological disorders need flu vaccine but don't always get it

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Credit: National Cancer Institute

Children who have neurological disorders such as cerebral palsy or epilepsy are no more likely to be vaccinated against influenza than youngsters without these conditions, despite the increased risk for complications from flu these children experience. Moreover, health care providers may not be familiar with the increased risk among these patients to effectively recommend influenza vaccine.

Those are the findings of a study by a research team from the University of Louisville and the Centers for Disease Control and Prevention published online today in the journal *Vaccine*.

Michael J. Smith, M.D., is an associate professor in the UofL Department of Pediatrics and a pediatric infectious disease specialist with University of Louisville Physicians. Smith is lead author of the study that is the first to estimate the rates of flu vaccination among children with neurological or neurodevelopmental disorders (NNDDs).

"Our research shows that influenza vaccination in children with NNDDs is comparable to vaccination in healthy children - but both rates are suboptimal," Smith said. "More education about the need for annual influenza vaccination is needed, both for parents and [health care providers](#)."

Overall, 2,138 surveys were completed by parents of children with at least one high-risk condition of any kind. Of these, 1,143 were completed by parents of children with at least one NNDD and 516 by parents of children with more than one NNDD. In the survey of providers, 412 physicians participated. The researchers worked with Family Voices, a national advocacy group for children with [special health care](#) needs, and the American Academy of Pediatrics to recruit survey participants in all 50 states and the District of Columbia.

Overall, 47 percent of parents reported that their children had received or were scheduled to receive seasonal [flu vaccine](#); among the group of NNDD parents, the rate was only slightly higher at 50 percent.

The major driver to have a child vaccinated was not the presence of an NNDD, however, but the presence of a chronic respiratory condition, although several studies show that children with NNDDs are at [increased risk](#) of complications from flu. According to a 2013 study in the journal

Pediatrics, one-third of reported pediatric influenza-related deaths between 2004 and 2012 in the United States occurred in children with NNDDs.

"The reasons for the increased severity of influenza among these children are uncertain," Smith said. "We do know, however, that an NNDD, [intellectual disability](#), was the most common NNDD associated with pediatric deaths during the 2009 H1N1 flu pandemic. A better understanding of the attitudes, beliefs and behaviors that influence flu vaccination of children with NNDDs such as intellectual disability is needed."

Parents who did not vaccinate their children were asked why. More than one-third of the 1,140 respondents - 38 percent - said they had concerns about how the vaccine would affect their child. Another 32 percent expressed concerns about the safety of the vaccine.

Among the 412 physicians who participated, 74 percent recognized that [children](#) with another NNDD, [cerebral palsy](#), were at higher risk from flu but other NNDDs were not so highly recognized as posing risk: epilepsy at 51 percent and intellectual disability at 46 percent.

More information: Influenza vaccination in children with neurologic or neurodevelopmental disorders, [DOI: 10.1016/j.vaccine.2015.03.050](https://doi.org/10.1016/j.vaccine.2015.03.050)

Provided by University of Louisville

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