

Spread of H1N1 within Households

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[Karen Hunter] Hello, I'm Karen Hunter. With me today is Dr. Oliver Morgan, an epidemiologist at the Centers for Disease Control and Prevention. We're talking about a paper in the April 2010 issue of CDC's journal, *Emerging Infectious Diseases*. The article looks at the spread of the pandemic influenza strain H1N1 in the spring of 2009 in Texas, specifically whether the flu was spreading between family members in households and, if so, how. Welcome, Dr. Morgan.

[Oliver Morgan] Thank you.

[Karen Hunter] This new flu was first identified in April 2009 and, by June, had spread across the globe. CDC and the Texas Department of Health set out to investigate whether flu was spreading within households. Dr. Morgan, why is it so important to look at household transmission?

[Oliver Morgan] Household transmission is a good indicator of infectiousness of influenza. And when we did this investigation at the very beginning of the pandemic in the U.S., the findings from this investigation along with others were used to immediately inform the public health response.

[Karen Hunter] What did you find in Texas?

[Oliver Morgan] We included 349 individuals from 77 households. We found that nine percent of household members who were exposed to another ill household member with H1N1 flu also developed flu. However, children were more affected than adults. Eighteen percent of children under five years of age and 11 percent of 5 to 18 year olds got the flu, much higher than numbers we saw among the adults in the households. We also found that children were more likely to be the person to introduce the flu into the household than adults.

[Karen Hunter] What are some of the reasons that children may have been more at risk or more likely to spread the disease?

[Oliver Morgan] Children tend not to cover their mouths when they cough or wash their hands when they sneeze. And this may mean that they're more likely to spread the flu virus. Children also tend to have close physical contact with their brothers and sisters, as well as parents or caregivers, which may increase the risk of infection. Another possibility is that adults may have greater immunity to the flu virus from previous flu virus infections during their lifetime.

[Karen Hunter] What does this investigation tell us about future pandemics?

[Oliver Morgan] Well, this investigation cannot tell us what will happen during future pandemics because a new flu virus may behave very differently. However, it does confirm that children play an important role in the transmission of influenza viruses and that reducing infection among

children and their caregivers, such as giving them H1N1 vaccine, may help reduce the spread of the disease.

[Karen Hunter] Thanks Dr. Morgan. I've been talking with CDC's Dr. Oliver Morgan about a paper that appears in the April 2010 issue of CDC's journal, Emerging Infectious Diseases. You can see the entire article online at www.cdc.gov/eid.

If you'd like to comment on this podcast, send an email to eideditor@cdc.gov. That's eideditor – one word - at cdc.gov. I'm Karen Hunter, for Emerging Infectious Diseases.

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