Medical Xpress

Amid the flu epidemic, don't forget RSV in young children

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Influenza, particularly H1N1, has understandably captured the attention of public health officials, the media and the public. However, an analysis from Children's Hospital Boston, based on patients seen in its emergency department (ED) during several recent flu seasons, shows that another virus - respiratory syncytial virus (RSV) -- takes a substantially greater disease toll among young children than does seasonal flu.

Although the data come from the pre-H1N1 influenza era, the analysis, published online by the journal *Pediatrics* on November 23, is a reminder that RSV can cause serious illness in infants and young children. Prior studies have shown that by 3 years of age, nearly 100 percent of children are infected with RSV. According to the CDC, RSV is the most common cause of bronchiolitis and pneumonia in children under 1 year of age in the U.S.

The study, led by Florence Bourgeois, MD, MPH and Kenneth Mandl, MD, MPH, both of Children's Division of Emergency Medicine and the Children's Hospital Informatics Program, looked at acute respiratory illnesses in children aged 7 and younger, and found that patients infected with RSV had more than twice as many ED visits and six times more hospitalizations than those infected with seasonal flu. RSV-related illnesses were also twice as likely to lead to additional primary care clinic visits and to antibiotic treatment. The parents of children with RSV missed almost three times more workdays than parents of children with the flu, and parents of children under age 2 were nearly five times more likely to miss work when their child had RSV.

"RSV has been underappreciated," says Bourgeois, who is also affiliated with Harvard Medical School. "There's been disproportionate attention given to influenza, even though our data show morbidity to be very high from RSV. Based on our data, much more should be done in terms of prevention."

The RSV season begins in October, but generally doesn't peak until January and lasts through April/May, so it will become more visible in the coming months, she adds.

Bourgeois and colleagues prospectively studied children aged 7 and under visiting the Children's Hospital Boston ED with acute respiratory illnesses during five consecutive seasons (2001-2006) - an average of 5,288 visits each year. A subgroup of children underwent viral testing; 23.6 percent were found to have RSV and 11.2 percent had influenza. To quantify additional healthcare visits and missed school and work days, the researchers conducted standardized interviews with 210 parents whose children had documented RSV or flu.

Using census data and data on pediatric acute respiratory illness from the National Hospital and Ambulatory Medical Care Survey, Bourgeois and colleagues were able to extrapolate their data nationally and determine population-based rates of RSV and flu illnesses. They estimate that 21.5 ED visits per 1,000 children were attributable to RSV, as compared with 10.2 per 1,000 for seasonal flu. Children under age 2 with RSV had the most visits - 64.4 per 1,000. Estimated hospitalization rates were 8.5 per 1000 for RSV, versus 1.4 per 1000 for flu. Nationally, caregivers missed an estimated 716,404 workdays each year for RSV and 246,965 for flu.

Although the study only looked at children age 7 and younger, the researchers believe their findings are relevant to older age groups, since young children drive transmission of viral infections, the researchers say. Recent hospitalization and mortality data indicate that, like flu, RSV

disproportionately affects elderly persons.

While H1N1 may change the equation this year - there are indications that it's causing a greater burden of illness than seasonal flu - we shouldn't relax our public-health vigilance once that epidemic starts to wane, says Bourgeois. "Many of the prevention measures people are following for H1N1 - such as frequent handwashing, using alcohol-based hand-sanitizers, and staying home when they're sick - should apply every winter, to every viral season," she says.

More information:

• Falsey AR; et al. Respiratory syncytial virus infection in elderly and high-risk adults. N Engl J Med 2005 Apr 28;3 52(17):1749-59.
• Thompson WW; et al. Mortality associated with influenza and respiratory syncytial virus in the United States. JAMA 2003 Jan 8;289(2):179-86.
• Hall CB; et al. The burden of respiratory syncytial virus infection in young children. N Engl J Med 2009 Feb 5; 360(6):588.

Source: Children's Hospital Boston (news : web)