

Children's hospitals not equipped to handle pandemics

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A new study of children's hospitals nationwide has found them under-equipped to handle a major surge of patients in the event of a pandemic, and urges health care institutions and government agencies to immediately review emergency preparedness plans as flu season approaches.

"Every year we get lucky," said the study's lead author, Marion Sills, MD, MPH, and associate professor of pediatrics at the University of Colorado School of Medicine. "But it wouldn't take much of an epidemic to put us over capacity. If that happens where do the children go?"

The study, published in the Centers for Disease Control and Prevention's [Emerging Infectious Diseases](#) journal, examined data from 34 children's hospitals as they dealt with the 2009 H1N1 pandemic, which disproportionately affected children.

Researchers found the median occupancy rate in the hospitals was 95 percent during the H1N1 pandemic but this situation did not differ from typical levels of high occupancy commonly experienced. In the 2008-09 [flu season](#), the median occupancy was 101 percent. Fortunately, the pandemic turned out to be milder than expected. Still, the study said, it would have only taken about 0.2 admissions per 10 beds per day to reach 100 percent occupancy across all hospitals in the study.

"Models representing an outbreak of a more virulent [influenza virus](#) based on historical comparisons demonstrate that modest increases in emergency department visits or emergency department admissions rates would have resulted in substantial overcrowding among the large cohort of children's hospitals in our study," Sills wrote.

According to Sills, [pandemics](#) last for weeks or months and affect large geographical areas, often multiple nations or continents. And even if

children's hospitals could handle such occupancy rates on a short-term basis, there are real questions of whether they could do so for a prolonged period.

The findings are especially significant in the context of national [disaster planning](#) related to children. The National Commission on Children and Disasters 2010 Report to the President and Congress found serious deficiencies in the state of disaster/pandemic preparedness for children and recommended the creation of a regionalized pediatric care system to help rectify these deficiencies.

"Our study shows that children's hospitals, the central component of this proposed regionalized system, routinely operate so closely to capacity that little available reserve exists for even a modest surge of inpatients," Sills said.

She noted that while it might make financial sense to keep the hospitals 95 or 100 percent full, it might not make sense from a health care quality perspective.

"H1N1 was not as virulent as people had feared, but the next one might be," Sills said. "The point of this paper is that it wouldn't take a much more virulent virus to get us into serious trouble."

Provided by University of Colorado Denver

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