
Inpatient capacity at children's hospitals during pandemic (H1N1) 2009 outbreak, United States

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Quantifying how close hospitals came to exhausting capacity during the outbreak of pandemic influenza A (H1N1) 2009 can help the health care system plan for more virulent pandemics. This ecologic analysis used emergency department (ED) and inpatient data from 34 US children's hospitals. For the 11-week pandemic (H1N1) 2009 period during fall 2009, inpatient occupancy reached 95%, which was lower than the 101% occupancy during the 2008-09 seasonal influenza period. Fewer than 1 additional admission per 10 inpatient beds would have caused hospitals to reach 100% occupancy. Using parameters based on historical precedent, we built 5 models projecting inpatient occupancy, varying the ED visit numbers and admission rate for influenza-related ED visits. The 5 scenarios projected median occupancy as high as 132% of capacity. The pandemic did not exhaust inpatient bed capacity, but a more virulent pandemic has the potential to push children's hospitals past their maximum inpatient capacity.

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Authors:

Sills MR, Hall M, Fieldston ES, Hain PD, Simon HK, Brogan TV, Fagbuyi DB, Mundorff MB, Shah SS