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Reply to Vanhems et al

To the Editor—We would like to thank Dr. Vanhems and colleagues¹ for their interest in our study.² We agree that development of a standard definition of healthcare-associated influenza (HAI), which currently does not exist, is an important priority to allow research in this area to progress.

Since it is uncommon for a specific source of influenza infection to be identified in patients who become symptomatic following admission, an agreed-upon time limit will likely be necessary, similar to National Healthcare Safety Network definitions for other healthcare-associated infections.³ This time limit should represent the estimated incubation period for naturally occurring influenza—either median or maximum. Using a median incubation period is problematic since, as Dr. Vanhems and colleagues point out, it is likely subject to patient-to-patient variability related to virus strain type,⁴ dose, and host factors, as reflected in variability in incubation periods seen even in point source outbreaks.^{5,6}

In our study,² designed to assess the burden of disease and seasonal variability in frequency of HAI, we elected to choose a maximum incubation period of 96 hours. Infections occurring beyond 96 hours after admission would be considered HAI, so that the HAI proportion would be conservatively estimated. In the 6 study years using this definition, 17.3% of hospitalized cases were considered HAI (range by year, 6.6%–33.1%). A further 4.2% of patients became symptomatic between 48 and 96 hours after admission (range by year, 2.9%–8.1%), and 4.8% developed symptoms between 24 and 48 hours after admission (range, 3.0%–7.8%). If these cases were added, the HAI proportion of all cases would be 21.5%

(symptom onset more than 48 hours after admission) or 26.3% (more than 24 hours after admission).

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