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## Letter to the Editor

### Four moments for healthcare facility visitor hand hygiene



To the editor:

The coronavirus disease 2019 (COVID-19) pandemic has highlighted the concern that visitors to healthcare facilities are at risk to acquire or transmit pathogenic microorganisms.<sup>1</sup> In an outbreak of COVID-19 in a long-term care facility, 16 visitors were diagnosed with infection, and half required hospitalization.<sup>1</sup> Encouraging visitors to perform hand hygiene is a basic measure recommended to reduce the risk for acquisition and transmission of pathogens.<sup>2,3</sup> However, several studies have demonstrated that visitors rarely clean their hands in healthcare settings.<sup>2,3</sup>

One factor that may limit hand hygiene by healthcare facility visitors is uncertainty regarding when hand hygiene should be performed. Identification of specific moments when hand hygiene measures are indicated has been previously used to improve understanding, training, and monitoring of personnel and patient hand hygiene.<sup>4,5</sup> Therefore, we sought to develop similar educational materials for visitors to our facility. We interviewed 8 infection prevention and nursing staff to identify moments when hand hygiene would be recommended for visitors. A “Four Moments for Healthcare Facility Visitor Hand Hygiene” poster was designed based on these interviews. The initial version of the poster was refined based on comments provided by the 8 staff members and 6 healthcare facility visitors.

The poster recommends 4 moments for healthcare facility visitor hand hygiene (Fig 1), including (1) Entering the facility, (2) After touching shared items, (3) Entering and exiting a patient’s room, and (4) Exiting the healthcare facility. Hand hygiene on building entry and exit will reduce the risk that organisms will be imported into the



Fig 1. Poster showing 4 moments for healthcare facility visitor hand hygiene.

healthcare facility or carried from the facility to the community. Hand hygiene after touching shared items such as elevator buttons, touchscreens, chairs, and magazines will reduce the potential for acquisition and transfer of pathogens. Finally, hand hygiene on entering and exiting a patient's room or care area will minimize the risk of carrying pathogens to patients or from patients to other areas in the healthcare facility. In addition to identifying moments for visitor hand hygiene, the poster informs visitors that they are welcome to use alcohol hand sanitizer dispensers or sinks for hand hygiene.

In the context of the COVID-19 pandemic, there is a need for all healthcare facilities to develop policies and procedures to reduce the risk for acquisition and transmission of pathogenic microorganisms by visitors. Education on basic infection control measures such as social distancing, cough etiquette, and hand hygiene will be required. The "Four Moments for Healthcare Facility Visitor Hand Hygiene" model described here may provide a useful tool for education of visitors on when hand hygiene is indicated. Additional studies are needed to evaluate the usefulness of the model in improving hand hygiene practices by visitors to hospitals and long-term care facilities.

## References

1. McMichael TM, Currie DW, Clark S, et al. Epidemiology of Covid-19 in a long-term care facility in King County, Washington. *N Engl J Med*. 2020;382:2005–2011.
2. Birnbach DJ, Rosen LF, Fitzpatrick M, Arheart KL, Munoz-Price LS. An evaluation of hand hygiene in an intensive care unit: are visitors a potential vector for pathogens? *J Infect Public Health*. 2015;8:570–574.
3. Wong MWH, Xu YZ, Bone J, Srigley JA. Impact of patient and visitor hand hygiene interventions at a pediatric hospital: a stepped wedge cluster randomized controlled trial. *Am J Infect Control*. 2020;48:511–516.
4. Sax H, Allegranzi B, Uckay I, et al. 'My five moments for hand hygiene': a user-centred design approach to understand, train, monitor and report hand hygiene. *J Hosp Infect*. 2007;67:9–21.
5. Sunkesula VCK, Knighton S, Zabarsky TF, et al. Four moments for patient hand hygiene: a patient-centered, provider-facilitated model to improve patient hand hygiene. *Infect Control Hosp Epidemiol*. 2015;36:986–989.

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