

## Correspondence

### Re: Hand Hygiene and Face Touching in Family Medicine Offices: A Cincinnati Area Research and Improvement Group (CARInG) Network Study

*To the Editor:* Elder et al<sup>1</sup> presented the results of a fascinating and detailed study of the hand hygiene and face touching behavior of family medicine physicians. The detailed nature of their study is particularly helpful insofar as it enables the reader to think hard about what measures if any might improve behavior in this field. Certainly, advocates of medical education to improve practice will likely find the results frustrating. Education to improve hand hygiene has been consistent, has used multiple methods, and has been ongoing for many years. Yet it still seems to have limited effects. Perhaps it is time to think of other methods besides education to change behavior. If physicians cannot be actively convinced to change, perhaps they could be engineered into positions where they have to follow best practice.

It was interesting to note that physicians were more likely to follow best practices when using an alcohol-based cleanser. Perhaps alcohol-based cleansers could replace sinks and soap dispensers in consulting rooms. Physicians then would in effect be “forced” to use the alcohol-based dispensers more often. Sinks would still need to be available in other rooms to clean soiled hands, but they would not be as convenient as the alcohol dispenser.

Another flaw in hand-washing behavior is that physicians use their hands to turn off the faucet and so contaminate themselves again. Could all hand-operated faucets be replaced by automatic no-touch faucets? Again, this would be a means of designing an error out of the system, in effect making it impossible for physicians to commit this error.

Last, we know that drying hands with a disposable towel is a best practice, so perhaps now is an opportunity to remove all nondisposable hand-drying equipment from clinical areas. This also would be a means of maneuvering physicians into a situation where they would operate according to best practice guidelines.

Education has clearly taken us a reasonable distance along the journey of improving hygiene—but to complete the journey we will likely need to use other means, and system redesign might need to come to the fore.

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#### Reference

1. Elder NC, Sawyer W, Pallerla H, Khaja S, Blacker M. Hand hygiene and face touching in family medicine offices: a Cin-

cinnati Area Research and Improvement Group (CARInG) Network study. *J Am Board Fam Med* 2014;27:339–46.

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The above letter was referred to the author of the article in question, who offers the following reply.

### Response: Re: Hand Hygiene and Face Touching in Family Medicine Offices: A Cincinnati Area Research and Improvement Group (CARInG) Network Study

*To the Editor:* We thank Dr. Walsh for highlighting valuable points about how best to improve the quality of hand hygiene in the office setting. A recent Cochrane review titled “Interventions to Improve Hand Hygiene Compliance in Patient Care” found only 4 studies meeting criteria for review—all hospital based, and none of high quality.<sup>1</sup> The review corroborates Dr. Walsh’s points by noting that education and training, even that rigorously performed within research studies, was insufficient to improve compliance and that, while multiple strategies may be helpful—including involving staff in planning activities or applying social marketing strategies—more research is needed.<sup>1</sup> We agree that system changes are imperative not only to sustain behavior change but also to achieve and measure safety practices such as hand hygiene. System changes such as those outlined by Dr. Walsh, however, must be implemented with attention to “resilience,” which is the ability of systems to anticipate and adapt to the potential for surprise, workarounds, and failure.<sup>2</sup> Not only is vigilance in the design of new systems for hand hygiene, such as those described, which “make it impossible for physician to commit this error,” needed, but attention must be paid to other system changes in primary care practice that may inadvertently make hand hygiene more difficult by correcting one problem but potentially creating new errors or disrupting work flow.

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#### References

1. Gould DJ, Moralejo D, Drey N, Chudleigh JH. Interventions to improve hand hygiene compliance in patient care. *Cochrane Database Syst Rev* 2010;(9):CD005186.
2. Carayon P, Xie A, Kianfar S. Human factors and ergonomics as a patient safety practice. *BMJ Qual Saf* 2013;23(3):196–205.

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