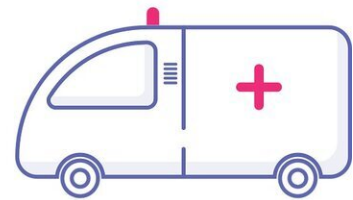
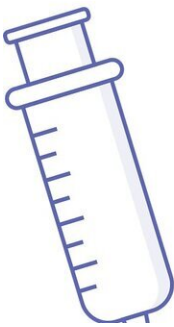
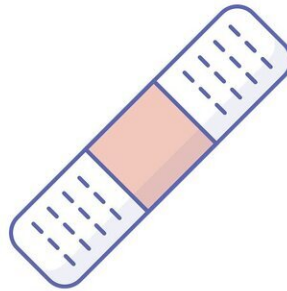


# Automated, interactive video content could improve hand-washing practices to reduce healthcare-associated infections

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Credit: CC0 Public Domain

Findings suggest that video intervention significantly increased mean hand-washing duration and the number of users who achieved the recommended 20 seconds of hand washing as compared to the control.

During the "impact-video" and "sustain-video" periods, mean seconds of hand washing increased by 7.5 and 4.2 seconds, respectively, as compared to control (21.9 seconds, 18.6 seconds and 14.4 seconds; p < 0.001). At month 1 of the "impact" period, 61.1% in the "impact" group and 41% in the "sustain" group achieved this duration, representing increases of 39.3% and 19.2% in the two video groups (p < 0.001). At month 3, the "impact" group followed by a 22% decrease at month 3 and then decline to a new steady state of 45% below the peak at month 11. The researchers suggest that the decline in hand-washing engagement could be attributed to creative and message fatigue and suggest that video content should be refreshed every 3 months to help sustain engagement and hand-washing improvements.

Good hand hygiene—including hand washing—is the simplest and most effective method to prevent HAIs. Effective hand washing involves both the washer's technique and the duration of their wash. The U.S. Centers for Disease Control and Prevention (CDC) recommends that all individuals, whether in a healthcare setting or the general public, wash hands for a minimum duration of 20 seconds. Previous research and [clinical evidence](#) have shown that compliance with this and other hand-washing guidelines is generally low.<sup>1</sup>

*The study conducted by Dr. Ackermann and her colleagues assessed whether an automated, smart video engagement system could increase the number of individuals who meet the recommended 20-second hand-washing duration, as well as whether hand washers eventually became fatigued with the intervention.*

*The researchers developed an innovative system comprising smart, connected, hand-soap and towel dispensers synched to a computer that was programmed to display a rotating set of 20-second-long creative videos. The system began playing the video on a display screen above the sink and timing the hand-washing duration when a user first dispensed soap onto*

*their hands, and then stopped both the video and timing when the same user dispensed a towel to dry their hands. Researchers installed and piloted two of the systems in staff bathrooms of a non-clinical hospital location and captured data for three defined periods: a control period of 3 weeks (during which no video played), followed by an "impact-video" period of 9 months, and then a "sustain-video" period of 17 months.*

*Findings suggest that video intervention significantly increased mean hand-washing duration and the number of users who achieved the recommended 20 seconds of hand washing as compared to the control. During the "impact-video" and "sustain-video" periods, mean seconds of hand washing increased by 7.5 and 4.4 seconds, respectively, as compared to control (21.9 seconds, 18.6 seconds and 14.4 seconds; p < 0.05). In the [control group](#), 61.1% in the "impact" group and 41% in the "sustain" group achieved this duration, representing increases of 39% and 19.2% in the two video groups (p < 0.05). The percentage of users achieving 20 seconds of hand washing at month 1 of the "impact" period followed by a 22% decrease at month 3 and then decline to a new steady state of 45% below the peak at month 11. The researchers suggest that the decline in hand-washing engagement could be attributed to creative and message fatigue, and suggest that [video](#) content should be refreshed every 3 months to help sustain engagement and hand-washing improvements.*

*"This study and its findings are exciting, because they suggest a viable new approach for addressing a fairly intractable healthcare problem," said Linda Dickey, RN, MPH, CIC, FAPIC, and 2022 APIC president.*

*"Solutions that meaningfully improve and sustain good hand hygiene will reduce infections, save money and save lives."*

**More information:** Lily Ackermann et al, Video engagement to improve handwashing duration: A longitudinal study assessing creative and messaging fatigue, *American Journal of Infection Control* (2022). [DOI: 10.1016/j.ajic.2021.11.024](https://doi.org/10.1016/j.ajic.2021.11.024)

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