



KEY POINT SUMMARY

OBJECTIVES

To determine how long flashing red lights affixed to hand hygiene dispensers can sustain higher levels of hand hygiene compliance, and to assess the effectiveness of strategic signage in improving hand hygiene compliance.

DESIGN IMPLICATIONS

Flashing lights attached to alcohol-gel dispensers could help attract attention and increase hand hygiene compliance. The authors note that individuals would tamper with the lights when they were affixed to the dispensers with putty; instead, translucent plastic containers attached to stands above the dispensers proved to be effective.

Effectiveness of an extended period of flashing lights and strategic signage to increase the salience of alcohol-gel dispensers for improving hand hygiene compliance

Rashidi, B., Li, A., Patel, R., Harmsen, I. E., Sabri, E., Kyeremanteng, K., & D'Egidio, G. 2016 | *American Journal of Infection Control* / Volume 44, Issue 7, Pages 782-5

Key Concepts/Context

Hospitals are often full of information and attention-seeking signs, colors, and noises, making it difficult for something as inconspicuous as alcohol-gel hand dispensers to stand out apart from everything else. Therefore if a hospital wishes to increase rates of hand hygiene compliance, the design and location of hand sanitizer dispensers is of high importance. In a previous study, the authors of this paper showed that affixing a flashing red light to alcohol-gel dispensers for one week doubled hand hygiene rates from 12.4% to 25.3%. What remains unknown is whether or not this intervention can sustain high levels of hand hygiene compliance over longer periods of time. The authors also noted in their previous study that hand hygiene compliance dropped off during colder days, possibly due to the use of gloves.

Methods

This study took place in the main entrance area of a large hospital. First, observers counted the number of times handwashing events occurred between 7:30 a.m. - 8:30 a.m., Monday through Friday for one week prior to the intervention. Then, flashing red lights were situated in translucent plastic containers attached to stands above two alcohol-gel dispensers that faced the hospital's entrance doors. The lights remained flashing for six weeks, and observers counted handwashing events from 7:30 a.m. - 8:30 a.m., Monday through Friday during weeks one, three, five, and six of the intervention period. To test the effectiveness of strategic signage in boosting compliance, a sign was placed 10 meters in front of alcohol-gel dispensers during week five. The sign informed individuals of the upcoming dispenser and



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directed them to remove their gloves prior to cleaning. Outdoor temperatures and snowfall levels were also recorded during this period.

Findings

10,824 total opportunities for hand hygiene compliance were observed; 2,281 were during the control week, and 8,543 during the intervention period. There was a significant increase in compliance during the intervention period -- from 11.8% to 20.7%. Compliance rates remained stable for as long as the lights were flashing. The preemptive warning sign did not generate increased rates of compliance, and temperature also did not seem to have a significant effect on compliance rates. There was a slight increase in compliance when the batteries for the flashing lights were fully charged, possibly due to increased brightness.

Limitations

This study took place in a single hospital, making the implications about the effectiveness of flashing red lights difficult to generalize. The time of day and year may have also affected the findings, despite the lack of correlation found between compliance and temperature.

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