SYNOPSIS

KEY POINT SUMMARY

OBJECTIVES

The objective of this study was to use a patient encounter simulation to evaluate the effectiveness of using different visual cues on improving HHC in a hospital environment.

The Efficacy of Visual Cues to Improve Hand Hygiene Compliance

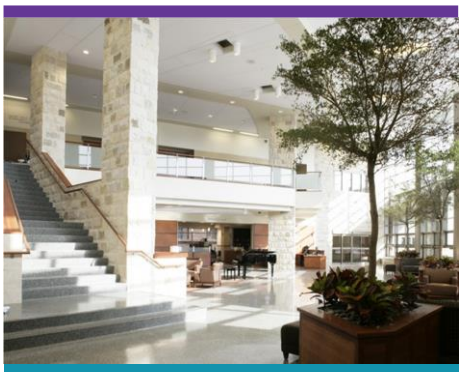
Nevo, Igal, Fitzpatrick, Maureen, Thomas, Ruth-Everett, Gluck, Paul A., Lenchus, Joshua D., Arheart, Kristopher L., Birnbach, David J., 2010 | *Simulation in Healthcare*. Volume 5, Issue 6, Pages 325-331

Key Concepts/Context

Healthcare-associated infections (HAI) affect patients at hospitals and other facilities. Hand hygiene compliance (HHC) among healthcare workers is important and was called upon by the World Health Organization (WHO) in 2009 for improvement and sustainability. The authors of this study argue that HHC remains low despite various interventions and is in need of a solution to improve compliance. The impact of using visual cues on HHC has not been studied and is the purpose of this study. Using various visual cues, a simulation of a hospital room encounter with patients was used to evaluate possible solutions.

Methods

Two rooms at a medical-surgical unit in a teaching hospital were used for one day to evaluate the impact of different visual cues on HHC. 75 nurses and 75 physicians volunteered to participate in the study, which was approved by the IRB. They were divided into five equal groups so that each participant would perform a physical examination on a patient. The participants were expected to maintain hand hygiene before and after each examination. The five groups were exposed to different visual cues to encourage the use of the hand sanitizer dispenser. The groups were exposed to the following: 1- The dispenser was kept in its usual location (Baseline). 2- The dispenser was placed in direct line of sight (Line-of-Sight). 3- Flashing lights were placed on the dispenser without moving it (Baseline & Flicker). 4- The dispenser was in the line of sight with flickers (Line-of-Sight & Flicker). 5- A sign was placed on the door with a warning of camera surveillance and an alarm in case of non-compliance (Warning Sign). The simulation was carried out on actors representing the patients following a pre-specified script. The participants were asked to perform as they would in a real clinical situation. They did a five minute abbreviated examination and were monitored by the patient actor who was a member of the research team



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to see how they interacted with the situation regarding HHC. A week after the study was completed the participants were anonymously surveyed about HHC. The data collected was analyzed using a linear model to perform a repeated measures logistic regression.

Findings

All visual cues increased the pre-examination HHC while post-examination was increased by Baseline & Flicker and Warning Sign. The overall baseline was 36.7% pre-examination and 33.3% post-examination compliance. The highest improvement for pre-examination was achieved with the warning sign at 93.3%. Among the four visual cues the warning sign was the most effective for both the before and after examinations. The study showed that visual cues, including signage, could improve HHC if used properly by locating the sanitizer dispenser and making it more visible for the healthcare professional.

Limitations

The study was conducted using actors and props instead of real patients and real examinations. This could have influenced the behavior of the participants and made them react in a positive way toward HHC.

Design Implications

Visual cues could improve HHC if taken into consideration during the design phase of healthcare facilities. Very specific sanitizer dispenser alternatives were given in the study to encourage their use. As shown by the authors, the visual cues could be effective in altering the behavior of healthcare professionals.