



Evaluation of the effect of hand hygiene reminder signs on the use of antimicrobial hand gel in a clinical skills center



Andy Wearn*, Harsh Bhoopatkar, Miriam Nakatsuji

Clinical Skills Centre, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, New Zealand

Received 2 September 2014; received in revised form 20 October 2014; accepted 16 December 2014

KEYWORDS

Hand hygiene;
Human factors;
Medical students;
Evaluation

Summary Hand hygiene is a critical element of patient care, which needs to be learned and reinforced to become an autonomous behavior. Previous studies have explored aspects of hand hygiene behavior in the clinical workplace, but not in controlled learning environments with health professional students. Development of good hand hygiene behavior requires a multi-faceted approach, including education, reinforcement, feedback and audit. Our study aimed to identify the effect of unannounced hand hygiene reminder signs on the use of antimicrobial hand gel in a clinical skills center. Year 2 MBChB students received practical learning regarding hand hygiene in their clinical skills sessions. Baseline hand gel use was measured using before and after weighing of the bottles. An A5 sign was created to remind the students to hand cleanse and was used as an unannounced intervention. In semester 2 (2012), the student groups were randomly allocated as intervention (signs) or control (no signs). Hand gel use at all sessions was measured. Data were compared between groups and over time. In total, 237 students attended the skills sessions twice during the study. Hand gel use was not significantly different between the two study arms. Overall use was low, typically 1–2 hand gel pumps per student per session. In addition, hand gel use fell over time. A visual reminder to cleanse hands did not appear to have any effect on behavior. These findings may have implications for their value in a clinical setting. Low overall use of hand gel may be context-dependent. Students are in a simulated environment and examine ‘healthy’

* Corresponding author at: Clinical Skills Centre, Faculty of Medical and Health Sciences, The University of Auckland, Private Bag 92019, Auckland Mail Centre, Auckland 1142, New Zealand. Tel.: +64 9 923 8953; fax: +64 9 923 5844.

E-mail addresses: a.wearn@auckland.ac.nz (A. Wearn), h.bhoopatkar@auckland.ac.nz (H. Bhoopatkar), m.nakatsuji@auckland.ac.nz (M. Nakatsuji).

peers or actors. There may have been inconsistent tutor role-modeling or problems with the educational approach to the skill. Analysis at the level of the group, and not the individual, may have also limited our study.

© 2015 King Saud Bin Abdulaziz University for Health Sciences. Published by Elsevier Limited. All rights reserved.

Introduction

Background

Hand hygiene is a cornerstone of good practice for infection control in clinical environments. International guidelines advise hand-washing with soap and water at the start of a clinical shift, after visible organic soiling and at intervals across the working day in association with the use of antimicrobial hand gel for all other clinical contacts [1,2]. Antimicrobial hand gel has been shown to be effective and is advocated after the initial soap and water wash in routine care [3]. All guidelines advocate the World Health Organization's 'Five moments of hand hygiene' [2]. In New Zealand, 'Hand Hygiene New Zealand' (HHNZ) was established to lead in the promotion, advocacy and audit of good practice [4]. HHNZ uses a multi-faceted approach, as recommended by the World Health Organization [5], and publishes performance reports.

Studies in the clinical workplace

Observational studies in the clinical workplace universally reveal suboptimal hand hygiene practice and compliance for health professionals; in their 2009 report, the WHO quotes the mean adherence across seventy-four studies as 39.7% [2]. The typical baseline compliance rate for New Zealand in 2009 was 35% [6]. Researchers have explored a range of methods for improving compliance. Intervention studies have commonly taken the form of educational packages combined with environmental changes [6–12]. Typically, impact has been measured through global hand gel use in a clinical environment [8], by observed gel use [9,10], or through observed compliance behavior [6,11,12]. In observational studies, where the observers are openly recording hand hygiene activity, a positive Hawthorne effect has been demonstrated [10]. In the New Zealand observation and audit study, where compliance was measured after a prolonged education campaign, appropriate hand hygiene episodes increased from 35% to 60% over 34 months [6]. However, there was variation between

compliance in different professional groups. The authors noted that "Changing culture among healthcare workers with respect to hand hygiene practices is an ongoing challenge" [6]. Although signage to promote hand hygiene is common in clinical settings, only two studies were found that examined this specific human factors approach as part of their method [13,14]. In both cases, reminder signs had no [13] or a non-significant positive effect [14]. However, signage or visual cues continue to be a part of the organizations' attempts to promote appropriate behavior.

Medical students

In the HHNZ performance report published in March 2014, the overall compliance rate increased to 73.1% [15]. However, medical students and medical practitioners had the poorest hand hygiene compliance for health professional groups (70.8% and 63.8%, respectively) [15].

As part of our early clinical skills learning in a clinical skills center, medical students were introduced to the principles of hand hygiene, taught a hand-cleaning regimen and encouraged to apply it. Our hope was that students would develop the behavior in a controlled environment and then transfer their learning to the workplace. This transfer has been previously unstudied. Moreover, the effect of education or visual trigger materials in a simulated learning environment has not been evaluated. Thus, this study was set in an undergraduate clinical skills center and employed the human factors approach: modifying the environment with a visual cue in an attempt to influence behavior. Despite the equivocal findings in previous clinical studies, we felt that signs may have an impact in our setting for two reasons: there are no other signs at the workspaces and the students do not have the multiple environmental distractions of health care workers.

The aims of this study were to identify the effect of hand hygiene reminder signs on the use of antimicrobial hand gel and to reinforce hand hygiene educational messages that might assist in developing lifelong clinical habits.

Download English Version:

<https://daneshyari.com/en/article/3405850>

Download Persian Version:

<https://daneshyari.com/article/3405850>

[Daneshyari.com](https://daneshyari.com)