Brief report

Just clean your hands: Measuring the effect of a patient safety initiative on driving transformational change in a health care system

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Key Words:
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In 2007, the Ontario government introduced the Just Clean Your Hands program across all provincial hospitals. The goal of this patient safety initiative was to improve hand hygiene practices among health care providers through workplace culture change. A survey questionnaire was distributed to 729 nurses employed at a single large community-based hospital from April to July 2011. Of the 223 nurses who responded to the questionnaire, 153 had completed the program (exposed group). By using the other 70 nurses as a contemporaneous control group (nonexposed), this study demonstrates that the Just Clean Your Hands program contributed to improved hand hygiene practices, but we were unable to demonstrate positive changes in patient safety culture.

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METHODS

Site

This single-center study was conducted at the Royal Victoria Hospital, a 299-bed community-based hospital in Barrie, Ontario, Canada.

Sample

After the survey tool received Research Ethics Board approval, it was distributed to registered nurses because they account for the vast majority of patient interactions and hand hygiene opportunities. Nurses were stratified into 2 groups (exposed and nonexposed) using completion of the JCYH program as the differentiating criterion. The hospital employs 729 registered nurses. The study survey was sent via hospital e-mail (23 e-mails were returned with error messages) with reminders sent every 2 weeks from April 21, 2011, to July 21, 2011.

Survey

There is no validated survey tool available for the assessment of health care provider attitudes and perceptions about hand hygiene best practices or their relationship to patient safety. As a result, the survey questions were modified from the Safety Attitudes Questionnaire, a validated tool for measuring health care provider attitudes about patient safety.11 The survey tool...
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**Communication**

Nurses reported they were more likely to approach their peers about missed hand hygiene opportunities if they had completed the JCYH PSI (Table 2), but this did not extend to other health care provider groups. There was a significant difference between intent to communicate with peers and subsequent behavior across all provider groups (Table 2).

**RESULTS**

**Baseline**

There were 223 survey respondents (31.6% participation rate). Baseline characteristics of the exposed (JCYH) and nonexposed groups are described in Table 1.

**Self-reported HHC**

The self-reported rates did not demonstrate any statistical difference between the 2 groups, and were consistent with the reported HHC rates (Table 2). The 2 groups differed in both their awareness and belief of the validity of the hospital’s and their own hospital ward’s HHC rate (Table 2).

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**DISCUSSION**

The JCYH PSI has been implemented in all acute care hospitals in Ontario (n = 221 hospitals). Compared with 2010, there has been a significant improvement in HHC rates in 2011 with increases in HHC from 67.1% to 73.1% (change, 6%; P < .0001) before patient contact and from 79.0% to 83.2% (change, 4.2%; P < .0001) after patient contact. These trends are consistent with those seen at Royal Victoria Hospital, with rates increasing from 64.5% to 80.2% (change, 15.7%; P < .0001) before patient contact and from 79.0% to 83.2% (change, 4.2%; P < .0001) after patient contact over the same time period. These reported outcomes suggest the JCYH PSI has had a positive impact on nursing hand hygiene practice.

By using a contemporaneous control group (nonexposed nurses), this study attempts to assess the potential positive impact of the JCYH PSI on nurses’ awareness, beliefs, perceptions, knowledge and communication about hand hygiene practices. This approach permits any observed changes to be attributed to the intervention.12,13 In general, effects attributable to the JCYH PSI were increased awareness of HHC rates and increased belief in the validity of these rates.

The penetration of the concept that 100% HHC is a cultural norm within the organization was measured by asking nurses with self-reported HHC rates exceeding 80% whether they believed their own performance was “just average” compared to their peers. The majority of nurses surveyed rated their performance as above average or excellent, suggesting that there is limited penetration of this PSI initiative as a cultural norm.14
The main strength of the study was the inclusion of a contemporaneous control group that allowed us to attribute any of the observed changes in the patient safety culture to the JCYH PSI. The study was limited by both the small sample size and the possibility of control group contamination by the JCYH program.15

**CONCLUSION**

By using a contemporaneous control group, we were able to demonstrate that the JCYH PSI was able to effect changes in organizational awareness and belief in the validity of reported HHC rates. However, similar positive changes in other domains of the patient safety culture could not be demonstrated in the exposed group compared with controls.

**References**