

ORAL PRESENTATION

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The impact of real-time computerised video analysis and feedback on hand hygiene practice and technique on a surgical ward

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Introduction / objectives

The fast hand movement and occlusion of observers' views make it difficult to audit hand hygiene technique. We investigate the effect of computerised video observation and real-time feedback on the hand hygiene technique.

Methods

Hand wash monitors (SureWash, Ireland) were placed above clinical sinks in a 28 bed surgical ward. The clinical trial consisted four phases: Phase 1 (1 week) determined the baseline practice without any feedback. Phase 2 (4 weeks) provided real-time feedback. In Phase 3 (5 weeks) a printed report was also presented at the weekly staff meeting. In Phase 4 (1 week) the feedback was turned off. The feedback was shown on a computer screen of each unit. SureWash deemed a hand washing complete if it followed every step of the CleanYourHands protocol.

Results

The number of hand wash events (HWE) for each day was divided by the product of the number of patients and staff. The daily averages of HWE were 0.14 ± 0.01 , 0.36 ± 0.02 , 0.35 ± 0.02 , 0.18 ± 0.2 for phases 1, 2, 3 and 4 respectively. The increase between phase 1 and 2 was 156% ($p < 10^{-7}$) and the fall in phase 3 from 4 was 48% ($p < 10^{-4}$). The daily average number of completed HWE was 0.02 ± 0.004 , 0.17 ± 0.01 , 0.16 ± 0.18 , 0.02 ± 0.005 in phases 1, 2, 3 and 4 respectively. The increase between phase 1 and 2 was 703% ($p < 10^{-9}$) and the fall in phase 3 from 4 was 48% ($p < 10^{-3}$). The total completion rates

were: 15.8% (38/240), 49.1% (719/1464), 44.4% (724/1630) and 13.3% (24/180) in each phase respectively.

Conclusion

Real-time computerised feedback on proper technique resulted in a significant increase in the number of HWE (+156%) and in the adherence (+703%) to the CleanYourHands protocol. Feedback acted as a reminder of technique and provided instruction on "difficult" poses.

Disclosure of interest

A. Ghosh: None declared, G. Lacey Shareholder of GLANTA Ltd, C. Gush: None declared, S. Barnes: None declared.

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