

A Cluster RCT of Immediate Hand Hygiene Compliance Feedback

Junaid S, Wallace E, Muller MP

St. Michael's

Inspired Care.
Inspiring Science.

Abstract #1377

BACKGROUND

- Feedback is a core element of multimodal hand hygiene (HH) improvement programs (1)
- Immediate, individual feedback may have more impact than aggregate feedback (2)
- The Hawthorne Effect results in inflation of directly observed hand hygiene compliance (HHC) (3)
- Immediate feedback could increase the Hawthorne Effect

HYPOTHESIS

- Immediate feedback during HH audits will improve HHC
- Improved HHC could be due to improved performance and/or enhanced Hawthorne Effect

METHODS

- Multimodal hand hygiene (HH) improvement program initiated at tertiary care hospital in 2009
- Cluster RCT with cross-over on 16 units in 2015
- Units matched by 1 year baseline HHC then randomized in pairs
- HH audits without feedback performed 2/week on ALL units ('non-feedback audits')
- HH audits with immediate feedback performed 2/week on 8 intervention wards ('feedback audits')
- Positive and/or constructive feedback provided to observed healthcare workers when HH observed or HH omitted
- Intervention and control units crossed over at 10 weeks
- 1^o analysis – change in HHC (from baseline to intervention phase) on intervention vs. control units based on non-feedback audits
- Qualitative results - Auditor recorded reactions of staff to feedback

RESULTS

- A total of 14527 HH opportunities observed by auditor of which 1533 included feedback to healthcare workers (Fig 1).

Fig 1. Measured HH Opportunities during cRCT

	Intervention units	Control Units
Baseline	4733	4482
Intervention	2053*	1108
Cross-over	806	1345*

- Units were well matched for baseline HHC (Fig 2)

Fig 2. Baseline HHC similar on Intervention and Control Units

Intervention Units	HHC	Control Units	HHC
Neonatal ICU	88	Medicine	84
Medicine	75	Surgery	76
Mixed	69	Surgery	74
Medicine	67	Surgery	68
Surgery	65	Surgery	66
CCU	61	Surgery	63
ICU	53	Medicine	57
ICU	54	ICU	54
All	65	All	67

Primary Outcome (Fig 3)

- HHC decreased 2% on intervention vs. controls units (65% to 65% intervention units, 67% to 69% control units)
- HHC increased 2% on control units following cross-over but increase occurred prior to initiation of intervention

RESULTS Continued

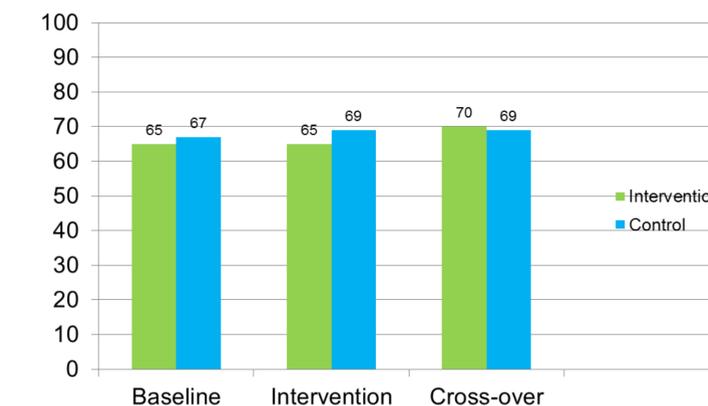
Secondary Outcomes (Fig 3)

- After the intervention was stopped on the intervention units (i.e. cross-over) HHC increased 5% (65% to 70%)

? Enhanced Hawthorne Effect

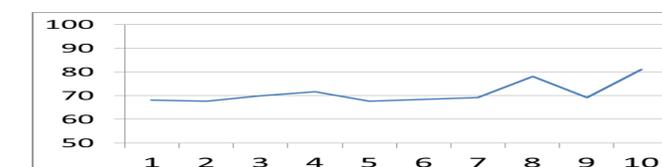
- HHC was 6% higher on feedback vs. non-feedback audits on the intervention unit during the intervention phase (71% vs. 65%)
- HHC was 7% higher on feedback vs. non-feedback audits on the control unit during the cross-over phase (76% vs. 69%)

Fig3. Change in HHC on intervention and control units (feedback audits excluded)



- Although the 10 week intervention and 10 week control phases were short, there was no evidence of any trend towards increasing HHC on the non-feedback audits (Fig 4)

Fig 4. Change in HHC over time, intervention units during intervention phase (non-feedback audits only)



RESULTS Continued

Qualitative Results – key findings

- Positive feedback not well received by high performers
- Constructive feedback elicited both appropriate and inappropriate reactions in approximately equal measure

Examples – Appropriate Responses

“thanks for the feedback”
“I didn’t know that – I won’t do that again”

Examples – Inappropriate Responses

Eye rolling
Walked away in middle of feedback
“Because I have more important things to do”
“Honestly, I don’t care what feedback you’re going to give me”

CONCLUSIONS

- A cRCT of immediate feedback failed to demonstrate a benefit in terms of improved HHC
- These results are similar to other studies showing limited benefits of immediate feedback to improve HHC (4)
- HHC was higher on audits where feedback was provided, suggesting that Immediate feedback may enhance the impact of the Hawthorne Effect
- The 10 week duration of the intervention may have been insufficient to see improvement on non-feedback audits however minimal trend towards higher HHC was observed
- Auditors providing feedback should be trained to deal with unprofessional reactions, and healthcare workers should be educated in advance on how to react to feedback

REFERENCES

- Schweizer ML et al. CID 2014;58(2):248-59
- Ivers N et al. Cochrane Library June 2012
- Srigley JA et al. BMJ quality and safety 2014;23(12):974-980
- Fuller C et al. PLoS One Oct 2012