

ORAL PRESENTATION

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Hand hygiene techniques: still a requirement for evidence for practice?

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Introduction

Two hand hygiene techniques are promoted internationally: the World Health Organisation's 6 step and the Centre for Disease Control's 3 step techniques; both of which may be considered to have suboptimum levels of empirical evidence for use with alcohol based hand rub (ABHR).

Objectives

The aim of the study was to compare the effectiveness of the two techniques in clinical practice.

Methods

A prospective parallel group randomised controlled trial (RCT) was conducted with 1:1 allocation of 6 step versus the 3 step ABHR hand hygiene technique in a clinical setting. The primary outcome was residual microbiological load. Secondary outcomes were hand surface coverage and duration. The participants were medical and nursing participants (n=120) in a large teaching hospital.

Results

The 6 step technique was statistically more effective at reducing the bacterial count 1900cfu/ml (95% CI 1300, 2400cfu/ml) to 380cfu/ml (95% CI 150, 860 cfu/ml) than the 3 step 1200cfu/ml (95% CI 940, 1850cfu/ml) to 750cfu/ml (95% CI 380, 1400cfu/ml) (p=0.016) but even with direct observation by two researchers and use of an instruction card demonstrating the technique, compliance with the 6 step technique was only 65%, compared to 100% compliance with 3 step technique. Further those participants with 100% compliance with 6 step technique had a significantly greater log reduction in bacterial load with no

additional time or difference in coverage compared to those with 65% compliance with 6 step technique (p=0.01).

Conclusion

To our knowledge this is the first published RCT to demonstrate the 6 step technique is superior to the 3 step technique in reducing the residual bacterial load after hand hygiene using alcohol based hand rub in clinical practice. What remains unknown is whether the residual bacterial load after the 3 step technique is low enough to reduce risk of transmission from the hands and whether the 6 step technique can be adapted to enhance compliance in order to maximise reduction in residual bacterial load and reduce duration.

Disclosure of interest

None declared.

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