Introduction

- Effective hand hygiene is the single, most important factor in preventing the spread of healthcare associated infections (World Health Organisation, 2009).
- Two main components of effective hand hygiene within clinical settings include hand hygiene opportunity and technique.
- Research suggests that compliance with opportunity improves when alcohol-based handrub (ABHR) is available (Erasmus et al., 2010).
- However, the evidence for the most effective handrubbing technique for use of ABHR remains limited and inconsistencies in guidelines exist (Price et al., 2011).

Methods

- An integrative literature review of factors influencing the effectiveness of handrubbing with ABHRs within clinical practice was conducted.
- A systematic approach was applied.
- CINAHL, MEDLINE, PROSPERO, ScienceDirect and Web of Science electronic databases were searched.
- All empirical study designs were included in the review.
- The search was limited to sources available in English language and published between the years 1980-2015.

Results

- Search resulted in 26 eligible papers, including 16 experimental and 10 observational studies (Figure 1).
- Six themes emerged including the effectiveness of handrubbing technique, volume of ABHR, duration of use, effect of rubbing, effect of hand size and acceptability of the handrubbing technique.
- Technique, level of compliance with protocol, ABHR volume, time and friction were all shown to influence the effectiveness of handrubbing.
- Handrubbing with 3ml of ABHR for at least 30s using 6-step technique (Figure 2) appears to yield the best results in antimicrobial efficacy.
- An interesting finding was that certain areas on hands might be more important than others during hand decontamination (Reilly et al., 2016).

Discussion

- This review identified factors influencing the effectiveness of handrubbing procedure which should be standardised for healthcare workers.
- The importance of covering all surfaces of the hands on the efficacy of handrubbing remains uncertain.
- Further research is required to investigate the contribution of each of the six steps to the effectiveness of handrubbing procedure.

References