# Systematic review literature review examples

Technology, Development



# **Systematic Review**

- In my practice, I am observing an increased emphasis on infection prevention. This increased attention to infection prevention measures has been prompted by legislative changes that transferred the financial burden of healthcare-associated infections to hospitals. In 2008, the Centers for Medicare and Medicaid Services (CMS) issued a directive denying payments to hospitals for certain conditions if they occurred during a hospital stay and had not been present on admission. The CMS was empowered to issue the directive by the Deficit Reduction Act of 2005. Section 5001(c) of the act required the Secretary of Health and Human Services to identify preventable conditions whose high volume and high cost result in higher payments when present as a second diagnosis. The act also empowers the CMS to revise the list of conditions from time to time (Stone et al., 2010). By the year 2013, the list had a total of 11 categories of healthcare-associated infections. These include air embolism, foreign body retained after surgery, blood incompatibility, falls and trauma, stage III and IV pressure ulcers, catheterassociated urinary tract infections, and features of poor glycemic control. The other categories are infections of surgical sites after bariatric surgery, certain orthopedic procedures, coronary artery bypass graft, and cardiac implantable electronic device (CMS, 2014).
- I am curious about the impact of hand hygiene as an infection prevention measure.
- I want to find out how the hand hygiene practices of healthcare workers can be improved.
- This is important to know because findings from clinical trials suggest that

adequate hand hygiene amongst hospital staffs can prevent an approximated 15-30% of healthcare-associated infections. Prevention of healthcare-associated infections is important because when they occur, they complicate treatment, lengthen hospital stays, burden patients, increase healthcare costs, and lastly, they can be life threatening (Stone et al., 2010).

- The key search terms I entered were hand washing practices, hospital settings, importance, and healthcare-associated infections.
- I found a total number of five systematic reviews on the topic.
- The systematic review I read for this assignment was Huis, A., van Achterberg, T., de Bruin, M., Grol, R., Schoonhoven, L., & Hulscher, M. (2012). A systematic review of hand hygiene improvement strategies: A behavioral approach. Implementation Science, 7, 92.
- Forty one individual studies/articles were included in the systematic review.
- The systematic review's research objective was to provide adequate conceptual clarity on the nature of hand hygiene improvement strategies by categorizing their improvement activities based on their determinants of behavior change. The study also sought to evaluate the effectiveness of targeting various determinants of behavior change.
- The hypothesis of the authors of the systematic review was hand hygiene improvement strategies targeting most of the various determinants of behavior change would be more effective in enhancing hand hygiene compliance than hand hygiene improvement strategies targeting less of the different determinants of behavior change.

- The key conclusions from the systematic review were two. Firstly, hand hygiene improvement strategies that address determinants of behavior change such as knowledge, action control, social influence, and facilitation only are not enough to change hand hygiene behavior. Secondly, hand hygiene strategies that address a combination of the various determinants are more effective.
- My opinion of this review is that it is comprehensive and thorough because it reviewed a total of 41 individual articles. In addition, the articles were searched from a number of databases that is, the Embase, Medline, Cochrane, and CINAHL databases. Lastly, the review covered articles published over a period of ten years (2000-2009).

# References

CMS (2014). Hospital-acquired conditions. Retrieved from http://www.cms. gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/Hospital-Acquired\_Conditions. html

Huis, A., van Achterberg, T., de Bruin, M., Grol, R., Schoonhoven, L., & Hulscher, M. (2012). A systematic review of hand hygiene improvement strategies: A behavioral approach. Implementation Science, 7, 92. Stone, P. W., Glied, S. A., McNair, P. D., Matthes, N., Cohen, B., Landers, T. F., & Larson, E. L. (2010). CMS changes in reimbursement for HAIs: Setting a

Appendices

Appendix 1: Abstract

research agenda. Med Care, 48(5), 433-439.

A systematic review of hand hygiene improvement strategies: a behavioural approach.

Huis A1, van Achterberg T, de Bruin M, Grol R, Schoonhoven L, Hulscher M. BACKGROUND:

Many strategies have been designed and evaluated to address the problem of low hand hygiene (HH) compliance. Which of these strategies are most effective and how they work is still unclear. Here we describe frequently used improvement strategies and related determinants of behaviour change that prompt good HH behaviour to provide a better overview of the choice and content of such strategies.

## **METHODS:**

Systematic searches of experimental and quasi-experimental research on HH improvement strategies were conducted in Medline, Embase, CINAHL, and Cochrane databases from January 2000 to November 2009. First, we extracted the study characteristics using the EPOC Data Collection Checklist, including study objectives, setting, study design, target population, outcome measures, description of the intervention, analysis, and results. Second, we used the Taxonomy of Behavioural Change Techniques to identify targeted determinants.

## **RESULTS:**

We reviewed 41 studies. The most frequently addressed determinants were knowledge, awareness, action control, and facilitation of behaviour. Fewer studies addressed social influence, attitude, self-efficacy, and intention. Thirteen studies used a controlled design to measure the effects of HH improvement strategies on HH behaviour. The effectiveness of the strategies varied substantially, but most controlled studies showed positive results. The median effect size of these strategies increased from 17. 6 (relative

difference) addressing one determinant to 49. 5 for the studies that addressed five determinants.

**CONCLUSIONS:**