



Effects of the Australian National Hand Hygiene Initiative a longitudinal study of 8 years

Longitudinal, interventional study

Performed by Hand Hygiene Australia (HHA) and the National Hand Hygiene Initiative (NHHI)

WHAT WAS INVESTIGATED?

- **Outcome of the National Hand Hygiene Initiative (NHHI)** in Australia during a **period of 8 years** (between January 2009 and June 2017)
- Outcome parameters were:
 - Hospital participation
 - Hand hygiene compliance (HHC)
 - Educational engagement
 - Costs
 - Association with the incidence of healthcare-associated *Staphylococcus aureus* bacteraemia (HA-SAB)

WHAT WAS THE RESULT?

- **Increased participation** of national healthcare facilities (105 in 2009 vs. 937 in 2017)
- **Increased overall HHC**
- **Significant decline in the incidence of HA-SAB** ($p \leq 0.0001$)
- Almost 2 Million NHHI completed online learning programs
- **Costs for NHHI coordination** equivalent to **AUD\$0.06 per inpatient admission nationally**

The implementation of the NHHI in Australian hospitals has been associated with significant sustained improvement in HHC and a decline in the incidence of HA-SAB. An increase in HHC by 10 % correlated with a decrease in HA-SAB by 15 %.





BACKGROUND

An important goal to ensure patient safety is to improve hand hygiene compliance within the medical staff. So far, there have been only a few programs at the national level that were designed over several years and successfully integrated into a national healthcare structure.

GOAL

The aim of this study was to analyse the effectiveness and outcomes of the national-wide Australian National Hand Hygiene Initiative (NHHI) in a longitudinal study. 8 years after the first implementation, data from the NHHI were analysed in detail and summarised for future national initiatives in infection prevention.

DESIGN AND METHODS

The NHHI is a standardized program based on the WHO Multimodal Hand Hygiene Improvement Strategy. Therefore, the central point of the initiative is a system change combined with education, audit and feedback. The initiative was implemented to improve hand hygiene compliance among Australian healthcare workers and by that to reduce the risk of healthcare-associated infections. This longitudinal study assessed the following outcome parameters:

- Hospital participation
- Hand hygiene compliance
- Association with the incidence of HA-SAB
- Educational engagement
- Costs

RESULTS

The main findings of the longitudinal observation are summarized in the following table 1:

Outcome parameter	Result
National healthcare facility participation	Increase from 105 hospitals in 2009 to 937 hospitals in 2017
Overall HHC (measured as the proportion of observed Moments)	Increase from 63.6 % in 2009 to 84.3 % in 2017 (p<0.001)
Educational engagement	~ 2million completed NHHI online learning credential programmes
Cost	NHHI budget in 2016 equivalent to AUD\$0.06 per inpatient admission nationally
Association of improved HHC with the incidence of HA-SAB	For every 10 % increase in HHC, the incidence of HA-SAB decreased by 15%

Table 1: Modified from Grayson *et al.* (2018)

CONCLUSION

The NHHI was very successful in substantially improving HHC among Australian healthcare workers and thereby reducing the incidence of HA-SAB. Additionally, it raised awareness about the importance of infection control among the Australian population. Finally, this initiative could be used as a template for other national culture-change programs.