



## Results

The intervention led to a significant reduction in HAIs:

- A 34.5% relative reduction in the prevalence of HAIs was observed, with a statistically significant reduction from 14.9% in the control phase to 9.8% during the intervention phase.
- The intervention was effective in reducing bloodstream infections, urinary tract infections, pneumonias, and surgical site infections from 6.3% to 4.0%.
- For the primary outcome, in unadjusted results HAI prevalence in all wards combined was higher in the control phase than in the intervention phase. (Table 1)

Table 1: Unadjusted prevalence of HAIs in control and intervention phases by ward

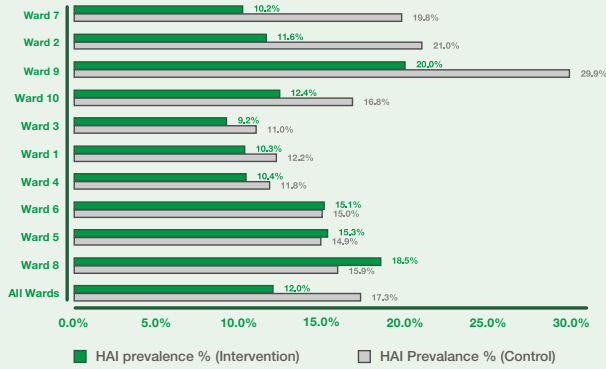
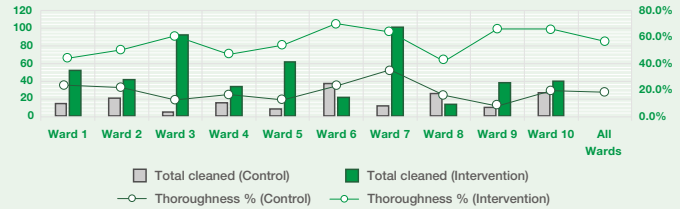
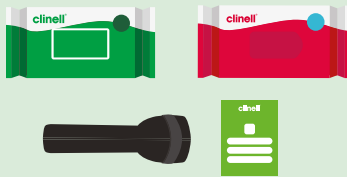


Table 2: Change in cleaning frequency and thoroughness by ward



The thoroughness of cleaning improved substantially, with the percentage of cleaned equipment rising from 18.2% to 56.6% during the intervention (Table 2). The intervention was effective in reducing bloodstream infections, urinary tract infections, pneumonias, and surgical site infections from 6.3% to 4.0%.

### Products used:



Clinell Universal Wipes, Sporidical (Peracetic Acid) Wipes, EvaluClean™ and Indicator Notes

## 34.5% relative reduction in HAIs

including bloodstream infections, pneumonias, UTIs, and SSI, COVID-19\* and EENTs\*

Thoroughness of cleaning improved significantly from 18.2% to 56.6% during the intervention

## Clinical impact

This study highlights the critical role of dedicated cleaning and disinfection protocols in reducing HAIs in a hospital setting. The successful implementation of additional dedicated cleaning time, using effective cleaning products, implementing the EvaluClean™ auditing system, and reinforcing ongoing staff education alongside communication of equipment readiness through labelling, healthcare facilities can significantly improve patient safety by reducing the microbial load on shared medical equipment.

## Conclusion

The CLEEN study underscores the importance of systematic cleaning approaches in healthcare environments. By dedicating additional time and resources to the cleaning of shared medical equipment, coupled with the use of disinfectant wipes along with ongoing staff education, hospitals can achieve substantial reductions in HAIs. This case study serves as a model for other healthcare facilities seeking to enhance their infection prevention and control practices and improve patient outcomes.

**The study's findings advocate for the adoption of similar cleaning protocols in hospitals worldwide, emphasising that even modest improvements in cleaning practices can lead to significant health benefits.**

Browne K, White NM, Russo PL, et al. Investigating the effect of enhanced cleaning and disinfection of shared medical equipment on health-care-associated infections in Australia (CLEEN): a stepped-wedge, cluster randomised, controlled trial. *Lancet Infect Dis*. Published online August 13, 2024. doi:10.1016/S1473-3099(24)00399-2

\*Urinary tract infections (UTIs), surgical site infections (SSIs) and eye, ear nose and throat infections (EENTs)

Use biocides safely. Always read the label and product information before use.