

Hand hygiene practices and perceptions of primary health care workers in protracted conflict settings



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Hand hygiene is crucial for the prevention of nosocomial infections and antimicrobial resistance in health care. This is even more essential in fragile contexts, such as protracted conflicts, where medical supplies cannot always be delivered, facilities are crowded, and the number of care takers is frequently insufficient. Despite the importance of monitoring hand hygiene in these contexts, data remains extremely scarce. Therefore, we present baseline findings of a cluster randomised controlled trial, with the aim to characterise current hand hygiene practices and perceptions of primary health care workers in Burkina Faso and Mali.

- **Study design:** cluster randomised controlled trial in 24 primary health care facilities in Burkina Faso and 24 in Mali
- **Participants:** Health care workers in direct patient contact
- **Data collection methods:** covert structured handwashing observations, surveys on self-reported hygiene-related behavioural factors, and hand-rinse samples for the detection of *E.coli*
- **Primary outcome:** observed handwashing rate $(\frac{\sum \text{Correct hand hygiene actions}}{\sum \text{Handwashing opportunities}})$ per hour of observation

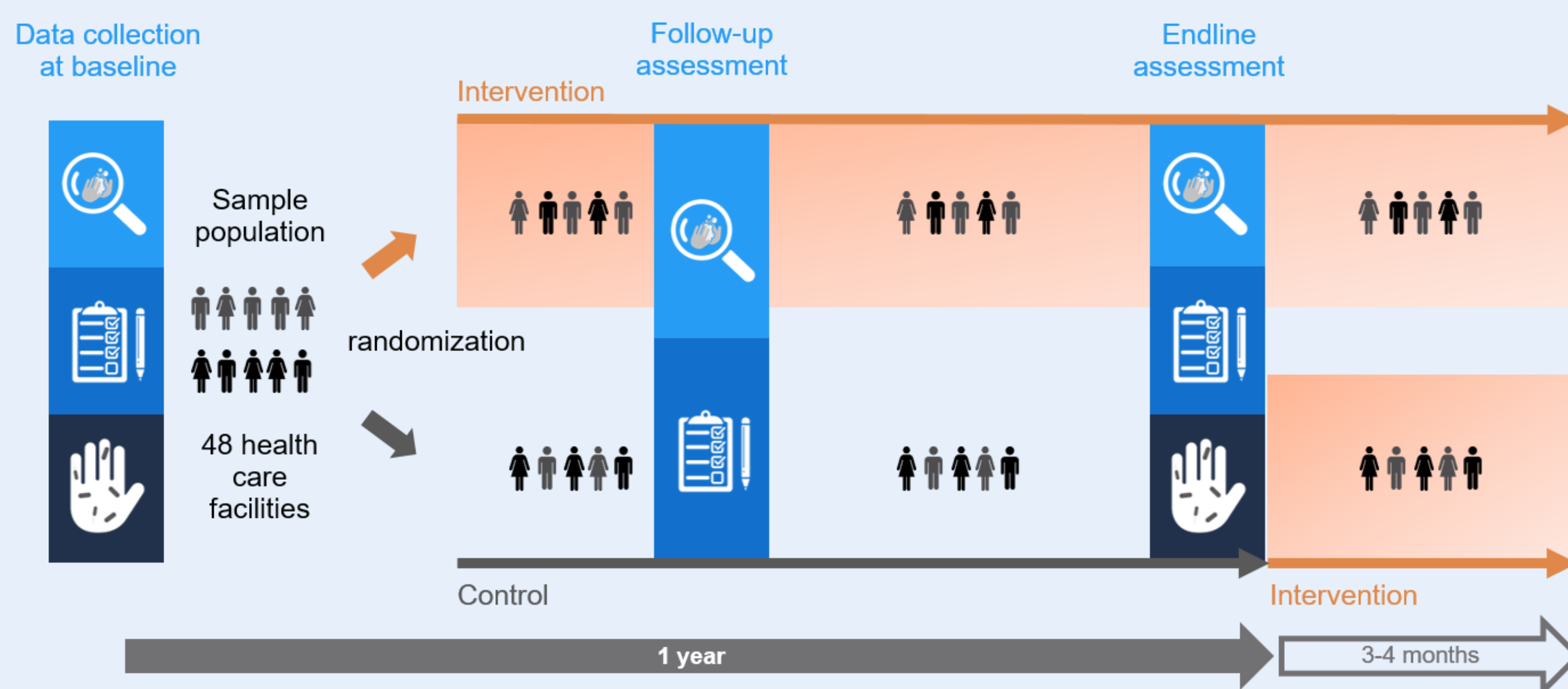


Figure 1: Study design of the cluster randomised controlled trial with data collection methods.

The overall proportion of the observed handwashing rate was 12%, with 16% of health care workers performing a correct hygiene action in Burkina Faso and 7% of health care workers in Mali. In contrast, self-reported hand hygiene adherence was five times higher than what was observed in both countries. *E.coli* contamination was found on 76% of health care worker's hands in Burkina Faso and on 23% of health care worker's hands in Mali. The mean number of Colony Forming Units across both countries was 135 (Standard deviation = 311).

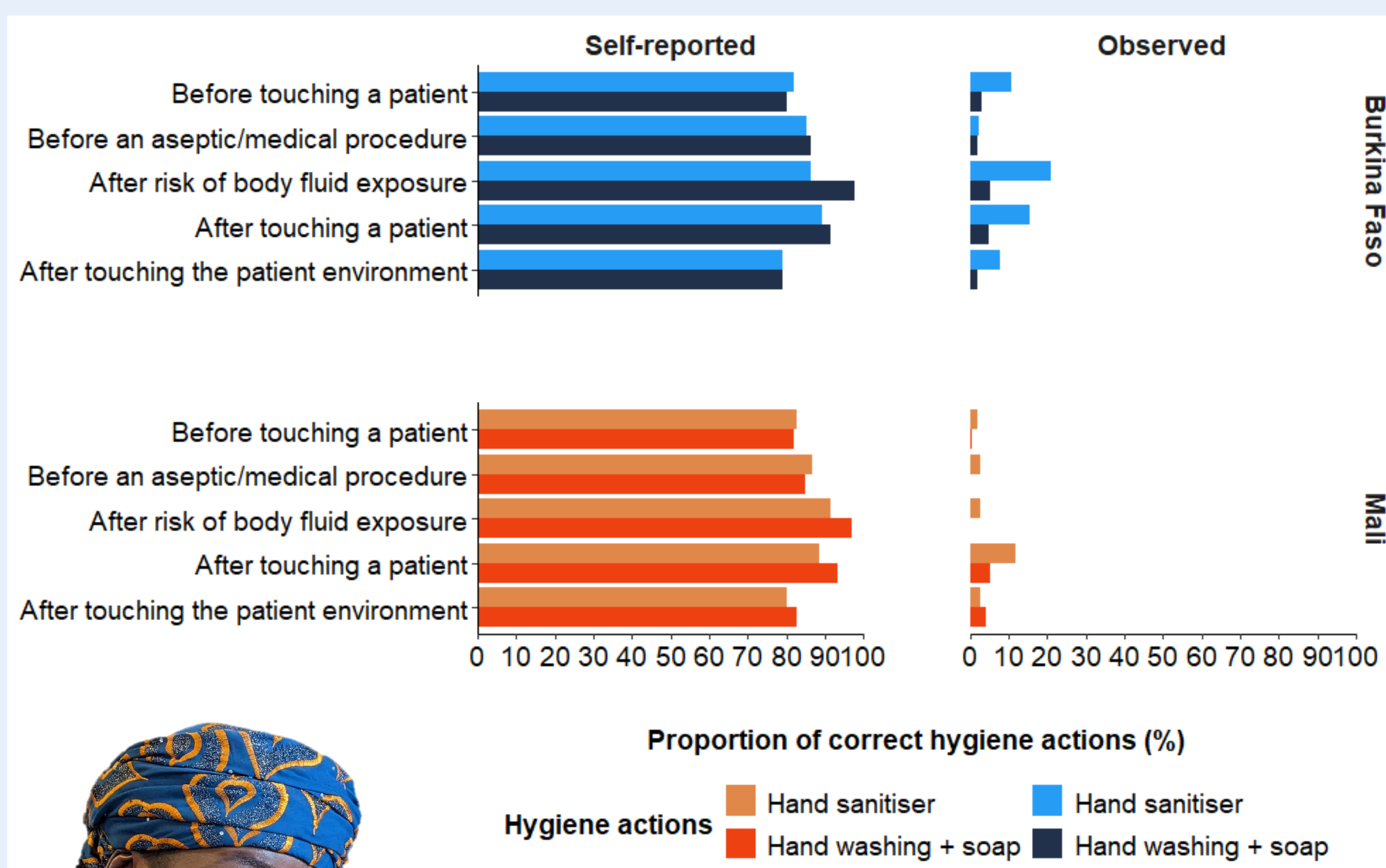


Figure 2: Proportion of self-reported and observed hand hygiene practices

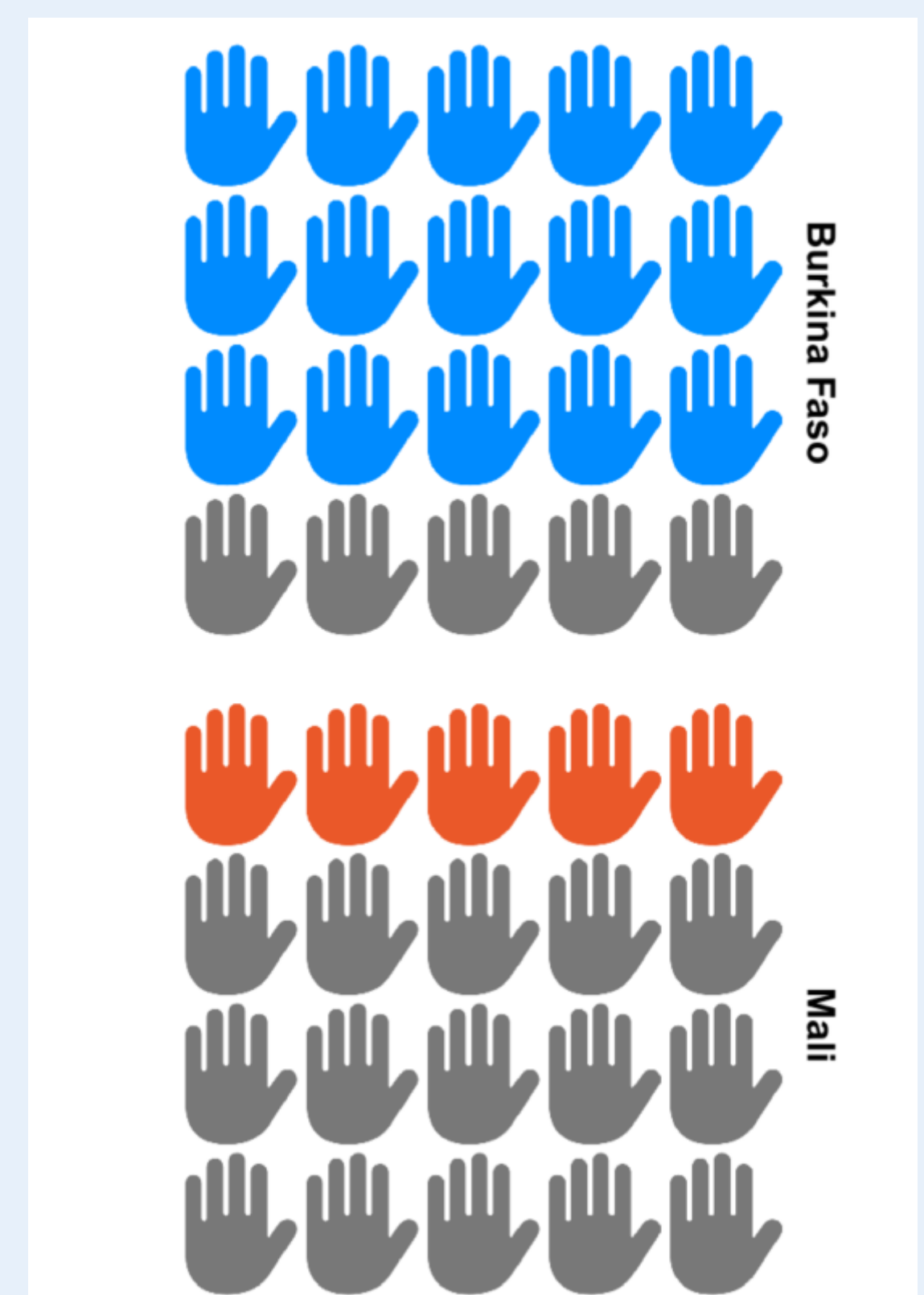


Figure 3: Proportion of health care worker's hands contaminated with *E.coli*



Hand hygiene practices in both countries must be improved to avoid the spread of health care-associated infections. We propose specific training for behaviour change combined with an improvement in infrastructure and maintenance, supported by policy makers.