

Hand Hygiene Improvement Programme: Collaborative Strategies Driving Sustainable Change



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Introduction

Hand hygiene (HH) is a cornerstone of infection prevention and control (IPC), yet compliance remains inconsistent across healthcare settings¹. In early 2025, multiple IPC team-led HH quality assurance audits identified various issues and barriers affecting compliance. In addition, an earlier HH gel dispenser readiness audit also found empty, faulty, or unclean dispensers, that may reduce adherence to HH and increase cross-contamination². These findings informed the development of the HH Improvement Programme, launched in August 2025 as a six-month test of change.

Method

A mixed-methods approach was used, combining quantitative audit data with qualitative staff insights. A baseline staff survey (n=400) explored perceptions of HH, workflow pressures, and barriers to compliance. Fishbone and Pareto analysis, along with a driver diagram, were used to identify priority factors. A Quality Improvement approach guided the programme, using an audit → feedback → action → reaudit cycle informed by the Model for Improvement. Findings were shared through governance and leadership forums to build awareness and align priorities.

Reflection from Practice

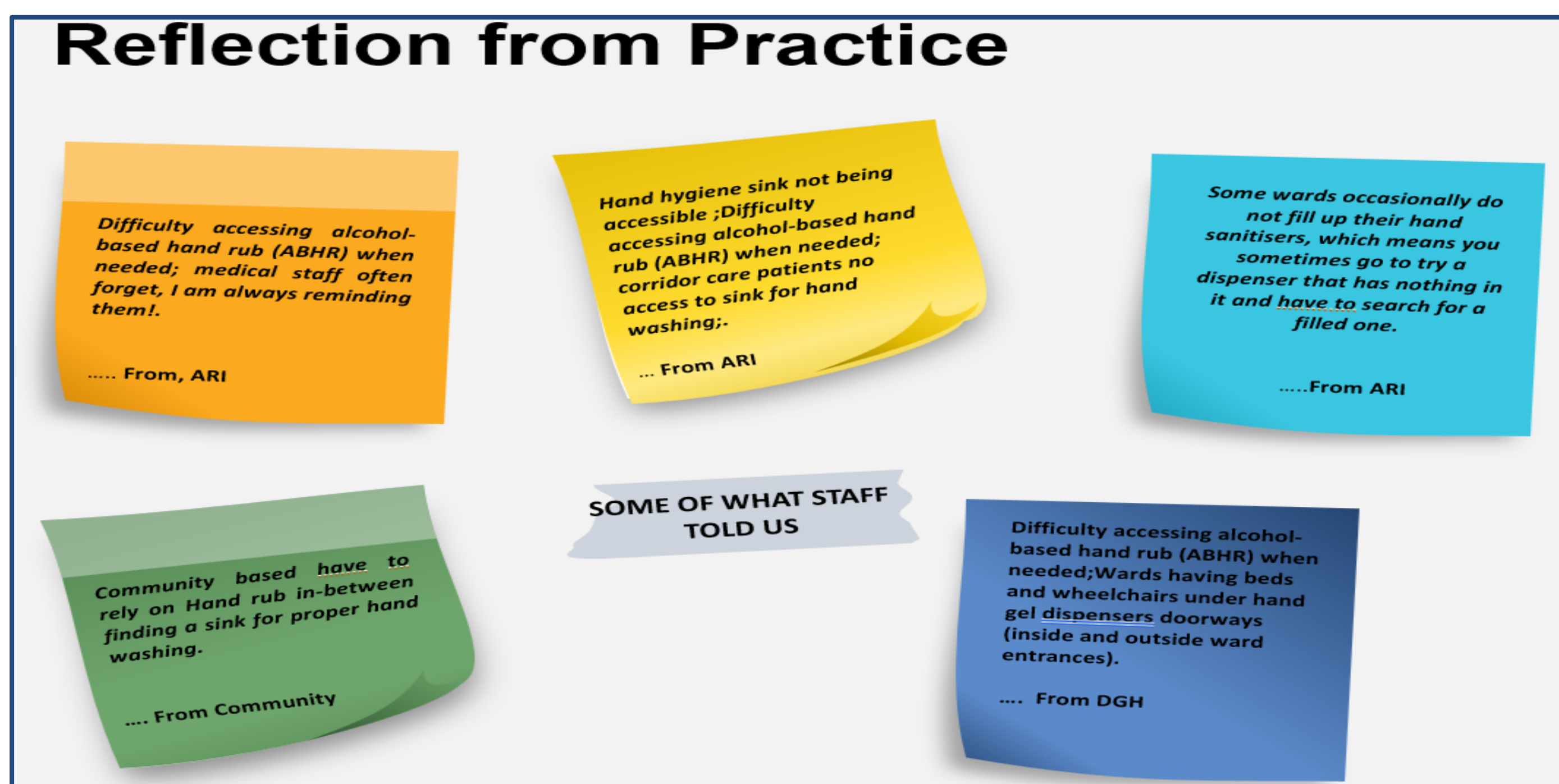


Figure 1: Reflection from Practice: What Staff Told Us

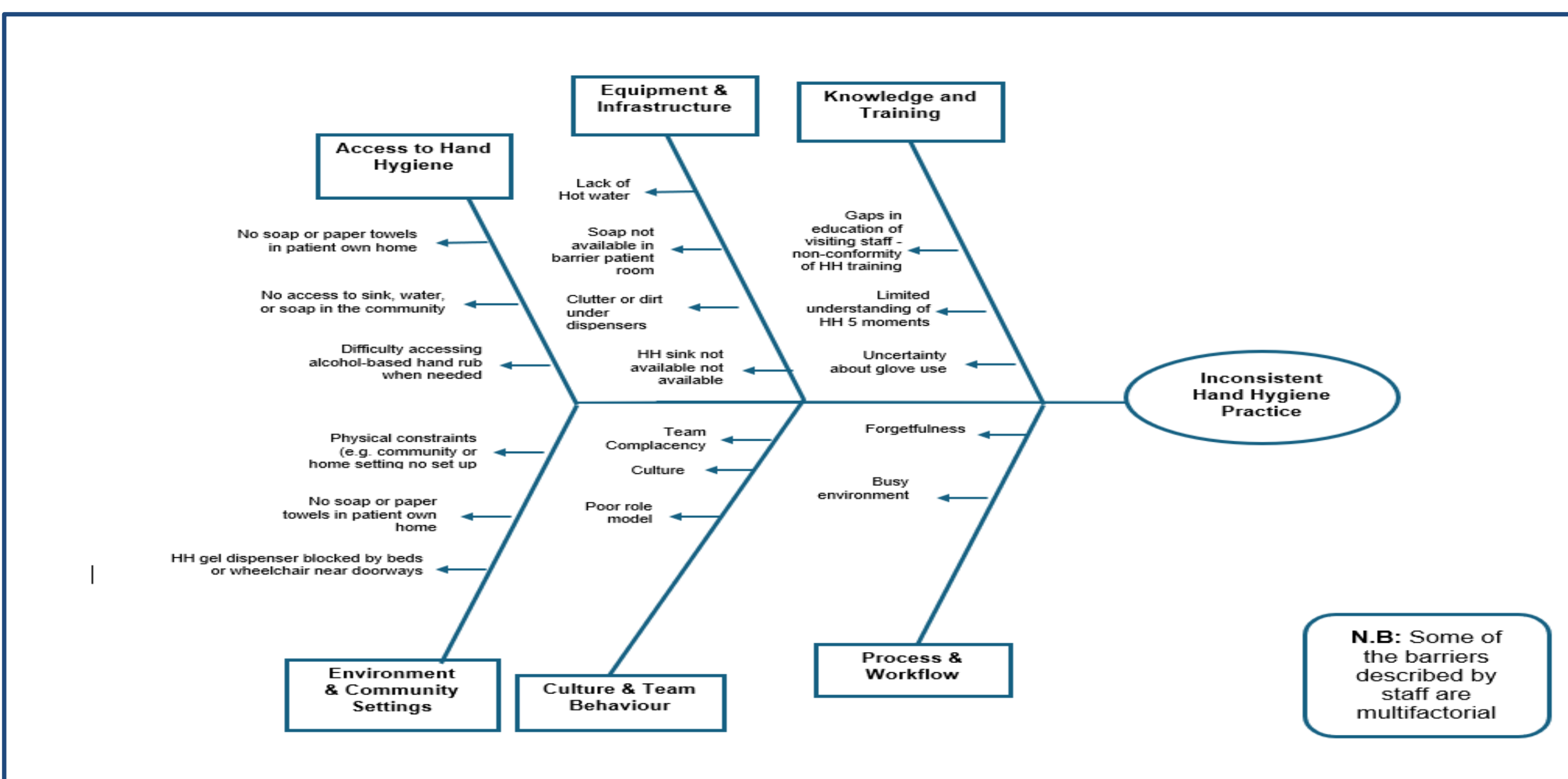


Figure 2: Fishbone Analysis of Barriers to Hand Hygiene Compliance

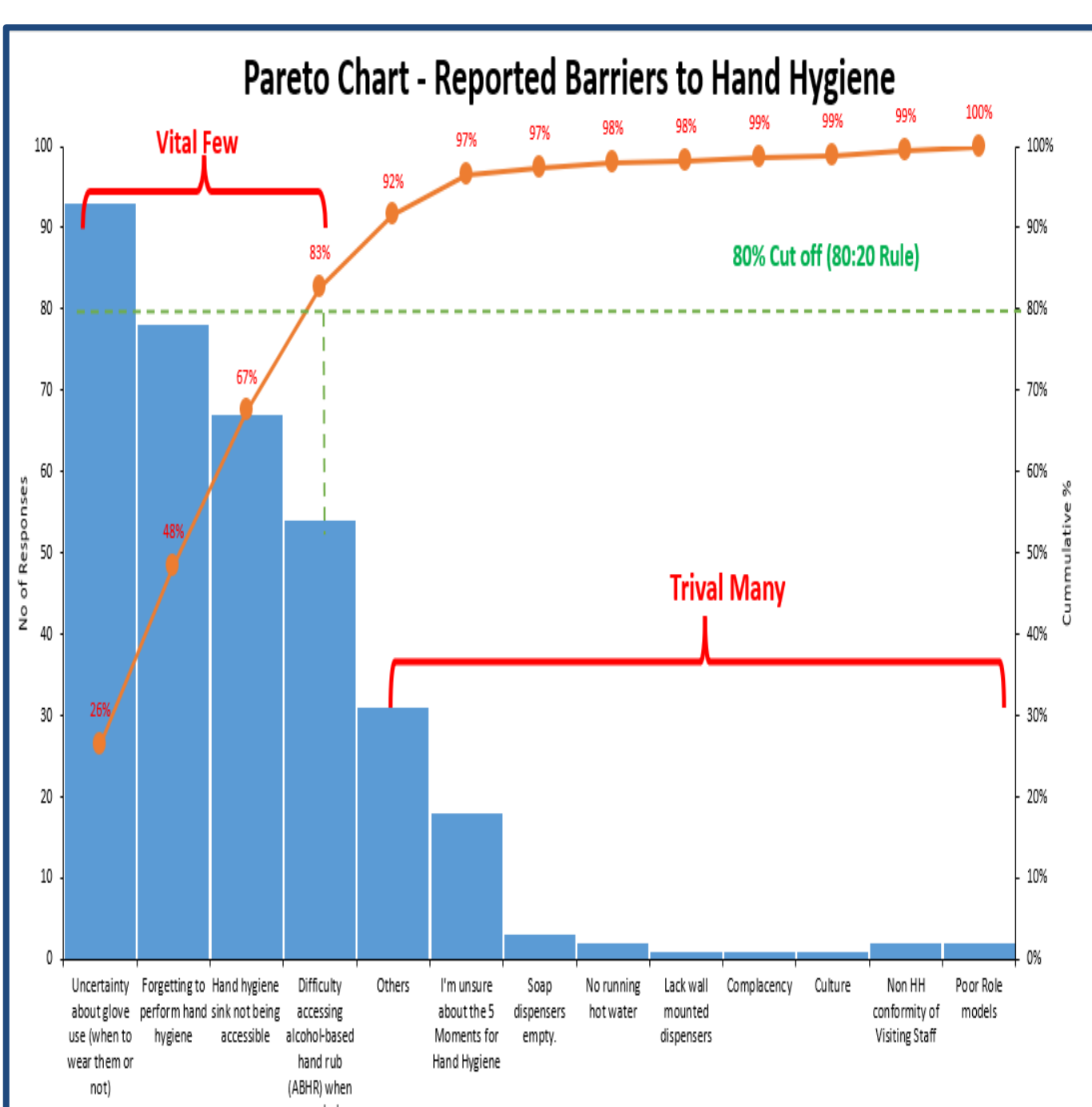


Figure 3: Pareto Chart of Priority Issues Affecting Hand Hygiene Compliance

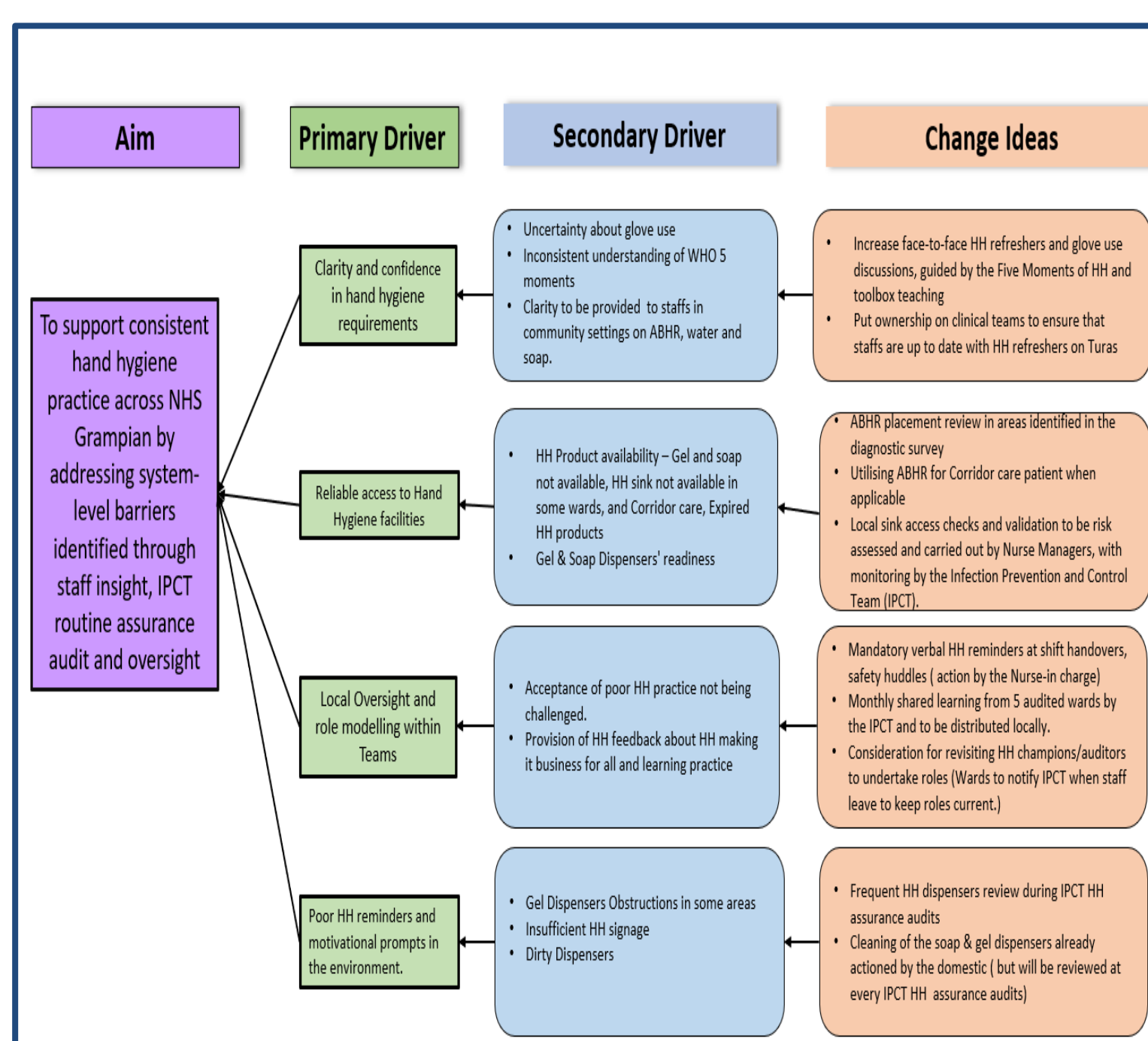


Figure 4: Driver Diagram for Hand Hygiene Improvement Programme

Results (After 5 Months)

From 11 August 2025 to 10 January 2026, 57 HH audits were completed across 26 wards. An earlier audit of 297 gel dispensers in 2024 identified practice and maintenance gaps, and during the programme; 13 of the 14 faulty dispensers were repaired. A total of 141 staff received HH refresher training. HH compliance increased from 79% to 85% (Figure 5). Across 19 wards, pre- and post-intervention results showed significant improvement in all staff groups, with 7 wards still requiring further interventions (Figure 6).

HH Compliance Trend (5-Month Progress)

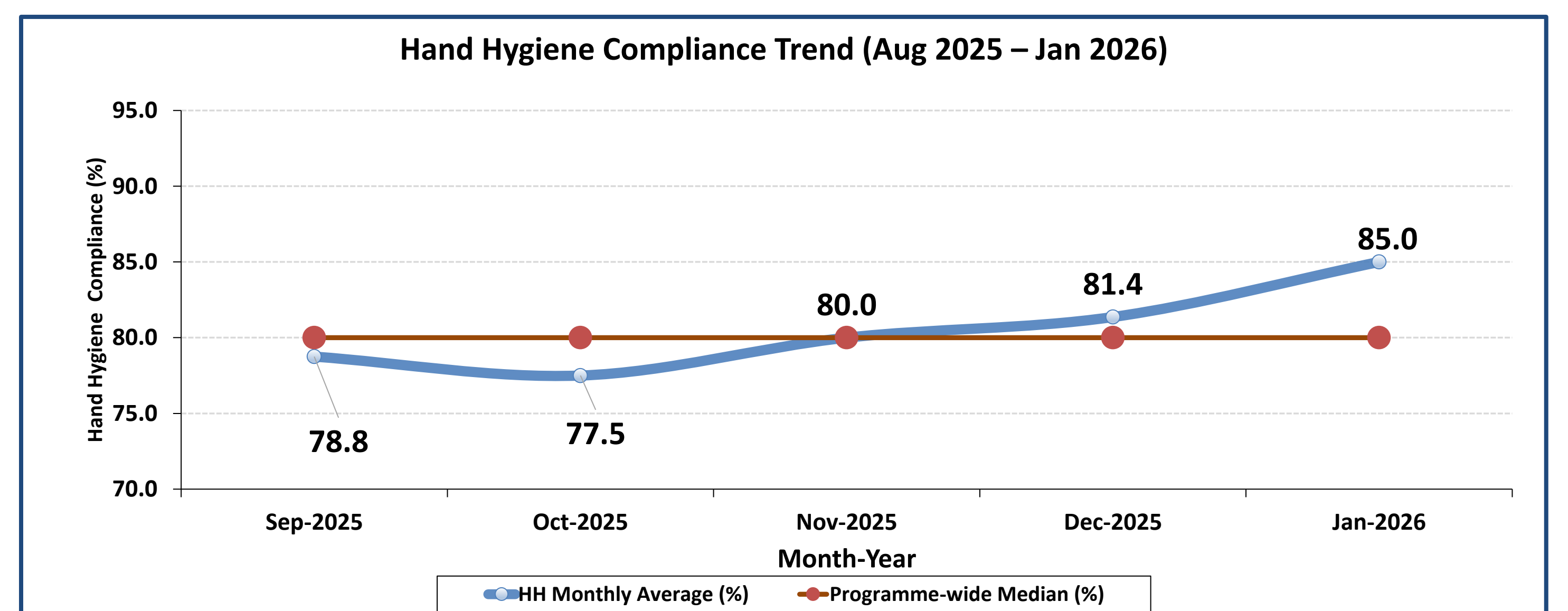


Figure 5: A steady upward trend was observed, with hand hygiene compliance increasing from 79% to 85% over the 5-month period, rising above the programme's 80% median line, indicating measurable, steady improvement.

Pre- and Post-Intervention HH Compliance Across 19 Wards

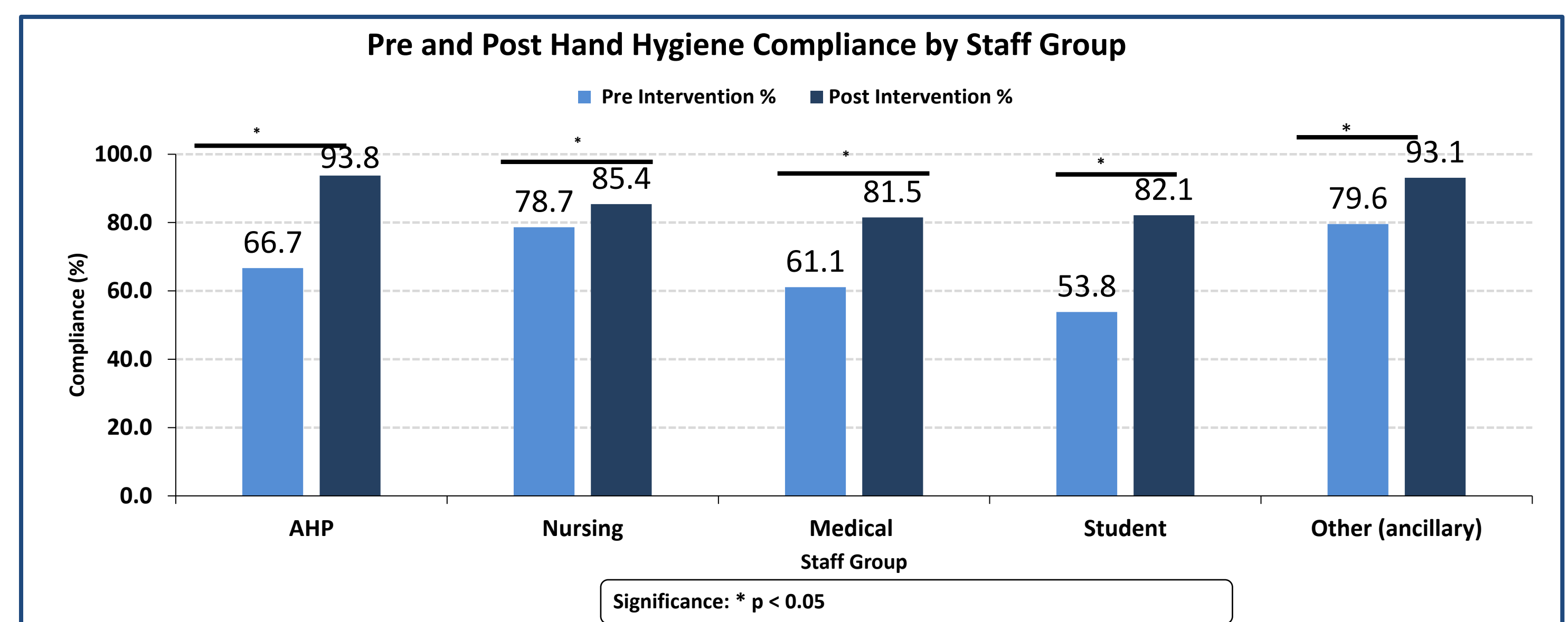


Figure 6: Hand hygiene compliance increased significantly across all staff groups following the intervention. A two-proportion z-test confirmed statistically significant improvements in AHP (p=0.012), Nursing (p=0.037), Medical (p=0.019), Students (p=0.025), and Other staff (p=0.039), demonstrating organisation-wide positive change.

Key Changes Implemented

- Shared Learning notes (SLN) issued to address non-compliance
- IPCT assurance audit tool adapted to include glove-use checks
- Escalation flowchart developed to guide timely actions
- SLN used to prompt HH discussions during daily safety briefs and huddles
- Gel dispensers incorporated into routine HH quality observations
- HH posters issued as visual prompts in areas lacking reminders

Conclusion

Addressing both behavioural and system-level barriers improved HH performance and dispenser readiness. Sustaining progress will require continued monitoring, staff engagement, and reinforcement through regular assurance audits, escalation processes, and leadership support.

Reference

- World Health Organization (2022). Infection Prevention and Control – Hand Hygiene Evidence.
- National Infection Prevention and Control Manual (2023). Hand Hygiene: Indications and Techniques. NHS Scotland.
- NHS Grampian IPCT (2025). Hand Hygiene Assurance Audit Data.
- NHS Grampian IPCT (2025). Hand Hygiene Gel Dispensers (Readiness and Compliance) audit report .

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