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NHS Foundation Trust

Innovation in Hospital Cleaning: Decontaminating Air

A case study in hypochlorous acid decontamination

THE PRESENTATION TEAM

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MEDIREST OVERVIEW

We partner with over **23** NHS Trusts in the UK

Currently employ over **10,000** dedicated Soft FM professionals

Patient and retail **catering** services, **cleaning** and **portering**, **security**, along with a number of wrap-around services

EACH DAY WE…

Clean over **1.5m m2** of hospital space

Serve **16,800** patient meals

Make **75,000** coffees

Conduct over **6000** patient moves

Serve **45,000** staff meals

SESSION OVERVIEW

- Infection control is critical to patient safety
- Current solutions: Hydrogen Peroxide & UV decontamination
- Limitations: Room containment required; not usable around people
- Opportunity: New solutions for high-risk, high-occupancy areas

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WHY WE NEED THIS INNOVATION

- Environmental contamination in Emergency Departments, Assessment Units
- 24/7 usage makes conventional decontamination impractical
- Risk of airborne transmission in multi-use areas, impact of AGPs
- Need for a people-safe, rapid, and effective solution suitable for open environments

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ABOUT THE BIOCAIR SYSTEM

- DS-1000 dry mist system using Hypochlorous Acid
- Eliminates common pathogens
- Safe for use around people – patients, visitors & colleagues
- No need to seal rooms or pause clinical operations
- Independently tested to meet BSEN standards: EN 13697, EN 1276, EN 16777, EN 14476, EN 13704, EN 17272

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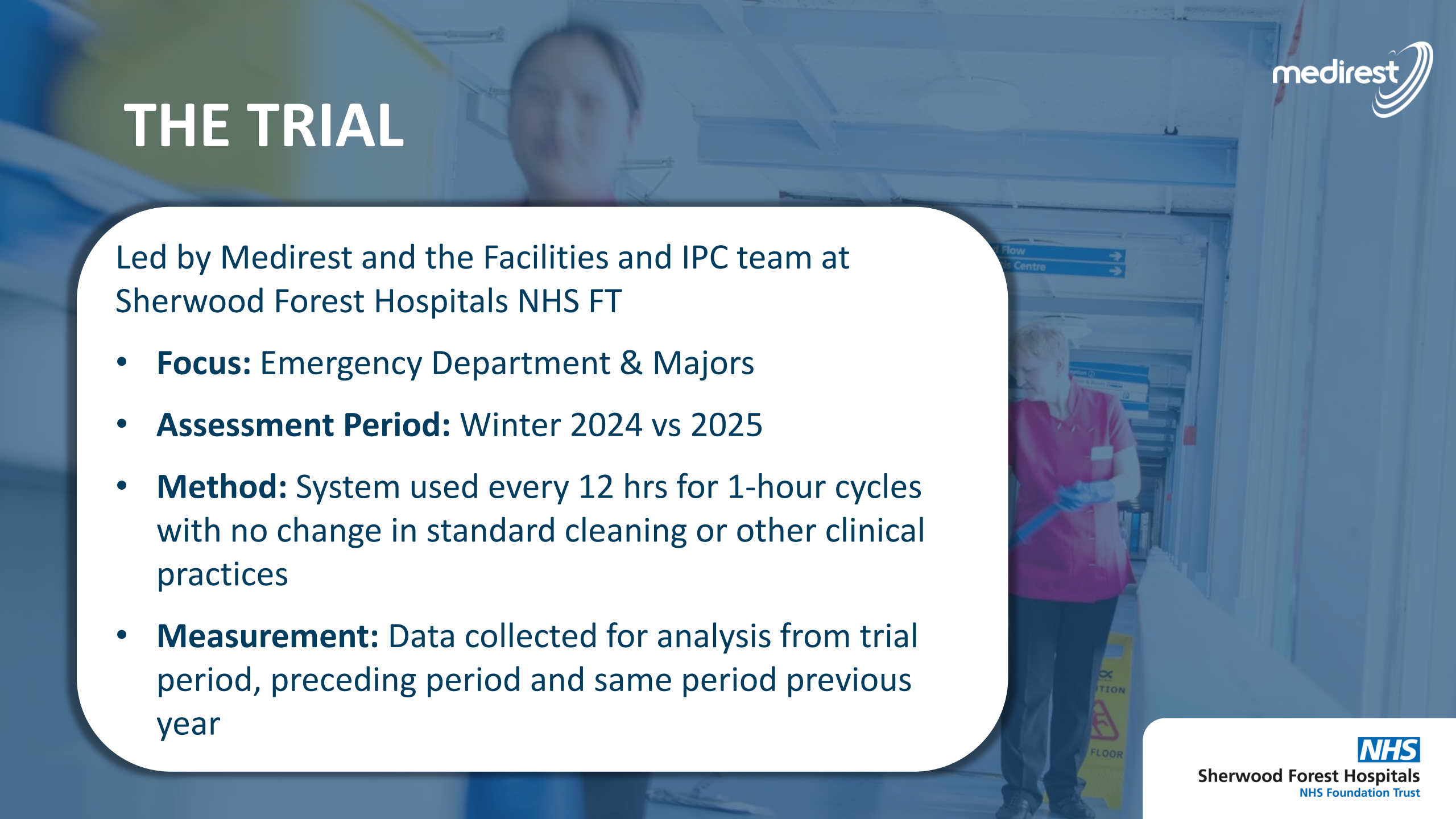
THE TRIAL

Led by Medirest and the Facilities and IPC team at Sherwood Forest Hospitals NHS FT

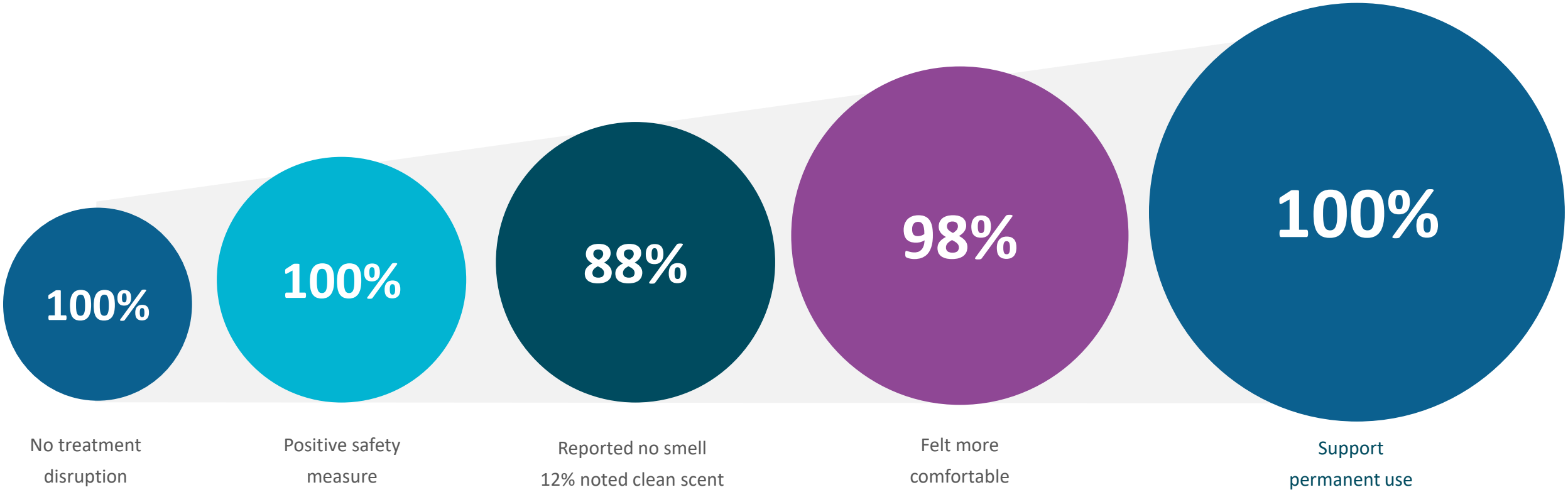
- **Focus:** Emergency Department & Majors
- **Assessment Period:** Winter 2024 vs 2025
- **Method:** System used every 12 hrs for 1-hour cycles with no change in standard cleaning or other clinical practices
- **Measurement:** Data collected for analysis from trial period, preceding period and same period previous year



SAFETY ASSESSMENT

- Risk assessments conducted independently by Health & Safety teams
- Outcome: 'No specific hazards, no chemical risk’
- Approved for use in occupied patient areas
- Both Medirest & Trust HSE teams in agreement on safety of the system

FEEDBACK


100%
No treatment disruption
100%
Positive safety measure
88%
Reported no smell
12% noted clean scent
98%
Felt more comfortable
100%
Support permanent use

Operational testing feedback

The device was praised for its lightness, ease of use, and speed – ***all critical in a busy hospital environment.***

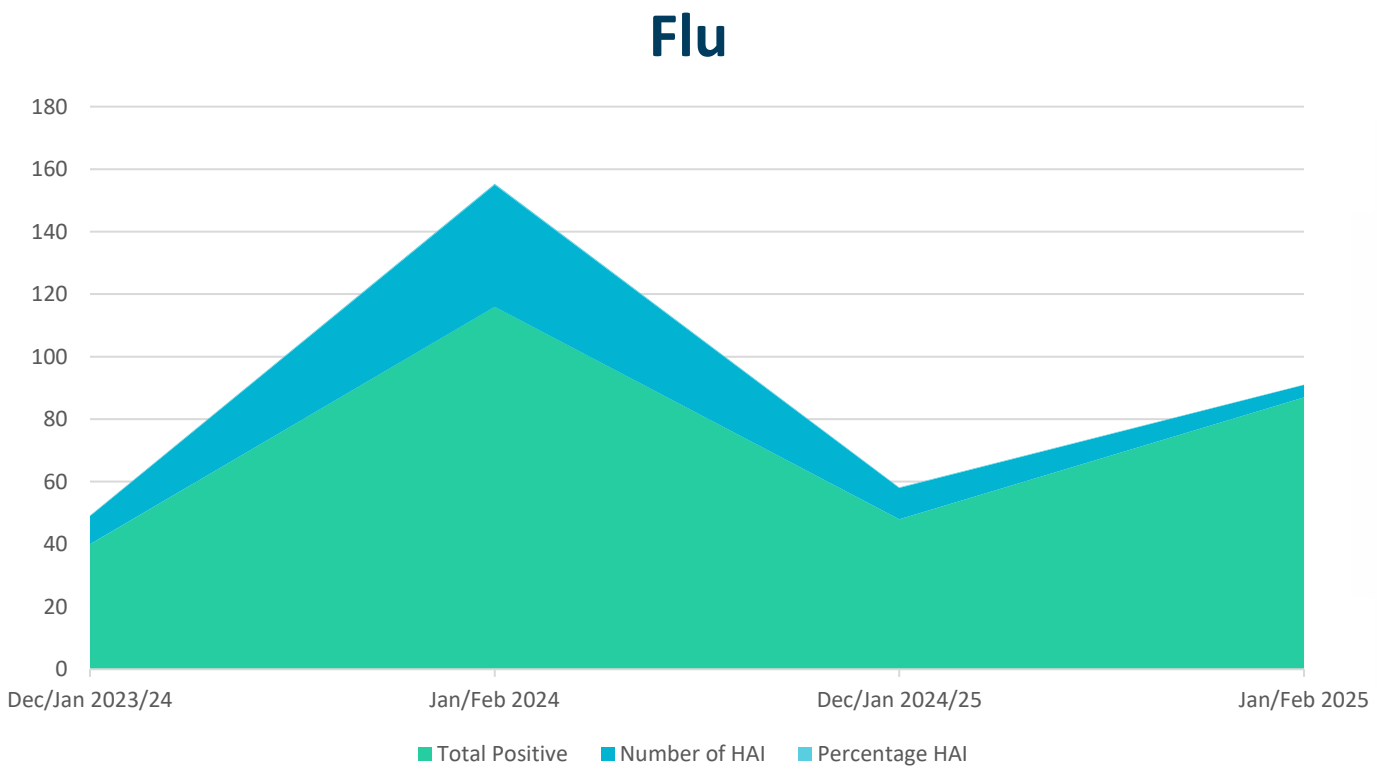
Overall benefits

- No additional time or labour required
- Positive impact on room turnaround times
- Cost effective

Operation team feedback

- Easy to operate (simple touchscreen interface)
- Lightweight and mobile – ideal for hospital settings
- Quick setup – no taping doors or sealing vents

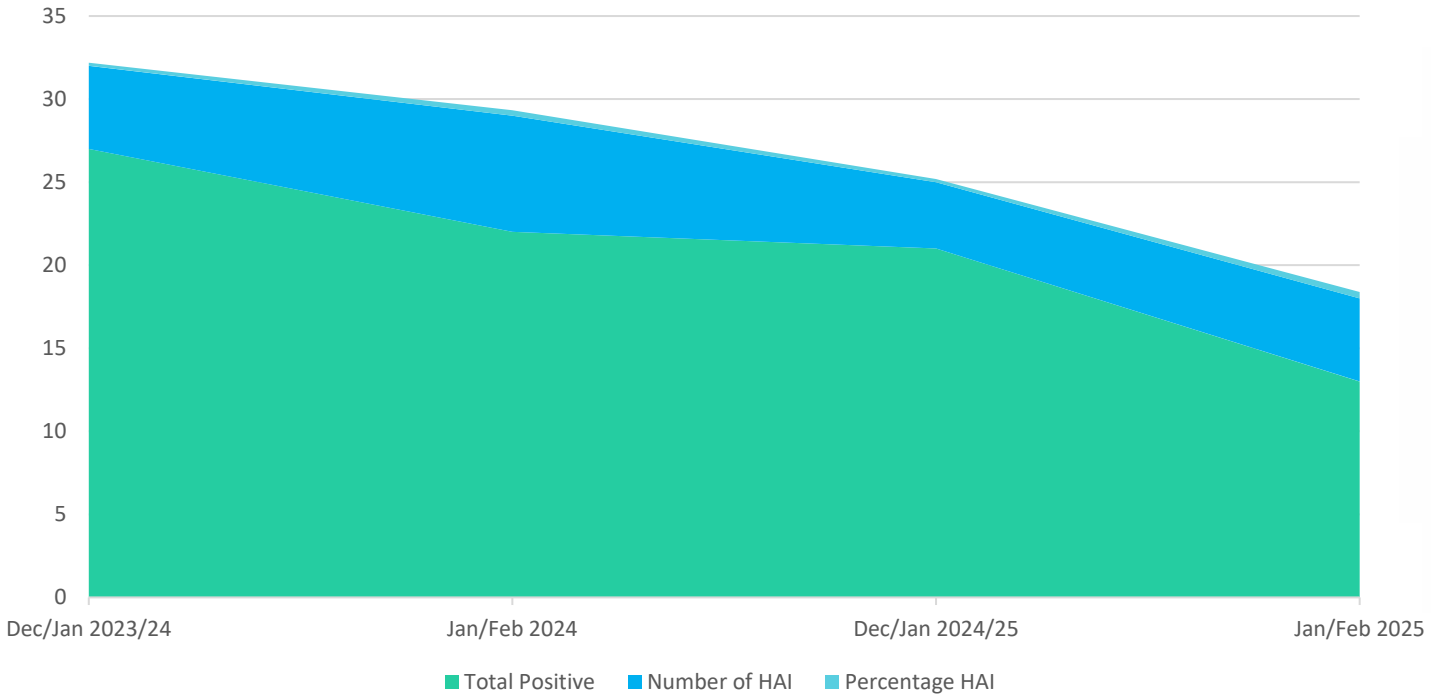
RESULTS



- Flu-related hospital-acquired infections dropped significantly during the trial from 34% in 2024 to just 5% in 2025
- Significant reduction in Hospital Acquired Infections
- Improved air and surface contamination

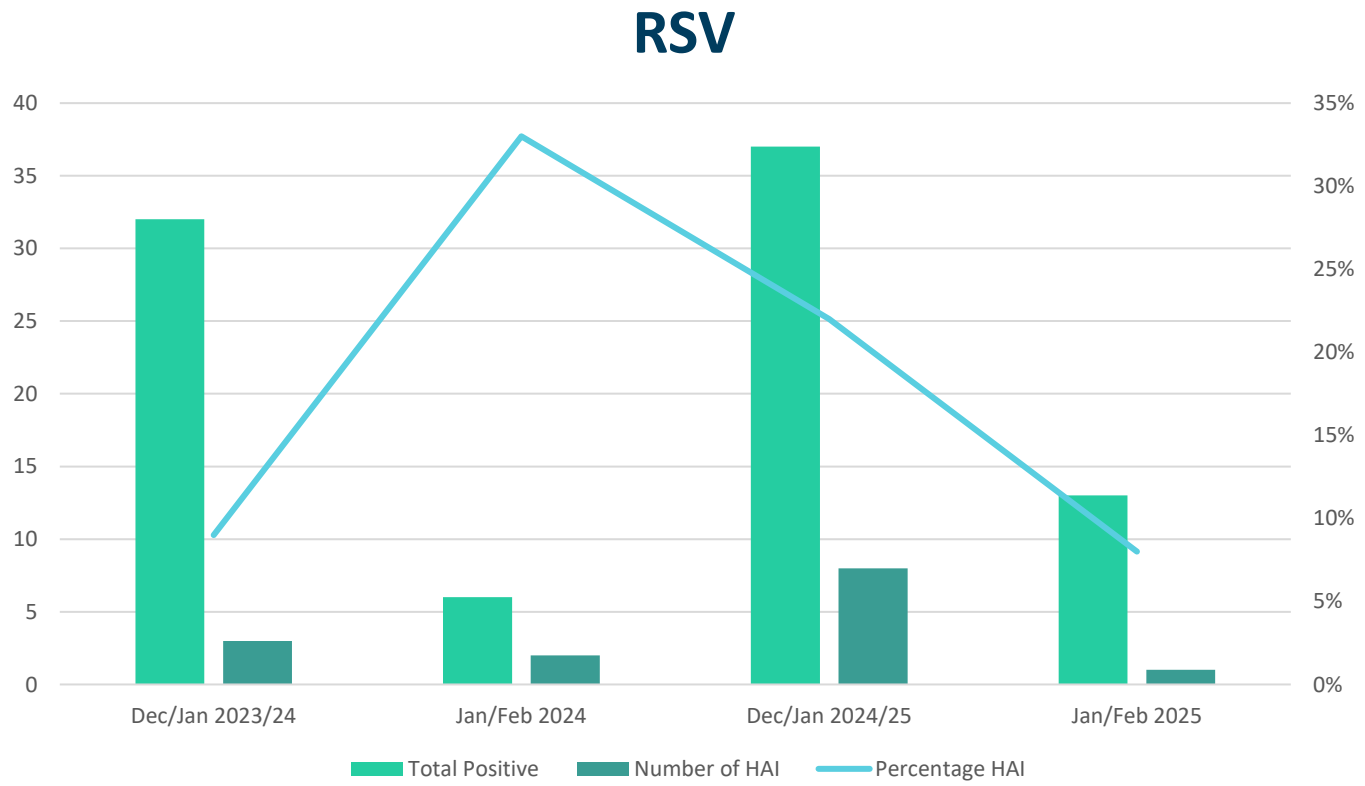
RESULTS

COVID



- Fewer people who contracted the virus out in the environment compared to the year before
- 38% HAI, slightly higher due to low overall case count
- COVID variation due to external factors

RESULTS



- Substantial drop in the number of hospital acquired cases down to only 8% compared to 33% the same time frame prior year
- RSV showed major improvement

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RETURN ON INVESTMENT

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FUTURE APPLICATIONS

As part of our continuous improvement and upon reviewing the data, we have used the machine on several wards which have had breakouts from c-diff, Norovirus and flu with positive impact.

Effectiveness

The IPC and domestic teams have concluded that this machine has been a welcomed addition to help contain breakouts on the wards by running the cycle for only 10mins per a room twice daily.

Future

In future we could look to use this system in areas that have airborne contamination or aerosol generating procedures (AGP) such as;
ED department
Endoscopy
Neo-natal department
Theatres
Intensive care unit
CSSD

CONCLUSION

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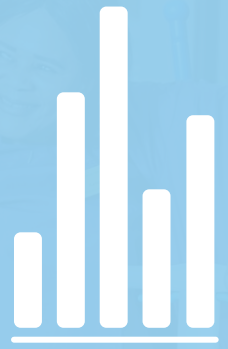

DATA

COLLABORATION

SAFETY

- RAD-1000 fills a critical infection control gap
- Reduced length of stay for patients
- Enables safe decontamination in live clinical areas
- Clear IPC impact & cost-efficiency
- Boosts confidence in hospital cleanliness and safety

HOW TO GET STARTED?

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FOCUS