

# Empowering Unit-Led Change: Using Daily Environmental Audits to Improve Single-Use Ultrasound Gel Adherence in a Continuing Complex Care and Rehabilitation Hospital

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## Background

- Environmental audits help prevent healthcare-associated infections by assessing adherence to infection prevention and control (IPAC) best practices.
- At Hennick Bridgepoint Hospital (HBH), a rehabilitation and complex continuing care hospital, Infection Control Practitioners (ICPs) conduct daily audits.
- Monthly data between February and April 2024 identified gaps in two key areas: use of single-use ultrasound gel and adequate storage shelving within clean supply rooms.

## Aim

- To increase adherence to single-use gel and adequate storage shelving in clean supply rooms at HBH from 1.5% and 2.3%, respectively, to 75% by December 31, 2024.

## Measures

- Outcome measures were rates of adherence to:
  - (1) single-use gel
  - (2) adequate storage shelving within clean supply rooms
- Process measures:
  - Percentage of clinical leaders receiving monthly audit reports
  - Number of clinical team-led interventions
- Balancing measure:
  - Number of workflow disruptions attributed to unavailability of single-use gel.

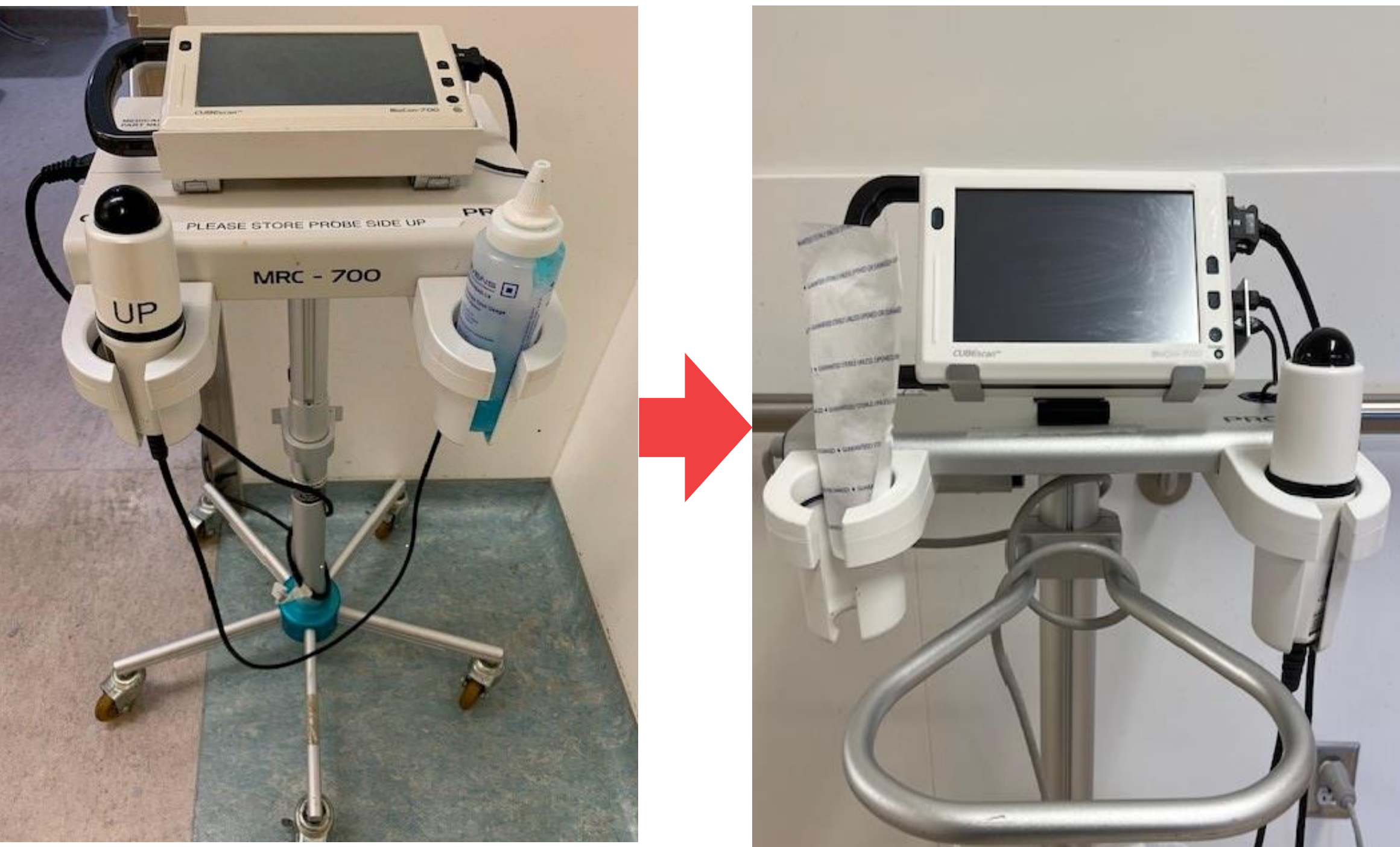


Figure 1: Ultrasound (US) gels pre and post implementation: Multi-use US gel and replaced with single-use packets

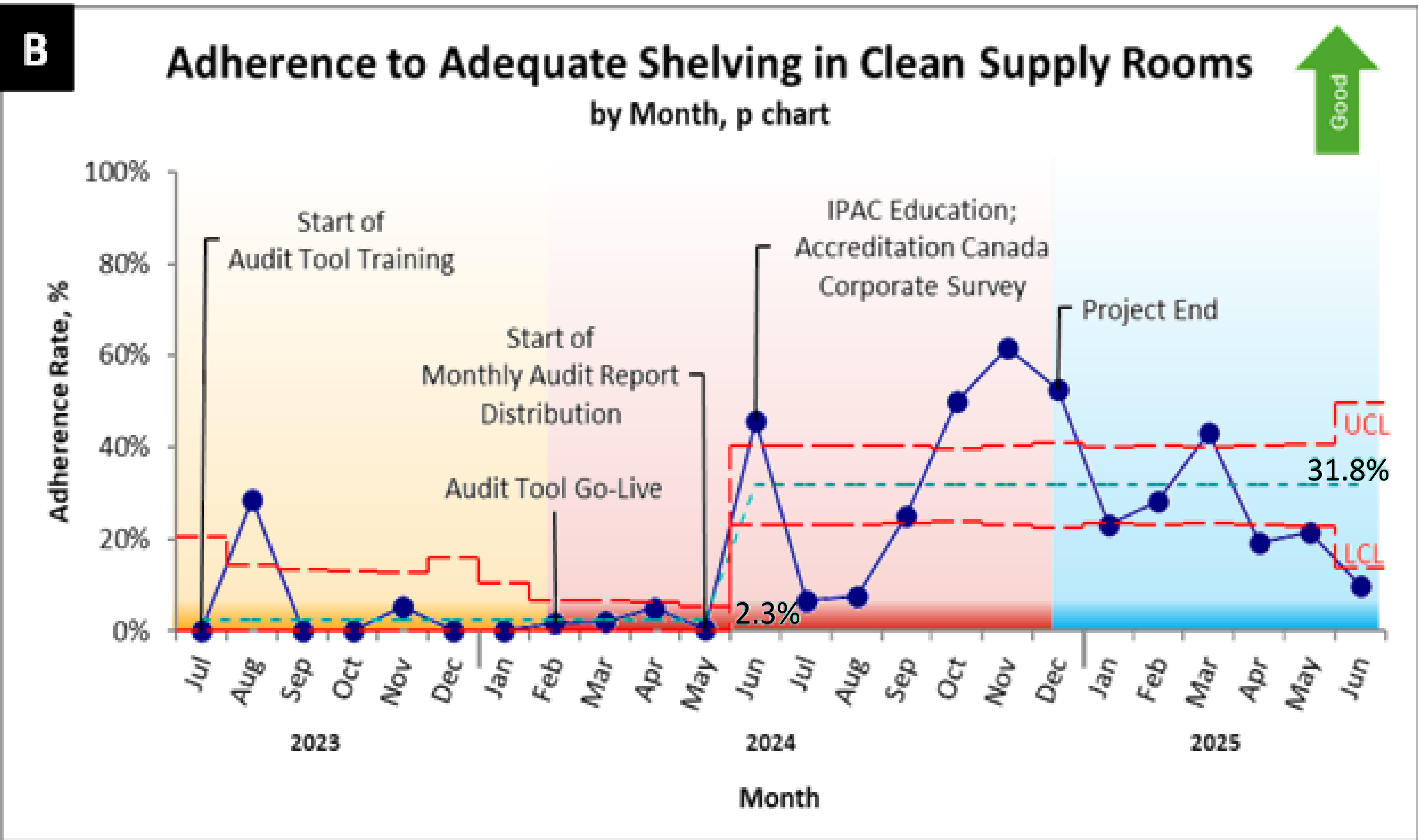
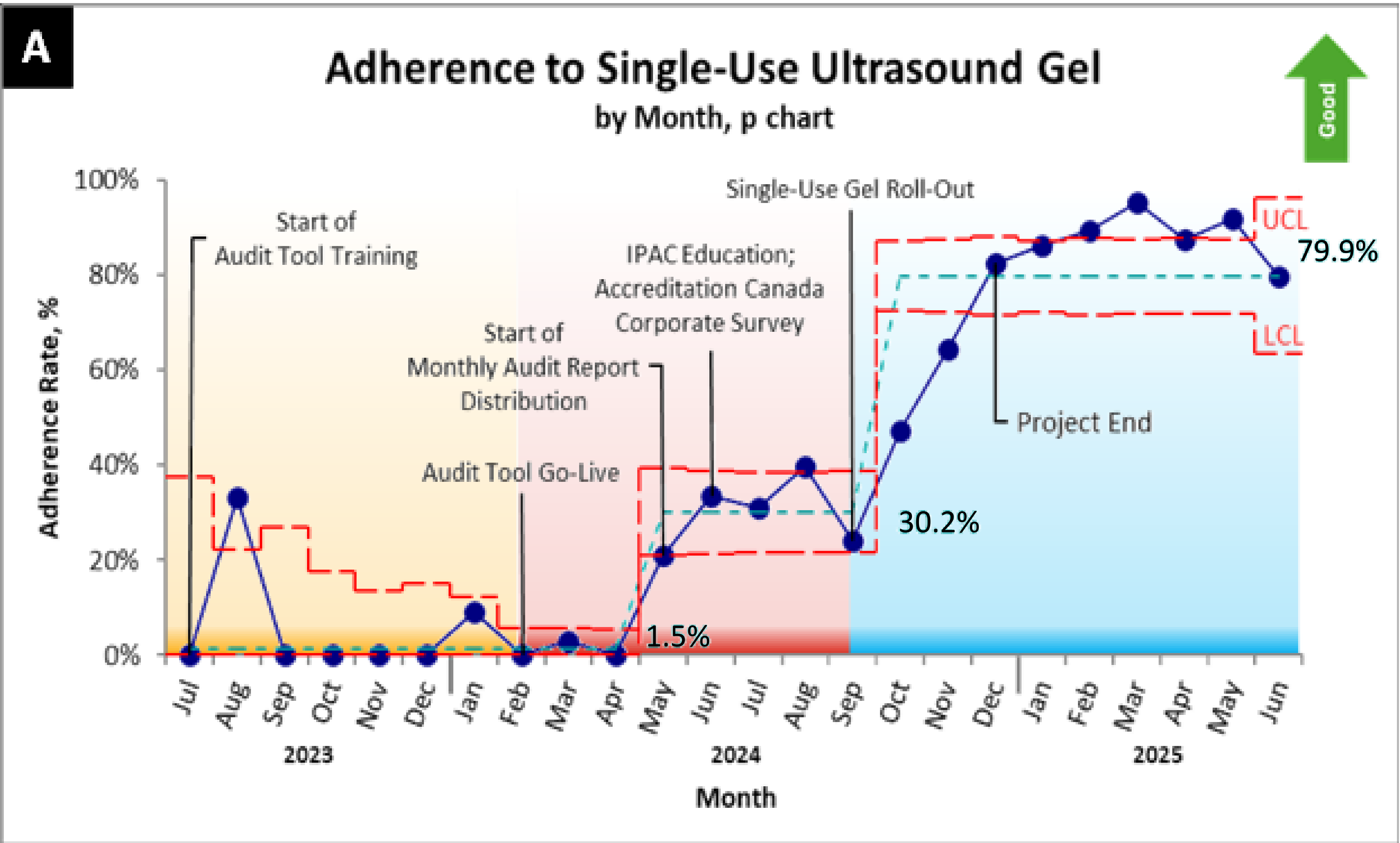


Figure 2. Control charts displaying data for the outcome measures of (A) adherence to single-use ultrasound gel and (B) adherence to adequate storage shelving within clean supply rooms.

## Interventions

- Clinical engagement was central to the initiative, empowering staff to lead unit-specific improvements supported by IPAC collaboration.
- Knowledge of IPAC best practices and unit-specific baselines were primary drivers.
- To ensure access to information, audit reports were created and distributed to clinical leadership (change idea 1).
- ICPs also led education to clinical leadership, informing the unit/hospital-wide improvements (change idea 2).
- July 2023 was the start of the use of the environmental audit tool by ICPs.
- May 2024 was the start of distribution of the monthly audit reports to unit leadership.
- In June 2024, IPAC education regarding best practices for single-use ultrasound gel and adequate storage shelving within clean supply rooms occurred.
- September 2024 was the start of the switch from multi-use to single-use ultrasound gel across units.
- External to this QI initiative, the hospital went through an Accreditation Canada survey in June 2024.

## Impact/Results

- After monthly audit report distribution began in May 2024, single-use gel use (figure 1) rose from 1.5% to 30.2% (figure 2).
- Prompt leadership engagement made the June 2024 education intervention successful, stimulating the switch to single-use gel in September 2024. Adherence rose to 82.6% by project end and maintained at an average of 79.9% in June 2025 (figure 2).
- In contrast, shelving improvements were short-lived, with education and accreditation effecting temporary but non-sustained improvement (31.8% in June 2025; figure 2).

## Discussion/Lessons Learned

- This initiative highlighted the power of robust data collection and distribution to identify gaps, engage clinical leadership, and enable relevant, attainable, and data-driven change.
- While education is a key starting point, systems-based forcing functions are more effective for sustainability.
- Next steps include improving shelving practices and sustaining single-use gel adherence.

## CONTACT INFORMATION

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