

Improving Hand Hygiene Compliance to Reduce CLABSI Risk on a Hematology/Oncology Unit

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INTRODUCTION & PROBLEM STATEMENT

Central line-associated bloodstream infections (CLABSI) are largely preventable infections that can increase patient harm, length of stay, and healthcare costs. Hematology/oncology patients are especially vulnerable because they are often immunocompromised and require prolonged central line access. Hand hygiene remains one of the most effective infection-prevention practices, yet baseline unit data identified ongoing missed opportunities, most often before patient contact and at room entry, the moments that immediately precede central line handling.

PURPOSE OF THE PROJECT

This quality improvement project aimed to evaluate hand hygiene practices on a hematology/oncology unit and identify evidence-based opportunities to strengthen CLABSI prevention. The team assessed both whether hand hygiene occurred and whether it was performed correctly during routine care moments involving patients with central lines, then prioritized sustainable interventions to reinforce accountability and support compliance within the daily workflow.

INTERVENTIONS

- Clean hands protect our patients
- 1

Weekly huddle and unit level recognition tied to automated dispense rate data.
- 2

Before performing PICC line access, document hand hygiene.
- 3

Devote one day a month to have an anonymous observer perform hand hygiene observation prior to entering the patient's room.
- 4

Visual cues before entering room regarding hand hygiene central lines.

MODEL FOR IMPROVEMENT (PDSA)

- P

Plan: Review unit CLABSI trends, Ecolab audit findings, direct-observation data, and survey results to identify the most common gaps.
- D

Do: Pilot the intervention bundle on the unit, provide brief staff education, and introduce visual cues and documentation expectations.
- S

Study: Re-audit hand hygiene opportunities, compare trends, and evaluate observations, dispense-rate data, and staff feedback.
- A

Act: Refine the interventions as needed and expand successful strategies to sustain improvement.

Data sources: unit heat map, Ecolab audit report, direct observation audit, and staff survey (n=10).

DATA SUMMARY

Hand Hygiene and Central-Line Practice Survey Results

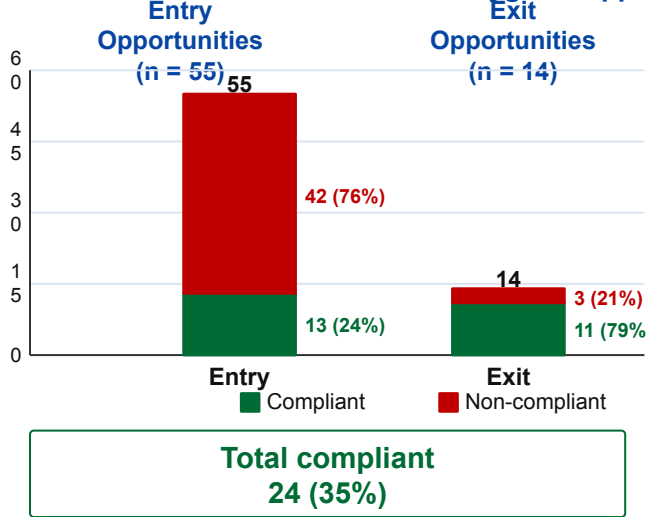
Response distribution by survey statement (n = 10)

Survey statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Favorable
Performs hand hygiene before donning clean gloves	3	5	2	0	0	80%
Performs hand hygiene after patient contact	4	6	0	0	0	100%
Allows alcohol-based hand rub to dry completely	5	2	1	2	0	70%
Washes with soap and water for at least 20 seconds	2	4	0	3	1	60%
Follows the current central-line policy	6	2	2	0	0	80%

Favorable responses = Agree + Strongly agree. Counts reflect the 10 completed survey responses.

Our Audit (Direct Observation)

Total hand hygiene opportunities observed (n = 69)



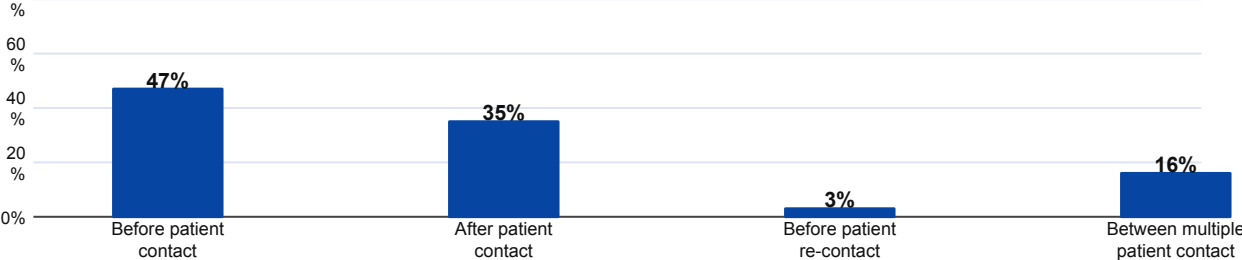
Reasons for non-compliance (n = 45)

No hand hygiene performed before entry/gloves only	38
Alcohol rub not allowed to dry before donning gloves	3
Answered phone / interrupted hand hygiene / no glove change	2
Soap-and-water technique less than 20 seconds	2

Total non-compliant 45 (65%)

Areas of Missed Opportunities (Ecolab Audit)

Ecolab Audit Period: 01/01/2025 – 02/01/2025



2025 Unit Heat Map

	Feb	Mar	Apr	May	Jul	Sep	Oct
CLABSI	1	2	1	1	1	1	–

PROJECT SUMMARY

- Internal unit data demonstrated ongoing CLABSI risk during 2025, with the highest cluster of cases occurring in March.
- The Ecolab hand hygiene audit conducted from 01/01/2025 to 02/01/2025 reported an overall hand hygiene compliance/dispense rate of 73% and highlighted the greatest gap before patient contact.
- Staff survey findings suggested strong awareness of central-line policy, but less consistent adherence to alcohol-rub dry time and 20-second soap-and-water technique.
- Together, the audit, heat-map, and survey findings supported a multifaceted intervention bundle focused on accountability, observation, documentation, and visual reminders.

PROJECT LIMITATIONS

- Small convenience sample and short observation period.
- Direct observation may have influenced staff behavior.
- Survey findings were self-reported and may reflect response bias.
- No post-intervention outcome data were available during this phase.
- Findings were based on one unit and may not be generalizable.

FUTURE DIRECTION

- Implement the intervention bundle and repeat the audit 4–6 weeks after rollout to assess early change in hand hygiene performance.
- Review automated dispense-rate data during weekly huddles, recognize staff success, and identify areas needing reinforcement.
- Continue monthly anonymous direct observation before room entry and during central-line related care to monitor sustained compliance.
- Evaluate hand hygiene documentation before PICC line changes and reinforce alcohol-rub dry time and proper 20-second hand washing technique.
- Maintain and revise room-entry visual cues based on staff feedback, then consider spread to other high-risk units if results improve.
- Continue tracking monthly CLABSI trends to determine whether improved hand hygiene is associated with reduced infection risk over time.

REFERENCES



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