Ecolab® Hand Hygiene Program

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Leading health organizations have stated that hand hygiene is the most important measure to avoid transmission of harmful pathogens. It is also the simplest, most effective method for preventing healthcare-associated infections (HAIs). However, studies show that healthcare workers are compliant less than 40% of the time.[1]

The Ecolab® Hand Hygiene Program is a complete offering that helps you monitor and standardize processes to drive measurable improvements in clinical, operational and financial metrics.

This program's Compliance Monitoring System allows you to accurately record hand hygiene events by individual, holding each healthcare worker accountable for their compliance and providing actionable guidance for improvement. This helps you achieve and sustain results, deliver better patient outcomes, provide a safer working environment for staff and protect margins for your hospital. Since 2016, the Compliance Monitoring System has captured over **128 million hand hygiene product dispenses**, supplied badges to over **14,000 healthcare employees** and monitored over **11,000 hospital beds**.

Program Benefits

Process Standardization & Consistency

Reduce Risk & Financial Impact of HAIs

Create a Safer Environment

Enhance Operational Efficiencies

Increase Staff & Patient Satisfaction

Ensure Regulatory Compliance

1. Data available in Hand Hygiene Program Peer-Reviewed Studies document

Foundational Program Components

INNOVATIVE PRODUCTS

Advanced chemistry and technology to create cleaner and safer environments

- Bed kits create patient zones around beds to indicate if hand hygiene is performed before and after patient contact

- Proprietary badge technology to record every patient interaction and provide immediate feedback via visual and audio cues

- Nexa™ touch-free or manual dispensers with beacons to track individual dispensing activity

- Proprietary hand soaps and sanitizers for a high standard of compliance and cleanliness

ANALYTICS & ACTIONABLE INSIGHTS

Digital dashboards gather millions of data points to drive standardization, measure compliance and pinpoint where corrective action is needed

- Customizable dashboards provide actionable insights at the system, hospital, unit, role or individual level

- Tracking of day and night shift hand hygiene trends over time for the entire hospital

- Compliance, equipment and infection reports, including Contact Investigator to identify staff exposure risk and Isolation Room designation to ensure hospital protocol is followed

CONSULTATION & SERVICE

On-site Ecolab experts deploy solutions, monitor progress and analyze performance metrics

- An implementation project manager to assist with hospital installation and support

- A dedicated, local account executive for ongoing service and to help answer staff and manager questions

- Regular check-ins and coaching consultations to evaluate current practices and identify areas for improvement

TRAINING & PROCESS SUPPORT

Professional training for your staff to drive standardization, manage corrective actions and assist with change management

- Ongoing, in-person and online CE training aligned to evidence-based practices ensures program success

- Administrator and manager level training for digital dashboard and data analytics reporting

- Printed training resources and facility signage to help drive staff education, adoption and compliance across your organization

- Environmental Services and Facilities training for equipment

Actionable Insights & Digital Dashboards

Customizable, clinician-friendly dashboards collect data on individual hand hygiene behaviors, measure compliance and pinpoint precisely where corrective action is needed, down to a department, team or individual level. These actionable insights allow department managers, clinicians and other authorized users to lead process improvements where they are needed most, standardize workflows and keep patients and staff safe.

QUICK ACCESS DASHBOARD

ECOLAB | System Menu | Reports ▾ | Contact Investigator | Isolation Room ▾ | Training ▾ | Contact Us | Joe Public ▾

Reports ▾ menu:
- Department Compliance ▶
- Role Compliance ▶
- Position Compliance ▶
- Employee Compliance ▶ → Employee Compliance / Employee Trend
- Inactive Employees
- Employee Event Count
- Low Badge Battery
- Low Device Battery
- Dispenser Low Product

< Today 📅 >

Shift: Day ▾ 91%

Employee Search: Badge Address, Name

Ecolab® Hand Hygiene Program

Department List

Emergency	100%
Food & Nutrition	100%
Hematology	94%
ICU	82%
Nephrology	100%
Neurology	86%
NICU	77%
Occupational Therapy	94%
Physicians	89%
Radiology	89%
Rehabilitation	83%
Transport	73%

7 Day Position Compliance

- RN (88%)
- CNA (84%)
- RESPIRATORY THERAPIST (88%)
- CHARGE NURSE (88%)
- PHYSICIAN (87%)
- PHYSICAL THERAPY (83%)
- EVS (74%)
- RESTORATIVE NURSE ASSISTANT (83%)
- SPEECH THERAPY (93%)
- LAB ASSISTANT (88%)

Events: 0, 5000, 10000, 15000, 20000

7 Day Shift Compliance Comparison

Compliance %: 50–100
07/23, 07/24, 07/25, 07/26, 07/27, 07/28, 07/29
Week

Legend: Day | Night | Total | Threshold

Reports: System and compliance data

7-Day Shift Compliance Trendline: Compliance by total, day and night shifts

7-Day Role Compliance Comparison: Compliance by role, organized by number of patient interactions

Current Active Departments: Data by active department during the current shift

FACILITY-LEVEL TRENDS

Missed Opportunities for the past 7 days

- Before Patient Contact (4/2) : 28%
- Between Multiple Patient Contact (5/2) (3/2) (1/2) (2/2)
- After Patient Contact (5/3) (5/0) : 28%
- Before Patient Re-co...

7-Day Missed Opportunity Breakdown: Provides actionable suggestions for improvement

12 Week Total Compliance

Compliance %: 50–100
04/01, 04/08, 04/15, 04/22, 04/29, 05/06, 05/13, 05/20, 05/27, 06/03
Week

12-Week Rolling Compliance Tracker: Visibility to long-term trends

IN-DEPTH REPORTING

Contact Investigator: Visibility to every badged employee who interacted with a patient, avoiding potential for unknown spread of infection

Department Trend Report: Option to select department and date range

INDIVIDUAL REPORT CARDS

Current Active Employees: Real-time visibility into who is on shift and what their compliance levles are

Individual report for a healthcare worker

Last 100 Events: Detailed report by individual showing event-level detail to communicate transparency and enable improvement
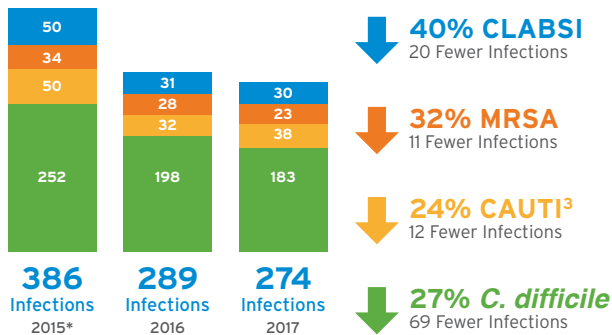
Case Studies

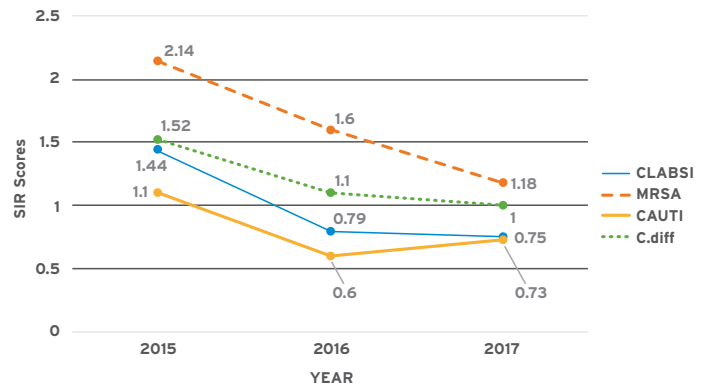| CASE STUDY 1 |
|---|
| **5** hospitals | **1,609** beds | **Florida** |

SETTING
In 2015, the Hand Hygiene Compliance Monitoring System was installed in 5 full hospitals ranging in size from 247 to 385 beds. A retrospective analysis of infection rates 2 years after installation shows a decrease in total annual rates of healthcare-associated infections (HAIs) across all 5 hospitals[2]

OUTCOMES

112 fewer HAIs after 2 years, delivered a 29% improvement

Stacked bar chart:

2015*: 50, 34, 50, 252 — **386 Infections 2015***
2016: 31, 28, 32, 198 — **289 Infections 2016**
2017: 30, 23, 38, 183 — **274 Infections 2017**

40% CLABSI
20 Fewer Infections

32% MRSA
11 Fewer Infections

24% CAUTI[3]
12 Fewer Infections

27% *C. difficile*
69 Fewer Infections

Standard Infection Ratios (SIRs) experienced a downward trend

SIR Scores chart (Y-axis: SIR Scores 0 to 2.5; X-axis: YEAR 2015, 2016, 2017)

- CLABSI: 1.44, 0.79, 0.75
- MRSA: 2.14, 1.6, 1.18
- CAUTI: 1.1, 0.6, 0.73
- C.diff: 1.52, 1.1, 1

HAI	Ancillary Cost/Infection	Number of Infections Reduced	Estimated Reduction in Cost for 2017
CLABSI	$70,000[4]	20	$1,400,000
MRSA	$14,000[5]	11	$154,000
CAUTI	$1,700 (non-ICU) - $10,000[6] (ICU)	12	$20,400 - $120,000
C. diff	$34,000[7]	69	$2,346,000
	Total Savings:		**$3,920,400 - $4,020,000**

Compliance levels have risen to 86%-90% and have been sustained

Fewer HAIs delivered an estimated savings of between $3.92 and $4.02M across all 5 hospitals and roughly 1,200 patient days

2. Ecolab data on file
3. No data was available for CAUTI in 2015. CAUTI data included in 2015 was collected in 2014.
4. Al-Rawajfah OM1, Hewitt JB, Stetzer F, Cheema J. Length of stay and charges associated with health care-acquired bloodstream infections. Am J Infect Control. 2012;40(3):227-32. https://www.ahrq.gov/professionals/quality-patient-safety/cusp/clabsi-final-companion/clabsicomp4c.html
5. AHRQ: https://www.hcup-us.ahrq.gov/reports/statbriefs/sb212-MRSA-Hospital-Stays-California-2013.jsp
6. Hollenbeak CS and Schilling AL. The attributable costs of catheter-associated urinary tract infections in the United States: A systematic review. Am J Infect Control. 2018;46:751-7. https://www.ajicjournal.org/article/S0196-6553(18)30036-1/pdf
7. Zhang S, Palazuelos-Munoz S, Balsells EM, Nair H, Chit A, Kyaw MH. Cost of hospital management of Clostridium difficile infection in the United States: A meta-analysis and modelling study. BMC Infectious Diseases. 2016;16;447.

353-bed hospital | **6-month** trial | **20-bed** surgical/medical hem-onc unit | **Minneapolis, MN**

HOSPITAL CHALLENGES

Hand hygiene compliance was historically measured by time-consuming direct observation

Device-associated infections persisted despite 95% hand hygiene compliance reported by secret shoppers

No method for determining individual hand hygiene compliance

ECOLAB SOLUTIONS

Performed a 2-week baseline compliance measurement reporting actual compliance at 61.5%

Provided on-site best practice training on hand hygiene and Compliance Monitoring for all staff
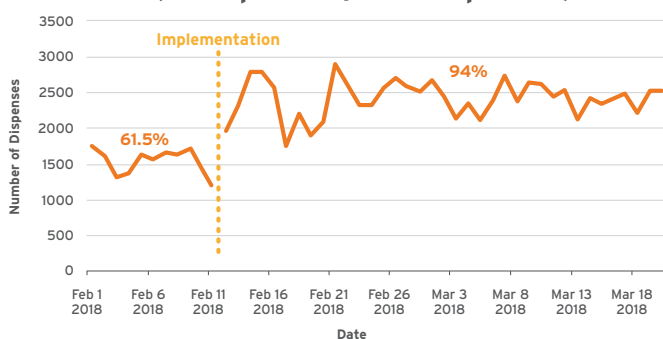
Introduced new Compliance Monitoring System

Compliance Monitoring bed kits to create a zone around the patient that monitors employee hand hygiene events before and after patient contact

Employee badges to measure and record hand hygiene events by individual, providing visual and audio hand hygiene reminders
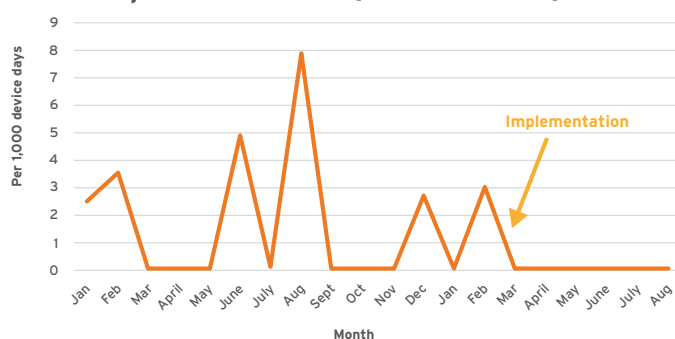
Nexa™ dispensers with beacons to communicate with Compliance Monitoring employee badges

OUTCOMES

Compliance before & after implementation (# Dispenses / % Compliance)

Number of Dispenses — Date

Implementation

61.5%

94%

CLABSI and CAUTI infection rates have improved from 1.87/1000 to 0.43/1000

Per 1,000 device days — Month

Implementation

Monthly Hand Hygiene Observations Increased from 1,200 to 20,000

Number of Observations

1200
Prior To Implementation
*Data from the whole hospital

20000
After Implementation
*Data from the united that trialed the system

Baseline compliance 61.5% | Post-implementation compliance sustained at >90%

Dispensing activity increased from an average of 1,577 dispenses to 2,426

Bor, B, Swanson S, Olson D, Jones C. Bringing Hand Hygiene to the Next Level. Abstract presented at APIC-MN September 27-28, 2018. Minneapolis, MN.

Program Outcomes Guaranteed

Our programmatic approach optimizes workflows across multiple touchpoints within hospitals by backing up results and partnering to guarantee improved outcomes. Our commitment to measurable results allows us to ensure sustained savings and strong return on investment.

**Ecolab®
Hand Hygiene Program**

Learn more about the Ecolab Program Guarantees for improved hand hygiene compliance and HAI reductions by speaking with your Ecolab account executive.

Ecolab Guarantee	Improve Hand Hygiene Compliance	Reduce MRSA

ABOUT ECOLAB HEALTHCARE

Ecolab Healthcare is driven to help health systems and hospitals realize clinical, operational and financial value through repeatable and measurable workflows. Our standardized processes and digital dashboards provide actionable insights and opportunities for corrective actions that help reduce the costs and inefficiencies of infections, while improving margins and keeping patients and staff safe.

To learn how our analytics-driven solutions and standardized processes can help your organization,

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