



REDUCE INFECTIONS

By Improving Hand Hygiene

Our Voice Resonates

THE PROBLEM

Healthcare-Associated Infections (HAIs) infect 1 – 2 million patients in the US per year,¹ leading to about **100,000 preventable deaths**² and **\$10-\$30 billion** in unnecessary costs.³

Hand hygiene is widely recognized as the best way to prevent HAIs. Unfortunately, **hospital hand hygiene performance rates tend to be low**—one multicenter study found non-ICU performance averaged 36% (ICUs were at 26%).⁴

And, as if patient safety and patient experience concerns weren't already enough to drive hospitals to solve the hand hygiene problem, now The Joint Commission has provided even more incentive. **If a surveyor sees one clinician fail to clean their hands one time, the hospital will be cited as a deficiency resulting in a Requirement for Improvement.**

Contact us today at 404.975.1686 • info@cleanhands-safehands.com

www.cleanhands-safehands.com

A hand sanitizer dispenser is mounted on a wall. A hand is shown being sanitized with the dispenser's nozzle. The dispenser is white and has a blue label that reads "Automatic Dispenser". The background is a light blue wall.

Automatic Dispenser

“

Most healthcare-associated infections are preventable through good hand hygiene—cleaning hands at the right times and in the right way.

”

– World Health Organization

THE SOLUTION

The Clean Hands – Safe Hands system can double—**or even triple**—hand hygiene performance rates. First, it accurately measures hand hygiene data, allowing you to make better decisions.

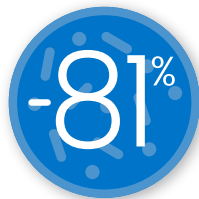
Second, it also provides **real-time reminders** to busy clinicians, reminding them to clean their hands in the moment.

OUR RESULTS

The Clean Hands – Safe Hands system delivers. Our hospital partners have seen results such as:



Hand hygiene increases, including a 300% improvement in multiple hospitals following voice reminder implementation.



HAI reductions – in 100% of hospitals following our process for 6 months, HAIs decreased between 45% and 81%.



Cost savings, including net savings of over \$1M per facility in a two-facility hospital partner.



Joint Commission commendation during a survey for using the Clean Hands – Safe Hands system.

¹ D. Reed. S. A. Kemmerly, *The Ochsner journal* 9, 27 (Spring, 2009).

² D. Pittet, *Emerging infectious diseases* 7, 234 (May – Apr, 2001).

³ E. Zimlishman et al., *JAMA internal medicine*, (Sept 2, 2013).

⁴ McGuckin, M, et al. "Hand Hygiene Compliance Rates in the United States—a One-Year Multicenter Collaboration Using Product/Volume Usage Measurement and Feedback." *American Journal of Medical Quality: the Official Journal of the American College of Medical Quality*, U.S. National Library of Medicine, 1 May 2009, www.ncbi.nlm.nih.gov/pubmed/19332864.

OUR TECHNOLOGY FEATURES

REAL-TIME VOICE REMINDER



ADAPTABLE SYSTEM



PERFORMANCE IMPROVEMENT



GAMIFIED ENCOURAGEMENT



ACTIONABLE ANALYTICS



HOW IT WORKS

Sensors on alcohol and soap dispensers gather data from badge reels. In the event a provider forgets to clean their hands, our **Real-Time Voice Reminder™** provides a gentle reminder.

The flexible sensor network allows us to adapt the system to your unique workflows. Data is gathered on both badged and non-badged people.



The Badge

- Identifies individual providers
- Non-intrusive to staff; lightweight
- Zero impact on workflow
- No additional wearable
- Over one year battery life; no recharging



The Sensor

- Identifies each hand hygiene event
- Communicates with all other sensors
- Flexible for ALL dispensers and skincare brands
- No facilities impact
- Real-Time Voice Reminder™



The Network

- Ethernet connection to the Internet
- No facilities impact
- Two-way secure communication
- Does not use nor interfere with hospital WiFi

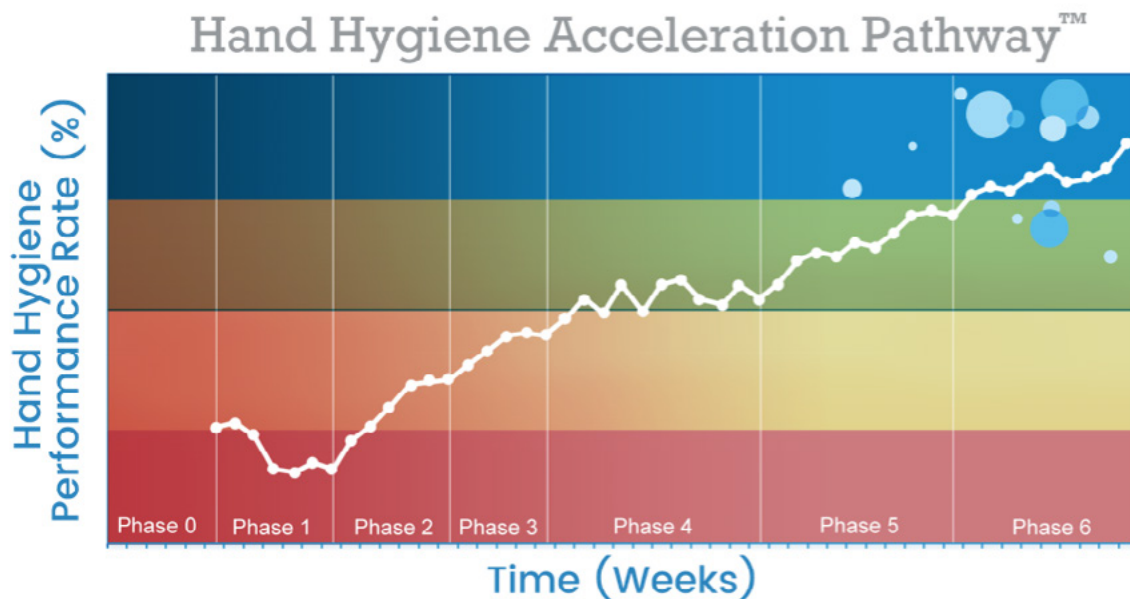


The Software

- Configure the system for your unique needs
- Access from any browser—no software installation required
- Individual and group level dashboards
- Meaningful, actionable data analytics

THE PROCESS

Our solution is part technology and part process that builds a culture of positive behavior change. Our unique, patent-pending, six phase process ensures that hand hygiene performance continues to build over time.



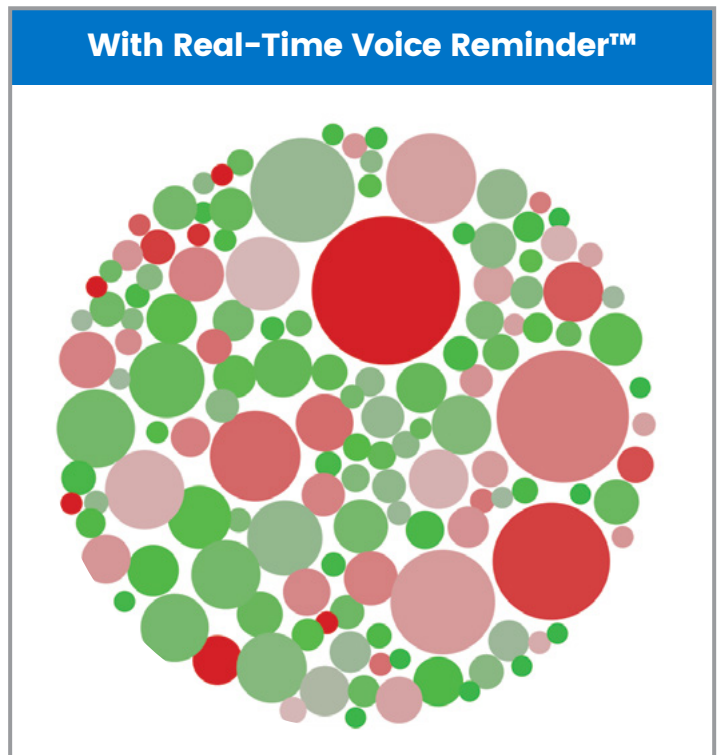
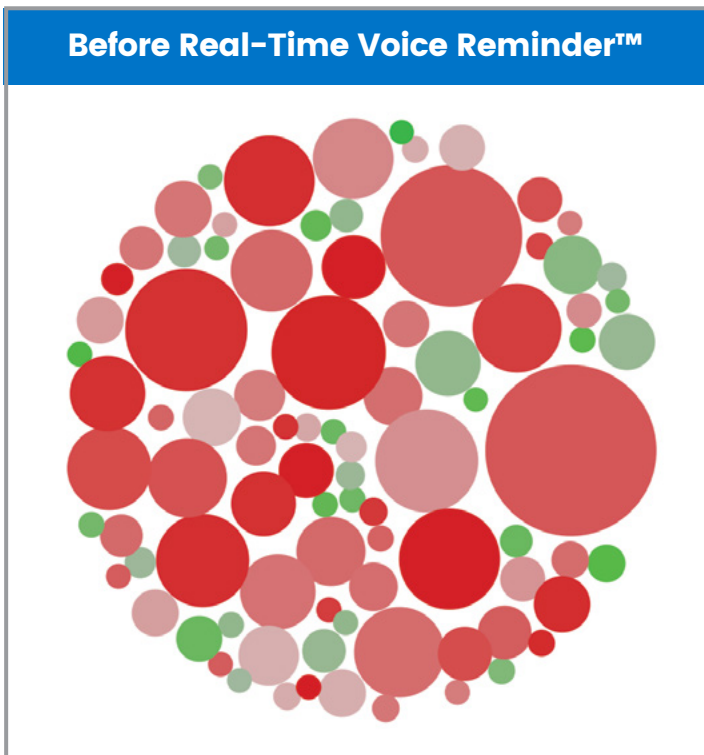
Here's What Happens In Each Phase:

- PHASE
1
Setting The Foundation: The technology is installed and quietly gathers data in the background to set a baseline.
- PHASE
2
Listen & Respond: The Real-Time Voice Reminder™ is turned on.
- PHASE
3
Team Engagement: Gamification is added; a group competition with incentives builds engagement.
- PHASE
4
Challenge Yourself: Gamification continues with an individual competition and rewards. We identify top performers and those who may be struggling.
- PHASE
5
Workflow Process Enhancement: System data identifies potential workflow challenges, allowing clinicians to be more efficient.
- PHASE
6
High Risk Patient Intervention: We customize the system to your unique needs, considering options such as badging UV robots or altering isolation protocols.

OUR DATA VISUALIZATION SUITE

Our new **Performance Bubble Plots™** provide unprecedented insights and quickly identify the most efficient path to hand hygiene improvement.

SEE AREAS OF HIGHEST RISK AT-A-GLANCE BY INDIVIDUAL

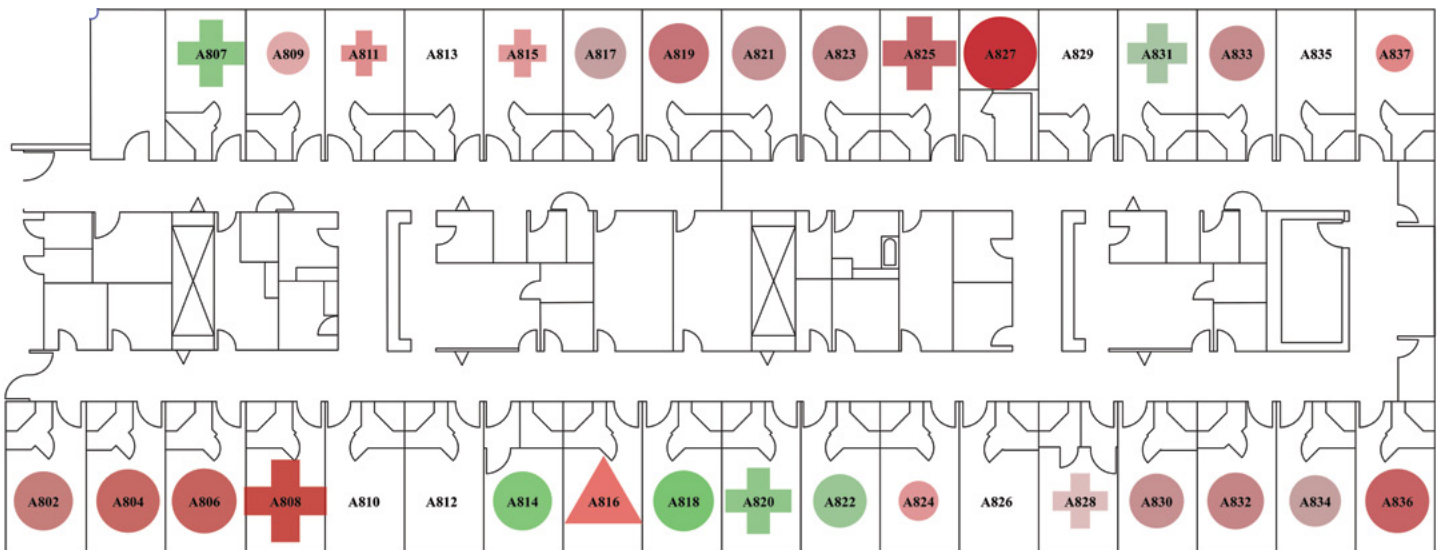
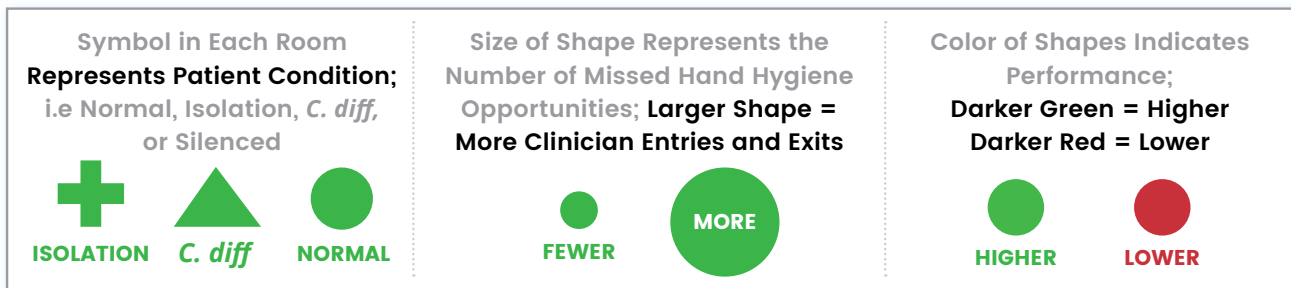


At a glance, identify the handful of staff members that have many hand hygiene opportunities and are struggling, making it easy to focus on those that need the most help.

OUR DATA VISUALIZATION SUITE

Our **Real-Time Intervention Blueprints™** allow you to quickly identify the most efficient path to hand hygiene improvement.

SEE AREAS OF HIGHEST RISK AT-A-GLANCE BY ROOM & PATIENT CONDITION



At a glance, identify the rooms that are having issues with hand hygiene, making it easy to focus on those that need help. We can even send managers a text message mid-shift, telling them which rooms they should go check on before an HAI has a chance to spread.



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***Most germs that
cause serious infections
in healthcare are spread
by people's actions.***

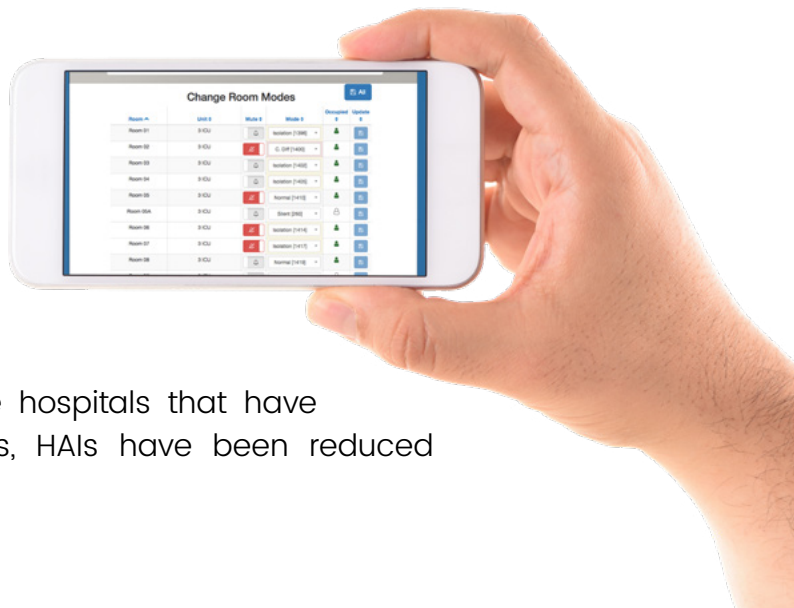
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– Centers for Disease Control and Prevention

WHY CLEAN HANDS — SAFE HANDS?

There are other electronic hand hygiene reminder systems on the market, but none that can offer these eight unique advantages.

- **Real-Time Voice Reminder™** A human voice does the best job of getting busy clinicians' attention. Lights and beeps are often ignored due to alarm fatigue.
- **Adaptive Room Modes™** Quickly change a room mode based on patient conditions, such as giving more time to gown and glove for isolation rooms. Or set the room to *C. diff* mode to change the voice to remind clinicians to use soap and water.
- **Staff Acceptance** The process includes gamification, competitions and rewards, both on group and individual levels. It keeps hand hygiene positive—never punitive—and even makes it fun!
- **Real-Time Text Messaging™** Your unit manager can get a text message midshift warning her that hand hygiene performance is down in a particular room right now. This enables her to address the issue right then, before it becomes a problem.
- **Hand Hygiene Acceleration Pathway™** Our unique, six phase process focuses your staff on particular goals for each phase. These build on themselves and continue to increase performance over time.
- **Workflow Improvements** Data pinpoints the areas most in need of improvement. This often brings workflow issues to light. When these are solved, the entire hospital can run more smoothly and efficiently.
- **Adaptable System** Our system adapts to your hospital's needs and workflows, not the other way around. In addition, we can work with any brand of skincare and any dispenser. And we can measure the performance of individuals, groups, or both.
- **Documented Results** In 100% of the hospitals that have followed our process for six months, HAIs have been reduced between 45% and 81%.



DIRECT OBSERVATION IS NOW OBSOLETE

The days of secret shoppers hiding in a corner with a clipboard are over. Our system monitors over 4,000 hand hygiene opportunities per bed per month on average. Direct observation is lucky to capture a fraction of a percent of that. In addition, the Hawthorne Effect⁵ shows that hand hygiene rates triple when a clinician knows he or she is being watched. And at least a dozen other human biases taint findings, ranging from confirmation bias and observer drift to uniform application errors and the inability to see into patient rooms.

Direct observation is no longer the Gold Standard in hand hygiene measurement—it's instead the Fool's Gold Standard.⁶ In addition, it faces an impossible duality⁷—a secret shopper cannot change behavior if he or she is to remain secret. If the secret shopper reminds a clinician to clean their hands, he or she is no longer secret and cannot collect accurate data due to the Hawthorne Effect.

Not only is data from direct observation grossly inaccurate, it does little to actually change behavior. Using technology to accurately capture virtually every opportunity—and then improve performance in the moment—is much more effective.

⁵ Srigley, J.A., et al., *Quantification of the Hawthorne effect in hand hygiene compliance monitoring using an electronic monitoring system: a retrospective cohort study*. *BMJ Qual Saf*, 2014. 23(12): p. 974-80.

⁶ "Direct Observation: the 'Fool's Gold' Standard," *Clean Hands – Safe Hands*, 08-16-17, <http://cleanhands-safehands.com/2017/08/16/direct-observation-fools-gold-standard/>

⁷ "The Impossible Duality of Direct Observation," *Clean Hands – Safe Hands*, 08-24-17, <http://cleanhands-safehands.com/2017/08/24/impossible-duality-direct-observation/>

⁸ Drew et al. (2014, October 22). *Insights into the Problem of Alarm Fatigue with Physiologic Monitor Devices: A Comprehensive Observational Study of Consecutive Intensive Care Unit Patients* [journal].

⁹ The Joint Commission. (2013, April 8). *The Joint Commission Sentinel Event Alert* [pdf].

Patient & Clinician Benefits Using the Clean Hands-Safe Hands System

CLINICAL

- Improves hand hygiene
- Reduces Healthcare-Associated Infections (HAIs)
- Improves patient safety
- Frees up staff from doing direct observation so they can focus on patient care

FINANCIAL

- Lowers costs due to infections
- Lowers costs related to Joint Commission citations
- Lowers costs related to HAI penalties

OPERATIONAL

- Decreased infections improves operational efficiency
- Improves fixed asset utilization
- Creates safer employee work environment
- Improves clinician workflow

STRATEGIC

- Improves Patient Satisfaction
- Improves Patient Experience
- Reputational Benefits
- Better data prompts better decision making

WHAT TO WATCH OUT FOR

Here's what you **don't want** in an electronic hand hygiene reminder system:

- **A technology that gathers data but doesn't also remind** providers to clean their hands in the moment. This will never be as effective in changing behavior.
- **Reminders that are beeps, alarms, or flashing lights.** One study found an audible alarm burden of 187 alarms per bed per day, with 88.8% being false positives.⁸ Clinicians understandably tune out this cacophony of sounds and visual alerts, leading to numerous deaths and other patient safety issues.⁹
- **Any system that requires the hospital to adjust their workflow** to the technology. It should be the other way around.
- **Systems that only track group performance, not individual.** Anonymous data is much less effective in changing behavior. And there are ways to use individual data in positive, supportive ways—not punitive.
- **Heavy IT demand systems** that require opening up walls, connecting to your network, or going through your firewall.
- **Additional wearables** that clinicians must add, which can disrupt workflows if they need to check them in and out each day to be recharged and sync data.
- **Any system that requires you to use a particular type of dispenser** or brand of skincare products.

REDUCE RISKS — SAVE LIVES

Finally, a hand hygiene solution that people like. Friendly reminders. Non-disruptive technology. Fitness tracker-style performance goals. And a process that nurtures a culture of proactive HAI prevention based on individual and team hand hygiene performance.

Preventing the spread of hospital-acquired infections is serious business, but there's no rule against making it fun. At the same time, you lower costs. Reduce risks. Improve the safety of your patients. Save lives.



**Contact Us Today to Find Out How We Can Help You
Increase Hand Hygiene Performance and Reduce HAIs**

Email info@cleanhands-safehands.com or Call **404.975.1686**

BY CLINICIANS, FOR CLINICIANS

Clean Hands – Safe Hands began through a research consortium of the Centers for Disease Control and Prevention (CDC), Emory University, Children's Healthcare of Atlanta, the Georgia Institute of Technology and the Georgia Tech Research Institute. Knowing that the primary accepted method of direct observation is ineffectual in reducing HAIs, physicians and technologists worked together to develop an innovative solution to the problem.

Clean Hands—Safe Hands. Improving Everyone's Performance.™