CleanHands SAFE•HANDS

INVEST FOR SUCCESS:

HOW THE RIGHT ELECTRONIC HAND HYGIENE MONITORING SYSTEM CAN HELP YOUR HOSPITAL THRIVE

Learn why there's never been a more crucial time to implement an electronic hand hygiene monitoring system, and what to look for.
Because you can't afford the wrong system.

Hospital margins are down. Staff are burned out. And highly infectious diseases continue to circulate. Now is not the time to experiment with unproven strategies, nor the time to continue with business as usual. With the healthcare system under strain, one thing is clear: past solutions aren't a good fit for the present day. To thrive now and in the future, hospitals need to invest in systems that will increase staff efficiency, promote staff retention, and boost the bottom line.

A Critical Time for Smart Investment

It's impossible to overstate the strain that the COVID-19 pandemic has inflicted on hospitals and healthcare workers. Hospital expenses are up, and margins remain below pre-pandemic levels. Staff shortages and infectious disease outbreaks complicate care delivery as demand for care sometimes outstrips supply.

*The median change in hospitals' operating margin dropped by **22.1 percent from 2019 levels**.**

**not including CARES Act funding*

Health systems can't afford to lose any more staff or business. Hospitals that want to thrive need to invest in systems and solutions that help, not hinder, staff members.

*In Sept. '21, **21% of nurses said they planned to leave their jobs** within the next 6 months.*

An emphasis on quality and safety remains essential. The COVID-19 pandemic has unfortunately demonstrated how easy it is for systems to break down under stress. Despite the highly contagious nature of COVID-19 and a global emphasis on handwashing, hand hygiene rates declined in many hospitals as staff worked tirelessly to meet patient needs. Some hospitals reported a 40% relative decrease in hand hygiene performance.

Sub-optimal hand hygiene performance can harm a hospital's Leapfrog Hospital Safety Grade. Some hospitals have seen their score drop more than a letter grade due to their hand hygiene metrics. Conversely, attention to hand hygiene can boost a hospital's Leapfrog Safety Grade. Diligently working to improve hand hygiene can add a letter grade or more to a hospital's safety grade.

Fall 2021 Leapfrog Hospital Safety Grades

32% of U.S. hospitals received an "A"

26% received a "B"

35% received a "C"

7% received a "D"

<1% received an "F"

3 Common Mistakes that Will Impact Your Leapfrog Hand Hygiene Survey

Any one of these mistakes may cause your Leapfrog Hospital Safety Grade to drop by a full letter:

1. Failing to monitor all bedside areas
2. Not validating the accuracy of your hand hygiene data
3. Not utilizing real-time feedback

Work Smarter, Not Harder

The Leapfrog Hand Hygiene survey asks whether hospitals collect hand hygiene compliance data on at least 200 hand hygiene opportunities, or 1.7% of all possible hand hygiene opportunities, **each month** in **each patient care unit**.

Hospitals can use either direct observation or an electronic hand hygiene monitoring system to collect that data. It takes approximately 10 minutes for a direct observer to watch and record a hand hygiene operation. If a hospital has 250 beds with 8 different patient care units, the facility will need to record **1,600 observations per month**.

1,600 observations X 10 minutes per observation =

16,000 minutes (266 hours!)

You can't afford to spend hundreds of hours of staff time on direct observation. It's not an efficient use of limited staff, and even if it was, the data obtained by direct observation isn't representative of real-world conditions.

Thanks to the Hawthorne effect – the principle that individuals change their behavior when under observation – hand hygiene rates collected by direct observation are usually artificially inflated. The numbers may look good on paper, but they're not an accurate representation of reality. The presence of the observer causes the staff to perform hand hygiene only when they're present, since they know they're being watched. Take away the observers and hand hygiene rates may drop by as much as 300%.[1,2]

That's why "**Leapfrog is communicating a strong preference for use of electronic monitoring** (implemented according to evidence-based principles)," according to the March 23, *2020 Summary of Changes of the Leapfrog Hospital Survey & Responses to Public Comments.*

> "Facilities that have adopted electronic compliance monitoring systems are better able to determine their actual hand hygiene compliance rate…The potential cost savings to an employer of reducing HAIs are tremendous …"
>
> From *Leapfrog Hospital Survey Factsheet: Hand Hygiene*

Want a Top Leapfrog Safety Grade?

- Your hospital must monitor hand hygiene compliance **in each nursing care unit**
- Leapfrog's Hand Hygiene Survey requires **individual and unit-level feedback**
- Stressed out staff **need technology that makes their jobs easier, not harder**

How to Choose the Right Electronic Hand Hygiene Monitoring System

The right electronic hand hygiene monitoring system can help you boost your Leapfrog Patient Safety Grade, decrease healthcare associated infections (HAIs), streamline patient care, and support clinical staff. The wrong system can interrupt clinical workflows and decrease staff morale without delivering meaningful increases in hand hygiene performance.

When looking for an electronic hand hygiene system, consider these 5 factors:

1 Does the system add to staff workloads?

Your staff is busy. A system that requires them to alter their workflow will likely be met with resistance. You want a system that seamlessly integrates with existing workflows.

Consider:

- **Does the system require an additional wearable?**

  Some systems require staff members to clip a sensor onto their uniforms. If the sensor is not properly positioned, it may not accurately detect hand hygiene opportunities.

- **How often do wearable components require charging? Do you have to download data?**

  How long do sensors take to charge? How long does a charge last? Do staff members need to "switch out" their wearable each shift, or can they retain and reuse the same wearable sensor over many shifts?

- **Do staff members have to pause or perform an extra action to get "credit" for hand hygiene?**

  Some systems require staff members to hold their sanitized hands over a wearable sensor, which scans for traces of alcohol-based hand sanitizer (ABHS). Other systems require staff to pause within proximity of a stationary sensor for a few seconds to receive "credit" for hand hygiene. These systems may miss hand hygiene that occurs on the run. A staff member who quickly rubs ABSH onto their hands while hurrying to a code could be inaccurately penalized.

- **Does the system work through isolation gowns without staff having to move badges?**

  The less staff members have to touch or move their badges or wearable sensors, the better.

Ideally, you want an electronic hand hygiene system that includes a non-obtrusive wearable component that doesn't require regular charging and can be worn on staff uniforms. Staff should not have to pause or otherwise alter their workflow to get "credit" for performing hand hygiene. The system **should automatically detect and record hand hygiene engagement**.

2 Does the system offer real-time feedback?

You want a system that discreetly reminds staff of missed hand hygiene opportunities. You don't want a system that adds additional noise or chaos to your units. In-the-moment reminders are critical to ensure that your system isn't just measuring hand hygiene, but is also helping to improve it.

A 2019 report from the National Fire Protection Research foundation notes that alerts intended to drive human behavior are only successful if they:

- Grab attention
- Provide information
- Are deemed trustworthy
- Clearly communicate what behavior is expected

Ideally, you want an electronic hand hygiene monitoring system that provides **immediate, unmistakable, real-time feedback** that directs staff to effectively perform hand hygiene when needed.

The Leapfrog Hand Hygiene survey requires "immediate feedback" to "non-compliant individuals."

Keep those 4 metrics in mind as you evaluate electronic hand hygiene systems:

- **Does the system grab the attention of staff members if hand hygiene opportunities are missed? How?**

  Some systems use a light-based system; red indicates missed hand hygiene and green is good-to-go. Other systems use an audible signal.

- **Does the system provide information to staff members?**

  Light- and sound-based systems provide information, but staff members must interpret the signal.

- **Are alerts provided by the system trustworthy?**

  A system that alarms after failing to detect hand hygiene will quickly lose staff members' confidence. They may learn to ignore signals sent by the system.

- **Do system alerts clearly communicate what behavior is expected? Does this change based on the isolation status of the patient?**

  Research studies have found that people learn the meaning of speech-based alarms more quickly than sound- or light-based signals.

3 Does the system adapt to changing clinical conditions?

Hand hygiene practices need to be altered in response to clinical conditions. For example, using an alcohol-based hand rub may not effectively remove *Clostridium difficile* spores from the skin, so the Infectious Disease Society of America recommends that staff perform hand hygiene with soap and water instead of alcohol-based hand hygiene products before and after caring for patients with C. *diff* infections.

Look for an electronic hand hygiene system that **automatically informs and reminds staff of recommended hand hygiene procedures** based on patient status. Ask:

- **Can the system adapt hand hygiene rules and recommendations to patient status?**

  A system that credits staff for cleansing their hands with alcohol-based hand sanitizer after caring for a patient with C. *diff* won't help you effectively decrease healthcare-associated infections (HAIs).

- **When needed, does the system allow extra time for staff to don personal protective equipment (PPE)?**

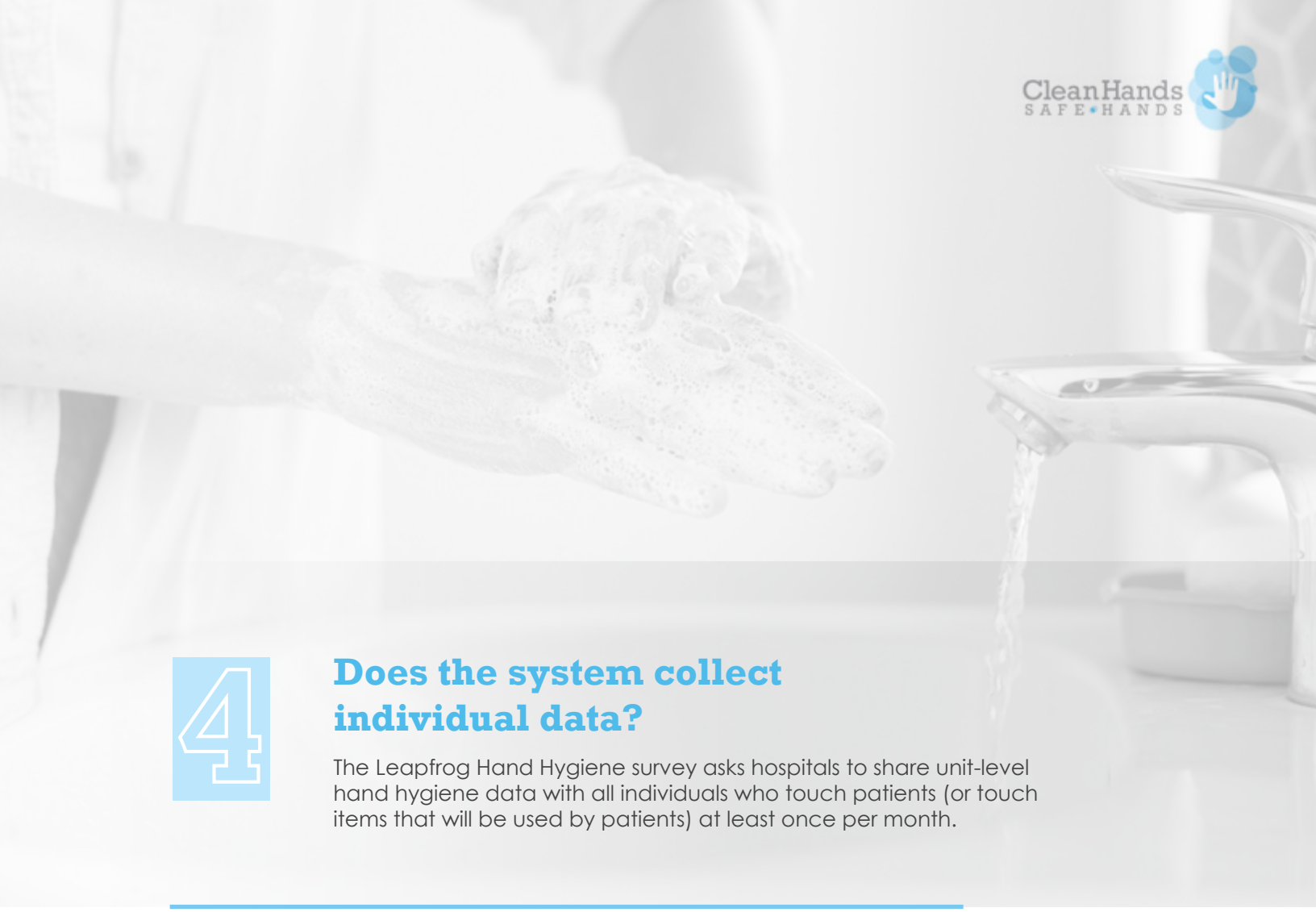
  It takes time to gown and glove. Staff will quickly become f18rustrated with a system that alarms while they are putting on PPE.

- **Does the reminder change based on the isolation status of the patient?**

  If a patient is in isolation due to persistent, watery diarrhea, it's safest to use C. *diff*. precautions while awaiting laboratory test results.

- **How are hand hygiene adaptations incorporated?**

  Manually? Automatically? How long does it take to update the system?



4 Does the system collect individual data?

The Leapfrog Hand Hygiene survey asks hospitals to share unit-level hand hygiene data with all individuals who touch patients (or touch items that will be used by patients) at least once per month.

To make significant improvements in hand hygiene, you also need individual data. Without individual data, many healthcare organizations that devote significant effort to hand hygiene improvement stagnate at approximately 60% hand hygiene performance. That's better than the national average of 40-50%, but far below what you can achieve with individual data.

Data from multiple hospitals show that a small portion of staff members typically account for a large chunk of all missed hand hygiene opportunities. With individual data, you can identify outliers and tailor additional education and intervention to individuals' needs.

Look for an electronic hand hygiene monitoring system that **collects both individual as well as aggregate data**. Ask:

- **How can unit leaders and staff members access individual data?**

  Is it easy to access and interpret hand hygiene metrics for individual staff members?

- **Can we see an individual's hand hygiene performance in specific locations?**

  An individual's hand hygiene performance can vary from room to room. Understanding when and where hand hygiene opportunities are missed can help you identify (and fix) previously unidentified challenges.

5

How does the system support behavior change?

Purchasing and installing an electronic hand hygiene monitoring system won't magically boost hand hygiene rates. Monitoring hand hygiene is one thing; driving behavior change is another.

When considering an electronic hand hygiene system, ask:

- **How does the system support behavioral change?**

  It takes time to adopt new habits. A step-by-step approach is most likely to support long-term behavioral change.

- **What is the implementation process like?**

  Understanding what to expect will help you and your staff prepare for change.

- **What is the change management process, and what are the clinical outcomes that are associated with following this process?**

  Ask to see data. Has implementation of the system led to a significant decrease in HAIs in other healthcare institutions?

- **Who do we contact with questions and problems?**

  You'll likely encounter a few challenges. Timely support that helps you troubleshoot and problem solve will enable your hand hygiene initiative to proceed without unnecessary interruptions.

Ideally, you want a system that **includes a proven change management process** and **personalized support.**

About the Clean Hands-Safe Hands Electronic Hand Hygiene Monitoring System

The Clean Hands-Safe Hands Electronic Hand Hygiene System:

Doesn't interfere with clinical workflows

Staff don't need to don (or charge) a bulky wearable. The badge reel is lightweight and non-obtrusive. There's no need for staff to pause or place their hands over a wearable to get "credit" for hand hygiene. The system automatically records all hand hygiene opportunities with zero impact on workflow.

Offers real-time feedback with the Natural Language Voice Reminder

CHSH is the only system that utilizes a voice reminder. It is pre-programmed with a human voice that says "please sanitize" or something similar when a provider fails to clean their hands. Hospitals can customize the Natural Language Voice Reminder to use the voices of trusted staff members with personalized messages. Reminders can be recorded in a variety of languages as well.

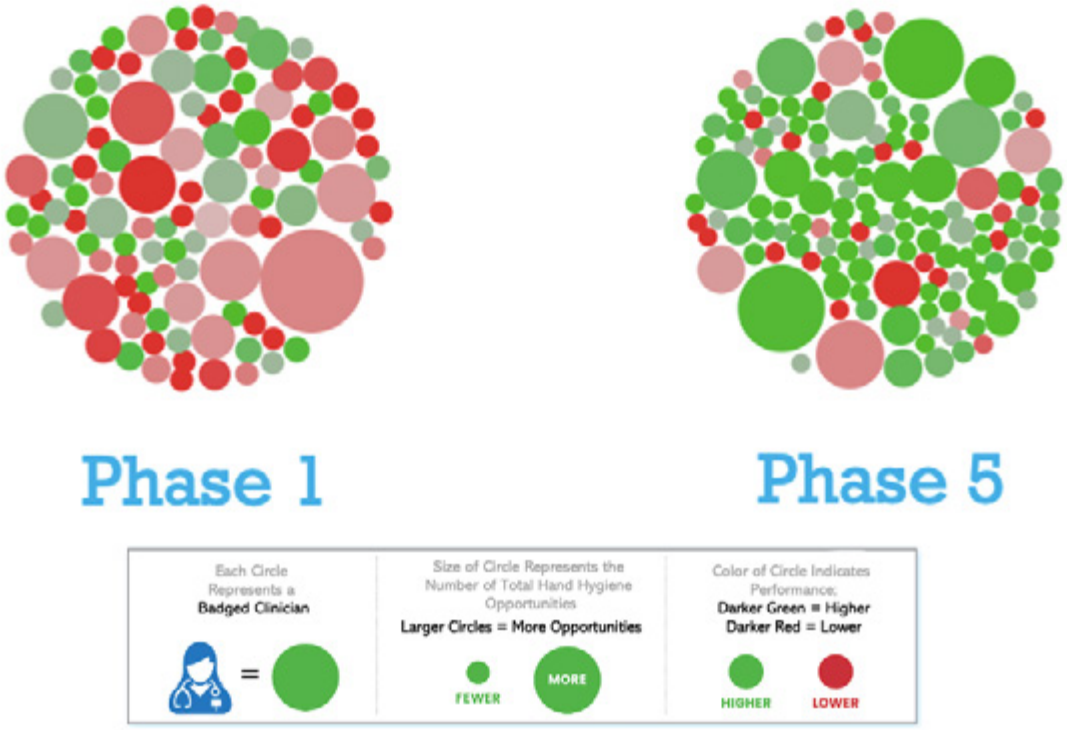
2016 research found that people respond an average of 5 seconds quicker to speech alarms than sound tones.

Automatically adapts to changing clinical conditions

The system can integrate with your electronic medical records (EMR) system and automatically update hand hygiene reminders based on clinical parameters. So, as soon as a positive C. diff result is entered in the EMR, the system will remind staff to sanitize with soap and water. Unit leaders can also manually update the system.

Collects individual data

With Performance Bubble Plots, you can quickly identify outliers. The size of each bubble represents the number of hand hygiene opportunities for a provider; the color of the bubble represents hand hygiene performance. Dark green is good; dark red indicates room for improvement.



The system also offers unmatched flexibility. Want to aggregate data by physician group, or blind hospital leaders from individual data, but share that information with union leaders? Clean Hands-Safe Hands can do that.

The system uses a systematic six-step process proven to support behavior change. And each hospital is assigned a partner success manager – one point person who will guide your healthcare facility through installation and implementation.

We Can Help Your Hospital Thrive

To thrive in 2022 and beyond, you need satisfied staff, streamlined workflows, and a top Leapfrog Hospital Safety Grade. The Clean Hands-Safe Hands Electronic Hand Hygiene Monitoring System gives you flexibility, and provides the data and insights you need to improve working conditions and patient and provider safety.

Get In Touch

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[1] 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**.

[2] Hagel, S., et al., Quantifying the Hawthorne Effect in Hand Hygiene Compliance Through Comparing Direct Observation With Automated Hand Hygiene Monitoring. Infect Control Hosp Epidemiol, 2015. **36(8): p. 957-62**.