

# U.S. Hospitals Are Making Dramatic Progress in Hand Hygiene

**LEAPFROG DATA ANALYSIS**  
2020 - Present

Hand hygiene is an essential component of patient safety, and hospitals are getting on board. To encourage and support this and other patient safety efforts, The Leapfrog Group, an independent nonprofit watchdog organization and the nation's premier advocate of patient safety and health care transparency, invites all U.S. adult general acute care and freestanding pediatric hospitals to voluntarily complete the Leapfrog Hospital Survey. Every year, this Survey collects data from approximately 2,100 hospitals, representing 74% of U.S. hospital beds and measures critical quality and safety practices, including hospitals' adherence to the highly rigorous Leapfrog Hand Hygiene Standard. The following analysis summarizes the trends and interpretations of hand hygiene data gathered from 2020 to 2023, data that is new to the industry and available only from Leapfrog.

## Report Highlights

- 1** The percentage of hospitals achieving the Leapfrog Hand Hygiene Standard has improved dramatically since scoring first began, from 11% in 2020 to 74% in 2023.
- 2** The use of electronic compliance monitoring has doubled in only four years.
- 3** Hospital leaders are more likely to be held accountable — financially and otherwise — for hand hygiene compliance throughout their organizations.

# Hospitals Are Moving Aggressively to Improve Hand Hygiene

Achievement of Leapfrog's standard for hand hygiene has improved dramatically since scoring first began in 2020. In that first year, only 11% of hospitals achieved the Hand Hygiene Standard, compared with 38.1% in 2021, 57.6% in 2022 and 74% in 2023\* – **an almost sevenfold increase in achieving the standard in just four years.** This demonstrates extraordinary improvement, especially considering the enormous pressures exerted by the COVID-19 pandemic.

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## Leapfrog's High Standard for Hand Hygiene

The Leapfrog standard is the most rigorous standard in the industry. The overriding directive of Leapfrog's Hand Hygiene Standard is that clinicians and staff should always clean their hands when entering and leaving a patient room. The standard focuses on hand hygiene best practices according to a national Hand Hygiene Expert Panel and adapted from the World Health Organization's "Hand Hygiene Self-Assessment Framework."

### The Leapfrog Hand Hygiene Standard: 5 Domains

- 1 Monitoring**  
Hand hygiene practices are regularly monitored for compliance.
- 2 Feedback**  
Feedback is consistently provided to ensure compliance with hand hygiene.
- 3 Training & Education**  
Appropriate training and education on best hand hygiene practices are provided.
- 4 Infrastructure**  
Staff and clinicians are given adequate access to hand sanitizer, paper towels and soap dispensers.
- 5 Culture**  
Good hand hygiene is emphasized and supported at every level within the organization.

\*Starting in 2022, Leapfrog adjusted the scoring for hospitals, allowing them to achieve the standard by monitoring fewer encounters but fully meeting all other domains.



## Monitoring

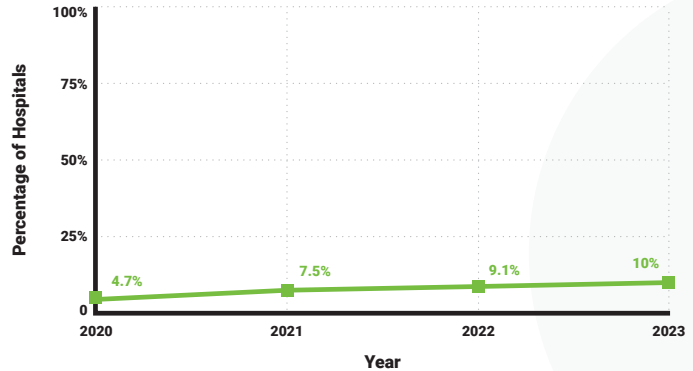
Hand hygiene practices are regularly monitored for compliance.

# Electronic compliance monitoring has doubled

An electronic compliance monitoring (ECM) system<sup>1</sup> allows facilities to monitor the hand cleaning practices of those who care for patients. ECM gives hospitals even more information to use in compliance improvement programs, and it does so with a lighter burden on staff as compared to direct human observation. ECM systems come in a variety of modalities, including door minder or activity monitoring technology, electronic badges, and camera-based systems.

The adoption of ECM is expanding rapidly, with hospital use more than doubling between 2020 and 2023. (Fig. 01)

Fig. 01 Percent of U.S. Hospitals Using Any Form of Electronic Compliance Monitoring For Hand Hygiene Observations

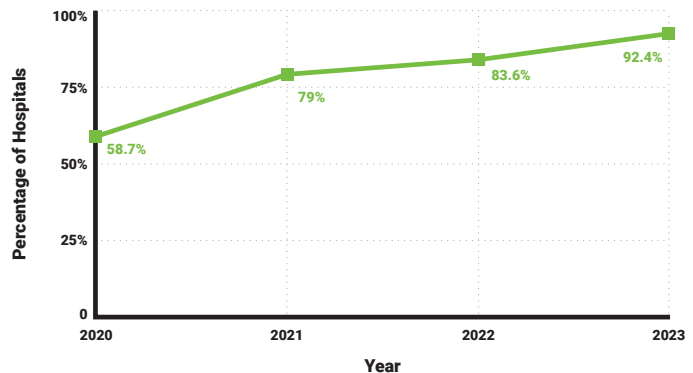


*The share of hospitals adopting electronic hand hygiene monitoring has more than doubled since Leapfrog began reporting on it, from 4.7% in 2020 to 10% in 2023.*

# Use of compliance coaches is on the rise

Another significant monitoring trend between 2020 and 2023 is the increase in the use of hand hygiene coaches or compliance observers. (Fig. 02) A hand hygiene coach or compliance observer trains and supports staff on proper hand hygiene practices to improve adherence. The standard requires coaching observers even when electronic monitoring is in place.

Fig. 02 Hospitals Using Hand Hygiene Coaches or Compliance Observers



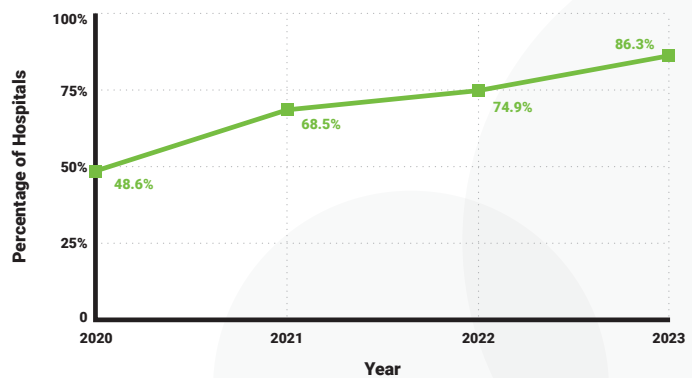
1. To comply with Leapfrog's standard, electronic compliance monitoring systems must identify both opportunities for hand hygiene and whether it was performed, and the accuracy of the system must be validated by the hospital.

## Hospital leadership compensation is increasingly impacted by hand hygiene compliance

The vast majority of hospitals provide hand hygiene compliance data to their leadership. Of these hospitals, 86.3% report that leaders are held directly accountable through performance reviews or compensation.

This marks significant growth from 2020, when only 48.6% of hospitals reported such accountability. This dramatic increase highlights that hospital leadership is increasingly recognizing the importance of hand hygiene practices in maintaining patient safety. (Fig. 03)

Fig. 03 **Hospitals Providing Hand Hygiene Compliance Data to Leaders and Holding Leadership Directly Accountable for Hand Hygiene Performance**



**From 2020 to 2023, the percentage of hospitals that hold leadership directly accountable for hand hygiene compliance data through performance reviews or compensation increased by 78%.**



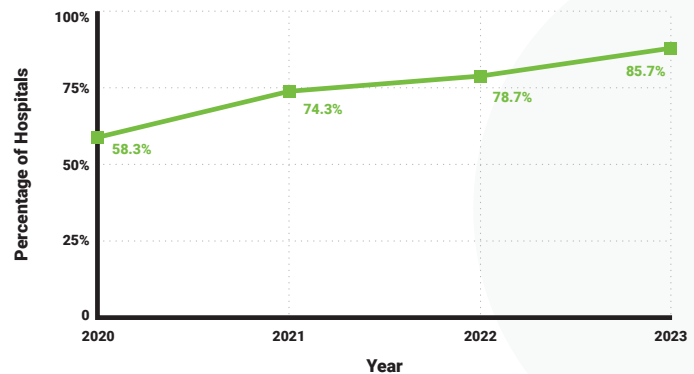
## Training & Education

Appropriate training and education on best hand hygiene practices are provided.

# Physically demonstrating proper hand hygiene technique is more commonly required

The Leapfrog Standard embodies the educational principle of “show, don’t tell,” which suggests that demonstrating proper techniques is more effective for learning than just talking or reading about them. This approach highlights the value of hands-on observation in skill development compared to traditional lectures or reading materials.

Fig. 04 **Hospitals Requiring Individuals to Physically Demonstrate Proper Hand Hygiene**



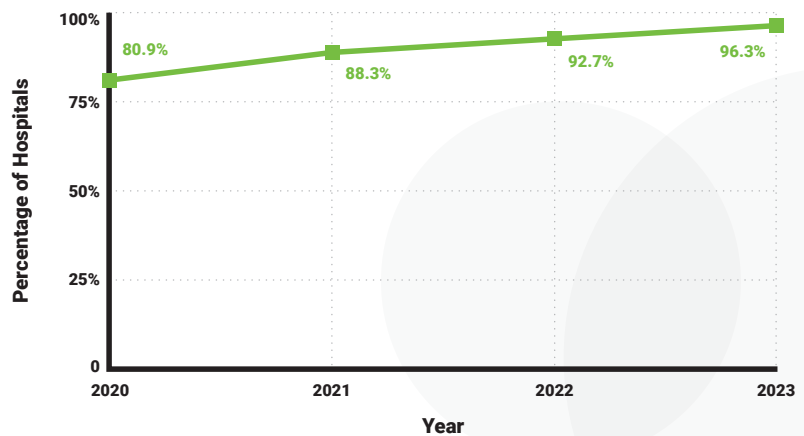
The growth trajectory is overwhelmingly positive (Fig. 04), but at the 2023 rate of 85.7%, 307 hospitals that responded to the Survey are still not requiring physical demonstration to pass initial hand hygiene training. Due to technique specifications and compliance standards, proper technique is not as simple as it sounds, which is why physical demonstration is so important.

***Hundreds of hospitals are still not requiring staff to physically demonstrate proper hand washing to pass initial hand hygiene training.***

# 96.3% of hospitals have processes in place to ensure that hand hygiene supplies are readily available

The most significant change in the infrastructure domain has been in ensuring the availability of supplies necessary to achieve the hand hygiene standard. Having supplies in stock is not the same as having them available at the point of use. Processes and audits to keep supplies from running empty – and ensuring that dispensers are working as intended – have achieved high adherence rates. (Fig. 05)

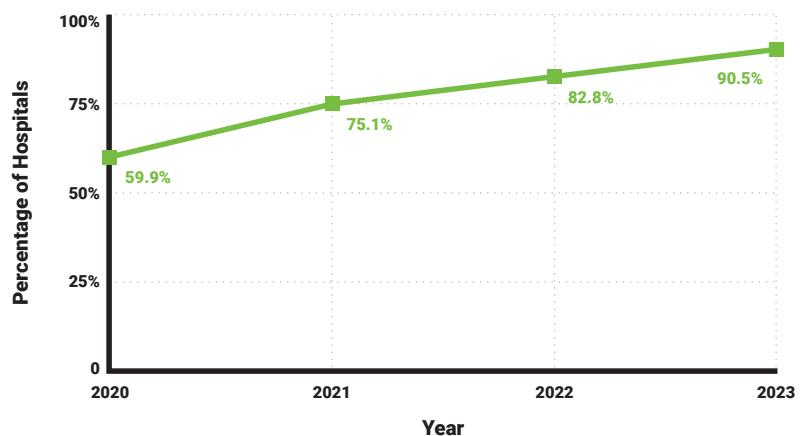
**Fig. 05 Hospitals with Processes to Ensure Hand Hygiene Supplies are Available and Operational**



*Hospitals have widely implemented processes and audits to keep hand hygiene supplies from running empty and ensure that dispensers are working as intended.*

Hospitals also are recognizing that the amount of sanitizer delivered upon activation is a critical component of proper hand hygiene and must be monitored. Without an adequate dose of product, the practice of alcohol-based hand sanitizing is unlikely to be effective. (Fig. 06)

**Fig. 06 Hospitals with Audits to Ensure the Proper Amount of Hand Sanitizer is Delivered**

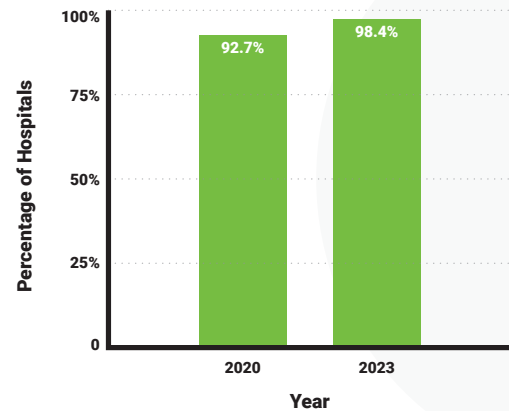


## Nearly every hospital in America is showing signs of true commitment to hand hygiene

Data from questions in the culture domain reveal that hand hygiene is important to hospitals, even if some hospitals still have some distance to go to achieve the Leapfrog Standard.

For the question, “Are patients and visitors invited to remind individuals who touch patients or who touch items that will be used by patients to perform hand hygiene?”, “Yes” responses have risen from 92.7% in 2020 to 98.4% in 2023. (Fig. 07)

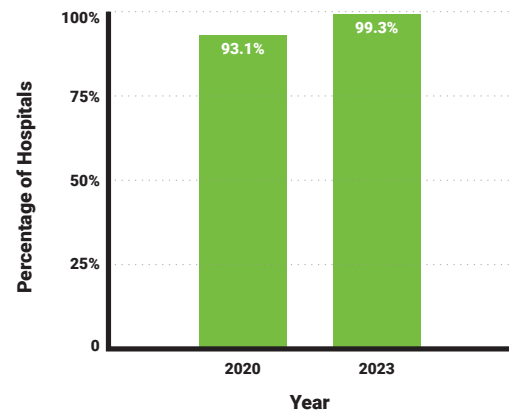
**Fig. 07 Hospitals Inviting Patients and Visitors to Remind Individuals to Perform Hand Hygiene**



*Hand hygiene is important to hospitals, even if some hospitals still have some distance to go to achieve the Leapfrog Standard.*

For the question, “Have the Chief Executive Officer, the Chief Medical Officer AND the Chief Nursing Officer (or their equivalents) demonstrated a commitment to support hand hygiene improvement in the last year (e.g., a written or verbal commitment delivered to those individuals who touch patients or who touch items that will be used by patients)?”, “Yes” responses have risen from 93.1% in 2020 to a remarkable 99.3% in 2023, indicating that nearly every reporting hospital has a culture that is committed to support hand hygiene improvement. (Fig. 08)

**Fig. 08 Hospitals with Top Leaders Demonstrating Commitment To Hand Hygiene Improvement**



## Discussion

# Hospitals are on the right path and all stakeholders benefit

Of the 2,149 hospitals that responded to the 2023 Leapfrog Hospital Survey, 1,590 of them (74%) achieved the Hand Hygiene Standard. (Fig. 09)

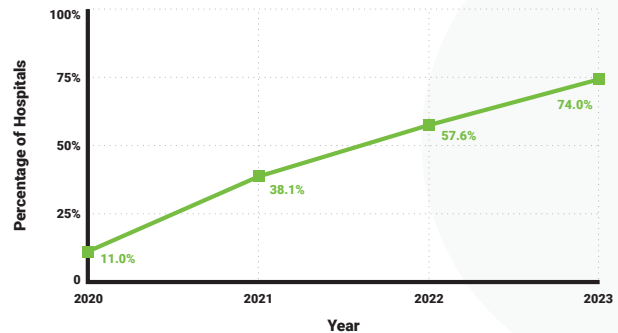
It is striking that electronic compliance monitoring has doubled over four years. Given the limitations of human observers, we encourage accelerated adoption of electronic systems as an important step in improving patient safety.

Perhaps the most promising finding is the high priority that hospital leadership is placing on hand hygiene, as evidenced by the 78% increase in leadership accountability through performance reviews and/or compensation. A sustained commitment to hand hygiene is far more possible with an engaged leadership team.

The increase in the number of hospitals that require physical demonstration of proper technique as an element of training is reassuring, yet there remains a noticeable opportunity for more hospitals to adopt this protocol.

While these findings are great cause for celebration, particularly since only 11% of hospitals achieved the standard in 2020, they show that at least 559 the hospitals in the U.S. do not meet all aspects of the Leapfrog Hand Hygiene Standard, potentially exposing hundreds of thousands of patients to preventable risk.

Fig. 09 **Hospitals Meeting the Leapfrog Hand Hygiene Standard**



And even among the 1,590 hospitals that achieve the standards, there are gaps in compliance. For the safety of hospital patients, we must all work together to correct this.

Hand hygiene presents an opportunity for everyone throughout the health care ecosystem to reinforce the importance of patient safety in hospitals. The rapid improvement in the achievement of Leapfrog's Hand Hygiene Standard is a strong signal that hospitals are on the right path to 100% compliance.

As with all patient safety initiatives, the potential benefits to all stakeholders when hospitals achieve the Leapfrog Hand Hygiene Standard are lifesaving

***At least 559 hospitals in the U.S. do not meet Leapfrog's Hand Hygiene Standard.***





## Other Exclusive Data from Leapfrog

The Leapfrog dataset includes data collection and reporting on a variety of nationally standardized and endorsed measures on the safety and quality of inpatient care. This data is available from no other source and represents 74% of inpatient beds. More than 2,100 hospitals submit Surveys to Leapfrog annually in areas of care including:

- 1 Patient Rights and Ethics**  
Billing Ethics, Health Care Equity, Informed Consent, Never Events
- 2 Medication Safety**  
Safe Medication Ordering, Medication Reconciliation, Safe Medication Administration
- 3 Healthcare-Associated Infections**  
MRSA, C.diff, CLABSI, CAUTI
- 4 Adult and Pediatric Complex Surgery**  
Hospital and surgeon volumes
- 5 Maternity Care**  
C-section and Episiotomy Rates
- 6 ICU Physician Staffing**
- 7 NQF Endorsed Safe Practices**  
#1 Leadership Structures and Systems and #2 Culture Measurement, Feedback and Intervention
- 8 Nursing Workforce**  
Nursing Care Hours per Patient Day, Nursing Skill Mix, Magnet Status
- 9 Pediatric Care**  
Patient Experience, Radiation Doses
- 10 Outpatient Procedures**  
Surgery Recovery Staffing, Safe Surgery Checklist, Patient Experience

### How to Access More Detailed Data

For a fee, Leapfrog makes more detailed data on hand hygiene and other safety and quality measures available by hospital.



*Visit our website at [leapfroggroup.org/data](https://leapfroggroup.org/data) to learn about licensing U.S. hospital hand hygiene data.*