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WHITE PAPER

The State of Patient Safety in Hospitals and Post-Acute Facilities: Success Factors in an Evolving Health Ecosystem



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Executive Summary

This Inovalon research explores the challenges of patient safety, the characteristics of high-performing patient safety programs, and how technology and AI may help support care delivery in a changing healthcare environment.

Findings

Challenges in preventing patient harm

Despite giving good-to-excellent ratings to their organizations' safety performance, most clinical leaders view preventing patient harm as a significant challenge. Two broad trends underpin many patient safety challenges: increasing patient acuity and complexity, and persistent understaffing.

Our research identified several additional challenges, including inexperienced care team members, delays in clinical information flow, challenges during care transitions, breakdowns in safety insights, and rapid organizational growth.

Elements of successful patient safety programs

- Clinical leaders reported using a wide range of quality and patient safety metrics and programs. Falls were the most frequently cited metric among both acute and post-acute facilities.
- Adequate staffing and staff engagement are foundational to patient safety. Leaders in significantly understaffed organizations reported lower patient safety performance ratings.
- Other commonly reported success factors included monitoring, auditing, and proactive surveillance; root cause analysis and learning systems; and leadership oversight supported by structured governance.

Future approach to patient safety

- As demonstrated during the COVID-19 pandemic, care teams' commitment, resilience, and ability to adapt will remain critical to maintaining and improving patient safety.
- Technology and automation can support those efforts. When implemented effectively, safety and surveillance automation can augment clinical judgment and help create a safer patient experience. About half of organizations surveyed already deploy surveillance software technology, and nearly seven in 10 have implemented safety incident reporting automation.
- AI has the potential to better support care teams working in an increasingly complex care environment. Clinical leaders are cautiously optimistic and conditionally open to using AI for patient safety and quality management. With clinical guidance and preferences helping shape future development, healthcare organizations can move toward a patient safety paradigm that is both deeply human and technologically enabled.

About the Research

Status of patient safety in the U.S.

Preventable harm remains a major public health issue, affecting an estimated one in four hospitalized patients and contributing to approximately 250,000 deaths annually.[1] National outcome metrics show improvement or recovery toward pre-pandemic baselines in key areas such as healthcare-associated infections (HAIs), falls with harm, and pressure injuries, though performance remains uneven by hospital and state.[2]

Provider assessments of patient safety are generally more positive than outcome data alone might suggest. Most leaders report strong teamwork and local safety performance, but fewer report adequate staffing or a just culture around errors.

Against this backdrop, Inovalon explored the patient safety challenges clinical leaders face and how they are using processes and technology to support safer, higher-quality care.

Research method

This research focused on shift-based inpatient and residential care settings, where staffing demands are continuous and around-the-clock coverage is essential. More than 230 clinical leaders participated in an online survey conducted in February 2026.

Topics explored included:

- Patient safety challenges and risk factors
- Patient safety performance, priorities, metrics, and success factors
- The human factor in patient safety
- Safety technology as a protective layer of care in an evolving healthcare ecosystem

> “Strain on healthcare workers, working in a rushed environment.”

> “All the changes – and they aren’t yearly, they are constant.”

> “The amount of change happening at any given moment.”

Participating Clinical Leaders

Survey participants primarily included Directors of Nursing, Nurse Managers, and Chief Nursing Officers. Leaders shared perspectives on workforce challenges, patient safety, and the realities of delivering care in today's healthcare environment.

Figure 1: Role in Healthcare Organization

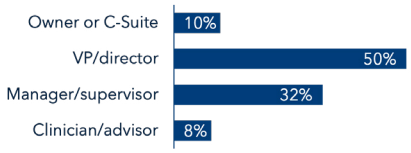


Figure 2: Knowledge About Quality/Safety

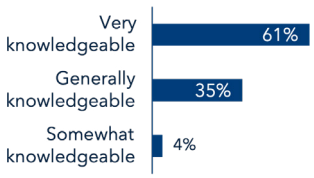
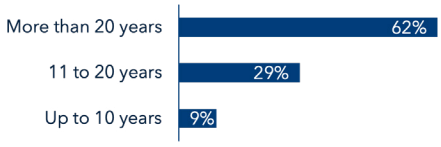


Figure 3: Years Working in Healthcare



Leaders also shared perspectives on the rewards and challenges of working in healthcare, highlighting the tension between their commitment to patient care and the operational realities of healthcare delivery.

Mission vs. Reality

THE MISSION

Many leaders viewed their work as a calling rather than simply a job. As mission-driven professionals, they described a commitment to providing quality care while supporting and mentoring staff.

> "Creating the best workplace for staff so that they can provide the best care to patients."

> "Helping patients transition safely after a hospital stay. Helping my staff advance their degrees and watching them succeed."

> "The care provided by my team and my team's engagement in that care and ways to improve."

> "Improvement in care of patient with the help of bedside team members."

VS

THE REALITY

Leaders described growing pressures on patient care, including resource constraints, payer requirements, staffing shortages, and regulatory burdens that pull time and attention away from patients.

> "The increasing regulations and documentation demands that take nurses away from the bedside."

> "The ever-changing landscape of politics and how they play into healthcare and how we provide what our patients need. Insurance companies dictating how we practice medicine and refusing to pay for what the patients need."

> "The fact that people don't view healthcare as a calling, they are in it for themselves and not the patients."

> "Rapid changes, nurse documentation burden, nurse leadership bandwidth."

Q. What do you find most satisfying about your job or career?

Q. What is most concerning about working in healthcare today?

The Challenges of Patient Safety

Preventable harm

Preventable harm remains a significant challenge across the U.S. healthcare system. Healthcare leaders must work to understand and address the factors contributing to patient harm while navigating growing financial, workforce, and operational pressures. At a high level, patient safety is influenced by a structural supply-demand imbalance driven by demographic change and workforce constraints. At the same time, an increasingly complex healthcare environment creates additional challenges that can heighten patient safety risk.

To better understand these challenges, clinical leaders were asked about:

- The level of concern patient safety poses within their organizations
- Two major underlying drivers of patient safety risk: increasing patient demand and staffing shortages
- Other operational factors that may contribute to patient safety risk

> “When our organization is at or above capacity and/or staffing is low, safety issues may arise.”

> “The greatest challenges in improving patient safety have included staffing shortages and workforce burnout, which can affect consistency in care as well as variation in adherence to protocols and workflows.”



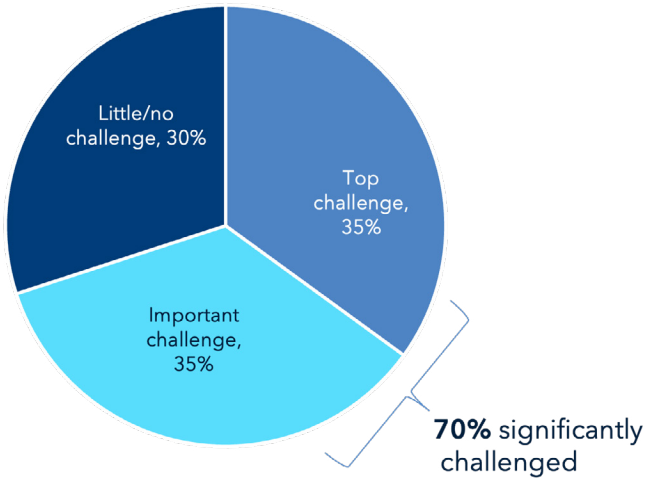
Leaders' perspectives on patient safety

For most clinical leaders, patient safety remains a significant challenge or concern. As the aging U.S. population becomes sicker, preparing care teams to meet that demand is of great urgency. By 2030, all baby boomers will be age 65 or older, contributing to rising demand for healthcare services and care coordination.[3,4]

The healthcare workforce is not keeping pace with the growing demand for care. Healthcare turnover rates remain elevated, and provider organizations continue to face staffing shortages. Clinical leaders are balancing labor costs with the need to maintain adequate staffing levels while also ensuring teams have the experience and training needed to provide safe, high-quality care.

Seventy percent of leaders identified patient safety as a significant challenge, reflecting concerns about both rising patient acuity and persistent understaffing. For many organizations, the risk of compromised patient safety remains top of mind (Figure 4).

Figure 4: Patient Safety
Level of Challenge or Concern



Q. For your organization, how great a challenge or concern is patient safety (preventing harm to patients from care intended to help them)?



Supply and demand in patient care

Healthcare workforce shortages reflect a structural supply-demand imbalance driven primarily by demographic change and exacerbated by economic constraints in healthcare labor markets. As the demand for care continues to increase, many organizations are struggling to maintain the workforce needed to meet patient needs safely and effectively.

> “High acuity of patients increasing exponentially.”

> “Staffing shortages and a very sick patient population.”

> “Patients with high acuity, cognitive deficits, patients susceptible to falls due to underlying medical diagnosis.”

Q. What have been the greatest challenges or hurdles in improving patient safety?

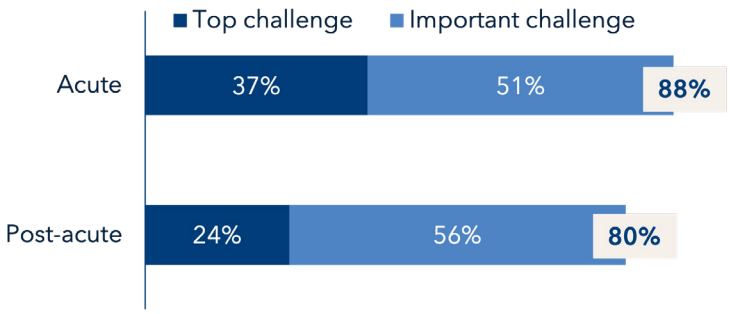


Increasing demand for care

With high or rising patient acuity, care is becoming more complex and resource intensive. Patients are living longer, often with multiple chronic conditions and more complex care needs. As a result, healthcare organizations require additional time, resources, and clinical expertise to deliver safe, effective care.

The challenge of caring for sicker, more complex patients was reported by both acute and post-acute leaders. Concerns about patient acuity were greatest in acute care organizations, where 37% of leaders identified acuity as a top challenge and 51% as an important secondary challenge. However, concerns were also widespread in post-acute facilities, where 80% of leaders reported acuity as either a top or important challenge (Figure 5).

Figure 5: Level of Challenge or Concern
High or Rising Patient Acuity or Complexity



Q. For your organization, how great a challenge or concern are staffing shortages/understaffing?

Leader Verbatims on Acuity

> "The increased acuity of patients and meeting their needs appropriately."

> "Higher acuity of residents with increased cognitive impairment."

> "High patient complexity and acuity."

Limited supply of care professionals

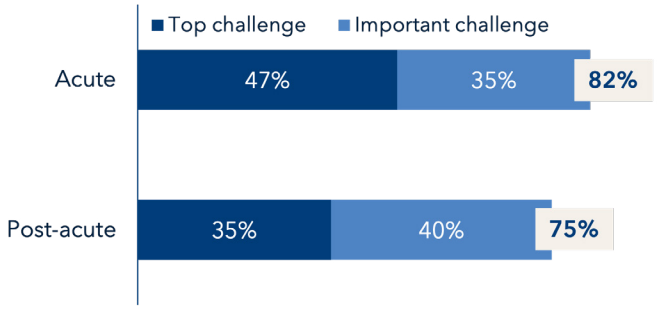
Elevated staff turnover and ongoing recruitment challenges contribute to persistent understaffing across healthcare settings. Organizations often turn to agency or per diem staff to fill critical gaps, but reliance on a contingent workforce can compromise continuity, team cohesion, and ultimately, increase the risk of patient harm.

Staffing shortages and understaffing were widely reported by both acute care leaders (82%) and post-acute leaders (75%), making workforce capacity one of the most significant patient safety concerns identified in the research (Figure 6).

Related workforce research found:

- Only 25% of organizations reported being fully staffed.
- Many organizations had implemented multi-pronged strategies to recruit, engage, hire, and retain staff.

Figure 6: Level of Challenge or Concern Staffing Shortages and Understaffing



Q. For your organization, how great a challenge or concern is staff shortages/understaffing?

Concerns About Working in Healthcare: Leader Verbatims on Acuity

> "Staffing levels. CNAs can be very difficult to find and are a high turnover position."

> "The most concerning part of working in healthcare today is the staffing crisis where the demand for care is rapidly overtaking the number of available professionals."

> "The staffing struggles of ancillary providers like labs, diagnostics, and transportation."

> "The most concerning part of working in healthcare today is the staffing crisis where the demand for care is rapidly overtaking the number of available professionals."

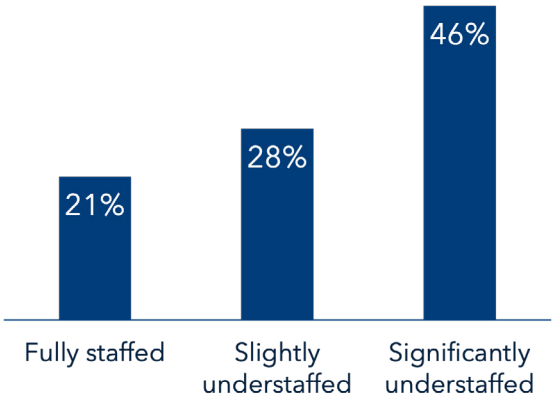
> "Technology cannot replace humans, but there appears to be less humans."

Staff training or experience challenges

Workforce training challenges are influenced by several factors, including faculty shortages, retiring educators, and limited access to clinical training opportunities.

Of leaders challenged by staff shortages, 30% identified insufficient training of staff. Insufficient training becomes more of a problem as understaffing becomes more severe (Figure 7). Leaders described a two-sided problem: workers entering healthcare without appropriate qualifications, and a perceived indifference to on-the-job learning among some staff, both of which place additional burden on already stretched care teams.

Figure 7: Insufficient Training Level of Staff
Frequency of Mention by Level of Staffing



Base: Staffing is a significant challenge

Q. You mentioned staff shortages as a significant challenge for your organization. What specifically are the issues?

> “Nurses with little knowledge of clinical skills (this impacts patient care).”

> “Healthcare needs bodies, and higher education systems recognize this as a money-making endeavor. Their lack of diligence of producing highly qualified staff puts patients at risk. This also puts the onus of additional training on already short- staffed healthcare organizations. Again, placing patients at risk.”

> “New generation not as interested to learn and understand the why of things. Everyone is on autopilot.”

Timeliness of clinical information flow

Patient safety failures often arise not from a lack of skill or intent, but from information lag. Patient physiologic status can change faster than typical documentation cycles, and in both hospitals and post-acute facilities where clinical deterioration can occur over hours, not days. Closing the gap is critical to patient safety.

Timely clinical information is particularly important for:

Medication safety

- Adverse drug events and medication administration errors remain common sources of preventable harm. Near real-time access to clinical information enables earlier detection of medication risks and faster, safer decisions.

Care coordination and handoffs

- Acute and post-acute facilities rely on frequent communication between clinicians, shifts, and disciplines. Handoffs between clinicians, shifts, and disciplines are a known risk point in patient safety research. Incomplete or delayed information at these transitions can let critical concerns go unrecognized, putting patients at risk when continuity matters most.

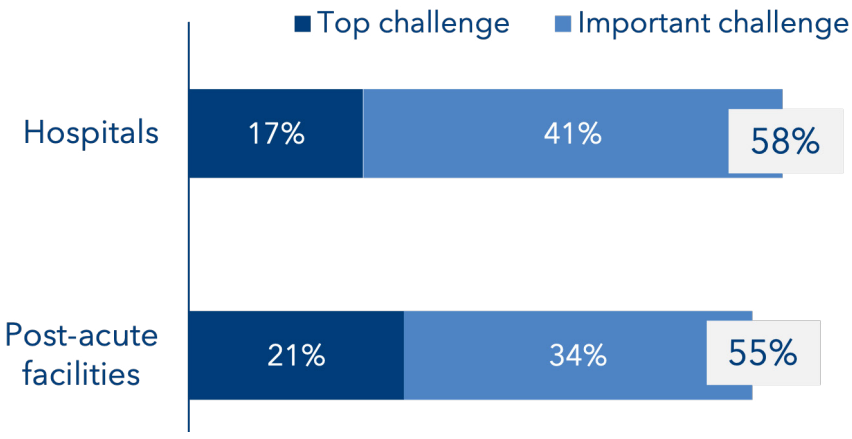
Patient monitoring outside intensive care settings

- Many patient safety events occur outside intensive monitoring, on general wards and in nursing facilities where staffing ratios are lower and eyes are fewer. There, timely recognition of changing conditions is the frontline defense against preventable harm.

Post-acute care

- Post-acute populations are often older, medically complex, and at greater risk for complications, making timely clinical information particularly important for patient safety.

Figure 9: Timely Patient Information for Clinical Problems
Level of Challenge or Concern



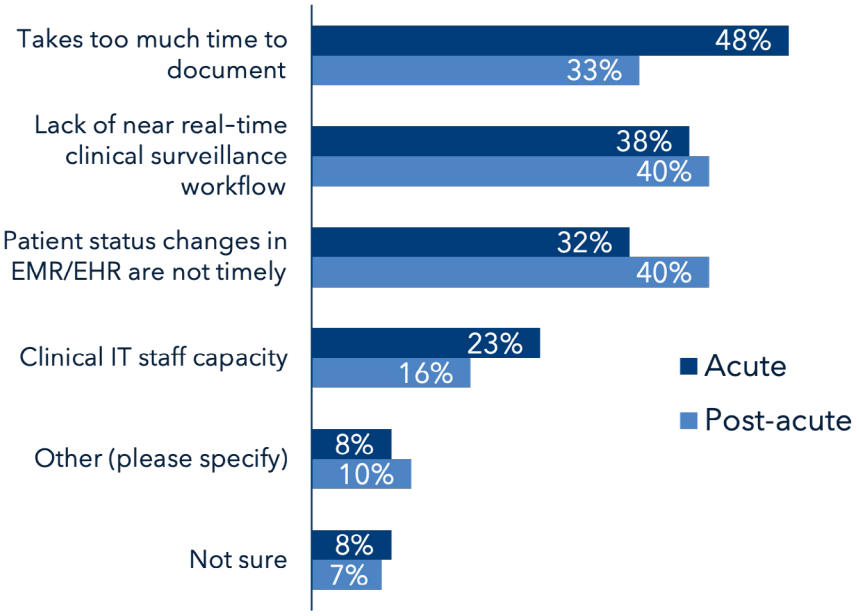
Q. For your [organization], how great a challenge or concern is timely patient/resident information for clinical problems?

More than half of clinical leaders identified timely access to patient information as a significant challenge or concern. Acute and post-acute leaders reported similar levels of concern, underscoring the importance of information flow in supporting safe patient care (Figure 9).

Among leaders experiencing challenges with clinical information timeliness: (Figure 10)

- Nearly half of acute leaders reported that documentation takes too much time, though post-acute leaders were less likely to identify this as a barrier.
- Approximately 40% of leaders in both acute and post-acute facilities reported lacking near real-time clinical surveillance workflows.
- Similar percentages reported delays in updating patient status changes within the EMR/EHR.
- Relatively few leaders identified clinical IT staffing capacity as a primary barrier, suggesting that timely information challenges are more closely tied to workflows and processes than technology resources alone.

Figure 10: Barriers to Obtaining Timely Information for Clinical Problems By Care Setting
(Multi-select)



Base: Timely patient information or top challenge

Q. You mentioned that obtaining timely patient information for clinical problems was a challenge. What are the barriers to obtaining this information?

Additional patient safety challenges

Clinical leaders reported other circumstances and processes which were seen as directly raising patient safety risk, as described in leaders' direct observations.

Rapid organizational growth

"We are a small rural healthcare organization. We are growing rapidly with new physicians joining and adding new service lines. Rapid growth is tough when it comes to maintaining quality and patient safety."

Non-compliant staff

"Staff failing to comply with existing safety interventions."

Safety insights/systems breakdown

"Low frequency of events are often overlooked as one-offs and not taken seriously enough by staff or administration as to supporting a fix when it requires money."

Productivity measures

"Inability to replace staff due to productivity targets, which inhibits ability to accept patients, drives census down, and then amplifies the target issue."

"Competing operational priorities and resource constraints can slow the implementation and sustainment of safety initiatives."

Insufficient care coordination

"Communication gaps during handoffs and transitions of care,... [and the] complexity of coordinating care across multiple departments also create hurdles. In addition, competing operational priorities and resource constraints can slow the implementation and sustainment of safety initiatives."

"Family member involvement with transfers without asking staff for assistance. Equipment not immediately available upon patient admission, etc."

Q. What have been the greatest challenges or hurdles in improving patient safety?



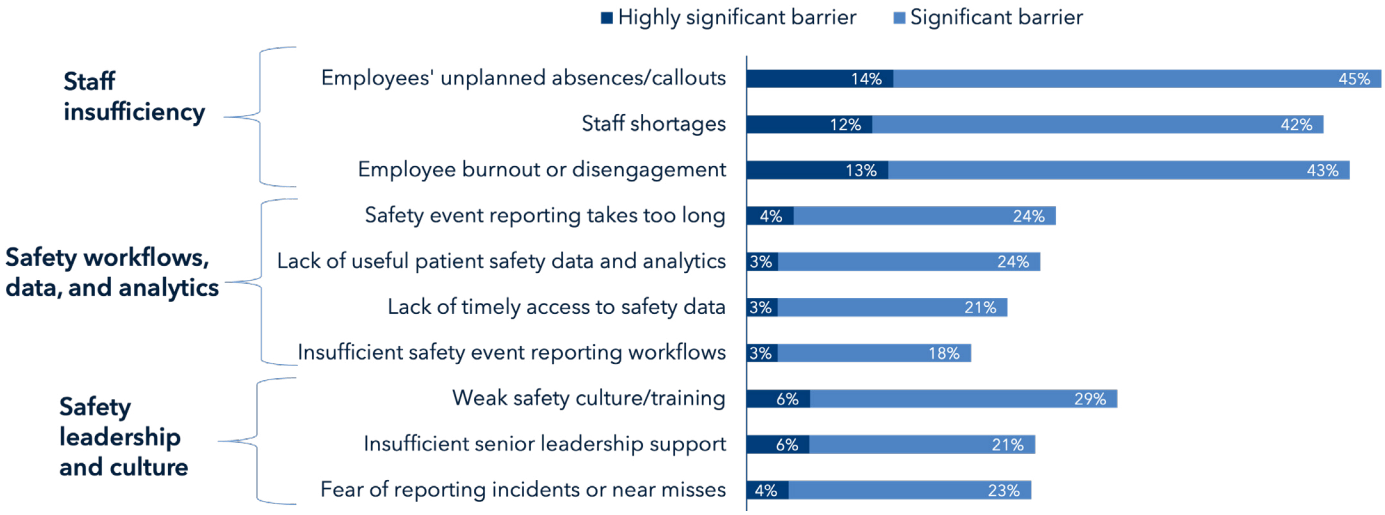
Barriers to maintaining and improving patient safety

Clinical leaders were asked about barriers to maintaining or improving patient safety, grouped by theme in Figure 11. More than half of leaders cited each of three staffing-related issues as a significant or highly significant barrier. As a group, staffing barriers posed a substantially greater threat to patient safety than insufficiencies in safety leadership and culture, or in safety workflows, data, and analytics, a finding consistent across both hospital and post-acute leaders.

While staffing challenges ranked highest, leaders also identified opportunities to strengthen safety workflows, reporting processes, data access, analytics, and organizational culture. In environments facing persistent staffing pressures, these capabilities may play an increasingly important role in supporting patient safety efforts.

Taken together, the findings suggest that workforce stability remains the foundation upon which many patient safety initiatives depend.

Figure 11: Barriers to Maintaining/Improving Patient Safety (Multi-select)



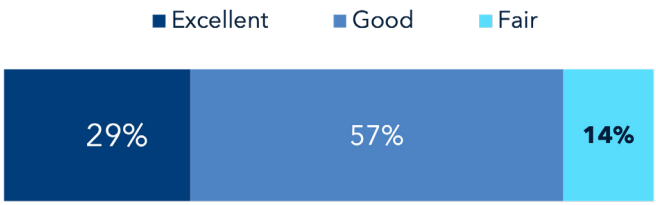
Q. To what extent is each of these items a barrier to maintaining or improving patient safety at your organization?

> “The greatest challenges in improving patient safety have included staffing shortages and workforce burnout, which can affect consistency in care, as well as variation in adherence to protocols and workflows.”

Patient Safety Performance

Despite ongoing concerns about patient harm and safety risks, most clinical leaders rated their organizations' patient safety performance positively, with 57% reporting good performance and 29% reporting excellent performance. Fourteen percent rated performance as fair, and no leaders rated their organizations as poor (Figure 12).

Figure 12: Patient Safety Performance By LOB*



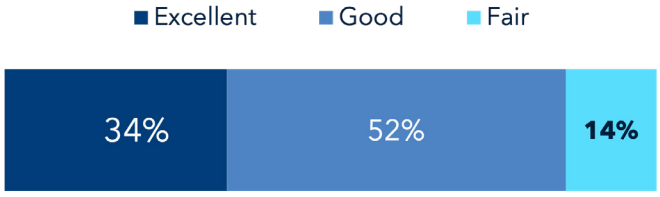
Q. How would you rate your organization's current patient safety performance?

***Note:** No leaders rated their performance as "poor"

> "As shown by our Leapfrog A scoring, we've been able to achieve opt decile in almost all areas of quality performance. This is due to our small size and ability to investigate and resolve issues quickly. Our staff are very engaged and provide feedback on gaps in processes."

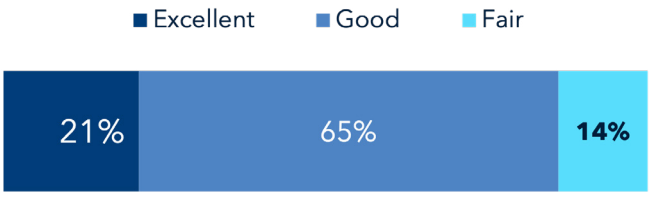
While patient safety performance ratings were generally positive across care settings, hospital leaders were more likely than post-acute leaders to rate their organizations' performance as excellent. Approximately one-third of acute care leaders reported excellent performance, compared with 21% of leaders in post-acute facilities (Figures 13 and 14).

Figure 13: Patient Safety Performance: Hospitals



Q. How would you rate your organization's current patient safety performance?

Figure 14: Patient Safety Performance: Post-Acute Facilities



Q. How would you rate your organization's current patient safety performance?

Metrics and Program Priorities

Clinical leaders identified a broad range of patient safety and quality measures as organizational priorities. While they varied somewhat by care setting, several themes emerged consistently across the research (Figure 15).

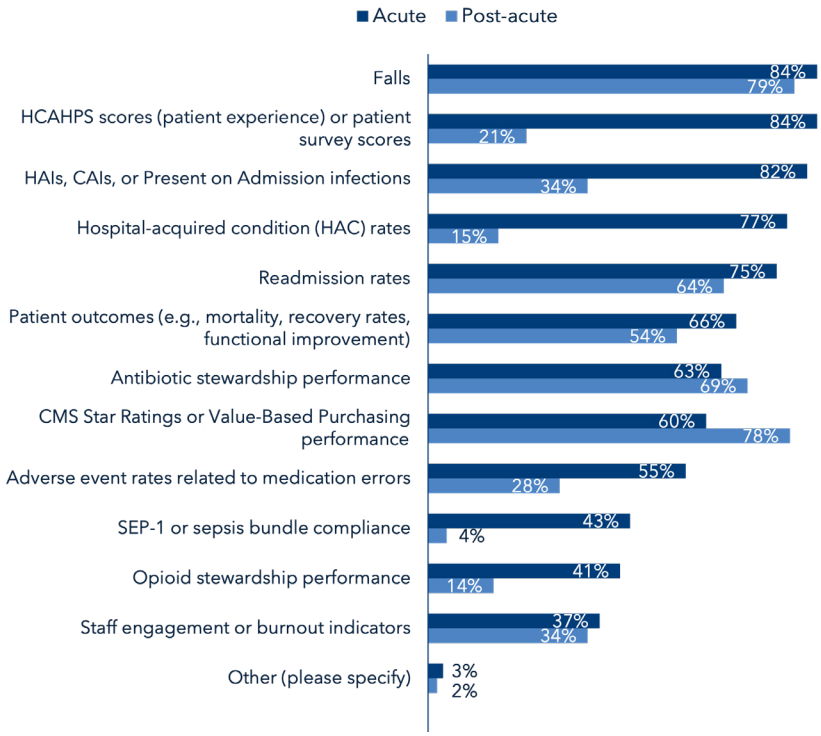
Falls were the most frequently cited priority among both acute care and post-acute leaders, reflecting the widespread focus on preventing one of the most common and costly sources of patient harm. Leaders frequently described fall prevention as a highly visible safety initiative supported through monitoring, assessment, and staff vigilance.

Acute care organizations placed greater emphasis on clinical quality measures such as patient experience scores, healthcare-associated infections (HAIs), hospital-acquired conditions (HACs), medication safety, and sepsis compliance. Post-acute organizations were more likely to prioritize CMS Star Ratings and antibiotic stewardship, reflecting the distinct operational and regulatory requirements of those settings.

Common Fall Prevention Strategies

- Identifying high-risk patients/residents
- Visual cues and alerts
- Preventive equipment
- Individualized care plans
- Frequent reassessment

Figure 15: Metrics and Program Priorities (Multi-select)



Q. Which metrics and programs are priorities for your organization's quality performance?

> "We have hired staff to help us work on our KPIs. As nursing leaders, we are now rounding daily to evaluate KPIs on our floors. Our organization's leadership team also meets daily to discuss any safety concerns; these concerns often include patient safety issues."

> "We identify high fall risk residents and put preventative interventions in place."

Elements of Effective Patient Safety Programs

Clinical leaders were asked about three broad approaches to keeping patients safe:

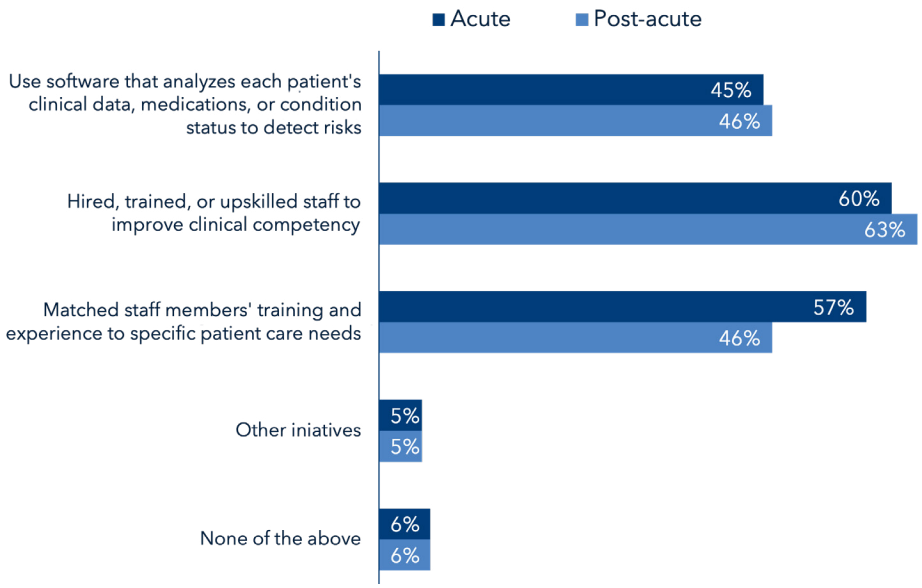
- Using clinical surveillance and analytics software to identify emerging risks
- Hiring, training, and upskilling staff to strengthen clinical competency
- Aligning staff experience and training with patient care needs

Across both acute and post-acute settings, clinical leaders reported using a variety of approaches to reduce patient harm (Figure 16).

- Hiring, training, and upskilling staff was the most widely reported approach, cited by approximately 60% of leaders in both acute care and post-acute facilities.
- Acute care organizations were more likely than post-acute facilities to report aligning staff experience and training with specific patient care needs.
- More than 40% of leaders reported using software to help identify patient safety risks and support clinical decision-making.

The findings suggest that most organizations are taking a multi-faceted approach to patient safety, combining workforce, process, and technology-based strategies.

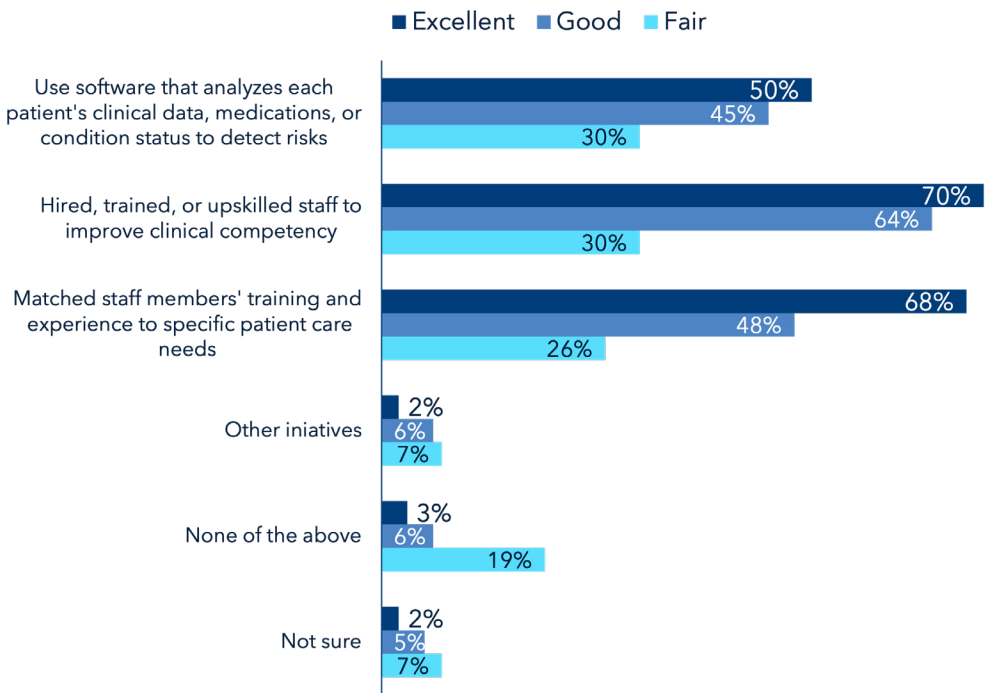
Figure 16: Initiatives to Reduce Risk of Patient Harm (Multi-select)



Q. Which of the following initiatives has your organization implemented to help reduce risk of patient harm?

Organizations reporting excellent patient safety performance were substantially more likely to have implemented each of the three patient safety strategies examined in this research. In contrast, leaders reporting fair performance were considerably less likely to report using these approaches (Figure 17).

Figure 17: Initiatives To Reduce Risk of Patient Harm by Safety Performance Rating (Multi-select)



Q. Which of the following initiatives has your organization implemented to help reduce risk of patient harm?

***Note:** No leaders rated their performance as "poor"



Patient Safety Success Factors

Clinical leaders who rated their organizations' patient safety performance as good or excellent were asked to identify the factors they believe contribute most to that success.

From their comments, four themes emerged consistently across organizations.

Program Element #1: Staff Engagement

Key Points:

- Clinical leaders remain highly mission-driven, with a strong commitment to patient care.
- Staff engagement is viewed as a core component of patient safety.
- Clinical leaders invest in developing staff who embrace the organization's mission and safety goals.

Examples:

- Alert and knowledgeable staff
- Employees who genuinely care about patients and residents
- Ongoing staff education and training

Clinical leaders consistently emphasized the importance of staff engagement and their role in fostering it. High-performing organizations described knowledgeable, engaged employees who value safety, understand their role in preventing harm, and actively contribute to a culture of patient safety.

Leaders consistently noted that tools, dashboards, and alerts are most effective when staff are engaged, trained, and empowered to act.

Clinical Leaders' Perspectives

> "We have employees that live and work our mission and vision. Safety is a top priority."

> "The care provided by my team and my team's engagement in that care and ways to improve."

> "In a CAH it takes the team (hospital employees) to engage and feel committed to their community and pull together as a team to provide safe patient care."

> "Working with team members that are patient advocates and desire positive patient outcomes. Watching employees grow in their profession."

Q. What are the key factors driving your organization's success with patient safety? Please comment on any processes and/or software used.

Program Element #2: Monitoring, Auditing, and Proactive Surveillance

Key components:

- Regular rounding (daily, consistent leadership rounds)
- Audits of documentation and care practices
- Trend monitoring through dashboards and reports
- Scorecards and KPI tracking
- Ongoing oversight and follow-up when risks are identified

Examples:

- Daily review of incident reports
- Consistent rounding and staff education
- Use of scorecards and performance metrics

Rounding and Vigilance

> “Multidisciplinary rounds, interdisciplinary meetings, quality improvement projects.”

> “We’re good at rounding and keeping our eyes open for possible safety risks.”

> “Continuous rounding, knowing the residents, alerts when change of condition occurs.”

> “Constant vigilance.”

Safety Metrics

> “We use nurse sensitive indicators to identify areas to improve our clinical practice.”

> “We keep scorecards on almost everything, this adds a layer of competition amongst staff and hold everyone accountable.”

Frequent monitoring, auditing, and early identification of risks help reinforce accountability and support patient safety improvement efforts. Leaders consistently noted that effective monitoring depends not only on technology, but also on routine oversight, accountability, and timely action.

Program Element #3: Root Cause Analysis and Learning Systems

Key points:

- Near real-time incident reporting
- Root cause analysis (RCA)
- Corrective action plans and follow-up
- Learning from near misses
- Transparency and accountability in reporting
- Safety technology that supports event reporting and analysis

Examples:

- Root cause analyses following safety events
- Near real-time incident reporting
- QAPI/QAA programs and corrective action plans

Clinical leaders consistently linked strong safety performance to rapid reporting, system-level analysis, and a culture of learning rather than blame. Organizations with effective learning systems use incidents, near misses, and audits to drive continuous improvement and reduce future risk.

Clinical Leaders' Perspectives

> "Patient's First Committee focused on patient safety initiatives with end-users and PI projects. We use a safety software system to get timely patient safety data."

> "We are an HRO facility with a structured system to report, escalate and investigate safety events."

> "On high reliability journey. Look at process failures before human errors."

> "Patient experience and reflective learning (PEARL). Documenting incidents creates awareness to prevent same events from happening again."

> "Incident reports are entered in real-time, and items are investigated at a systems level to ensure that if it was a systems problem, the system is changed in order to reduce the risk of the event happening in the future."

Program Element #4: Leadership Oversight and Structured Governance

Key components:

- Daily leadership huddles or safety calls
- Safety committees and quality councils
- Strong leadership visibility and accessibility
- Executive prioritization of patient safety
- Minimal barriers to implementing change
- Active recognition and support for staff who identify safety concerns

Examples:

- Highly engaged leadership team
- Dedicated quality and patient safety resources
- Formal patient safety governance structure

Clinical leaders consistently identified visible leadership involvement and structured governance as critical drivers of patient safety performance. Safety programs are strongest when leaders remain actively engaged in daily operations, not just periodic oversight.

Clinical Leaders' Perspectives

> "Issues are discussed at a large facility huddle everyday."

> "Job Instruction training, standardization, KATA, LeapFrog, JHACO, etc."

> "Safety committee meets monthly and reviews all reports on incident reports employee and non-employee, event tracking incidents (med errors, equipment failures, hotline calls, ER transfers) as well as environment of care rounds."

> "We have a daily safety call where leaders from the entire organization discuss issues from the previous day."

> "Data transparency and reporting, process improvement support, HRO culture, equity at the core."

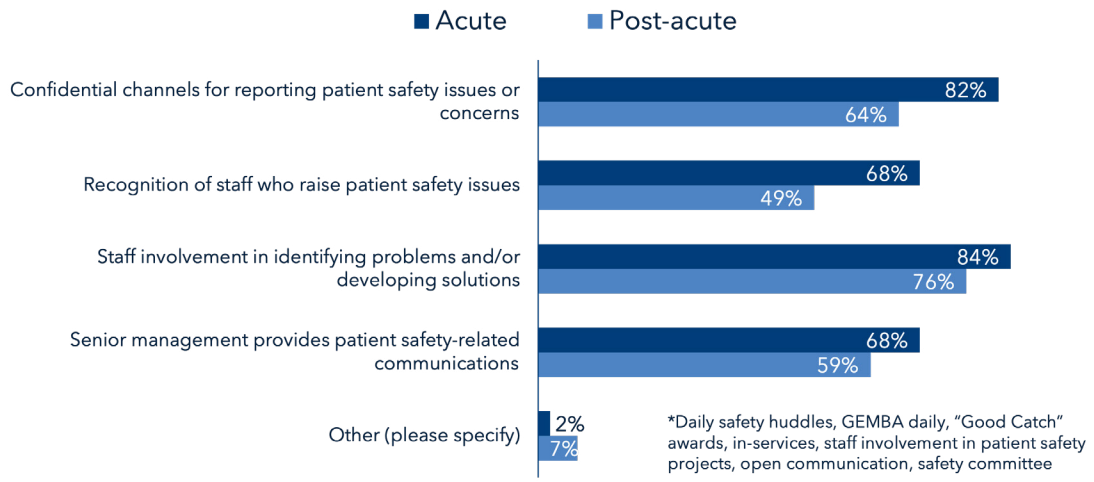
> "Very involved management team, patient safety is top focus. Not a lot of red tape to get through to make process changes when safety is a concern."

Visible leadership is only effective when it creates trust. Leaders consistently noted that patient safety improves when staff feel comfortable reporting concerns, sharing near misses, and raising issues before harm occurs.

Leaders reported a range of strategies to encourage staff to speak up, identify risks, and participate in problem-solving. Recognition programs, leadership communication, and confidential reporting channels help create an environment where concerns can be raised without fear of retaliation.

Across both acute care and post-acute facilities, staff involvement in identifying problems and developing solutions was one of the most frequently cited approaches. Confidential reporting channels and leadership communication were also widely used to support a culture of safety (Figure 18).

Figure 18: Practices Used to Encourage Staff to Report Patient Safety Issues (Multi-select)



Challenge

"Getting buy-in that reporting harm does not equal discipline."

"Getting staff to report things."

Actions

"Improved focus on reporting any safety concerns, great work completed around culture of safety and psychological safety."

"Constant attention and communication around the importance of safety and building a safety and learning culture."

Behavioral Change

A needle broke off inside a patient's chest wall during a procedure. The needle fragment was visible on x-ray. But the surgeon, whose short temper was well known, could not retrieve it and became belligerent, saying, "That's it. I'm leaving it." The technician expressed confidence in the surgeon's ability and suggested inserting a spinal needle to pinpoint the location, then using the needle as a guide to retrieve the fragment. The surgeon nodded approvingly and removed the fragment successfully. At the end of the procedure, the surgeon thanked the technician for "helping me do the right thing." Team members who witnessed the exchange marveled at a side of the surgeon they'd never seen."

Patient Safety Programs and Patient Safety Organizations

As clinical leaders work to reduce preventable harm, many organizations participate in formal patient safety programs or collaborate with Patient Safety Organizations (PSOs). While these resources serve different purposes, both are designed to strengthen safety culture, improve care processes, and support continuous learning.

What are patient safety programs?*

Patient safety programs are initiatives, frameworks, or interventions designed to prevent patient harm, improve care reliability, and build a culture of safety within healthcare organizations, by typically focusing on specific processes, behaviors, or clinical risks. They may be provider-led or national/collaborative programs and focus on implementation of best practices.

What are patient safety organizations (PSOs)?

Patient Safety Organizations (PSOs) are federally listed entities established under the Patient Safety and Quality Improvement Act of 2005. Their primary role is to collect, aggregate, and analyze patient safety event data under protected confidentiality provisions.

By participating in a PSO, healthcare organizations can gain access to benchmarking data, peer learning opportunities, and broader insights into patient safety trends and improvement strategies.

*Unlike PSOs, patient safety programs do not confer federal legal privilege protections for shared safety data and are not regulatory entities. Their value lies in standardization, training, performance improvement, and outcomes measurement rather than protected data aggregation.



The Future Vision for Patient Safety

Decades of clinical research confirm what experienced nurses have always known: the most critical safety signals are often invisible to algorithms. A subtle change in gait or the quiet withdrawal of a patient who was talkative yesterday. These are the cues that precede deterioration, often by hours, and they are recognized not through data alone but through the trained eye, the practiced ear, and the clinical intuition that comes only from experience.

Technology has an essential role to play. Clinical surveillance systems help care teams identify patterns, surface emerging risks, and respond faster than manual monitoring alone allows. But the strongest patient safety programs are not built on technology alone. They are built on engaged clinicians whose judgment technology is designed to support, whose instincts it is designed to sharpen, and whose time at the bedside it is designed to protect.

- Clinical data and surveillance tools provide critical visibility into patient risk, but do not capture every aspect of a patient's condition.
- Experienced caregivers often recognize subtle changes through observation, communication, and ongoing patient interaction.
- Direct patient observation remains an essential component of safe, high-quality care.

Figure 19: Perspectives of Nursing Professionals About Experience, Observation, and Intuition[5]

❝ I can't tell you how many times I have that feeling, I don't feel right about this patient. It could be just the way their skin looks or feels to me."

❝ Sometimes you can see a patient and, just looking at them [know they're] not doing well. It doesn't show in the labs, and it doesn't show on the monitor."

❝ How are they [the patient] answering questions? How are they walking? All these subtle things that physicians and nurses see and understand about their patients."

2020: Human expertise in a time of crisis

The pandemic tested healthcare organizations in ways few had previously experienced. Clinical leaders were forced to make rapid decisions, adapt workflows, and respond to constantly changing conditions while continuing to care for patients and protect staff.

While the pandemic exposed vulnerabilities across the healthcare system, it also demonstrated the resilience, adaptability, and commitment of frontline caregivers and clinical leaders. Organizations rapidly implemented new care models, adjusted infection prevention protocols, and developed innovative approaches to maintaining patient care during a period of extraordinary uncertainty.

Many of the capabilities that proved essential during that time — including proactive surveillance, multidisciplinary collaboration, clear communication, and operational agility — remain important components of patient safety programs today.

Figure 20: Most Difficult Effects of COVID-19 Pandemic

Source: Clinical Surveys, Inovalon, May and December, 2020

> Preventing spread. Enough PPE. **Daily stress** of contacting or spreading the virus. **Isolation of residents** and mental/emotional/physical impact on them. Staffing. **Managing with so much contradiction-public misinformation and the unknown."**

> **Within two days we were doing telehealth.** Our Practice Administrator is a go-getter. Most providers are working from home except for providers remaining in-house for babies."



> The **disruption of security, stability and routine. Financial impact**. Keeping residents safe and sane at the same time."

> **Staffing**, focus moved away from standard patient care due to **infection control priorities, decline in patient psychosocial well-being**."

> **Strict infection control procedures, and ensuring our staff, families, and residents are educated."**

> 1. At first, it was the fear of the unknown, lack of PPE, and lack of an action plan.
>
> 2. After that wave hit, then we had patients canceling visits, staff going on leave because they were high risk, and having to set up our office staff to work from home.
>
> 3. The next challenge was **creating policies and procedures on infection control**, PPE use, and what to do when visiting a COVID-19 patient.
>
> 4. Another big challenge was **implementing telehealth visits** and **coming up with the policies and procedures** for those."

Q. Please describe the most difficult effects of the pandemic on your organization.

Care teams evolve, but the mission stays the same

“Support for the nursing world. We have gone through a lot of changes in my 20+ years in nursing… from heroes to zeros…“

Healthcare has continued to evolve since 2020. Clinical leaders describe an environment shaped by staffing shortages, financial pressures, organizational change, reimbursement challenges, and increasing demands on care teams.

Among the shifts leaders are seeing:

- Staffing shortages and increased turnover
- Rising cost pressures and productivity demands
- Mergers, acquisitions, and organizational consolidation
- Growing administrative and regulatory complexity
- Declining reimbursement rates
- Insurance-driven influences on clinical decision-making
- Retirement of experienced clinicians and educators
- Less time available for direct patient care

Concerns About the Pace of Change in Healthcare

“Communication breakdowns between providers and patients, and the push for fast care to address more financial concerns. Rapid growth, putting the cart before the horse, and setting facilities up for failure.”

“The consistent race in getting admissions which makes it unsafe for the incoming admits and unsafe for the current residents since it is diverting license staff time to manage the admissions.”

“I work at a federal hospital, and new administration has put freezes, caps and abolished positions.”

“Change in leadership, decreased pay rate, general staffing shortage in area which leads to competition for same health care workers.”

“The fact that people don’t view healthcare as a calling – they are in it for themselves and not the patients.”

“The amount of paperwork versus the amount of time we spend with a patient.”

“The increase cost of services and decrease in Medicaid reimbursement.”

“The cost of innovation, especially for rural regional hospitals.”

“The constraints placed on us by insurance companies.”

“Sale of the health system.”

A Role for Technology in Patient Safety

“We have a highly competent workforce that needs more support in IT solutions.”

Technology has an important role to play in patient safety, particularly as healthcare organizations face staffing shortages, rising patient acuity, and increasing operational complexity. Leaders need tools that help clinicians identify risks earlier, prioritize attention, and act on emerging patient safety concerns.

Patient safety technologies are most effective when they support, not replace, clinical expertise. Surveillance, analytics, and alerting systems can help surface patterns and changes in patient condition that may otherwise be difficult to identify in busy care environments. These technologies are most effective when they support clinical expertise, surfacing patterns that are easy to miss and closing the information gaps that remain a persistent challenge for many organizations.

When thoughtfully implemented, technology becomes part of a broader patient safety strategy that includes engaged staff, proactive monitoring, and strong leadership. The goal is not to replace clinical judgment, but to support care teams with timely, better-informed decisions.

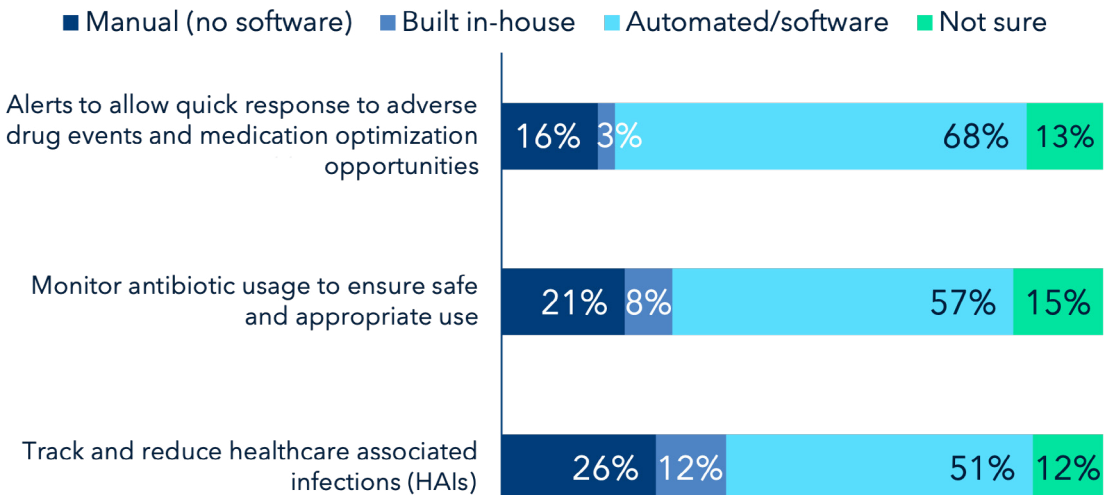
Software can help organizations monitor patient safety risks more consistently and support earlier identification of potential issues. As staffing shortages, patient acuity, and operational demands increase, many healthcare organizations are using technology to strengthen surveillance, reporting, and safety monitoring processes.

More than half of organizations participating in this research reported using software to support adverse drug event surveillance, antibiotic stewardship activities, and healthcare-associated infection monitoring (Figure 21).

While technology adoption is widespread, approaches vary considerably across organizations. Some rely primarily on dedicated patient safety platforms, while others use EMR-based tools, manual monitoring processes, or a combination of methods. Clinical leaders emphasized that technology is most effective when paired with strong workflows, engaged staff, and clear accountability for acting on safety information.

The findings suggest that technology is increasingly viewed as an important component of patient safety programs, helping organizations improve visibility into potential risks while supporting more proactive monitoring and intervention.

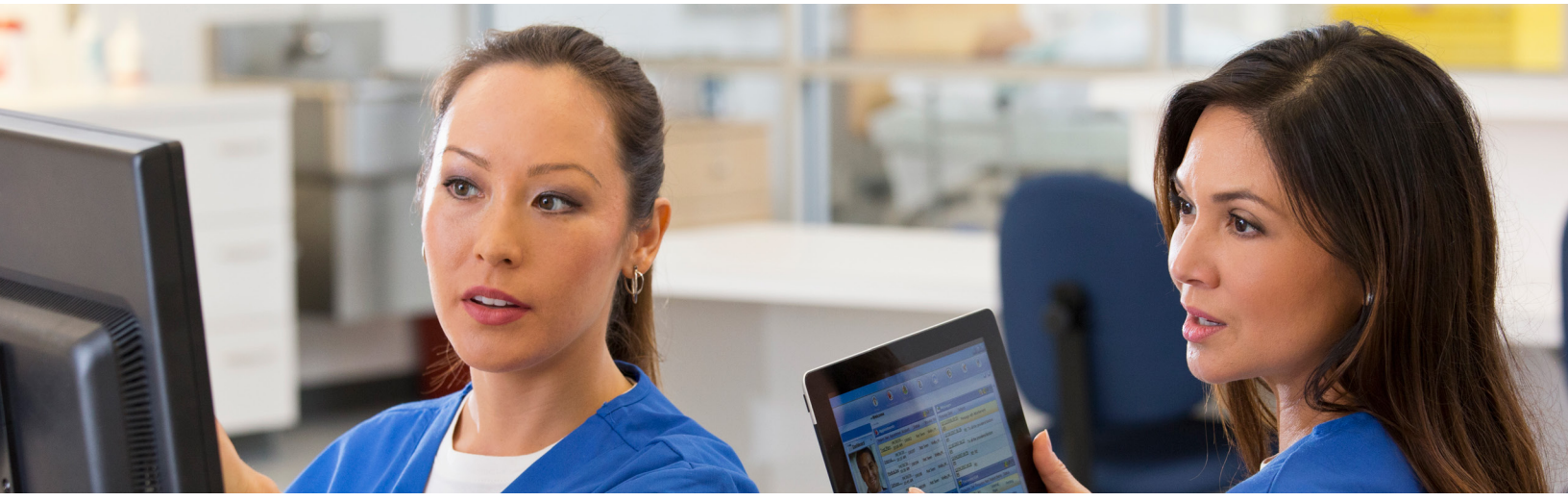
Figure 21: Methods Used to Monitor and Track Patient Safety Risks



Q. What method or solution does your organization use to analyze and report on safety events?

> "We currently use our EMR to track medication safety and events. We utilize (a third-party vendor) for all other safety issues hospital-wide. In combination with a great risk manager, we feel it is very effective for our facility."

> "No reports are available on our EMR that analyze trends and patterns of falls and other resident incidents. We manually track and trend data from these events. We use alarms and other safety equipment to promote residents' safety."



Incident reporting as a system-wide learning and improvement tool

Incident reporting remains a foundational component of patient safety programs. Organizations use reporting processes to document adverse events, identify trends, investigate root causes, and implement corrective actions designed to reduce future risk.

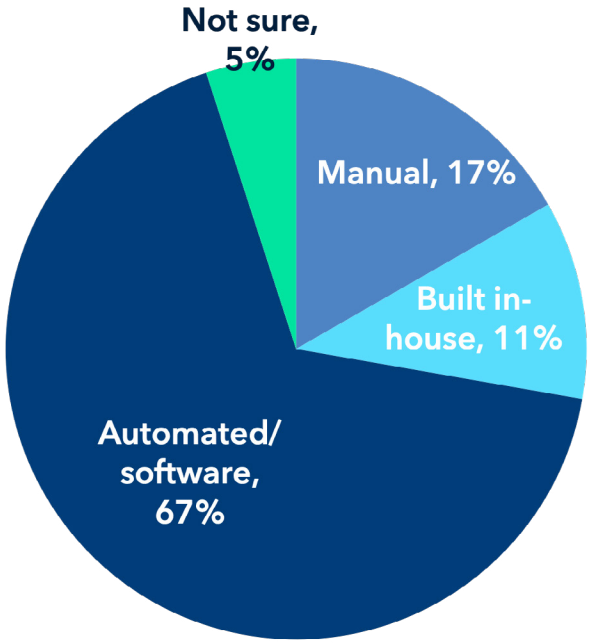
Leaders consistently described incident reporting as more than a compliance activity. When paired with effective review processes, reporting helps organizations learn from near misses, identify recurring challenges, and strengthen safety practices across departments and care settings.

The value of incident reporting increases when information can be aggregated, analyzed, and shared with the appropriate stakeholders. By examining patterns across events, organizations can move beyond addressing individual incidents and focus on underlying process, communication, or workflow issues that contribute to patient harm.

Technology is increasingly helping organizations scale these efforts through automated reporting, trend analysis, and workflow support. Two-thirds of clinical leaders reported using software automation to analyze and report on safety events (Figure 22).

Acute care organizations were somewhat more likely than post-acute facilities to report using software automation for incident reporting and analysis (77% and 59%, respectively).

Figure 22: Methods Used to Analyze and Report Patient Safety Events



Q. What method or solution does your organization use to analyze and report on safety events?

> “Safety committee meets monthly and reviews all reports on incident reports employee and non-employee, event tracking incidents (medication errors, equipment failures, hotline calls, ER transfers) as well as environment of care rounds.”

Looking ahead: AI as a support tool for patient safety

As healthcare continues to evolve, successful organizations will use technology to support the judgment, experience, and human connections that remain at the heart of safe patient care.

Clinical leaders were asked about the role of artificial intelligence in patient safety and quality management. Overall, leaders expressed cautious optimism about AI's potential to support healthcare organizations, with sentiment remarkably consistent across care settings.

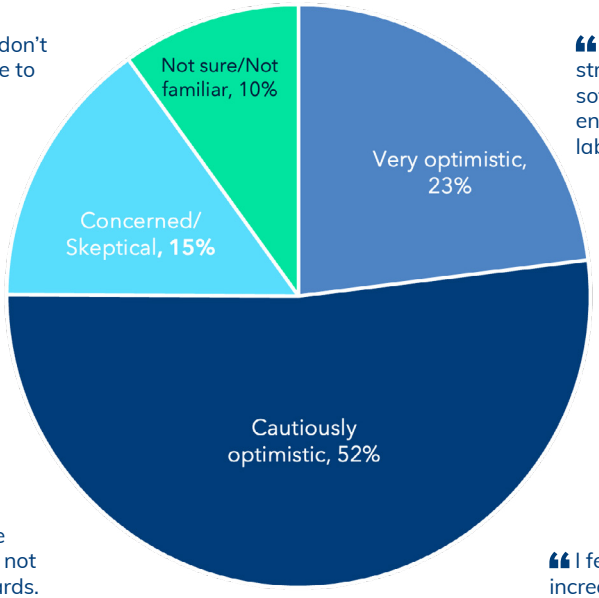
More than three-quarters of respondents reported either a very optimistic (23%) or cautiously optimistic (52%) view of AI in patient safety and quality management. At the same time, leaders emphasized that AI should support clinical expertise and decision-making (Figure 23).

However, enthusiasm is consistently tempered by concerns about accuracy, data privacy, trust, and fear of AI replacing human judgment or bedside care. Rather than being resistant to AI, clinical leaders are protective of patients, staff, and professional identity.

Preference for AI capabilities that are:

- Used to assist, not replace, clinical judgment
- Focused on reducing burden and improving patient safety
- Transparent and validated
- Implemented with human oversight

Figure 23: Opinions on AI in Patient Safety and Quality Management



"Patient care is humanistic; don't know how AI would contribute to this."

"I think AI can be very useful in helping improve quality of care ...I would have concerns around HIPAA and some around accuracy of data."

"AI can review a lot of data quickly to create flags. Humans need to do the decision making based on the whole person and person-specific knowledge."

"We need to be careful to prove benefits with well done studies – not just promises and fancy dashboards. We need to prove that AI is benefitting patients and staff."

"We utilize AI to improve triage and, for strokes. It would be great to have an AI software that reviews the entire chart at the end of the visit to flag any concerns regarding lab results and or vitals."

"I am a believer in AI; I use it often. However, I am concerned that some rely too heavily on it and then don't learn the processes on the backend to verify AI info, or they will weaken their skillsets. Downtime becomes a disaster."

"I believe AI with human intelligence can create better outcomes for patients."

"I feel that whatever can assist with increasing residents' quality of life by ensuring informed staff is worth trying."

"Very open to see how this technology improves tracking and trending events as well as identifying commonalities amongst the data."

Q. What is your opinion about AI in software used for patient safety and quality management?

Restoring time and space for care

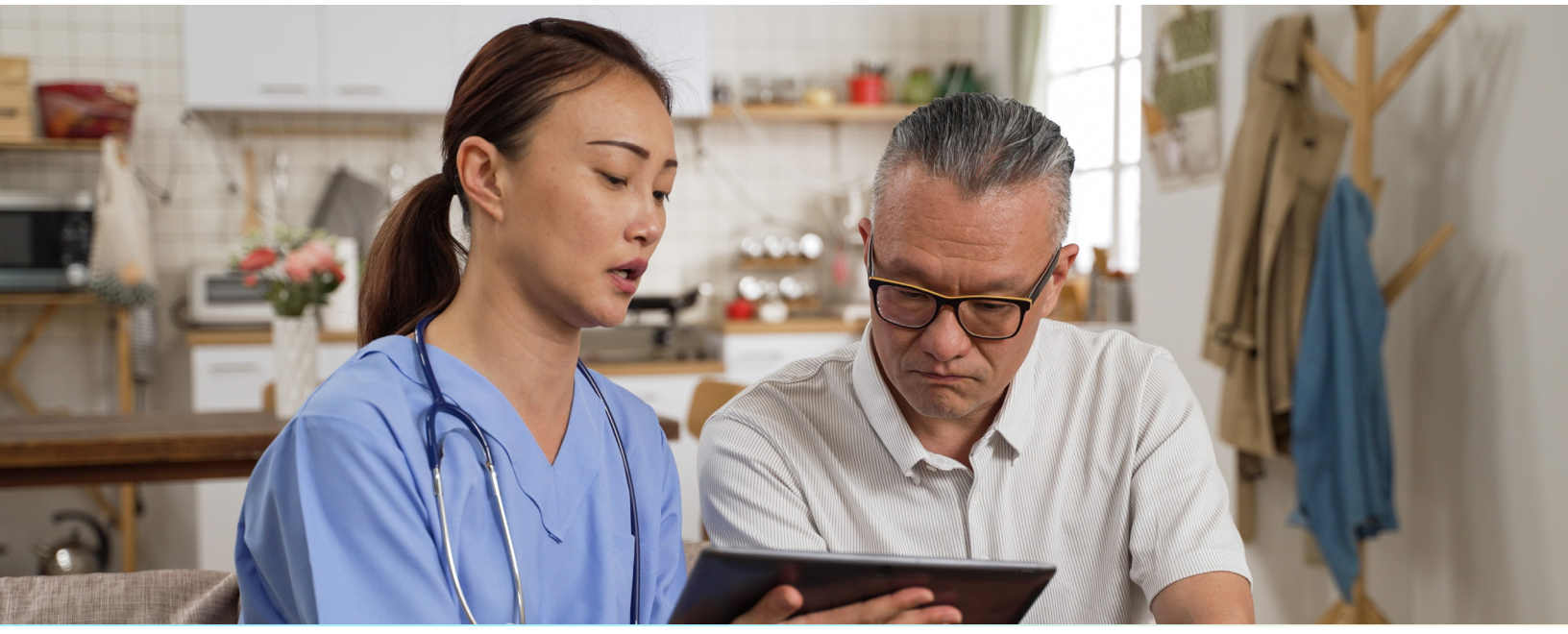
At its core, care delivery is a human endeavor. Every day, clinicians, nurses, pharmacists, therapists, and support staff make thousands of decisions that directly affect patient outcomes. Yet they do so within a healthcare environment facing unprecedented operational, financial, and workforce pressures.

Throughout this research, leaders consistently identified communication, engagement, surveillance, leadership involvement, and organizational culture as critical drivers of patient safety performance. While technology can help organizations identify risk and improve efficiency, it cannot replace the judgment, experience, and human connection that remain central to safe patient care.

The findings point to a consistent conclusion: patient safety depends on engaged caregivers, effective communication, strong leadership, and timely access to meaningful information. Technology plays an important role, but its greatest value is helping care teams identify risks earlier, reduce manual burden, and focus more attention on patients.

As healthcare organizations navigate staffing shortages, operational pressures, and increasing complexity, the most effective patient safety strategies will continue to combine human expertise with thoughtfully designed technology. When technology strengthens clinical judgment rather than replacing it, organizations are better positioned to deliver safer, more reliable, and more patient-centered care.

> “The secret of the care of the patient is in caring for the patient.”
>
> - Francis W Peabody (1881-1927), renowned Harvard medical professor and physician



Putting These Insights Into Action

Strong patient safety programs require more than data alone. They depend on timely information, proactive monitoring, and workflows that help care teams focus attention where it matters most. Learn how Inovalon helps healthcare organizations support safer, more proactive care.

Explore Patient Safety Solutions



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About us

Inovalon is a leading provider of data and solutions empowering data-driven healthcare. We bring together national-scale connectivity, real-time primary source data access, and advanced analytics into a sophisticated platform empowering improved outcomes and economics across the healthcare ecosystem. The company's analytics and capabilities are used by over 50,000 active, licensed customers. Learn more at www.inovalon.com.

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PRO-26-0428