SPECIAL REPORT

Top 10 Patient Safety Concerns 2026

ECRI

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Top 10 Patient Safety Concerns 2026

This annual report from ECRI and the Institute for Safe Medication Practices (ISMP) outlines the 10 most critical patient safety challenges anticipated to impact the healthcare industry in 2026.

The Top 10 Patient Safety Concerns is informed by insights from senior executives from across the healthcare landscape—including integrated health systems, children's hospitals, rural community health centers, and national associations. In 2025, ECRI engaged these leaders in roundtable discussions; of particular concern to this group is that despite decades of effort and the best intentions of leaders across the country, preventable harm remains a persistent and costly challenge to the US healthcare system. Progress has stalled, and a fresh approach is urgently needed.

For decades, safety advocates have made the case for patient safety on moral grounds. That foundation remains unshakable, but there's an equally compelling financial argument that's impossible to ignore. Unsafe care isn't just dangerous; it's expensive.

The numbers tell the story. Preventable adverse events in US hospitals drain $17.1 billion annually.[1] Another $4.6 billion in annual US costs come from clinician burnout.[2] In addition, up to 12.6% of all health spending in high-income countries, including the United States, is on managing the consequences of unsafe care.[3] Combined, these costs represent a financial hemorrhage that no organization can afford.

> "The counterintuitive reality is, it's expensive to provide unsafe care. In healthcare, like in other high-risk complex industries, you either invest in safety up front, or pay a much higher bill, and the human tragedy, on the back end."
>
> — **Marcus Schabacker, MD, PhD**
> President and CEO, ECRI

Many of this year's concerns highlight the risk of preventable harm, including the physical, emotional, and financial impact that can result when patient safety is deprioritized. Healthcare leaders can use this report to identify high-impact interventions and drive measurable improvements in patient safety within their organizations.

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1 Van Den Bos J, Rustagi K, Gray T, Halford M, Ziemkiewicz E, Shreve J. The $17.1 billion problem: the annual cost of measurable medical errors. *Health Aff (Millwood).* 2011;30(4):596-603.

2 Han S, Shanafelt TD, Sinsky CA, et al. Estimating the attributable cost of physician burnout in the United States. *Ann Intern Med.* 2019;170(11):784-790.

3 World Health Organization. Global Patient Safety Report 2024. WHO; 2024. Accessed November 24, 2025.

The List for 2026

1. Navigating the AI Diagnostic Dilemma
2. Reduced Access to Rural Healthcare Increases Health Risks and Disparities
3. Increasing Rates of Preventable Acute Diseases in Communities and Healthcare Settings
4. Effects of Federal Funding Cuts on Healthcare Operations and Patient Safety
5. Lack of Recognition and Reporting of Harm Events
6. Structural and Systemic Barriers Inhibit Equitable Pain Management for Women
7. Persistent Workforce Shortages Continue to Burden Staff and Restrict Access to Care
8. The Impact on System Improvement When a Culture of Blame Hinders Learning
9. Emergency Department Boarding Contributes to Worse Patient Outcomes
10. Persistent Gaps in Manufacturer Packaging and Labeling Design Continue to Undermine Medication Safety Efforts

Repeat Patient Safety Concerns

Over the years, several patient safety issues have made repeat appearance on our Top 10 list. See Ongoing Patient Safety Challenges for a list of perennial patient safety issues.

Note: To access resources linked throughout this report, first log into the ECRI website.

The 2026 Top 10: Systemic Threats to Safe, Equitable, and Reliable Healthcare Delivery

The patient safety concerns outlined in this report reflect broad, systemic threats to the delivery of safe, equitable, and reliable healthcare. These issues reveal how vulnerabilities in technology, staffing, culture, and public health all intersect to increase patient risk.

Healthcare organizations face ongoing staff shortages in critical areas, grapple with emergency department overcrowding, and are forced to make tough financial decisions due to rising costs and federal funding cuts. Further, hospital closures in rural communities add to this erosion of reliable access to essential services.

And even though artificial intelligence (AI) has the potential to streamline workflows, ease clinician burden, and cut costs, unchecked reliance on AI can increase the risk of diagnostic error and erode clinicians' critical thinking skills.

In addition, cultural barriers can prevent organizations from learning and making meaningful safety improvements. Underreporting of harm events can hinder continuous improvement, while a culture of blame further discourages transparency and system-wide learning.

What's more, medication safety continues to be undermined by persistent flaws in manufacturer packaging and labeling design. Further, preventable diseases, once thought to be under control, are resurging due to declining vaccination rates, misinformation, and public health infrastructure gaps.

Lastly, structural inequities in pain management for women further highlight the need for organizations to address disparities in care delivery.

Taken all together, these issues illustrate that patient safety is more than simply preventing isolated errors; it requires leadership investment in order to confront systemic weaknesses that span technology, staffing, infrastructure, culture, and equity.

To address each concern in this year's list, healthcare leaders can consider our action recommendations, which are organized into four foundational categories:

1. Culture, leadership, and governance
2. Patient and family caregiver engagement
3. Workforce safety and well-being
4. Learning system

Method for Selecting Our List

This list reflects ECRI and ISMP's broad patient safety and risk management expertise. Our interdisciplinary staff includes experts in medicine, nursing, pharmacy, human factors engineering, patient safety, quality, risk management, clinical evidence assessment, health technology, and many other fields.

As part of the topic nomination process, ECRI and ISMP staff proposed important patient safety concerns to be evaluated. Nominators supported their proposals with information and evidence from scientific literature; trends in event reports, causal analyses, and research requests submitted to ECRI and the ISMP Patient Safety Organization; reports submitted to the ISMP National Medication Errors Reporting Program (ISMP MERP) and the ISMP National Vaccine Errors Reporting Program (ISMP VERP); medical device alerts, problem reporting, and evaluation; reported medication safety problems; accident investigations; lessons learned from consultation work; and other internal and external data sources. ECRI and ISMP also asked the public and members who read last year's report to nominate topics by sharing the patient safety issues that concern them most.

A cross-disciplinary team of ECRI and ISMP experts then analyzed the supporting evidence and evaluated each topic using the following criteria:

- **Severity.** How serious would the harm be to patients if this safety issue were to occur?
- **Frequency.** How likely is it for the safety issue to occur?
- **Breadth.** If the safety issue were to occur, how many patients would be affected?
- **Insidiousness.** Is the problem difficult to recognize or challenging to rectify once it occurs?
- **Profile.** Would the safety issue place a lot of pressure on the organization?

Based on these criteria, the team chose and ranked the Top 10 Patient Safety Concerns.

Tools and Solutions for 2026

No organization can address all 10 patient safety concerns at once. Instead, organizations should assess risk scores and perform a gap analysis to compare current practices with our recommendations, using the following resources:

- Scorecard
- Customizable Risk Map

Partners in Safety

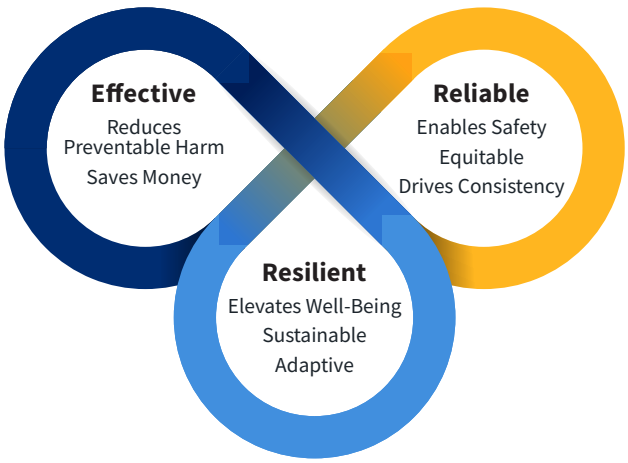
At ECRI, we believe each person deserves safe, reliable care. Our SafeSystem℠ Solutions help healthcare organizations move beyond fragmented efforts to build cohesive, effective systems that protect patients and support clinicians.

Drawing on advanced safety science and decades of data-driven expertise, we partner with healthcare teams to embed safety into culture, operations, and decision-making. Together, we design robust, sustainable systems that are evidence-based, operationally sound, and adaptable to evolving challenges.

Our approach empowers organizations to elevate well-being, reduce preventable harm, and achieve total systems safety.

View more information about our Patient Safety Advisory Services.

Transformational Outcomes



Navigating the AI Diagnostic Dilemma

#1 Patient Safety Concern

Many healthcare organizations are turning to artificial intelligence (AI) technology in an effort to improve diagnostic efficacy and precision and reduce the risk of incorrect, missed, or delayed diagnoses. Indeed, AI has been successfully adopted in certain diagnostic radiology procedures for years, and studies have shown that AI technology has the potential to improve diagnostic accuracy and timeliness; in some cases, it has shown improved diagnostic performance compared to doctors.[1]

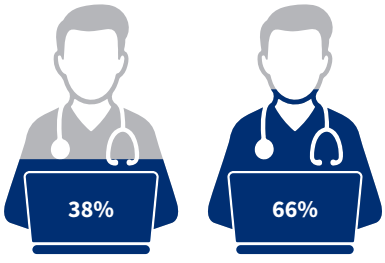
However, **AI systems are only as good as the algorithms they use and the data on which they are trained, and the potential for errors remains a significant concern.** For example:

- **Tested machine learning models failed to recognize 66% of critical or deteriorating health conditions and injuries in synthesized cases.[2]**
- Popular generative AI models more accurately diagnosed genetic conditions based on textbook-like descriptions, while **their accuracy dropped significantly when prompts were based on a conversation with a simulated patient,[3,4] suggesting that AI models struggle with open-ended diagnostic reasoning.**
- Due to a lack of robust training data, **certain cancers and rare diseases may be harder for AI to detect in radiology studies.[5]**

AI is an evolving technology that raises issues related to reliability, transparency, privacy, liability, and ethics, and users should not treat it as a replacement for clinical expertise. **Placing too much trust in an AI model to diagnose patients without factoring in clinician expertise can lead to misdiagnosis—the very problem AI was intended to solve.**

AI in Diagnosis: A Double-Edged Sword

More clinicians are relying on AI for various healthcare applications, including diagnosis. A **survey of nearly 1,200 physicians found that approximately 66% reported using AI in 2024—an increase of 74% compared to 2023, when only 38% of physicians reported using AI.[6]** AI has the potential to improve diagnostic accuracy by automating data retrieval, decreasing cognitive load, reducing cognitive biases, and providing clinicians with information to help guide their decisions.[7]



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Despite its potential, **AI technology is not foolproof, and in some circumstances, it can contribute to diagnostic errors.** For example:

- AI models can **perpetuate biases** present in the data used to train them. **Such biases can result in incorrect diagnoses and may exacerbate healthcare disparities.**[8]
- A **lack of transparency** related to the data used to train the AI model and the development and testing of underlying algorithms **can result in diagnoses based on outdated, insufficient, or incorrect information.**[8,9]
- Issues with an AI system's operation and performance can result in hallucinations (i.e., incorrect, nonsensical, or nonexistent outputs) or system brittleness (i.e., AI's inability to consider situations that fall outside of its training data), both of which can contribute to misdiagnosis. This is especially dangerous because **AI systems are often trained to give answers to every question—and users may not realize the answers are wrong.**[10]
- Research has shown that **over time, overreliance on AI can erode people's critical thinking skills.** This has raised concerns that clinicians who regularly rely on AI to help diagnose patients will lose valuable diagnostic skills, and that **clinicians in training may fail to develop these skills entirely.**[11,12]
- Doctors may be susceptible to "automation bias," which is defined as a tendency to favor AI recommendations over clinical judgment. **Automation bias could result in doctors failing to double-check or challenge AI recommendations, potentially resulting in missed or incorrect diagnoses.**[13]
- There is also uncertainty regarding whether **physicians will be held liable for AI-related diagnostic errors** because there are no federal regulations or legislation governing AI use as of this writing.[14]
- Staff may have difficulty determining when patient safety events are wholly or partially attributable to AI. As a result, **AI-related adverse events may go unreported, making them difficult to track and correct.**

A Balanced Approach Is Needed

In order for AI to be used effectively in diagnosis, **clinicians must view it as a tool designed to supplement and support clinical expertise—not replace it.** This requires a balanced approach to adoption, thoughtfully considering both the benefits and risks of AI to the diagnostic process. Clinicians who want to best utilize an AI system for diagnosis must be trained on the system's proper use and must understand its capabilities and limitations.

Action Recommendations

Culture, Leadership, and Governance

— Establish AI usage policies, guidelines, and procedures for staff that outline clear roles and responsibilities for the governance, implementation, oversight, documentation, and monitoring of AI technologies.

— Ensure that staff are trained on the proper use of AI systems, particularly those that assist in diagnosis, and inform clinicians of the systems' capabilities and limitations.

— Require staff to document instances in which AI was used for diagnostic purposes and how it affected the clinical diagnostic process.

— Utilize human factors engineering principles to evaluate the usability of AI tools.

— Carefully evaluate the business case for AI diagnostic tools against the costs related to preventable harm.

Patient and Family Caregiver Engagement

— Disclose the use of AI to patients and obtain informed consent before using generative AI in patient diagnosis or uploading patient information to an AI system. Include opt-out clauses in consent agreements.

— Ensure that clinicians take time to address patient concerns related to the use of AI in diagnosis and reassure patients that AI is used as a tool to supplement—not replace—clinical expertise.

Workforce Safety and Well-Being

— Verify that AI-enabled health technologies are subject to human-factors-based assessments before implementation in order to determine how they fit into clinical workflows and to assess potential impacts.

— Monitor staff satisfaction and user experience with systems that incorporate AI.

— Foster a just culture and encourage staff to speak up if issues with AI-based technologies occur. Take concerns related to the operation and use of AI systems seriously and take steps to investigate and address them.

Learning System

— Emphasize through training, policy, and repetition that AI is a tool, and that clinicians should defer to their own clinical judgment and seek second opinions when questioning clinical decisions or diagnoses aided by AI.

— Ensure that every stage of AI adoption, from planning to implementation, is guided by a focus on health equity and inclusivity.[15]

— Train staff on how to identify, document, and report incidents, errors, adverse events, and near misses that can be attributed to AI functionality. Ensure that such events are properly investigated, and work with AI system manufacturers and developers to prevent future issues.

— Incorporate strategies that emphasize critical thinking skills into staff training, including evaluation of physicians' diagnostic thought processes; lessons on cognitive biases; and regular assessment of critical thinking skills.[16]

ECRI Resources and References

Some ECRI resources are publicly available. To obtain other ECRI reports, contact us by telephone at (610) 825-6000, ext. 5891, or by email at clientservices@ecri.org.

ECRI Resources

Incorporating AI into Healthcare

AI in Healthcare: An Introduction (Device Evaluation)

Ethical Use of AI in Healthcare (Device Evaluation)

Risks with AI-Enabled Health Technologies

Policy and Procedure Builder: Artificial Intelligence Governance Policy (HSRM, ASRM, ACRM)

Insufficient Governance of AI Used in Medical Technologies Risks Inappropriate Care Decisions

Insufficient Governance of Artificial Intelligence in Healthcare

Unintended Consequences of Technology Adoption

State of Artificial Intelligence: Viewpoints from ECRI Clinical and Technical Experts (Device Evaluation)

Technology Acquisition and Management (HSRM)

References

1. Rodman A, Buckley TA, Manrai AK, Morgan DJ. Artificial intelligence vs clinician performance in estimating probabilities of diagnoses before and after testing. *JAMA Netw Open*. 2023;6(12):e2347075.
2. Pias TS, Afrose S, Tuli MD, et al. Low responsiveness of machine learning models to critical or deteriorating health conditions. *Commun Med (Lond)*. 2025;5(1):62.
3. Flaharty KA, Hu P, Hanchard SL, et al. Evaluating large language models on medical, lay-language, and self-reported descriptions of genetic conditions. *Am J Hum Genet*. 2024;111(9):1819-1833.
4. Okunytė P. ChatGPT can read medical textbooks but likely will misdiagnose you. Cybernews. August 19, 2024. Accessed October 16, 2025.
5. O'Donnell J. Why it's so hard to use AI to diagnose cancer. MIT Technology Review. January 21, 2025. Accessed October 16, 2025.
6. Henry TA. 2 in 3 physicians are using health AI—up 78% from 2023. AMA Digital Health. February 26, 2025. Accessed October 16, 2025.
7. Taylor RA, Sangal RB, Smith ME, et al. Leveraging artificial intelligence to reduce diagnostic errors in emergency medicine: challenges, opportunities, and future directions. *Acad Emerg Med*. 2025;32(3):327-339.
8. Cross JL, Choma MA, Onofrey JA. Bias in medical AI: implications for clinical decision-making. *PLOS Digit Health*. 2024;3(11):e0000651.
9. Fehr J, Citro B, Malpani R, Lippert C, Madai VI. A trustworthy AI reality-check: the lack of transparency of artificial intelligence products in healthcare. *Front Digit Health*. 2024;6:1267290.
10. Jones N. Bigger AI chatbots more inclined to spew nonsense—and people don't always realize. *Nature*. October 2, 2024. Accessed October 16, 2025.
11. Abdulnour RE, Gin B, Boscardin CK. Educational strategies for clinical supervision of artificial intelligence use. *N Engl J Med*. 2025;393(8):786-797.
12. Khan FA. AI in clinical diagnostics: is overreliance eroding clinical expertise? *PLOS Digit Health*. 2025;4(8):e0000959.
13. Abdelwanis M, Alarafati HK, Tammam MM, Simsekler MC. Exploring the risks of automation bias in healthcare artificial intelligence applications: a Bowtie analysis. *J Saf Sci Resil*. 2024;5(4):460-469.
14. Catherman C. Are doctors liable when AI makes a mistake? Malpractice experts weigh in. Healthcare Brew. April 1, 2025. Accessed October 16, 2025.
15. AI implications for health equity: shaping the future of health care quality and safety. Harvard Medical School. April 7, 2025. Accessed October 16, 2025.
16. Hayes MM, Chatterjee S, Schwartzstein RM. Critical thinking in critical care: five strategies to improve teaching and learning in the intensive care unit. *Ann Am Thorac Soc*. 2017;14(4):569-575.

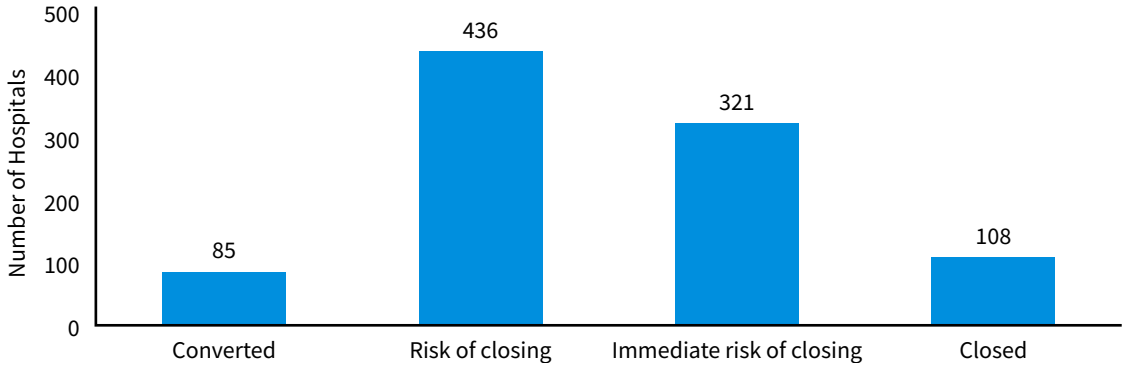
Reduced Access to Rural Healthcare Increases Health Risks and Disparities

#2 Patient Safety Concern

More than 80% of US counties lack proper access to healthcare services, including pharmacies, primary care providers, hospitals, trauma centers, and low-cost health centers.[1] These healthcare deserts disproportionately affect rural communities as financial strains lead to widespread facility closures and diminished services across care settings.[2]

Hospitals are often the principal source of laboratory tests, imaging studies, and primary care in rural communities.[3] But since 2005, 195 US rural hospitals either closed or converted from inpatient services to other healthcare services (e.g., primary care, long-term care).[4] Now, another **757 (34%) hospitals are at risk of closing, of which 321 (14%) are at immediate risk.**[3]

Closure Status of Rural Hospitals Since 2005



Sources: Rural hospital closures. The Cecil G. Sheps Center for Health Services Research. University of North Carolina. Accessed October 15, 2025; Rural hospitals at risk of closing. Center for Healthcare Quality and Payment Reform. October 2025. Accessed November 21, 2025.

With costs of services fixed yet fewer patients served, the average cost per care visit is higher in rural areas. Private health insurance and federal reimbursement rates often do not compensate for this discrepancy, leading to **nearly half of rural hospitals operating with negative patient service margins** and higher debt-to-asset ratios.[3] See Effects of Federal Funding Cuts on Healthcare Operations and Patient Safety for more information.

Although local tax revenues and government grants exist, there is no guarantee that these funds will continue, cover higher costs, or offset losses on services to uninsured or Medicaid patients.[3]

Hospital | Ambulatory surgery | Physician practice | Senior care | Home care | Pharmacy

Rural areas also have wide patient-provider ratio gaps that underscore uneven distribution of the healthcare workforce and impede access to timely care.[5] **More than 60% of primary medical, dental, and mental health professional shortage areas are rural.**[6] Access to emergency medical services, obstetrics, surgery, long-term care, and other medical specialties is also increasingly limited.[7] See Persistent Workforce Shortages Continue to Burden Staff and Restrict Access to Care for more information.

These significant and pervasive barriers to healthcare put rural residents at higher risk for worse health outcomes and exacerbated disparities, such as[8]:

- Delayed or forgone essential healthcare
- Higher mortality and chronic disease rates
- Poorer health behaviors (e.g., smoking, alcohol consumption, lack of exercise, weight management)
- Higher rates of suicide, mental health issues, and substance use
- Poorer social drivers of health
- Lower life expectancy

Action Recommendations

Culture, Leadership, and Governance

- Explore opportunities regarding provider types, models of care, federal and state programs, and health system or network affiliations to improve financial viability and preserve or extend health services.
- Expand telehealth and telepharmacy services—such as remote consultations, treatment, and monitoring—to bridge access gaps in underserved areas.
- Consider establishing or expanding mobile health clinics for primary and preventive care, such as vaccinations, routine screenings, and nonemergent diagnostics.
- Safeguard resources for essential health services; build a "shared ownership of community health" approach with other facilities to maintain continuity of care if services are shifted due to financial strain.[9]
- Stay abreast of funding opportunities for facility improvements or financial stability, such as those gathered by the Rural Health Information Hub or through the federal Rural Health Transformation Program.

Patient and Family Caregiver Engagement

- Ensure all staff are aware of and competent in respecting cultural differences among rural and tribal communities that may influence patient and family engagement.
- Partner with local community-based organizations to run educational campaigns to improve public awareness of rural-specific health disparities, healthy habit support networks, and preventive health services.
- Leverage community health workers to serve as patient health educators, navigators, or advocates to streamline and improve timely access to care.
- Explore residential transportation programs, care navigator roles, and other outreach mechanisms to improve patient access to healthcare facilities.
- Invest in consumer-friendly resources and education to promote use of technology that may be integrated with telehealth.

Workforce Safety and Well-Being

- Evaluate innovative staffing models to protect against provider burnout by optimizing human resource capabilities and capacity.
- Seek government, higher education, nonprofit, and private organization/provider partnerships to improve recruitment and retention.
- Consider financial, educational, and other incentives to attract healthcare professionals to practice in underserved rural areas and address workforce maldistribution.

Learning System

- Assess local patient health and service needs to identify care access gaps (e.g., comprehensive community health needs assessment). Use results to explore service line or provider availability improvements, expansion, or adjustments.
- Bolster electronic health record interoperability and infrastructure to improve care coordination and information sharing among rural health networks.
- Participate in rural health research programs or work with rural practice-based research networks to improve national understanding of rural public health and healthcare needs. The Federal Office of Rural Health Policy can help identify requests for proposals from federal and state governments, agencies, or other interest groups, as well as calls for study participants through academic institutions.

ECRI Resources and References

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ECRI Resources

Navigating Challenges in Rural Healthcare (HSRM, ASRM, ACRM)

Overview of Critical Access Hospitals (HSRM, ASRM, ACRM)

Barriers to Accessing Palliative Care in Indigenous Populations in North America (Clinical Evidence)

References

1. Nguyen A, Kim S. Mapping healthcare deserts: 80% of the country lacks adequate access to healthcare. GoodRx. September 9, 2021. Accessed September 19, 2025.
2. Healthcare access in rural communities. Rural Health Information Hub. Updated November 7, 2025. Accessed November 25, 2025.
3. Rural hospitals at risk of closing. Center for Healthcare Quality and Payment Reform. October 2025. Accessed November 21, 2025.
4. Rural hospital closures. The Cecil G. Sheps Center for Health Services Research. University of North Carolina. Accessed October 15, 2025.
5. States with the biggest discrepancies between urban and rural healthcare access. Concordia University Texas. Accessed September 19, 2025.
6. Designated Health Professional Shortage Areas Statistics: Fourth Quarter of Fiscal Year 2025 Designated HPSA Quarterly Summary. Bureau of Health Workforce, Health Resources and Services Administration, US Department of Health and Human Services. September 30, 2025. Accessed October 15, 2025.
7. Navigating challenges in rural healthcare. ECRI. December 10, 2025. Accessed December 10, 2025.
8. Rural health disparities. Rural Health Information Hub. Updated September 24, 2025. Accessed September 30, 2025.
9. Barnett K. Best Practices for Community Health Needs Assessment and Implementation Strategy Development: A Review of Scientific Methods, Current Practices, and Future Potential. Public Health Institute; February 2012. Accessed November 25, 2025.

Increasing Rates of Preventable Acute Diseases in Communities and Healthcare Settings

#3 Patient Safety Concern

Preventable diseases—both those that are vaccine-preventable and those for which no vaccine exists—are rising worldwide, threatening to reverse decades of progress in public health and patient safety. Once largely controlled, **these illnesses are resurging due to declining immunization coverage, vaccine hesitancy, misinformation on evidence-based treatment, funding cuts to public health programs, humanitarian crises, and gaps in healthcare infrastructure**. Changes to the Centers for Disease Control and Prevention's recommended childhood vaccine schedule announced in January 2026 risk further diminishing vaccination rates and accelerating the return of vaccine-preventable illnesses.[1]

Measles remains one of the most contagious vaccine-preventable diseases, infecting up to 90% of unvaccinated individuals who are exposed.[2] **In 2024, an "estimated 20.6 million people were infected with measles,"** with large outbreaks reported in 57 countries,[3] driven by multiple factors including pandemic-related declines in routine immunization, immunity gaps, missed vaccine doses, and increased international travel that facilitates disease spread.[4,5]

To maintain herd immunity, vaccination coverage of more than 95% is needed. **However, an estimated 280,000 US kindergartners are at risk for measles because coverage with the measles, mumps, and rubella (MMR) vaccine fell from 95.2% during the 2019-2020 school year to 92.7% during the 2023-2024 school year.**[6]

Another vaccine-preventable illness making a comeback is pertussis, commonly known as "whooping cough." It poses particular danger for infants and older adults, and in the United States, recent data show that the number of reported cases in 2024 was more than six times higher than in 2023.[7,8]

Vaccines are not the only line of defense against preventable diseases. Illnesses such as acute dysentery, for which no vaccine exists, continue to cause significant illness and death worldwide, and prevention depends on access to clean water, sanitation, and strong infection control.

In January 2025, officials in Multnomah County, Oregon, reported 40 confirmed cases of dysentery, more than double the number identified the previous year. The outbreak was linked to inadequate sanitation and hygiene among people experiencing homelessness.[9]

Globally, similar risks are seen with cholera; mass displacement caused by natural disasters and humanitarian conflicts leave communities without reliable access to safe water and sanitation, fueling outbreaks and widening health inequities.[10]

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These patterns of vulnerability are echoed in healthcare settings, where preventable diseases can spread rapidly due to systemic lapses. Vaccine-preventable illnesses have been traced to gaps in staff immunization and delays in implementing isolation protocols, while diarrheal diseases can quickly propagate in hospitals and long-term care facilities when infection control measures such as environmental cleaning, disinfection, and hand hygiene are insufficient or inconsistently applied. The resurgence of acute preventable diseases strains healthcare systems and drives unnecessary morbidity and mortality. Sustaining immunization programs, strengthening surveillance, and countering misinformation are essential. Health equity must also remain a central focus.

Without equitable access to vaccines, clean water, and timely care—especially as vaccine hesitancy and misinformation continue to drive down immunization rates—the most vulnerable populations will face the greatest risk of illness and death, widening disparities and threatening to reverse decades of progress in global public health.

Action Recommendations

Culture, Leadership, and Governance

- Strengthen infection prevention and control programs in all care settings by providing adequate resources, staffing, and authority to lead prevention and outbreak response activities.
- Promote accurate, consistent communication by establishing organizational strategies to counter misinformation and partnering with public health agencies and community organizations to reinforce trust in science and vaccination.
- Develop policies that support staff vaccination and screening programs.
- Leverage electronic-based tools to identify patients and residents with incomplete vaccination status.
- Maintain a safe physical healthcare environment with adequate ventilation, designated isolation rooms, and accessible hand hygiene stations, in alignment with the Centers for Disease Control and Prevention's Guidelines for Environmental Infection Control in Health-Care Facilities.[11]
- Advance health equity and address social drivers of health by directing resources to underserved populations and mitigating barriers such as limited access to clean water, transportation, and other basic needs.

Patient and Family Caregiver Engagement

- Improve health literacy of patients, residents, families, and visitors on vaccination and infection prevention using culturally relevant, multilingual materials that apply plain language and visuals as outlined in the Agency for Healthcare Research and Quality's AHRQ Health Literacy Universal Precautions Toolkit, 3rd Edition.[12]
- Empower patients/residents, families, and visitors to identify and counter misinformation through accessible tools, such as FAQs, and guidance on finding reliable health information.
- Encourage families to engage in care by asking about vaccination status, hand hygiene, and infection prevention practices during encounters.

Workforce Safety and Well-Being

- Provide ongoing staff education on recognizing, preventing, and managing vaccine-preventable diseases, including how to address patient questions or misinformation with respectful, nonjudgmental communication and updated guidance on emerging threats.
- Support staff safety and resilience by guaranteeing reliable access to personal protective equipment, vaccines, preventive medications, and easy-to-follow protocols during routine care and outbreaks.
- Promote a just culture that embraces coaching and organizational learning when staff display at-risk behavior or deviations from best practice that may increase the risk of transmitting illness and infections.

Learning System

- Track, analyze, trend, and share data on vaccination rates, preventable disease cases, and outbreak response activities to identify gaps and guide resource allocation.
- Review failures and near misses related to infection prevention during safety huddles to reinforce accountability and learning.
- Leverage technology and surveillance systems to detect trends, highlight at-risk populations, and provide actionable insights for timely intervention.
- Integrate staff and patient feedback into improvement cycles, using frontline experiences to refine education, communication, and outbreak preparedness strategies.

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ECRI Resources

Accountability in the Healthcare Workforce: The Case for a Just Culture

Risks of Dismissing Patient, Family, and Caregiver Concerns

Shining a Light on Disparities: Understanding the Role of Health Equity in Infection Prevention and Control

Transforming Health Systems: Closing Gaps in Disparities, Diversity, and Determinants of Health

References

1. Racine AD. AAP opposes federal health officials' unprecedented move to remove universal childhood immunization recommendations. American Academy of Pediatrics. January 5, 2026. Accessed January 8, 2026.
2. How measles spreads. Centers for Disease Control and Prevention. April 18, 2024. Accessed September 22, 2025.
3. Why CDC is involved with global measles. Centers for Disease Control and Prevention. July 14, 2025. Accessed October 1, 2025.
4. Minta AA, Ferrari M, Antoni S, et al. Progress toward measles elimination—worldwide, 2000-2022. *MMWR Morb Mortal Wkly Rep*. 2023;72(46):1262-1268.
5. Global measles cases surge as 30 million children miss vaccines, UN health agency warns. United Nations. November 28, 2025. Accessed December 8, 2025.
6. Measles cases and outbreaks. Centers for Disease Control and Prevention. Updated November 19, 2025. Accessed November 25, 2025.
7. About whooping cough outbreaks. Centers for Disease Control and Prevention. June 11, 2025. Accessed September 22, 2025.
8. Pertussis surveillance and trends. Centers for Disease Control and Prevention. October 27, 2025. Accessed November 25, 2025.
9. Raji T. Dysentery is on the rise in Oregon. Here's what to know. *The Washington Post*. March 4, 2025. Accessed October 2, 2025.
10. Cholera – multi-country with a focus on countries experiencing current surges. World Health Organization. August 29, 2025. Accessed October 3, 2025.
11. Sehulster LM, Chinn RYW, Arduino MJ, et al. Guidelines for Environmental Infection Control in Health-Care Facilities. Centers for Disease Control and Prevention; 2003. Updated July 2019. Accessed September 22, 2025.
12. Brach C, ed. AHRQ Health Literacy Universal Precautions Toolkit, 3rd Edition. Publication No. 23-0075. Agency for Healthcare Research and Quality; 2024. Accessed September 22, 2025.

Effects of Federal Funding Cuts on Healthcare Operations and Patient Safety

#4 Patient Safety Concern

Healthcare organizations are currently facing a period of tremendous financial strain. Many healthcare facilities depend on federal reimbursement programs such as Medicare, Medicaid, and grant funding to sustain essential services.

In July 2025, Congress passed legislation that included **sweeping reductions to federal healthcare funding,** including the following:

- Reductions in funding for Medicaid, which the Congressional Budget Office (CBO) estimates would be **reduced by almost $1 trillion over the next 10 years**[1]
- Reductions in funding for Medicare, which CBO estimates would be **reduced by $491 billion from 2026 through 2034**[2]

The National Institutes of Health also **terminated more than 1,000 grants to hospitals and medical schools** predicted to be worth almost $2 trillion.[3]

The reductions in Medicaid are expected to leave 10 million Americans without insurance,[4] leading many facilities to worry about the increase in uncompensated care they will be providing;[5] uncertainty surrounding other care funding streams, such as subsidies for insurance plans purchased under the Patient Protection and Affordable Care Act, compounds concerns for providers. **Medicaid is the largest source of revenue for community health centers, accounting for 42% of their operating revenue**.[6] Residents in senior care facilities also depend on these programs, with **13% of nursing home residents relying on Medicare as the primary payer and 63% relying on Medicaid**.[7]

In the wake of these funding cuts, many organizations have announced discontinuation of some services or deferred investments in infrastructure and technology.[8] Layoffs are also forthcoming; for example:

- A community health center announced it would lay off more than 70 employees, since Medicaid accounted for 70% of its funding.[9]
- An academic medical center said it would lay off 650 employees, mostly in research and administrative roles.[10]
- A children's hospital announced it would lay off more than 150 staff, in addition to discontinuing or scaling back some services and delaying expansion plans at some of their sites.[11]

Hospital | Ambulatory surgery | Physician practice | Senior care | Home care | Pharmacy

These layoffs are expected to exacerbate ongoing healthcare staff shortages across care settings as well, especially in rural communities. See Persistent Workforce Shortages Continue to Burden Staff and Restrict Access to Care and Reduced Access to Rural Healthcare Increases Health Risks and Disparities for more information.

Although healthcare organizations routinely function within strict financial limitations, **cutting back on safety is never the solution to financial pressures.**

Unsafe care jeopardizes patient outcomes and strains healthcare budgets, making it a dual threat to system integrity. **Preventable adverse events in US hospitals cost $17.1 billion annually.**[12] Even though areas such as risk, safety, and quality can be seen as cost centers, they are essential to providing efficient, cost-effective care.

In spite of financial challenges, an unwavering commitment to safety, risk management, and quality must remain the foundation of trusted healthcare.

Action Recommendations

Culture, Leadership, and Governance

- Elicit support from board members and organizational leaders to continue to prioritize patient safety, risk management, and quality staffing and resources by providing evidence that these programs save money, and more importantly, they reduce patient harm, prevent litigation, ensure corporate compliance, and protect the organization from reputational damage.
- Safeguard patient safety, quality, and risk management budgets by framing these departments as nonnegotiable investments rather than discretionary expenses.
- Include patient safety leaders (e.g., patient safety officer, risk manager, medication safety officer) as key voices in executive-level financial decision-making.
- Issue public leadership statements that commit to funding of patient safety resources.
- Integrate lessons learned during previous periods of financial stress into organizational action plans.

Patient and Family Caregiver Engagement

- Involve members of patient and family advisory councils in discussions regarding which safety and quality services they value most and use that feedback to prioritize resource allocation.

Workforce Safety and Well-Being

- Protect safety, risk, and quality staff positions by embedding them into essential workforce categories that cannot be downsized without board approval.
- Provide support programs for staff experiencing stress or burnout related to working in underresourced conditions.
- Support staff by reinforcing the message that safety reporting systems and quality oversight remain intact and resourced.

Learning System

- Maintain investments in data analytics, safety dashboards, and reporting systems that track harm events and quality outcomes.
- Evaluate proposed cost-cutting initiatives against patient safety and risk data before implementation to prevent unintended harm. Continue to assess any cost-saving measures systematically and adjust, as necessary.
- Expand partnerships with regional collaboratives or patient safety organizations to pool resources and share lessons learned.

ECRI Resources and References

Some ECRI resources are publicly available. To obtain other ECRI reports, contact us by telephone at (610) 825-6000, ext. 5891, or by email at clientservices@ecri.org.

ECRI Resources

Patient Safety: A Moral Imperative and Smart Business Strategy

Patient Safety, Risk, and Quality (HSRM, ASRM, ACRM)

The Role of the Patient Safety Officer (HSRM)

Demonstrating Risk Management Value (HSRM)

The Role of the Healthcare Risk Manager: A Primer (HSRM)

Culture of Safety: An Overview

Risk Management Basics courses

References

1. Euhus R, Williams E, Burns A, Rudowitz R. Allocating CBO's estimates of federal Medicaid spending reductions across the states: enacted reconciliation package. KFF. July 23, 2025. Accessed September 24, 2025.
2. US Congress Congressional Budget Office. CBO's Estimates of the Statutory Pay-As-You-Go Effects of Public Law 119-21. August 15, 2025. Accessed September 23, 2025.
3. Impact of NIH grant terminations. Association of American Medical Colleges. June 10, 2025. Accessed September 24, 2025.
4. CBO projects OBBBA to increase uninsured by 10 million, federal deficit by $3.4 trillion. American Hospital Association. July 21, 2025. Accessed September 24, 2025.
5. Boyle P. Hospitals make painful choices as federal cutbacks add to economic headwinds. AAMC News. August 7, 2025. Accessed September 24, 2025.
6. Looming Medicaid changes threaten to deepen the community health center workforce crisis. National Association of Community Health Centers. May 20, 2025. Accessed September 23, 2025.
7. Medicaid cuts will devastate nursing home residents. Center for Medicare Advocacy. February 26, 2025. Accessed September 23, 2025.
8. Brady M. Hospitals prepare for $149B cut to Medicaid state-directed payments. HealthcareDive. August 12, 2025. Accessed September 24, 2025.
9. Flower J. Layoffs hit Providence Community Health Centers due to financial strain. May 8, 2025. Accessed September 24, 2025.
10. Muoio D. Vanderbilt University Medical Center announces 650 layoffs, $300M-plus budget cut. Fierce Healthcare. June 23, 2025. Accessed September 24, 2025.
11. Takahama E. Seattle Children's to lay off more than 150 staffers. *The Seattle Times.* September 17, 2025. Accessed September 23, 2025.
12. Van Den Bos J, Rustagi K, Gray T, Halford M, Ziemkiewicz E, Shreve J. The $17.1 billion problem: the annual cost of measurable medical errors. *Health Aff (Millwood).* 2011;30(4):596-603.

Lack of Recognition and Reporting of Harm Events

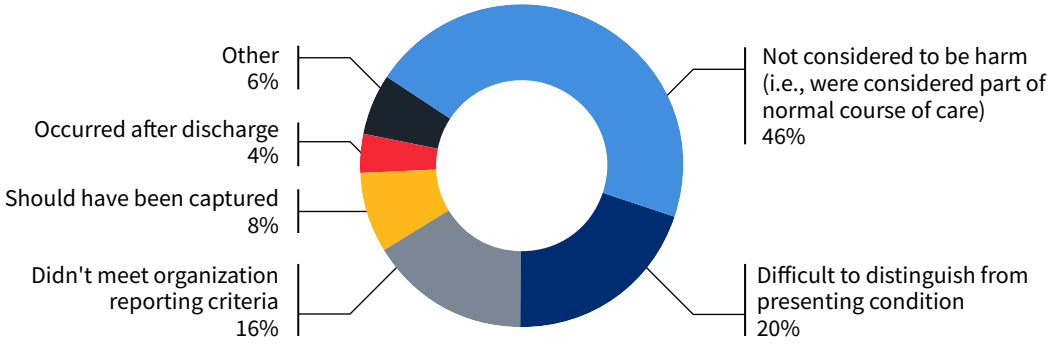
#5 Patient Safety Concern

Patient harm is one of the top causes of morbidity and mortality worldwide according to the World Health Organization, which conservatively ranks it as No.14.[1] **However, because healthcare systems capture only half of the harm events that occur—and act on even fewer—it is incredibly difficult to respond to, learn from, or mitigate the risk of adverse events.**

In July 2025, the US Office of Inspector General (OIG) reported survey results indicating that participating hospital reporting systems captured only 51% of the adverse events occurring in those facilities. It's important to note that this is an improvement on the 2012 OIG finding of just 14% of events captured.[2]

The lack of event recognition or internal reporting can be attributed to various factors: events were not considered unexpected in the course of care or were indistinguishable from the patient's condition; organization reporting requirements were too narrow to capture all events; or the event occurred post discharge.

Why Harm Events Were Not Reported



Source: Office of Inspector General. Hospitals Did Not Capture Half of Patient Harm Events, Limiting Information Needed to Make Care Safer. Department of Health and Human Services; July 2025. OIG publication OEI-06-18-00401. Accessed September 5, 2025.

When organizations accurately identify and report events, risks can be addressed effectively. Moreover, patients involved in harm events can be cared for appropriately, and organizations can implement policies and procedures to decrease the likelihood of future harm occurrence. An adverse event or unanticipated harm can cost an organization anywhere from approximately $5,000 to $17,000[3]; conversely, one health system's implementation of harm reduction strategies saved a total of more than $100 million.[4]

Hospital | Ambulatory surgery | Physician practice | Senior care | Pharmacy

Action Recommendations

Culture, Leadership, and Governance

— Assess the organization's definition of harm. Ensure that it is sufficient to allow recognition and capture of all events and that it is standardized across the organization to support increased accuracy of tracking, follow-up, and external reporting as appropriate.[5] See the Agency for Healthcare Research and Quality's Common Formats and NCC MERP's Index for Categorizing Medication Errors as examples.[2]

— Consider the organizational culture's impact on reporting. Instill and uphold a just culture philosophy. Address staff perceptions of isolation, reprimand, or blowback due to reporting. Toxic culture is often entrenched and difficult to combat; see The Impact on System Improvement When a Culture of Blame Hinders Learning for more information.

Patient and Family Caregiver Engagement

— Create reporting pathways for patients and caregivers to voice concerns during the course of care; they can be helpful sources of information or even early warning systems regarding unanticipated events.

— Ensure that policies and procedures guide providers in communicating how issues were resolved to patients and families after harmful or potentially harmful events.

— Engage patient advocates and representatives from the organization's patient advisory council in reviewing the efficacy of the organization's adverse event response plans.

Workforce Safety and Well-Being

— Encourage reporting of all harm events by ensuring that reporting is easy, quick, and minimally disruptive to staff member routines. Make sure that staff have the time and resources necessary to submit a report, and that supervisors are able to promptly follow up to obtain necessary information and manage the aftermath of the event. ISMP describes the implementation of a "safety coach" program, in which select frontline staff coach their peers to recognize risks and hazards and know how to escalate concerns.[6]

— Provide patient and family feedback to healthcare staff, not as a punitive measure, but as part of a just culture approach to learning and improvement.

— Consider options such as a monthly "good catch" award to encourage reporting. In addition, sharing lessons learned from an event report can promote further reporting.

— Implement a peer support program to provide emotional support to clinicians involved in traumatic events.

Learning System

— Strengthen efforts to support accurate event reporting and tracking, even as event identification efforts are fine-tuned. Reporting systems should be able to protect reporters' privacy, receive reports from a range of staff, share summaries as needed, and support the development of action plans.

— Obtain leadership and staff buy-in before training on reporting systems, as it will require collaboration among risk, quality, information technology, training, and other staff. Consider implementing a train-the-trainer approach or positioning system superusers to support adoption across the organization to deeply embed event identification and reporting into organizational culture and procedures.

— Develop and assess the efficacy of communication systems to convey event definitions, identification strategies, and lessons learned as a result of event reports. Use existing channels, such as the organization intranet, internal gatherings, staff newsletters, departmental or small-group meetings, or other strategies.

ECRI Resources and References

Some ECRI resources are publicly available. To obtain other ECRI reports, contact us by telephone at (610) 825-6000, ext. 5891, or by email at clientservices@ecri.org.

ECRI Resources

Resource Collection: Event Reporting and Management (HSRM, ASRM, ACRM)

Acute Care Adverse Event and Near Miss Event Reporting Policy (HSRM)

Event Reporting (HSRM, ASRM, ACRM)

Incident Identification and Notifications in Aging Services (HSRM, ASRM)

Patient Safety Event Data Analytics for Predicting Serious Harm Risks (Clinical Evidence)

Pump Up the Volume: How to Prioritize Events and Analyze Error Data (ISMP)

Pump Up the Volume: Tips for Increasing Error Reporting and Decreasing Patient Harm (ISMP)

Report an Error

Speaking Up for Safety: Use of an Abbreviated Reporting Form to Increase Understanding of Near-Miss and Adverse Events (ECRI and the ISMP PSO)

References

1. Patient safety. News release. World Health Organization. March 9, 2019. Accessed September 15, 2025.
2. Office of Inspector General. Hospitals Did Not Capture Half of Patient Harm Events, Limiting Information Needed to Make Care Safer. Department of Health and Human Services; July 2025. OIG publication OEI-06-18-00401. Accessed September 5, 2025.
3. Estimating the additional hospital inpatient cost and mortality associated with selected hospital-acquired conditions. Agency for Healthcare Research and Quality. November 2017. Accessed September 15, 2025.
4. Lee A, Yi D, Li M, et al. Impact of inpatient harms on hospital finances and patient clinical outcomes. *J Patient Saf*. 2018;14(2):67-73.
5. Adverse events toolkits: medical record review methodology and clinical guidance for identifying patient harm. Department of Health and Human Services Office of Inspector General. July 6, 2023. Accessed October 8, 2025.
6. Safety coaches engage staff to report medication concerns and promote safe behavior. Institute for Safe Medication Practices. September 2024. Accessed October 28, 2025.

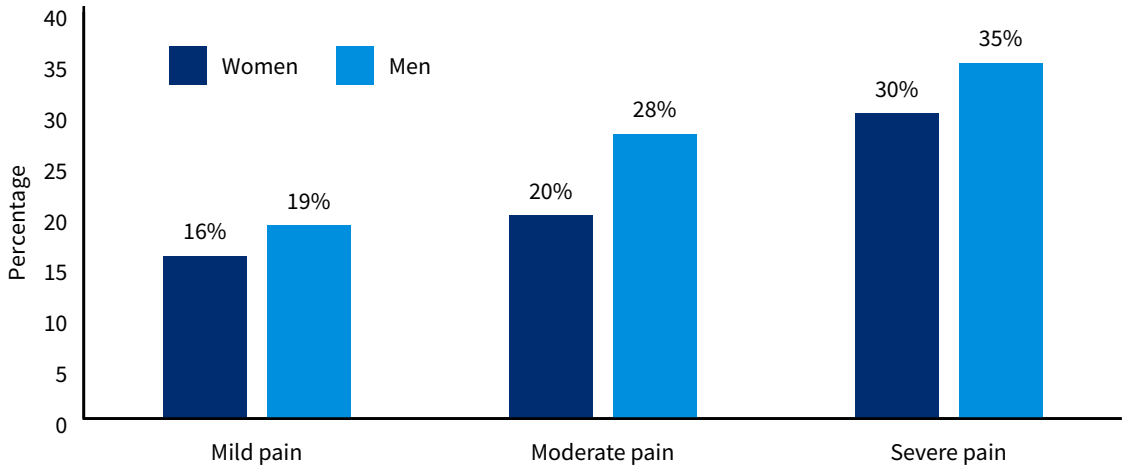
Structural and Systemic Barriers Inhibit Equitable Pain Management for Women

#6 Patient Safety Concern

Inequities regarding women's healthcare are critical patient safety issues. Not only do women* face unique health risks related to pregnancy, childbirth, and other reproductive conditions, they also face challenges to receiving adequate pain management due to structural and systemic barriers such as **implicit bias and inconsistent guidelines.**

Implicit bias is "a negative attitude, of which one is not consciously aware, against a specific social group."[1] Even when clinicians intend to remain impartial, **gender bias results in women's pain being more frequently attributed to psychological or hormonal factors than to physical causes,** as compared to men.[2] In addition, one study found that **women are less likely to receive analgesics than men,** even when indicating the same level of pain.[3]

Percentage of Women and Men Who Receive Pain Medication Prescriptions Based on Reported Pain Levels



Source: Guzikevits M, Gordon-Hecker T, Rekhtman D, et al. Sex bias in pain management decisions. *Proc Natl Acad Sci U S A.* 2024;121(33).

Additional inequities compound these challenges. **Women of color often have their pain significantly underestimated** by their clinicians during pain assessments[4] and are **more likely to have their pain dismissed during pregnancy and childbirth** than their White counterparts.[5]

Hospital | Ambulatory surgery | Physician practice | Senior care | Home care | Pharmacy

The absence of consistently applied evidence-based guidelines leads to a wide variation in treatment. For example, research shows that **local anesthesia significantly reduces pain during hysteroscopies and intrauterine device insertions, yet anesthesia is not consistently offered to women during these procedures.**[6,7]

Another example pertains to the use of acetaminophen during pregnancy. In September 2025, the US Food and Drug Administration stated that "the use of acetaminophen by pregnant women may be associated with an increased risk of neurological conditions such as autism and ADHD in children"[8] despite the absence of evidence establishing a direct link.[9]

In response, the American College of Obstetricians and Gynecologists stated, "Maternal fever, headaches as an early sign of preeclampsia, and pain are all managed with the therapeutic use of acetaminophen, making acetaminophen essential to the people who need it. **The conditions people use acetaminophen to treat during pregnancy are far more dangerous than any theoretical risks and can create severe morbidity and mortality for the pregnant person and the fetus.**"[10]

*For clarity and readability, this article uses the term "women." This usage is intended to encompass not only cisgender women but also transgender men, nonbinary individuals, and other gender-diverse people.

Action Recommendations

Culture, Leadership, and Governance

- Align organizational pain management goals with the Joint Commission's National Performance Goal 6 to prioritize pain management and safe prescribing practices.
- Integrate equity goals into strategic plans to hold the organization accountable for addressing systemic pain management disparities.
- Acknowledge sex and gender as social determinants of health.[2]
- Implement comprehensive and standardized pain assessment tools that are validated across gender, age, and cultural groups. Encourage providers to adapt perspective-taking interventions during assessments by asking open-ended questions, avoiding judgment statements, and eliminating medical jargon.[11]

Patient and Family Caregiver Engagement

- Promote shared decision-making by discussing pain management options with each patient and educating them about their rights.[11] Be sure to assess for health literacy and tailor these conversations in a way that the patient fully understands and can participate in.
- Understand that pain is subjective and that individuals express pain differently.[12] Tailor pain management approaches and treatment to each individual's needs.[11]
- Ask patients to describe their pain, not just on a numbered scale, but by comparing it to past experiences or by describing how their pain impacts daily activities.[11] However, keep in mind that a verbal description of pain is only one way to indicate distress,[12] and these descriptions can also vary widely among cultural and social groups.[13]
- Conduct patient surveys to continuously capture patient experiences of pain management and use results to guide improvements.[2]
- Engage in public awareness campaigns to educate the community about gender and racial disparities in pain management to encourage patients to advocate for equitable care.[2]

Workforce Safety and Well-Being

- Support staff with forums for reflection, debriefing, and peer support when they encounter challenges in equitable pain management.
- Recognize staff who champion equity-focused practices.

Learning System

- Train clinicians and staff to recognize and address gender bias, stigma, and cultural differences in pain expression and treatment.
- Analyze adverse events, patient complaints, and malpractice claims related to pain management to address inequities.
- Share lessons learned across departments and with peer organizations.

ECRI Resources and References

Some ECRI resources are publicly available. To obtain other ECRI reports, contact us by telephone at (610) 825-6000, ext. 5891, or by email at clientservices@ecri.org.

ECRI Resources

Risks of Dismissing Patient, Family, and Caregiver Concerns

Safety Break - Provider Cognitive Bias: Impact on Diagnosis (HSRM, ASRM, ACRM)

Cognitive Biases and Diagnostic Error

Racial and Ethnic Disparities in Healthcare

Taking Action: Effective Provider-Patient Communication (HSRM, ASRM, ACRM)

Taking Action: Strategies to Advance Health Equity (HSRM, ACRM)

References

1. Implicit bias. American Psychological Association. Accessed September 11, 2025.
2. Gendered pain: a call for recognition and health equity. *EClinicalMedicine*. 2024;69:102558.
3. Guzikevits M, Gordon-Hecker T, Rekhtman D, et al. Sex bias in pain management decisions. *Proc Natl Acad Sci U S A*. 2024;121(33):e2401331121.
4. Ruben MA, Stosic MD. Documenting race and gender biases in pain assessment and a novel intervention designed to reduce biases. *J Pain*. 2024;25(9):104550.
5. Boakye PN, Prendergast N, Bailey A, et al. Anti-Black medical gaslighting in healthcare: experiences of Black women in Canada. *Can J Nurs Res*. 2025;57(1):59-68.
6. Grinberg K, Sela Y. A literature review on pain management in women during medical procedures: gaps, challenges, and recommendations. *Medicina (Kaunas)*. 2025;61(8):1352.
7. Pain management for in-office uterine and cervical procedures: ACOG clinical consensus no. 9. *Obstet Gynecol*. 2025;146(1):161-177.
8. FDA responds to evidence of possible association between autism and acetaminophen use during pregnancy. News release. FDA. September 22, 2025. Accessed September 23, 2025.
9. Ahlqvist VH, Sjöqvist H, Dalman C, et al. Acetaminophen use during pregnancy and children's risk of autism, ADHD, and intellectual disability. *JAMA*. 2024;331(14):1205-1214.
10. ACOG affirms safety and benefits of acetaminophen during pregnancy. News release. ACOG. September 22, 2025. Accessed September 23, 2025.
11. Wang ML, Jacobs O. From awareness to action: pathways to equity in pain management. *Health Equity*. 2023;7(1):416-418.
12. IASP revises its definition of pain for the first time since 1979. News release. IASP. July 16, 2000. Accessed September 12, 2025.
13. Peacock S, Patel S. Cultural influences on pain. *Rev Pain*. 2008;1(2):6-9.

Persistent Workforce Shortages Continue to Burden Staff and Restrict Access to Care

#7 Patient Safety Concern

More than half of US healthcare workers expect to leave their job in 2026.[1] Although staffing shortages are seen across the industry, behavioral health, obstetrics, long-term care, and Veterans Affairs are areas of substantial concern. Burnout, poor worker well-being, funding cuts, and financial instability play significant roles in healthcare employment rates and access to care.

Such shortages are hindering workforce development in behavioral health, as **more than one-third (122 million) of the US population lives in a mental health professional shortage area,** and substantial shortages are projected to continue to 2037. As a result, the "national average wait time for behavioral health services is 48 days."[2]

Similarly, as of 2024, **more than 35% of US counties are considered maternity care deserts that lack a birthing facility or obstetric clinician,** affecting over 2.3 million women of reproductive age and more than 150,000 births.[3] Although certified nurse midwives are projected to increase by 40% by 2037 and offset obstetrician-gynecologist projected losses of 15%,[4] "only 10.9% of births in the US are attended by midwives" due to integration challenges and licensure restrictions.[3]

In long-term care, **72% of nursing homes have fewer employees than before the COVID-19 pandemic,** despite significant investments in the workforce. Nearly half are limiting admissions as a result, and 97% have staff working extra shifts or overtime.[5] Medicaid reimbursement, which often covers less than 80% of care costs,[6] and a lack of qualified or interested candidates has made recruitment extremely challenging.[5]

Veterans Health Administration (VHA) facilities are struggling too. **VHA reported a 50% increase in severe occupational staffing shortages from 2024 to 2025[7] and a net loss of more than 16,000 workers in 2025.**[8] While shortages of medical officers, nurses, psychologists, and police officers were the most frequently cited, 41 occupations were identified as severe shortages by at least 20% of facilities—the highest number since 2018.[7]

Reports of the **VHA shortages followed the termination of most federal union contracts, eliminating key staff protections** (e.g., working conditions, staffing ratios, wage negotiations, safety protocols, grievance procedures).

Federal funding cuts also made our Top 10 Patient Safety Concerns for 2026. See Effects of Federal Funding Cuts on Healthcare Operations and Patient Safety for more information.

Hospital | Physician practice | Senior care | Pharmacy

Action Recommendations

Culture, Leadership, and Governance

- Demonstrate compliance with all applicable elements of Joint Commission's National Performance Goal for staffing (e.g., NPG.12.01-06).
- Partner with academic institutions to expand the workforce through innovative training programs; career pipelines and pathways; and financial programs such as loan repayment, scholarships or grants, and internships or residencies.
- Take full advantage of state flexibility in scope of practice expansions, evolving telehealth policies, interstate collaboratives, and financial support opportunities to enhance workforce capabilities and financial viability.
- Empower staff to speak up when overburdened or report unsafe conditions associated with staff shortages. Establish easy, clear communication pathways, and respond to reports with strategies rooted in just culture principles.
- Consult with human resources and other stakeholders to understand the organization's use of temporary or agency staff. Collaborate with human resources, finance, and legal personnel to explore creating an in-house staffing agency; weigh the risks and benefits and the impact this would have on permanent staff, the work environment, and patient safety.

Patient and Family Caregiver Engagement

- Involve patient family advisory councils to inform areas where additional support is needed to improve the patient experience (i.e., staff, services, or other resources).
- Be transparent about the scope of services impacted by staffing shortages. Proactively support continuity of care by arranging for alternative providers, using clear communication, and implementing patient-centered care planning.

Workforce Safety and Well-Being

- Engage departmental leaders to increase staff awareness of well-being resources, including peer support programs, employee assistance programs, and external resources available through employee benefits.
- Solicit feedback from clinical and nonclinical staff on workloads, perceived responsibilities, and alignment between job scope and personnel capabilities. Use the results to make adjustments where needed.
- Collaborate with human factors engineers to assess clinical work systems for factors that may lead staff to develop unsafe workarounds.
- Streamline administrative processes and confirm that such tasks are appropriately delegated for clinical staff, allowing them to practice at the top of their licensure.

Learning System

- Evaluate community health needs (e.g., comprehensive community health assessment) and service utilization rates (e.g., medical record data, processed claims) to routinely identify essential roles and workforce gaps. Use results to optimize resource allocation and maintain minimum essential capabilities.
- Investigate impacts of staffing shortages on worker well-being, patient safety, and quality of care by tracking and trending near misses and adverse events that are associated with insufficient staff ratios, bandwidth, or burnout. Also consider administering routine Surveys on Patient Safety Culture. Use results to inform staff scheduling, backup providers, and contract pools.

ECRI Resources and References

Some ECRI resources are publicly available. To obtain other ECRI reports, contact us by telephone at (610) 825-6000, ext. 5891, or by email at clientservices@ecri.org.

ECRI Resources

Safety Sprint: Strategies to Minimize the Impact of Healthcare Staffing Shortages on Safety (ECRI and the ISMP PSO)

Understaffing (HSRM)

Flexible Scheduling for Mitigating Healthcare Personnel Staffing Shortages (Clinical Evidence)

Licensed Practical Nurses for Mitigating Healthcare Personnel Staffing Shortages (Clinical Evidence)

ECRI SALUTE™ Program

Culture of Safety: An Overview

References

1. Roy M. Over half of US healthcare workers plan to switch jobs by next year, survey finds. Reuters. September 16, 2025. Accessed September 30, 2025.
2. National Center for Health Workforce Analysis. State of the Behavioral Health Workforce, 2024. Health Resources and Services Administration; November 2024. Accessed September 30, 2025.
3. Stoneburner A, Lucas R, Fontenot J, Brigance C, Jones E, DeMaria AL. Nowhere to Go: Maternity Care Deserts Across the US. March of Dimes. 2024. Accessed September 30, 2025.
4. Workforce projections. HRSA Data Warehouse. Accessed September 30, 2025.
5. State of the nursing home sector: survey of 441 nursing home providers highlights persistent staffing and economic crisis. American Health Care Association. March 2024. Accessed September 30, 2025.
6. New survey highlights devastating impact of Medicaid reductions on nursing homes. American Health Care Association. June 9, 2025. Accessed September 30, 2025.
7. Department of Veterans Affairs. OIG Determination of Veterans Health Administration's Severe Occupational Staffing Shortages Fiscal Year 2025. Office of Inspector General; August 12, 2025. OIG Publication No. 25-01135-196. Accessed September 30, 2025.
8. VA workforce dashboard. Department of Veterans Affairs. September 26, 2025. Accessed September 30, 2025.

The Impact on System Improvement When a Culture of Blame Hinders Learning

#8 Patient Safety Concern

Healthcare workers cite fear of being shamed or disciplined for reporting errors or unsafe practices as a key barrier to making such reports; thus, organizations lose an opportunity to identify and rectify systemic issues.[1] This puts patients at risk and creates a toxic work environment that makes continuous improvement impossible.

According to the Just Culture Company, an ECRI company, **punitive responses to errors harm organizations and their patients across multiple domains,** as shown in Table 1.[2] All six benchmark values are highly correlated; a punitive culture in one domain is strongly associated with a punitive culture in another.

For example, perceptions of punitive responses to customer service errors are significantly associated with customer safety mistakes ($r = 0.74$, $p < 0.001$).[2] The justice of an organization is not tied to a specific value, such as safety, but is instead an attribute of organizational culture as a whole.

Table 1. Correlation Matrix for Punitive Response to Errors

Punitive Responses to Errors	Mean (1-5)	SD	Customer Service	Customer Safety	Employee Safety	Financial Stewardship	Data Privacy	Environmental Protection
Customer service	3.05	1.21	1					
Customer safety	3.41	1.29	0.74*	1				
Employee safety	3.32	1.29	0.69*	0.80	1			
Financial stewardship	3.03	1.11	0.56*	0.50*	0.50*	1		
Data privacy	3.20	1.23	0.62*	0.67*	0.64*	0.60*	1	
Environmental protection	2.87	1.17	0.52*	0.47*	0.53*	0.55*	0.50*	1

N = 1,000
* $p < 0.001$

Source: Schabacker M, Brunner A, Olson B, Dutra S. The quiet power of accountability: 10 leadership steps to transform healthcare's punitive culture. ECRI. 2025. Accessed October 3, 2025.

Hospital | Ambulatory surgery | Physician practice | Senior care | Home care | Pharmacy

Consequences can reach beyond organizational walls. **High-profile cases can bring negative press attention,** as in the 2025 case of a New Jersey nurse reportedly fired after reporting a baby mix-up[3]; even more infamously, a Tennessee nurse was convicted of criminally negligent homicide in 2022 following a fatal medication error.[4,5]

Progress in culture improvement has been slow. The Agency for Healthcare Research and Quality's (AHRQ) Surveys on Patient Safety Culture show only modest improvement from 2007 to 2024, as seen in Table 2.

Table 2. AHRQ Surveys on Patient Safety Culture Nonpunitive Response to Errors

2007	2014	2018	2021	2024	Change
47%	49%	52%	60%	60%	+13%

Source: Schabacker M, Brunner A, Olson B, Dutra S. The quiet power of accountability: 10 leadership steps to transform healthcare's punitive culture. ECRI. 2025. Accessed October 3, 2025.

The federal government, through the Centers for Medicare & Medicaid Services' Patient Safety Structural Measure,[7] and states, including Kentucky's 2024 law providing for immunity from criminal liability for harm or damages resulting from health services,[8,9] are taking steps to encourage adoption of a just culture.

Supported by these efforts, **organizations can implement meaningful changes to support a just culture that prioritizes learning.**

Action Recommendations

Culture, Leadership, and Governance

- Embrace a broad view of just culture as a workplace accountability mindset, not limited to safety but inclusive of all human errors, such as service and privacy errors.
- Reject a "no harm, no foul" attitude; assess justice based not on whether harm occurred but rather on systems in place and individual choices.
- Support a culture of safety by holding individuals accountable for reckless behaviors and other culpable conduct (e.g., theft, harassment, intentional harm).
- Use leadership walkrounds to proactively seek feedback from staff members about factors or systemic issues that inhibit their ability to safely care for patients.

Patient and Family Caregiver Engagement

- Educate patient and family advisory councils, professional groups, regulators, and the public about the role of just culture, and the importance of examining and correcting systems factors rather than blaming individual human error or at-risk behavior.
- Consider patient and family languages and health literacy needs in related efforts, ensuring that they can understand and act on the information provided to them.
- Use programs such as Vanderbilt Center for Patient and Professional Advocacy's Patient Advocacy Reporting System or Ariadne Labs' Pathway to Accountability, Compassion, and Transparency to engage patients, families, and staff in a way that emphasizes learning rather than punishment.

Workforce Safety and Well-Being

- Adopt a tool such as the Accountability Decision Tree and define how, when, and by whom it will be used to promote transparency and ensure that no staff member feels treated unfairly.
- Demonstrate a commitment to just culture by defining human error and at-risk behavior as exempt from discipline as a first response. Emphasize the need to learn from these situations, reserving discipline for when errors are repetitive and at such unacceptable rates that the individual proves incapable of improving.
- Evaluate individual intentions that led to adverse incidents, with acceptance of human error and coaching for at-risk behaviors.

Learning System

- Ensure that all stakeholders receive timely and comprehensive feedback on reported events through stories on the organizational intranet, patient safety fairs, action reports from the patient safety committee, employee newsletters, and "good catch" awards, for example.
- Examine systems that contribute to errors and near misses and redesign them to lead staff members to make safer choices.
- Measure the organization's safety culture with a tool such as the Just Culture Company's Just Culture Improvement Index or AHRQ's Surveys on Patient Safety Culture.
- Commit to an ongoing focus on just culture beyond initial training for managers and staff, with continued discussions about adverse events and near misses that emphasize lessons learned.

ECRI Resources and References

Some ECRI resources are publicly available. To obtain other ECRI reports, contact us by telephone at (610) 825-6000, ext. 5891, or by email at clientservices@ecri.org.

ECRI Resources

Accountability in the Healthcare Workforce: The Case for a Just Culture

Is Your Organization Still Punishing Human Error?

Culture of Safety: An Overview

Measuring Safety Culture (HSRM, ASRM, ACRM)

Accountability Decision Tree (HSRM, ASRM, ACRM)

Just Culture: Leveraging Psychological Safety to Improve Culture of Safety Survey Results (ECRI and the ISMP PSO)

A Deeper Dive into Active Failures and Accountability Using Just Culture Principles—Part II (ISMP)

The Differences Between Human Error, At-Risk Behavior, and Reckless Behavior Are Key to a Just Culture (ISMP)

References

1. Braiki R, Douville F, Gagnon M-P. Factors influencing the reporting of medication errors and near misses among nurses: a systematic mixed methods review. *Int J Nurs Pract.* 2024;30(6):e13299.
2. Schabacker M, Brunner A, Olson B, Dutra S. The quiet power of accountability: 10 leadership steps to transform healthcare's punitive culture. ECRI. 2025. Accessed October 3, 2025.
3. Gantz S. A Virtua Vorhees nurse reported a baby-switch mistake. Then she was fired. *Philadelphia Inquirer*. September 17, 2025. Accessed November 25, 2025.
4. Sutton C. RaDonda Vaught found guilty of criminally negligent homicide in death of patient. NewsChannel 5 (Nashville). March 25, 2022. Accessed November 25, 2025.
5. Criminalization of human error and a guilty verdict: a travesty of justice that threatens patient safety. *ISMP Medication Safety Alert!* April 7, 2022;27(7):1-5.
6. Agency for Healthcare Research and Quality. Surveys on Patient Safety Culture® (SOPS®) Hospital Survey 2.0: 2024 User Database Report Part I. AHRQ publication 25-0006. November 2024. Accessed October 3, 2025.
7. Medicare and Medicaid Programs and the Children's Health Insurance Program; Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long-Term Care Hospital Prospective Payment System and Policy Changes and Fiscal Year 2025 Rates; Quality Programs Requirements; and Other Policy Changes. 42 CFR §405, 42 CFR §412, 42 CFR §413, 42 CFR §431, 42 CFR §482, 42 CFR §485, 42 CFR §495, 42 CFR §512. August 8, 2024. Accessed November 25, 2025
8. An Act relating to immunity from criminal liability for health care providers. Kentucky House Bill 159. March 26, 2024. Accessed November 25, 2025
9. Kentucky law prevents practitioners from being criminally charged for medical errors. *ISMP Medication Safety Alert!* May 16, 2024;29(10):3-4.

Emergency Department Boarding Contributes to Worse Patient Outcomes

#9 Patient Safety Concern

Emergency department (ED) boarding occurs when patients who clinically should be admitted to the hospital or transferred to another level of care must be held in the ED due to limited bed availability or staffing shortages. **High ED boarding rates are a key indicator of broader hospital-wide and system-wide patient flow, capacity, and financial issues.**[1]

In recent years, ED boarding has become more common. An analysis of data on 46.2 million hospitalizations from 2017 to 2024 found that, at its peak **in January 2022, 40.1% of patients boarded in the ED for more than 4 hours, and 6.3% boarded for more than 24 hours.**[2]

ED Boarding Leads To...[1,3,4]

- Delayed/ Missed Care
- Longer Hospitalizations
- Increased Readmissions
- Increased Violence Against Healthcare Workers
- Increased Medication Errors and Adverse Events
- Poorer Infection Control
- Decreased Compliance with Standards of Care
- Higher Morbidity and In-Hospital Mortality
- Increased Provider Burnout
- Decreased Patient Satisfaction

Boarding is also associated with a **greater likelihood of patient-perceived discrimination**. A survey of patients boarded in the ED found that **those boarded 24 hours or longer reported more discrimination and dissatisfaction with care, which "may disproportionately affect patients from marginalized racial and ethnic groups."** In addition, **nearly 40% of patients "felt inadequately involved in treatment decisions."**[5]

Boarding patients in the ED is expensive. One study found that the total daily cost for medical-surgical boarding per patient with acute stroke was $1,856, nearly double the $993 for those receiving inpatient care.[6]

Hospital

Action Recommendations

Culture, Leadership, and Governance

- Establish clear processes and workflows for managing high-capacity situations. This can involve developing comprehensive triage guidelines, streamlining admission and discharge processes, utilizing telehealth, establishing critical care/ED nurse float pools, and implementing strategies for rapid patient turnover.[7,8]
- Collaborate with human factors engineers to perform a system analysis to identify inefficiencies and ineffective workflows.
- Ensure that scheduled elective surgeries are evenly distributed across the week to reduce peaks in inpatient bed demand.[4,9]
- Establish consistent staffing patterns that align with established guidelines to mobilize sufficient healthcare staff to meet increased patient needs.[10]
- Establish policies and procedures to expedite the transfer of boarded patients to in-network facilities, outside hospitals, or alternative care settings when the boarding hospital has no beds available.[10]
- Appoint inpatient bed managers to assess bed availability, speed up bed assignments, and determine alternative services.[4]
- Report the number of ED-boarded patients in daily tiered safety huddles to create a shared mental model of throughput issues across the organization.
- Work with human factors engineers to assess whether hospital and ED layouts can be rearranged to maximize usability of every open space (e.g., establish makeshift ED pods, designate unused or low-utilization hospital areas as potential temporary inpatient units).[11]

Patient and Family Caregiver Engagement

- Ensure that ED staff involve ED-boarded patients in their care decisions and take time to address patient questions about their care.[5]
- Screen patients for health-related social needs (e.g., access to transportation, education, literacy, food or housing insecurity) and barriers to care. Document this information in the patient's medical record.
- Set realistic expectations by sharing anticipated ED wait times with patients.

Workforce Safety and Well-Being

- Involve ED staff in "hospital-wide efforts aimed at monitoring and improving inpatient resource utilization" and staffing.[10]
- Implement programs and resources designed to support staff, including wellness programs, violence prevention programs, and peer support groups.[4]
- Promote effective communication strategies to keep ED staff informed and engaged (e.g., briefings, huddles, debriefings).[7]

Learning System

- Use organizational data to measure and monitor ED throughput and boarding. Track metrics such as the number of boarded patients, boarding duration, ED patient satisfaction scores, and the number of patients who leave without being seen.[9]
- Educate ED staff on "triage protocols, patient flow management, and effective communication strategies."[7]
- Establish "cross-training initiatives to enhance flexibility and adaptability among team members."[7]
- Consider whether patient-flow strategies and initiatives implemented by other healthcare organizations can be effective at your organization.

ECRI Resources and References

Some ECRI resources are publicly available. To obtain other ECRI reports, contact us by telephone at (610) 825-6000, ext. 5891, or by email at clientservices@ecri.org.

ECRI Resources

Strategies for Managing Care of Boarded Patients in the Emergency Department (EPC)

Improving Patient Flow in the Emergency Department (HSRM)

Ask ECRI: Improving ED Wait Times (HSRM)

Emergency Department Liability (HSRM)

Taking Action: Strategies to Address Health Disparities in Emergency Care (HSRM)

Self-Assessment: Emergency Department: Facility, Safety, and Security Considerations (HSRM)

Self-Assessment: Emergency Department: Common Liability Risks (HSRM)

Self-Assessment: Emergency Department Boarding (HSRM)

Resource Collection: Emergency Department (HSRM)

References

1. Kelen GD, Wolfe R, D'Onofrio G, et al. Emergency department crowding: the canary in the health care system. *NEJM Catalyst*. September 28, 2021. Accessed October 16, 2025.
2. Janke AT, Burke LG, Haimovich A. Hospital 'boarding' of patients in the emergency department increasingly common, 2017-24. *Health Aff (Millwood)*. 2025;44(6):739-744.
3. Loke DE, Green KA, Wessling EG, Stulpin ET, Fant AL. Clinicians' insights on emergency department boarding: an explanatory mixed methods study evaluating patient care and clinician well-being. *Jt Comm J Qual Patient Saf*. 2023;49(12):663-670.
4. Agency for Healthcare Research and Quality. AHRQ Summit to Address Emergency Department Boarding. AHRQ Pub. No. 25-0042. January 2025. Accessed October 16, 2025.
5. Olson RM, Fleurant A, Beauparlant SG, et al. Prolonged boarding and racial discrimination and dissatisfaction among emergency department patients. *JAMA Netw Open*. 2024;7(9):e2433429.
6. Canellas MM, Jewell M, Edwards JL, Olivier D, Jun-O'Connell AH, Reznek MA. Measurement of cost of boarding in the emergency department using time-driven activity-based costing. *Ann Emerg Med*. 2024;84(4):376-385.
7. Hollowell A. A guide to successfully navigate ED boarding. Becker's Hospital Review. February 20, 2024. Accessed October 16, 2025.
8. Patient safety alert 31: critical care patients boarding in the emergency department. Academic Medical Center Patient Safety Organization. April 12, 2023. Accessed October 16, 2025.
9. Policy solutions to emergency department boarding. American College of Emergency Physicians. Accessed October 16, 2025.
10. Boarding of admitted and intensive care patients in the emergency department. American College of Emergency Physicians. Revised February 2023. Accessed October 16, 2025.
11. How hospitals are tackling ED boarding problems. Advisory Board. March 31, 2025. Accessed October 16, 2025.

Persistent Gaps in Manufacturer Packaging and Labeling Design Continue to Undermine Medication Safety Efforts

#10 Patient Safety Concern

Safety gaps in the design of manufacturer medication packaging and labeling (e.g., look-alike products, strengths, concentrations) have been identified as contributing factors in up to **29% of events** reported to the ISMP National Medication Errors Reporting Program (ISMP MERP).

Errors, particularly those that involve high-alert medications (i.e., drugs that have an increased risk of causing significant harm if used incorrectly), have contributed to significant patient morbidity and mortality.

Confusion caused by the packaging and labeling design has resulted in adverse events and patient deaths related to dosing errors and mix-ups between drugs, including anesthetics and cardiac medications; electrolytes and sedatives; sodium chloride and cardiac medications; insulin and blood pressure drugs; and similar-looking infusions.[1-8]

Reported mix-ups most often occur between medications supplied by the same company.[9] Manufacturers frequently want to apply a corporate trade dress (i.e., the manner in which a company labels their products to create a commercial image or identity) in packaging and labeling; however, this approach often results in labels that look too similar, which can contribute to mix-ups and patient harm.

Product mix-ups involving look-alike medication label designs are more likely to occur when there are other overlapping product similarities, including the same or similar label content (e.g., dosage strength [10 mg]), container packaging (e.g., container type, shape, and size), and product storage locations (e.g., both stocked in anesthesia carts).[9-11]

Despite advances in technology that could detect errors (e.g., barcode scanning) as well as federal and US Pharmacopeia (USP) labeling regulations, standards, and guidance, poor packaging and labeling design continues to undermine medication safety efforts and place patients at risk.

In addition, poorly designed labels can burden healthcare organizations by forcing them to expend additional financial and staff resources to address safety risks. For example, **they may need to create manual processes for repackaging or altering products to make them look different, which can introduce error risk.**

Manufactured products have a national—and in some instances international—reach. Depending upon the various systems implemented within each facility, even the most sophisticated facilities may experience challenges, errors, and patient harm related to poor package and label design.

Hospital | Ambulatory surgery | Physician practice | Senior care | Pharmacy

Action Recommendations

Culture, Leadership, and Governance

- Government and regulatory bodies should require pharmaceutical manufacturers to externally test and evaluate their proposed product labeling and packaging for error-prone aspects prior to seeking US Food and Drug Administration (FDA) approval.
- FDA and USP should require companies to develop a risk management program that includes the timely evaluation and correction of error-prone labeling or packaging identified during postmarketing surveillance (including error reports).
- Pharmaceutical companies and 503B compounding companies should design labels such that the barcode can be easily scanned at each step of the medication-use process.
- Establish a process to assess the labeling and packaging of new products brought into the organization to identify potential risks related to the product's design, including look-alike labeling and packaging concerns. Use findings to inform purchasing decisions. To the extent possible, select products with well-designed packaging and labeling.
- Consider purchasing products or one product of a problematic pair from a different manufacturer.
- Convene an oversight committee to consider whether all sizes and strengths of a medication are necessary and limit the variety to medications that match the patient population served.
- Healthcare organization leaders should ensure that high-leverage strategies—such as barcode scanning in the pharmacy and barcode medication administration—are deployed and utilized to assist with identifying incorrect medication product selections.

Patient and Family Caregiver Engagement

- Empower patients to participate in their care through direct healthcare provider or pharmacy interactions, which should include a comprehensive description of their expected medication(s), communicated in the patient's preferred language.
- Encourage patients and their caregivers to visually inspect every medication upon pickup to confirm they are receiving the expected prescription(s).
- Provide patients with strategies to differentiate look-alike medication containers in the home (e.g., use adhesive tape, a rubber band, or a hair tie wound around insulin pens to differentiate different insulin types).

Workforce Safety and Well-Being

- Support the consistent use of barcode scanning to help minimize the potential for errors related to look-alike packaging and labeling.

Learning System

- Implement a "good catch" reporting recognition program to acknowledge staff members who speak up and identify potential concerns, including look-alike packaging.
- Encourage practitioners and leaders who identify look-alike medication labels to advocate for change by reporting the concern to FDA, ISMP, and the manufacturer.
- Monitor information and communications from external organizations (e.g., ISMP, ECRI, FDA) and warning systems to identify concerns reported by other healthcare facilities and drug supply issues that may introduce error risk.

ECRI Resources and References

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ECRI Resources

A Call to Action: Pharmaceutical Manufacturers Must Ensure Injectable Medication Labels are Well-Differentiated to Prevent Patient Harm (MSB)

Pump Up the Volume: How to Prioritize Events and Analyze Error Data (ISMP)

Bar-Coded Medication Administration Systems (HSRM)

Health Literacy

Resource Center: High-Alert Medications (ISMP)

References

1. Institute for Safe Medication Practices. There's more to the 60 Minutes story on heparin errors. *ISMP Medication Safety Alert! Acute Care*. 2008;13(6):1-2.
2. Institute for Safe Medication Practices. Mix-ups reported with B. Braun heparin bags. *ISMP Medication Safety Alert! Acute Care*. 2013;18(19):1-2.
3. Institute for Safe Medication Practices. Obstetrical patient receives ampule of digoxin instead of BUPivacaine for spinal anesthesia. *ISMP Medication Safety Alert! Acute Care*. 2023;28(17):1-2.
4. Institute for Safe Medication Practices. Latent and active failures perfectly align to allow a preventable adverse event to reach a patient. *ISMP Medication Safety Alert! Acute Care*. 2023;28(1):1-4.
5. Institute for Safe Medication Practices. Patient death after inadvertent infusion of PRN medication hanging on bedside IV pole. *ISMP Medication Safety Alert! Acute Care*. 2024;29(8):1-4.
6. Institute for Safe Medication Practices. Do you know what is going on in your OR? The anesthesiology residents' perspective. *ISMP Medication Safety Alert! Acute Care*. 2025;30(11):1-5.
7. Institute for Safe Medication Practices. Why scan "harmless" saline infusions and flush syringes? It might not be what you think! *ISMP Medication Safety Alert! Acute Care*. 2025;30(14):1-4.
8. Institute for Safe Medication Practices. Patient received Myxredlin instead of Cardene IV. *ISMP Medication Safety Alert! Acute Care*. 2024;29(9):4-5.
9. Medication Safety Board. White paper on manufacturer labels: a call to action: pharmaceutical manufacturers must ensure injectable medication labels are well-differentiated to prevent patient harm. September 3, 2024. Accessed October 1, 2025.
10. Institute for Safe Medication Practices. More can be done to alleviate errors associated with pharmaceutical product labeling and packaging. *ISMP Medication Safety Alert! Acute Care*. 2021;26(9):1-4.
11. Institute for Safe Medication Practices. Updated guidance needed for longstanding LVP labeling and packaging problems. *ISMP Medication Safety Alert! Acute Care*. 2021;26(3):1-4.