

# 2024 ANNUAL REPORT

Betsy Lehman Center for Patient Safety

JANUARY 2025



**BETSY  
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CENTER**  
for Patient Safety



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January 29, 2025

Dear Governor Healey, Senator Friedman and Representative Lawn,

On behalf of the Betsy Lehman Center for Patient Safety, I am pleased to submit this annual report per MGL Chapter 12, Section 15. The report offers an overview of health care safety outcomes and trends for 2024 to the extent we know them. It also recommends steps the Commonwealth can take right now to propel actions on the 2023 *Roadmap to Health Care Safety for Massachusetts* that are key to monitoring the system for safety, building provider capacity to reduce preventable harm, and supporting patient engagement in safety improvement work.

Last month marked the 30-year anniversary of Betsy Lehman's sudden death from a series of errors during treatment for breast cancer. Her death sparked a movement here and nationally to address the systemic risks that lead to serious patient harm.

In Massachusetts, as elsewhere, progress has been slower than expected and needed. As we enter 2025:

- Serious preventable harm to patients happens daily across the state's continuum of care;
- High rates of harm are driving up costs and straining capacity across the system;
- Unsafe care exacerbates health care inequities as certain patient populations, particularly Black patients, are more likely to be harmed;
- Harm events also impact the health care workforce in myriad ways, contributing to burnout and attrition; and
- Lack of timely, reliable data on safety outcomes remains a leading barrier to progress.

Policy developments at the state and federal levels in 2024 underscore the urgency to address safety problems in the health care system now. These include new safety metrics envisioned by your recent market review legislation, and federal incentives that tie hospital Medicare reimbursements to specific safety practices and increase public transparency.

For decades, safety experts have called for better data to track and drive safety improvement. This is now possible. State investment in piloting new technology-enabled tools that automate monitoring of patient medical records for safety events would enable provider organizations to make exponential gains in safety. Over time, it also could lead to meaningful transparency tools to inform the public and hold health care leaders accountable for safety.

Massachusetts has a long history of successful collaboration and leadership around urgent health policy issues. Because the actions known to improve safety also will accelerate progress on cost, capacity, workforce, and equity, elevating safety on the policy agenda and investing in new approaches prescribed by the *Roadmap* will strengthen the entire health care system.

Thank you for your leadership in ensuring that Massachusetts residents have access to the safest and highest quality care possible.

Sincerely,

Barbara Fain

**EXECUTIVE DIRECTOR**  
Barbara Fain

**BOARD MEMBERS**  
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Attorney General

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# Table of contents

30 years after Betsy Lehman’s death, preventable harm happens every day in health care settings across Massachusetts.....	1
The consequences of unsafe care strike patients and families first before rippling across the system, impacting cost, capacity and equity.....	3
Information about patient safety outcomes in Massachusetts falls far short of what everyone needs to know .....	4
Game-changing action is necessary...and is now possible .....	8
From paper to impact: Initial <i>Roadmap</i> action steps.....	9
Looking ahead: Momentum is building for new thinking and approaches.....	11
Acknowledgements.....	13

## ABOUT THE BETSY LEHMAN CENTER FOR PATIENT SAFETY

The Betsy Lehman Center is a non-regulatory state agency that catalyzes the efforts of providers, patients and policymakers working together to advance the safety and quality of health care in all settings.

Established by Chapter 224 of the Acts of 2012, the Center’s mandate includes coordinating system-wide patient safety initiatives and conducting a program of research, data analysis, and education aimed at reducing preventable patient harm, and reporting on the Commonwealth’s safety improvement progress.



# 30 years after Betsy Lehman's death, preventable harm happens every day in health care settings across Massachusetts

When people think of patient harm, sensational events—like when a healthy kidney is removed from the wrong patient or when people hemorrhage to death from errors during surgery or childbirth—are what typically come to mind. However, evidence points to tens of thousands of preventable harm events each year in Massachusetts that don't make headline news but deeply impact patients and families and the health care system at large.

*Evidence points to tens of thousands of preventable harm events each year in Massachusetts that deeply impact patients and families and the health care system at large.*

Decades of work by dedicated safety professionals has produced insights into the underlying causes of preventable harm as well as a large body of evidence-informed approaches for mitigating the risks. Yet, a chasm exists between what we know and what we do—"we," meaning everyone from leaders of provider organizations to payers to policymakers.

The barriers to progress are many. They include low awareness and expectations, change management challenges, and misaligned incentives.<sup>1,2,3</sup> Provider organizations across the care continuum are still struggling to rebound from the effects of the pandemic, which exacerbated preexisting cultural and operational weaknesses and are stressing the capacity of the entire system.<sup>4,5,6,7</sup> And while most past efforts to improve safety have been directed at or by hospitals, more care is shifting to ambulatory, long-term, and home care settings that may be even less equipped to recognize and manage risks to safety.<sup>8,9,10,11</sup>

## RECENT STUDIES SHOW THAT ERRORS IN CARE REMAIN FREQUENT, HARMFUL AND COSTLY

Today, there is scant evidence, here or nationally, that safety outcomes are better overall than they were 30 years ago when Betsy Lehman died from a massive overdose of chemotherapy.

- In one year, [nearly 62,000 harm events](#) were identified in Massachusetts inpatient and outpatient settings for which patients needed an additional \$617 million of medical care;<sup>12</sup>
- A leading study found that almost [7% of inpatients](#) of 11 Massachusetts hospitals experienced at least one preventable adverse event during their admissions, which lengthened their hospital stays by 6.6 days on average;<sup>13</sup>
- In a related study, [7% of patients](#) experienced adverse events in ambulatory care settings, with rates varying from less than 2% to almost 24% across the 11 study sites;<sup>14</sup>
- Maternal morbidity in Massachusetts is on the rise, with Black patients 2.6 times more likely to experience an adverse event during delivery compared to White Non-Hispanic patients (see Figure 1); and
- [1-in-5 Massachusetts residents](#) recall recent personal experience with medical error (44% in non-hospital settings), with most reporting physical, financial, or emotional consequences including loss of trust leading 1-in-3 to avoid all medical care.<sup>15</sup>



[Watch the video](#) to learn more about Betsy Lehman

Safety issues affect the workforce too. Health care workers experience the highest rates of injuries from workplace violence of any occupation,<sup>16</sup> and incidents of assault, verbal abuse, and threats have consistently risen since 2020.<sup>17</sup> They also are at risk of workplace injuries from clinical and nonclinical job duties.<sup>18,19</sup>

The Health Policy Commission has documented a cycle in which difficult working conditions led to premature nurse departures from hospital employment, resulting in staffing shortages that disrupt continuity of care<sup>20</sup>—a known contributor to patient harm events.<sup>21, 22</sup> Low levels of workforce well-being and high levels of burnout are also associated with poor safety outcomes, including medical errors.<sup>23,24</sup>

### **PATIENT HARM EVENTS REPORTED TO THE STATE IN 2023-24 INCLUDE:**

- A woman in her 30s died of cardiac arrest. She was sent home with her newborn before the hospital had the results of testing for a suspected case of a life-threatening streptococcus infection
- A young child was taken to the hospital with symptoms of new onset diabetes six weeks after a physician missed a high glucose reading in the child's lab results
- A pathology lab lost important specimens taken from a woman's lymph node during a mastectomy
- A patient received a larger-than-prescribed dose of morphine and died shortly thereafter
- A woman in her 30s ended up in the hospital with a worsening wound infection after she followed instructions on an antibiotic prescription label that were incorrect
- A man in his 60s died after a significant delay in starting antiarrhythmic medication in the emergency department

# The consequences of unsafe care strike patients and families first before rippling across the system, impacting cost, capacity, and equity

Any well-functioning health care system must be grounded in safety. When safety culture and operations are weak, it has a direct impact on the full array of challenges facing the system. Because the incidence of harm is so high, these events impose enormous burdens not only on patients and their families, but on payers and provider organizations themselves.

## FOR EXAMPLE...

A patient with pneumonia is admitted to the hospital after boarding in the emergency department. A series of miscommunications and process breakdowns delays the administration of the antibiotics. Her condition deteriorates, and she is sent to the ICU. She will need treatment at a rehabilitation facility, but no beds are available when she is ready for discharge. What should have been a 3 or 4-day hospital stay turns into 10 days, plus more days at a rehabilitation facility that would not have otherwise been needed.

The patient's health plan will bear many of the extra costs. This particularly impacts the state's MassHealth budget and employers. The hospital will also lose revenue if the longer length of stay is not reimbursed under its contract with the health plan. The patient herself may face higher out of pocket costs and lost wages.

In addition to cost, preventable harm to this patient will have upstream and downstream consequences in a system already operating at capacity. Throughput will be slowed, as other patients boarding in the ED have longer waits for inpatient beds and more inpatients are queued up for post-acute care placements. Opportunities for harm are compounded by ED boarding. Frontline staff are also affected when patients in their care are harmed, prompting some to leave health care altogether.

*Unsafe care impacts the financial, physical and emotional well-being of patients harmed*



## HUMAN SUFFERING

- Loss of function
- Out of pocket expenses, lost wages
- Loss of trust, health care avoidance

*before rippling across the health care system, exacerbating persistent challenges*



## COST

- Providers lose revenue for unreimbursed services
- Payers incur costs of excess care, higher premiums



## CAPACITY

- Longer hospitalizations, more readmissions, greater demand for post-acute care, slow throughput
- Safety risks and events and poor safety culture cause workforce burnout and attrition



## EQUITY

- People of color, older and disabled patients are more likely to experience harm

*and results in broader economic disruptions when patients or their caregivers can't work.*

# Information about patient safety outcomes in Massachusetts falls far short of what everyone needs to know

The ability to monitor patient safety at the provider and system levels is imperative. Although informational needs vary, access to data that are timely, reliable, and actionable enables:

- **Health care providers and leaders** to recognize events and risks within their own organizations, to set improvement priorities, and to measure progress;
- **Payers** to develop meaningful incentives that reward better safety outcomes;
- **Policymakers and state agencies** to monitor the system for safety, offer useful public transparency tools, and integrate safety with other health system improvement initiatives; and
- **Patients and the public** to understand potential safety risks in their own care, make informed choices, and engage in safety improvement efforts.

Yet, none of these informational needs are being met by the current array of available data.

## MOST PATIENT HARM EVENTS GO UNDETECTED AND UNREPORTED

In national studies of harm events experienced by Medicare patients during hospitalizations, the Office of the Inspector General of the U.S. Department of Health and Human Services (OIG) consistently finds rates of harm similar to those in the Massachusetts studies referenced above (most recently, [25% of all Medicare admissions](#)).<sup>25</sup> Critically, the OIG has found that hospitals [capture only 14% of these harm events](#) through their own incident reporting systems,<sup>26</sup> and [report only a small fraction of harm events to state regulators](#).<sup>27</sup> OIG has determined that, more often than not, underreporting results from staff not perceiving the event as reportable.<sup>28</sup>

Most facilities that are subject to state reporting mandates rely on frontline staff to “see something, then say something” by submitting reports through the facility’s incident reporting system. But staff do not “see” most errors, often attributing events to common complications of care, patient history, or other factors. [Racial and other biases in event reporting](#) have also been documented, with staff less likely to recognize or report on harm when the patient is a member of a minoritized group.<sup>29</sup> And when they are aware of a reportable event, some may fear the consequences of “saying” anything about it. When harm events aren’t consistently recognized, it undermines the efforts of leaders and safety professionals to improve patient care and patient outcomes.

### HOW PATIENT HARM GOES “UNDETECTED”

Clinicians and staff often miss the connection between a deterioration in a patient’s condition and mistakes in care.

That is precisely what happened to Betsy Lehman. No one on her care team recognized that she had been given [overdoses of chemotherapy](#) over several days, despite the atypically severe reaction to the treatment that led to her death. The overdoses went undetected until months later, and only then came to light during a clerical review of the research trial in which she was a participant.

## WHAT WE DO KNOW

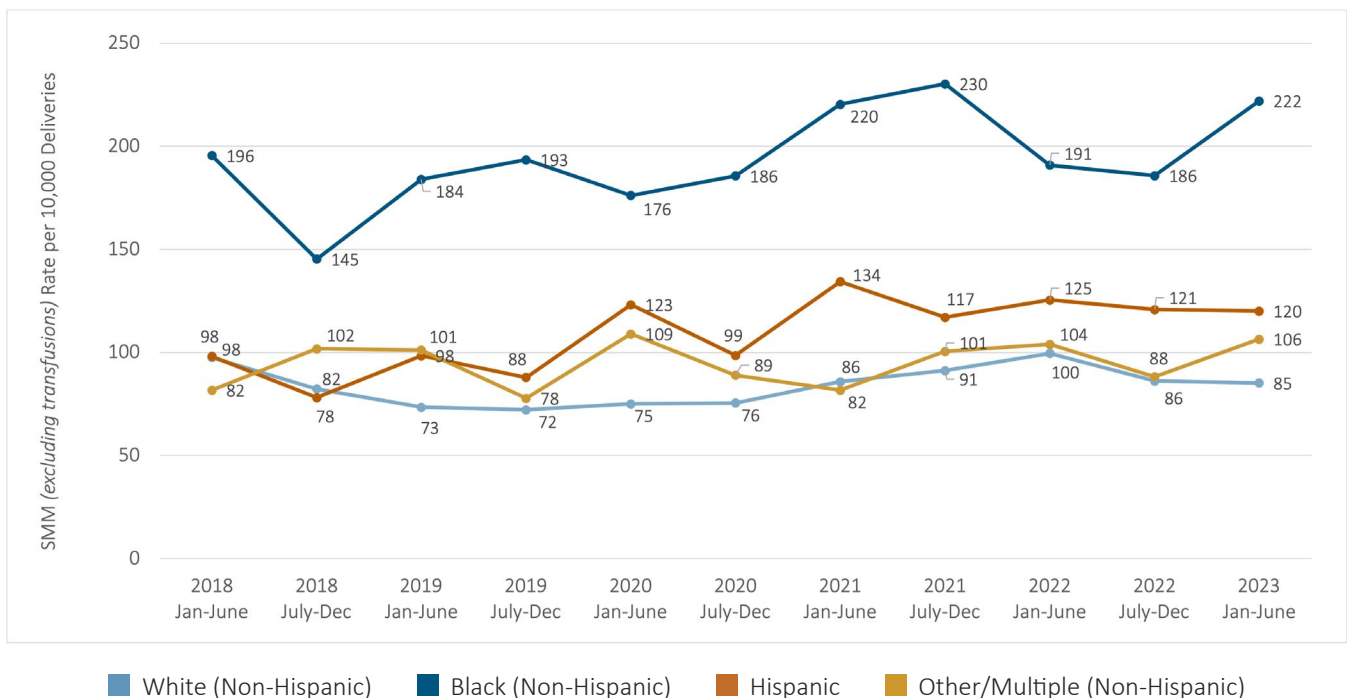
Information about safety outcomes and risks comes from disparate state and federal data sources. The patchwork nature of these data systems, by design and in practice, means that dashboards and other meaningful syntheses of statewide safety trends are not yet possible. Current data resources include administrative data, safety reporting systems, and clinical data.

### 1. ADMINISTRATIVE DATA

Although these resources were never designed or intended for the purpose of safety surveillance, much of what we now know about safety is gleaned from administrative databases meant for billing and other purposes. For instance:

- Health insurance claims data.** The Betsy Lehman Center’s [“Cost of Medical Error in Massachusetts”](#) findings (61,982 cases of avoidable patient harm at a cost of over \$617 million in excess care in one year) came from an analysis of Medicare claims data from the Centers for Medicare and Medicaid Services (CMS) and the All Payer Claims Database (APCD) operated by the state’s Center for Health Information and Analysis (CHIA).<sup>30</sup>
- Hospital discharge data.** CHIA’s “case mix” dataset allows the Betsy Lehman Center to provide birthing hospitals with frequent analyses of severe maternal morbidity (SMM)— rates, trends, comparisons to peer hospitals, and disparities in patient outcomes based on race. From these analyses, we know, for example, that SMM rates for non-Hispanic Blacks are the highest and continue to rise (see Figure 1). We also know that when patients experience an SMM, their average hospital length of stay increases by 3.3 days.
- Patient Safety Indicators (PSIs).** CMS also aggregates information from discharge data for a hospital safety composite measure reflecting complications and adverse events following surgeries, procedures and childbirth.<sup>31</sup> The Betsy Lehman Center’s analysis of PSIs for Massachusetts hospitals from 2019-2023 shows that safety risks rose during the COVID-19 pandemic, highlighting the vulnerability of safety to system stressors. On a positive note, PSIs recovered to pre-pandemic levels in mid-2021 and continued to improve through 2023, the most recent year for which data are available.

**FIGURE 1**  
**Massachusetts Statewide Severe Maternal Morbidity by Race and Ethnicity January 2018 - June 2023**





## 2. SAFETY REPORTING SYSTEMS

State and federal agencies collect, analyze and publish data on certain patient harm events. The data reveal only a small fraction of events for three reasons: reporting is only required for a narrow scope of events; reporting is not uniformly required of all settings where people receive health care; and, as noted above, facilities fail to identify most reportable events.

*State and federal agencies collect, analyze and publish safety data, but it only reveals a small fraction of patient harm events.*

Reporting systems include:

- **Serious Reportable Events (SREs).** The Department of Public Health (DPH) requires hospitals and ambulatory surgery centers to report occurrences of 27 so-called “never events,” [recognized nationally](#) as events that are preventable, such as harm related to surgery on the wrong body part or patient, burns, medication errors, and patient suicides. Serious injuries and deaths from falls and pressure ulcers are also reported and account for more than half of SREs filed each year, though not all are considered preventable.

From 2015 to 2023, the number of SREs reported to DPH rose from 1101 to 1756, but it is unclear whether the rise reflects increased incidence or stronger reporting. Again, this is a small subset of total patient harm events. The total number of SREs reported by ASCs from 2020 to 2022 averaged just one per year. SREs are public records, available by request. [Aggregated data](#) are available online.

- **Safety and Quality Review Reports (SQRs).** Another subset of harm event data is provided to the Board of Registration in Medicine’s Quality and Patient Safety Division (QPSD) by hospitals, surgery centers and clinics through the Patient Care Assessment Program. These “major incidents” or unexpected outcomes sometimes overlap with SREs reported to DPH.

In 2023, 643 events were reported to QPSD that included, for example, harm to patients during radiology or imaging procedures and delays in diagnoses or treatments. SQR reports are not public records; [aggregated data](#) on SQRs are available via QPSD’s newsletter.

- **Professional licensing boards.** The state’s licensing boards for clinicians, ranging from physicians and dentists to nurses and chiropractors, require their licensees to report a small number of safety events, such as drug diversions or unexpected patient deaths. The reports are available only by public records request and aggregate data are not published at this time.
- **Healthcare-Associated Infections (HAIs).** HAIs are infections that patients acquire while being treated for other conditions in a health care setting and are a leading cause of preventable death. DPH, in collaboration with the Centers for Disease Control and Prevention (CDC), CMS, and other state and local authorities, requires certain licensed facilities, including hospitals, dialysis centers and nursing homes, to report HAI data. [Statewide trends on HAIs](#) through 2023 are available on DPH’s website.

## 3. CLINICAL DATA

Patient’s clinical records offer the most robust source of information about safety events because, in addition to diagnostic codes and other data about each patient encounter, physician and nursing notes provide context. But research to extract safety data from them is labor intensive and costly as it requires teams of trained clinicians to review thousands of patient charts, apply algorithms to identify potential harm events, and then validate them.

Clinical chart review was the method used in the multi-year, multimillion dollar OIG and Massachusetts studies referenced earlier. Researchers were able to measure not only the incidence of patient harm events among hospitalized [Medicare patients](#) nationally and in Massachusetts [outpatient settings](#) and [hospitals](#), but also the impact of these events on cost and hospital lengths of stay.

## DESPITE THE MANY LIMITATIONS OF EXISTING DATA, SEVERAL POINTS OF CLARITY DO EMERGE

- Preventable patient harm happens frequently in care settings across Massachusetts.
- Hospitalized patients who suffer preventable harm need significantly longer hospital stays.
- Apart from periodic research studies, information about safety outcomes and risks in most outpatient settings is scarce.
- If systemwide safety outcomes are improving (or worsening) in any consistent, sustainable way, these trends are not visible in the data we have.
- Data gaps, lags, and silos make it impossible to reliably compare the safety outcomes of peer provider organizations.
- Hospitals, nursing homes, payers and regulators invest resources in collecting, reporting and analyzing data, but little of it impacts safety outcomes or results in measurable benefits.

### LEARN MORE

The Betsy Lehman Center's [Patient Safety Navigator](#) is an online tool to help Massachusetts health care professionals and provider organizations understand and comply with their unique state and federal safety event reporting responsibilities. It also serves as a useful resource for anyone seeking more information about safety reporting requirements.



[Watch the video](#) to learn more about the Navigator

“

*“I feel the humanity is being taken out of the process.”*

– Her husband had trouble breathing and ended up in the emergency department after a missed diagnosis at his doctor’s office earlier in the day

“

*“I know she was sick and I know she wasn’t going to live another 10 years. I get all that. A little bit of reasonable follow-through would’ve prevented so much.”*

– This nurse’s mother’s health deteriorated during a nursing home stay from a series of communication breakdowns and other missteps

“

*“You should not confuse one individual with another. Between social security numbers, addresses, previous addresses, guarantor on the account, everything else that they ask you. I found it very difficult to understand.”*

– Her son’s medical records were entangled with another patient’s

# Game-changing action is necessary...and is now possible

To overcome the barriers that have made progress on safety frustratingly slow, the Betsy Lehman Center convened the multistakeholder [Massachusetts Health Care Safety and Quality Consortium](#). In 2023, the Consortium released the [Roadmap to Health Care Safety for Massachusetts](#), an unprecedented strategic action plan designed to set priorities, propel investment in high-impact initiatives, and avoid low-yield distractions at the state level.

The *Roadmap* applies new thinking and approaches that:

- Build on decades of learning to target the leading barriers to safety improvement;
- Recognize the need for provider organizations across the continuum of care to prioritize safety as a core value and act to operationalize it—with support from payers and policymakers in the form of adequate investment and incentives;
- Set concrete goals in five areas: leadership and governance, operations and engagement, patient and family support, workforce well-being, and measurement and transparency; and
- Recognize the human and operational dimensions of safety, and the need to integrate safety with other priorities including equity, patient experience, and workforce well-being.

The Human and Operational Drivers of Health Care Safety



## THE ROADMAP AIMS TO:

- Move the health care system toward a mindset of zero tolerance for defects that can result in physical or emotional harm to patients, families, and staff;
- Support approaches to continuous, proactive safety improvement that break down silos and enable all stakeholders to carry out their respective roles;
- Promote a “just culture” by adopting a fair and consistent approach to safety improvement that fosters psychological safety in the health care workforce and holds leadership accountable for breakdowns and shortfalls;
- Advance health equity through the elimination of disparities in safety and quality outcomes on the basis of race, ethnicity, age, disability, sex, gender, language, and economic factors;
- Encourage an approach to health care and safety that maximizes the benefits of co-production, recognizing that patients and families provide expertise essential to person-centered care;
- Reduce low-value administrative burdens; and
- Remove all forms of waste from work, making it easier to do the right thing.



[Watch the video](#) to learn more about the *Roadmap*

# From paper to impact: Initial *Roadmap* action steps

The *Roadmap's* five ambitious goals will be achieved through strategies and action steps that tap the talent and expertise of many in the health care community. Each of these actions will support progress on the three main drivers of transformational change:



## INFORMATION

That builds awareness, knowledge and skills and enables everyone to carry out their unique roles in safety

**Why**

Leaders, managers, and frontline staff need a shared understanding of the foundations of safety to work as a team



## INCENTIVES

That motivate everyone to prioritize and invest in safety improvement, particularly those in leadership roles

**Why**

Accountability structures and incentives that reward leadership engagement will accelerate change



## IMPLEMENTATION SUPPORT

Tools, peer learning opportunities, and other resources that help provider organizations advance safety

**Why**

Knowledge alone is not enough to build a safety culture and improve outcomes

In 2024, the Betsy Lehman Center launched three initial action steps:

### 1. AUTOMATED ADVERSE EVENT MONITORING HOSPITAL PILOT

The *Roadmap's* goal of safety operations calls for provider organizations to have systems in place that enable leaders, managers, clinicians, and staff to continuously identify safety issues and resolve problems. But traditional methods for detecting harm events and risks consistently fail to flag more than a very small fraction of these issues.<sup>32</sup>

Recently, new technology has made it possible to detect patient harm in near real-time. By continuously scanning the electronic health records of current patients, automated adverse event

monitoring (AAEM) picks up many times more harm events than provider organizations have been discovering through existing systems, including reporting by even the most engaged staff. AAEM essentially automates the slow, costly manual clinical chart review process that has been the gold standard for researchers to measure harm outcomes and to identify causes, enabling clinical teams to manage and reduce harm in daily operations. The Center is now working with Pascal Metrics Inc., a leader in the field, to pilot AAEM in 6-8 Massachusetts hospitals.

#### ACTION 1: SAFETY EVENT DETECTION



#### ACTION

Test an AI-enabled system that:

- Continuously scans every inpatient's EHR chart to detect potential harm events
- Provides daily, validated safety outcomes data and analytics
- Enables concurrent intervention and more rapid improvement cycles



#### OBJECTIVE

- Increase hospitals' understanding of safety outcomes
- Enable hospitals to reduce harm based on more accurate, timely, and actionable safety outcomes analytics
- Improve safety culture, operations, and throughput
- Ease reporting burdens on frontline staff and support workforce well-being
- Save money for both payers and providers
- Help the state monitor the system for safety risks and trends



#### 2024 PROGRESS

- Convened advisory committee
- Designed pilot
- Procured AAEM vendor
- Started hospital recruitment

## 2. STATEWIDE HEALTH CARE SAFETY CURRICULUM

The *Roadmap* recognizes the need for health care leaders, managers, clinicians, and staff in all settings to take ownership of the unique roles they play in safety vigilance and improvement, understand the difference their participation can make, and have the information and knowledge they need to proactively address safety risks. Yet, there are no minimum standards for the safety knowledge or skills that health care professionals and personnel must have, and seldom has their formal training covered this ground.

To fill these gaps, *Roadmap* strategies include the setting of educational standards and creation of an accessible statewide health care safety curriculum that fosters a shared understanding of fundamental safety principles and practices. In 2024, the Center convened an expert advisory committee to shape initiatives in both areas.

### ACTION 2: SAFETY EDUCATION



#### ACTION

Develop first-in-the-nation:

- Statewide curriculum on safety basics for health care leaders, clinicians, and staff in all settings
- Educational safety standards for health care professionals and facility leaders



#### OBJECTIVE

- Define expectations around safety education appropriate to leaders and staff in all roles
- Fill knowledge gaps by making high-quality educational resources available to all
- Build the skills of executive leaders and boards to carry out their roles in creating and sustaining safety culture



#### 2024 PROGRESS

- Convened advisory committee
- Outlined course content
- Vendor procurement under development

## 3. PATIENT AND FAMILY ADVISORY COUNCIL (PFAC) SUPPORT

The *Roadmap* underscores the essential role patients and families play as partners in safety improvement. Strong patient and family advisory councils are an effective way to achieve meaningful engagement. In Massachusetts, hospitals, by DPH regulation, and MassHealth accountable care organizations (ACOs), by contract, are required to convene PFACs.

In 2024, the Betsy Lehman Center built an infrastructure to offer resources and shared learning opportunities to PFAC members, to enhance their ability to fully engage in safety and quality improvement work with the organizations they advise. The Center's programming also supports efforts to encourage participation by members of underrepresented groups in PFAC work.

### ACTION 3: PATIENT ENGAGEMENT



#### ACTION

- Support Massachusetts hospitals and ACOs in building the capacity of Patient and Family Advisory Councils (PFACs) to participate in organizational safety improvement structures and activities



#### OBJECTIVE

- Strengthen patient/family voice in tracking and enhancing safety
- Overcome barriers to diverse PFAC membership
- Expand PFAC model to other health care settings



#### 2024 PROGRESS

- Hosted two semi-annual forums for PFAC members on common challenges
- Published resources to help PFACs with operational and other needs
- Hired program director

# Looking ahead: Momentum is building for new thinking and approaches

Decades of concerted efforts to move the needle on health care safety outcomes have repeatedly fallen short. But there are signs of renewed attention and willingness to try different approaches both here and nationally.

- In Massachusetts, the newly signed health care market review legislation (Chapter 343 of the Acts of 2024) promotes the inclusion of safety measures in the state’s Standard Quality Measure Set for contracts between payers and health care providers. It also authorizes greater patient safety data sharing across state agencies.
- At the federal level, CMS recently promulgated a [patient safety structural measure for hospitals](#) that goes into effect in 2025. The measure applies financial incentives and public transparency to motivate hospital leaders to invest in the most salient strategies and practices for strengthening safety culture and operations. The CMS measure closely mirrors the goals and strategies of the *Roadmap to Health Care Safety for Massachusetts*.
- The President’s Council of Advisors on Technology and Science (PCAST) 2023 report, [A Transformational Effort on Patient Safety](#), calls for more frequent public reporting of a wider range of serious preventable harm events, and greater uptake of automation to accomplish this objective.
- And the National Quality Forum’s [Focus on HARM \(Harmonizing Accountability in Reporting and Monitoring\)](#) aims to kickstart reductions in preventable harm by updating its list of SREs or “never events” that states, including Massachusetts, rely upon to regulate SRE reporting by hospitals and ASCs.

## PRIORITIES AND RECOMMENDATIONS FOR MASSACHUSETTS IN 2025

The comprehensive sets of strategies and action steps prescribed by the *Roadmap to Health Care Safety* are well aligned with the aforementioned policy initiatives. They are designed for impact and will be accomplished over a span of years.

The three initial action steps described above— a pilot of automated adverse event monitoring (AAEM) in hospitals, development of a statewide safety curriculum, and Patient and Family Advisory Council capacity building—are foundational and will remain the focus of the Betsy Lehman Center’s work to coordinate implementation of the *Roadmap* in 2025. Each of these initiatives is being carried forward in partnership with an advisory group whose diverse members are volunteering their time and a wealth of expertise and experience.

.....

*Massachusetts can achieve breakthroughs on health care safety that have eluded us for decades.*

.....

In the coming year, the Center will continue to explore how we can support hospital efforts to meet the demands of the new CMS patient safety measure, possibly through expansion of our technical assistance programs. The Center also will convene an interagency group to develop recommendations for harmonizing the state’s patient safety data systems and increasing interagency data sharing where that would be useful.

Two of the initial action steps—curriculum production and launch of the AAEM pilot—will require additional state investment to fully implement. The Center is seeking appropriations in the FY 2026 state budget to fund these critical initiatives.

## REAL PROGRESS STARTS WITH INVESTING IN BETTER DATA

It is no small task, and will take strong leadership, to continuously improve operations and build a culture that prioritizes safety. But if we're serious about reducing preventable patient harm and its many associated costs, we need to increase access to timely, reliable data. This will require upfront state investment—investment that should save both lives and money while easing pressures on system capacity and advancing health equity.

*Progress will require upfront state investment — investment that should save both lives and money while easing pressures on system capacity and advancing health equity.*

The new ability to monitor electronic health records for reliable, unbiased information about harm events in near real-time changes the equation. Anecdotally, we know that several hundred early adopters of AAEM in other states are finding 10 times more serious harm events than they were aware of before, and the timeliness of the information allows them to respond quickly to address the risks. The result is unprecedented reductions in a wide range of preventable harm events—at least 25 percent overall.

These hospitals also are reducing excess costs to the health care system while improving their own bottom lines. By cutting down on extended lengths of stay, they are reducing unreimbursed care under their payer contracts. And by preventing harm and intervening promptly when patients have been harmed, they are lowering their liability claims and payouts.

The AAEM pilot would first and foremost support hospital efforts to improve their safety outcomes while gaining insight into the return on investment they would realize through ongoing use of this technology-abled approach. But it also would inform how AAEM could be scaled over time to enable the state to monitor the health care system for safety risks, preserve system capacity, power useful public transparency tools, and save money as one of the state's largest payers by reducing harm to MassHealth members.

## THE TIME TO ACT IS NOW

The *Roadmap to Health Care Safety for Massachusetts* sets a bold aim: a health care system in which providers—in partnership with patients, policymakers, payers and other experts—continuously strive to eliminate preventable patient harm and improve the safety of staff in and across all settings where care is delivered in the Commonwealth.

With investment, Massachusetts will be well-positioned to achieve breakthroughs on health care safety that have eluded us for decades. Because the measures known to advance safety also will drive progress on cost, capacity, workforce, and equity, investing in safety is not only the right thing to do but will strengthen the entire health care system. The *Roadmap* charts a path forward.

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# Endnotes

1. Fond, M., Volmert, A., Levay, K., L'Hôte, E., & Kendall-Taylor, N. (2017, December). Safety is more than caring: Mapping the gaps between expert, public, and health care professionals' understandings of patient safety. FrameWorks Institute. Retrieved January 20, 2025 from [https://betsylehmancenterma.gov/assets/uploads/FW\\_MapTheGaps\\_Final.pdf](https://betsylehmancenterma.gov/assets/uploads/FW_MapTheGaps_Final.pdf)
2. Harvard School of Public Health. (2014, December). The public's views on medical error in Massachusetts. Betsy Lehman Center for Patient Safety and Health Policy Commission. Retrieved January 20, 2025 from <https://content.sph.harvard.edu/wwwhsph/sites/94/2014/12/MA-Patient-Safety-Report-HORP.pdf>
3. Dixon-Woods, M. (2019). How to improve healthcare improvement—an essay by Mary Dixon-Woods. *BMJ*, 367, l5514. <https://doi.org/10.1136/bmj.l5514>
4. Osei-Poku, G. K., Szczerepa, O., Potter, A. A., Malone, M. E., Fain, B. A., & Prentice, J. C. (2021). Safety trade-offs in home care during COVID-19: A mixed methods study capturing the perspective of frontline workers. *Patient Safety*, 3(3), 7-17. <https://doi.org/10.33940/infection/2021.9.1>
5. Baker, M. A., Sands, K. E., Huang, S. S., et al. (2022). The impact of coronavirus disease 2019 (COVID-19) on healthcare-associated infections. *Clinical Infectious Diseases*, 74(10), 1748-1754. <https://doi.org/10.1093/cid/ciab688>
6. The Leapfrog Group. (2022, May 10). New hospital safety grades from the Leapfrog Group highlight pandemic era declines in patient experience. Retrieved April 19, 2023, from <https://www.leapfroggroup.org/news-events/new-hospital-safety-grades-leapfrog-group-highlight-pandemic-era-declines-patient>
7. Fleisher, L. A., Schreiber, M., Cardo, D., & Srinivasan, A. (2022). Health care safety during the pandemic and beyond - building a system that ensures resilience. *New England Journal of Medicine*, 386(7), 609-611. <https://doi.org/10.1056/NEJMp2118285>
8. Carpenter, D., Famolaro, T., Hassell, S., et al. (2017, August). Patient safety in the home: Assessment of issues, challenges, and opportunities. Institute for Healthcare Improvement. Retrieved April 6, 2023, from <https://www.ihl.org/resources/publications/patient-safety-home-assessment-issues-challenges-and-opportunities>
9. Wachter, R. M. (2006). Is ambulatory patient safety just like hospital safety, only without the "stat"? *Annals of Internal Medicine*, 145(7), 547-549. <https://doi.org/10.7326/0003-4819-145-7-200610030-00014>
10. Bates, D. W., & Singh, H. (2018). Two decades since To Err Is Human: An assessment of progress and emerging priorities in patient safety. *Health Affairs*, 37(11), 1736-1743. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2018.0738>
11. Schneider, E. C., Ridgely, M. S., Khodyakov, D., Hunter, L. E., Predmore, Z., & Rudin, R. S. (2014). Patient safety in the Commonwealth of Massachusetts: Current status and opportunities for improvement. RAND Corporation. Retrieved January 21, 2025, from <https://www.betsylehmancenterma.gov/assets/uploads/blc-rand-research-report.pdf>
12. Betsy Lehman Center for Patient Safety. (2019, June). The financial and human cost of medical error and how Massachusetts can lead the way on patient safety. Retrieved January 21, 2025, from <https://betsylehmancenterma.gov/assets/uploads/Cost-of-Medical-Error-Report-2019.pdf>
13. Bates, D. W., Levine, D. M., Salmasian, H., Syrowatka, A., Shahian, D. M., Lipsitz, S., ... Mort, E. (2023). The safety of inpatient health care. *New England Journal of Medicine* 388(2), 142-153.
14. Levine, D. M., Syrowatka, A., Salmasian, H., Shahian, D. M., Lipsitz, S., Zebrowski, J. P., ... & Bates, D. W. (2024). The safety of outpatient health care: Review of electronic health records. *Annals of Internal Medicine*, 177(6). <https://doi.org/10.7326/M23-2063>
15. Betsy Lehman Center for Patient Safety. (2019, June). The financial and human cost of medical error and how Massachusetts can lead the way on patient safety. Retrieved January 21, 2025, from <https://betsylehmancenterma.gov/assets/uploads/Cost-of-Medical-Error-Report-2019.pdf>
16. U.S. Bureau of Labor Statistics. (2020, April). Fact sheet: Workplace violence in healthcare, 2018. <https://www.bls.gov/iif/factsheets/workplace-violencehealthcare-2018.htm>
17. Massachusetts Health and Hospital Association. (2023, January). Workplace violence at Massachusetts healthcare facilities: An untenable situation & a call to protect the workforce. <https://www.mhalink.org/wp-content/uploads/2023/08/A-Call-to-Action-MHA-Workplace-Violence-Report.pdf>
18. Davis, L., Miner, C., Laramie, A., Sparer, E., & Wegman, D. H. (2014, December). Moving into the future: Promoting safe patient handling for worker and patient safety in Massachusetts hospitals. Report of the Massachusetts Hospital Ergonomics Task Force. Occupational Health Surveillance Program, Massachusetts Department of Public Health. <https://www.mass.gov/doc/moving-into-the-future-promoting-safe-patient-handling-for-worker-and-patient-safety-in/download>
19. Lapane, K. L., Dubé, C. E., & Jesdale, B. M. (2016). Worker injuries in nursing homes: Is safe patient handling legislation the solution? *Journal of Nursing Home Research Sciences*, 2, 110-117. <https://doi.org/10.14283/jnhrs.2016.17>

20. Massachusetts Health Policy Commission. (2023, March). Health care workforce trends and challenges in the era of COVID-19: Current outlook and policy considerations for Massachusetts. <https://masshpc.gov/publications/policyresearch-brief/health-care-workforce-trends-and-challenges-era-covid-19>
21. Mitchell, B. G., Gardner, A., Stone, P. W., Hall, L., & Pogorzelska-Maziarz, M. (2018). Hospital staffing and health care-associated infections: A systematic review of the literature. *The Joint Commission Journal on Quality and Patient Safety*, 44(10), 613-622. <https://doi.org/10.1016/j.jcjq.2018.02.002>
22. Driscoll, A., Grant, M. J., Carroll, D., et al. (2018). The effect of nurse-to-patient ratios on nurse-sensitive patient outcomes in acute specialist units: A systematic review and meta-analysis. *European Journal of Cardiovascular Nursing*, 17(1), 6-22. <https://doi.org/10.1177/1474515117721561>
23. Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare staff wellbeing, burnout, and patient safety: A systematic review. *PLoS ONE*, 11(7), e0159015. <https://doi.org/10.1371/journal.pone.0159015>
24. Loeppke, R., Boldrighini, J., Bowe, J., et al. (2017). Interaction of health care worker health and safety and patient health and safety in the US health care system. *Journal of Occupational and Environmental Medicine*, 59(8), 803-813. <https://doi.org/10.1097/JOM.0000000000001100>
25. Grimm, C. A. (2022). Adverse events in hospitals: A quarter of Medicare patients experienced harm in October 2018. Office of Inspector General. Retrieved January 21, 2025, from <https://oig.hhs.gov/documents/evaluation/2997/OEI-06-18-00400-Complete%20Report.pdf>
26. Levinson, D. R. (2012). Hospital incident reporting systems do not capture most patient harm (OEI-06-09-00091). U.S. Department of Health and Human Services, Office of the Inspector General. Retrieved January 21, 2025, from <https://oig.hhs.gov/documents/evaluation/2953/OEI-06-09-00091-Complete%20Report.pdf>
27. Office of Inspector General. (2012, July 19). Few adverse events in hospitals were reported to state adverse event reporting systems (OEI-06-09-00092). U.S. Department of Health and Human Services. Retrieved January 21, 2025, from <https://oig.hhs.gov/documents/evaluation/2954/OEI-06-09-00092-Complete%20Report.pdf>
28. Office of Inspector General. (2012, January). Hospital incident reporting systems do not capture most patient harm (OEI-06-09-00091). U.S. Department of Health and Human Services. Retrieved January 21, 2025, from [https://web.archive.org/web/20190429105708id\\_/https://oig.hhs.gov/oei/reports/oei-06-09-00091.pdf](https://web.archive.org/web/20190429105708id_/https://oig.hhs.gov/oei/reports/oei-06-09-00091.pdf)
29. Hoops, K., Pittman, E., & Stockwell, D. C. (2024). Disparities in patient safety voluntary event reporting: A scoping review. *The Joint Commission Journal on Quality and Patient Safety*, 50(1), 41-48
30. Betsy Lehman Center for Patient Safety. (2019, June). The financial and human cost of medical error and how Massachusetts can lead the way on patient safety. Retrieved January 21, 2025, from <https://betsylehmancenterma.gov/assets/uploads/Cost-of-Medical-Error-Report-2019.pdf>
31. Agency for Healthcare Research and Quality. (2024). PSI technical documentation (Version v2024). Rockville, MD: Author. Retrieved January 21, 2025, from [https://qualityindicators.ahrq.gov/measures/psi\\_resources](https://qualityindicators.ahrq.gov/measures/psi_resources)
32. Panagioti, M., Khan, K., Keers, R. N., Abuzour, A., Phipps, D., Kontopantelis, E., Bower, P., et al. (2019). Prevalence, severity, and nature of preventable patient harm across medical care settings: Systematic review and meta-analysis. *BMJ*, 366, l4185. <https://doi.org/10.1136/bmj.l4185>

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