

## A Roadmap to Healthcare Safety for Massachusetts

### A PERSISTENT CHALLENGE: ELIMINATING PREVENTABLE HARM IN HEALTH CARE

Considerable progress has been made to improve the safety and quality of health care since 1994, when Betsy Lehman's death from an overdose of chemotherapy at one of Massachusetts' leading hospitals catalyzed a movement to prevent such outcomes.<sup>1</sup> We now have a better understanding of what contributes to these and other types of safety events, and have amassed a large body of evidence-based strategies for reducing the risk that errors will result in patient harm. Massachusetts health care provider organizations, patient advocates, and other experts have been at the forefront of this work at the local, national and international levels.

Despite these gains, health care here and elsewhere remains prone to error and is generally not as safe and reliable as it should be.<sup>2</sup> A recent study by the Betsy Lehman Center for Patient Safety found almost 62,000 preventable patient harm events resulting in over \$617 million in excess health care costs in a single year in Massachusetts — just over one percent of the state's total health care expenditures. These numbers do not include some of the most prevalent causes of preventable harm, such as diagnostic delay or medication errors of the type that caused Betsy Lehman's death.<sup>3</sup> Nor do they reflect the disproportionate and inequitable medical harms suffered by Black, brown and indigenous residents of the Commonwealth as a result of institutional racism, or by others based upon their gender, sexual orientation, age, disability status, or income.<sup>4,5,6</sup> A companion study by the Center demonstrated the long-lasting physical, emotional, and financial impacts of medical error on Massachusetts patients and families, including loss of trust and avoidance of health care.<sup>7</sup> Other research has established the deleterious effects of patient harm events and workplace stress and violence on clinicians and staff.<sup>8</sup>

Together, these findings underscore the need for all Massachusetts health care provider organizations to rethink not only some of the fundamentals of their delivery models, but how they prioritize safety for their patients, clinicians and staff. They also point to the need for a coordinated, statewide policy response that encourages provider initiative on safety, holds health care leaders accountable, and supports patients, families, clinicians and staff in preventing and in response to harm events. Only through these actions will Massachusetts achieve a health care system that routinely delivers the safe, quality care upon which everyone should be able to depend.

### THE INTERSECTION OF SAFETY AND QUALITY

Health care safety and quality improvement are distinct but related spheres. Patient safety — defined as “freedom from accidental injury due to medical care or medical errors” — is a subset of quality, which includes a much broader array of outcomes.\*

Differences aside, an organization or system that performs poorly on safety could never be considered high quality. And safety is a probable gateway to quality in the sense that the conditions essential to safety are also likely to advance overall quality. Safety improvement work is therefore best regarded as integral to the delivery of high value care rather than as a separate set of activities or layer of responsibility.

\*Institute of Medicine (US) Committee on Quality of Health Care in America. To Err is Human: Building a Safer Health System. Kohn LT, Corrigan JM, Donaldson MS, editors. Washington (DC): National Academies Press (US); 2000. PMID: 25077248.



## THE CONSORTIUM: SETTING A BOLD AIM FOR MASSACHUSETTS

The Massachusetts Healthcare Safety and Quality Consortium is an unprecedented undertaking that recognizes the potential for major breakthroughs in reducing preventable harm through a sustained multi-stakeholder effort to identify and drive transformative, systemic change. The Consortium draws upon the deep expertise of the Commonwealth's health care community, bringing together 35 essential partners, including providers, patients, government agencies, and others who play a role in the provision, payment, or oversight of health care.

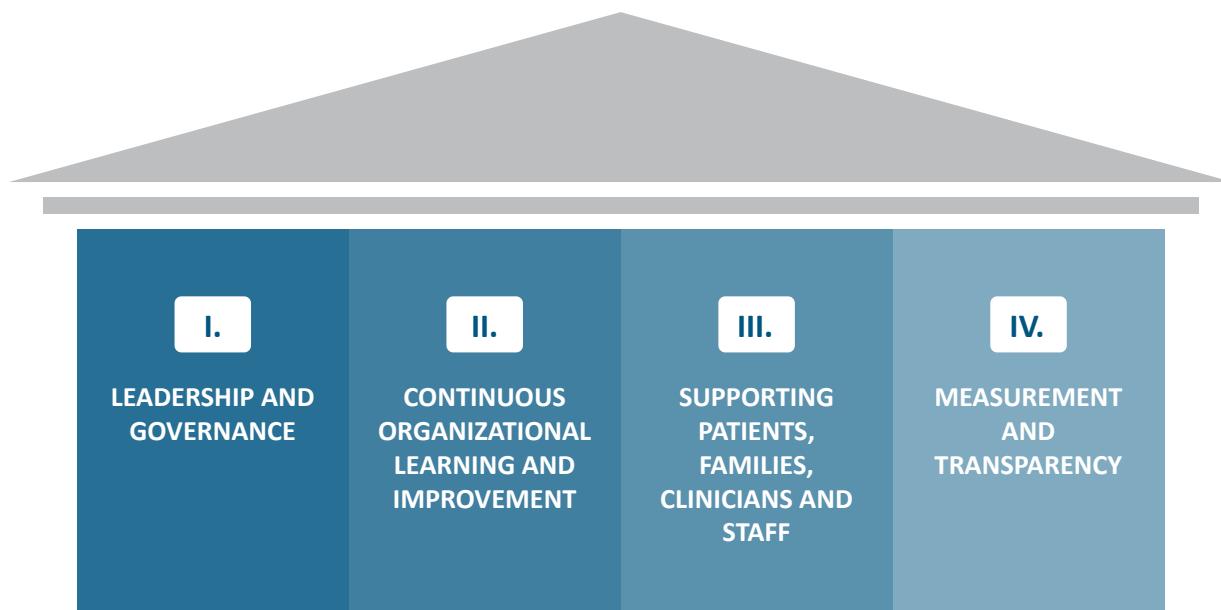
States are on the frontlines of health care. Recognizing Massachusetts' long history of successful collaboration and leadership around urgent health policy issues, the Consortium's first decision was to set a bold aim: *a health care system in which providers — in partnership with patients, policymakers, 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.*

## A ROADMAP TO SAFETY

The *Roadmap to Healthcare Safety for Massachusetts* is a statewide strategic plan that sets forth a vision and goals to propel investment, action and transformative change on safety across the Commonwealth's health care continuum. The Roadmap's purpose is to guide and sustain progress toward these common goals over time. Like any strategic plan, it will help stakeholders set priorities, invest in high impact initiatives, and avoid low-yield distractions. The Roadmap also will help Massachusetts engage with promising safety initiatives and resources beyond its borders, including the recently released National Action Plan for Patient Safety.<sup>9</sup>

The *Roadmap to Safety* is structured around four foundational "pillars" essential not only to health care safety but to any well-functioning system: (1) leadership and governance; (2) continuous organizational learning and improvement; (3) supporting and engaging patients, families, clinicians and staff; and (4) measurement and transparency.

Each pillar lays out:



### Four foundational “pillars” of safety and quality

These four pillars, or domains, of safety are interdependent and drive or are driven by safety culture. They apply to all health care settings across the continuum.

- The current state of health care safety in Massachusetts, emphasizing key challenges and opportunities;
- A vision for where the system can be over time with commitment and investment; and
- A series of achievable short and long-term goals.

The *Roadmap* identifies *what* safety improvement goals should be pursued. The next phase of the Consortium's work will be to define *how* these goals will be achieved.

Although the *Roadmap* does not specify timelines, the Consortium anticipates that some goals are within reach in the shorter term, while others will require more time in which to develop and execute the necessary strategies and tactics.

Provider organizations vary in size, readiness and other capacities. Future strategies, resources, and timelines for advancing progress on the goals enumerated under each of the pillars will need to reflect these differences.

## FRAMING THE VISION

Debate over how to characterize the ultimate goal of health care safety continues. Some commentators advocate for "zero harm," arguing that no lesser goal is justified and that framing the desired endpoint as the elimination of all preventable harm is motivational and will lead to the greatest possible improvement. Opposing commentators regard "zero harm" as doomed to failure, arguing that new safety risks are constantly emerging, making perfect outcomes impossible and the message of "zero harm" demoralizing and ultimately counterproductive to safety improvement.

While recognizing the value of succinct, memorable messaging, Consortium members decided it was unnecessary to resolve whether "zero harm" is the best way to frame a vision for health care safety in Massachusetts. Instead, the Roadmap articulates a commitment to big thinking and system transformation to advance continuous improvement.

## SAFETY CULTURE

Safety culture is an essential, underlying feature of all four pillars. A strong safety culture enables an organization to anticipate, detect and mitigate risks in order to prevent staff and patient harm and to learn from adverse events when they do happen. It is achieved only through the unequivocal commitment of the organization's leadership, a commitment that is modeled consistently and permeates the organization at every level.

Consortium members deliberated extensively on the hallmarks of provider organizations with strong safety cultures and determined that such organizations:

- 1. Prioritize safety by:**
  - Identifying patient and staff safety as a preeminent core value
  - Communicating and demonstrating the primacy of safety through the actions of their leaders
- 2. Acknowledge the high risk nature of their organization's work by:**
  - Recognizing the potential for human error and its contributing factors, including cognitive biases
  - Anticipating the potential for harm
  - Maintaining a "preoccupation with failure"<sup>10</sup>
- 3. Strive toward consistently safe operations by:**
  - Adopting and adhering to known safety principles
  - Promoting structured and effective communication among team members
  - Proactively addressing structural or systems issues that contribute to errors and events with safety implications
  - Engaging all staff in seeking solutions to patient safety risks and in continuous process improvement to address those risks
  - Committing sufficient resources to support and accelerate safety improvement
- 4. Foster "just culture" by:**
  - Acknowledging that ultimate accountability for organizational culture, systems and processes necessary to prevent adverse events or near misses rests with organizational leaders
  - Ensuring that frontline clinicians and staff are trained and supported in carrying out safety protocols and policies, are backed up when they raise safety concerns, and are held to appropriate and proportionate levels of accountability if they engage in unsafe behaviors
  - Instituting programs and incentives to formally recognize and reward transparency and other behaviors that improve safety
- 5. Put patients first by:**
  - Including patient and family representatives in meaningful positions in governance structures
  - Facilitating and encouraging the reporting of adverse events, near misses, and other safety concerns by patients and families, and responding in a timely and appropriate manner with promised follow-up and action
  - Recognizing that patient choice and patient-centered care are important values that should be taken into account while maintaining a safe environment for all patients and staff
- 6. Monitor and learn from their safety performance and progress by:**
  - Maintaining robust, efficient systems for internal reporting of near-misses, adverse events and safety concerns through which clinicians, staff and patients routinely submit information that is promptly analyzed to identify risks and to support continuous improvement
  - Regularly assessing and improving safety culture
  - Identifying disparities in safety outcomes among vulnerable patient populations (e.g., by race/ethnicity; language; age; disability status; immigrant status; sexual orientation; gender identity), and prioritizing and taking steps to promote equity
  - Participating in voluntary data sharing with Patient Safety Organizations, learning collaboratives, and national registries to benchmark their own performance on key safety metrics against peer provider organizations
- 7. Embrace transparency by:**
  - Communicating openly with patients and families and clinicians and staff after an adverse event
  - Regularly sharing patient and staff safety data and analyses with their own governing bodies
  - Complying with mandated safety/quality reporting to regulatory agencies and payers

## PILLAR I: LEADERSHIP AND GOVERNANCE

### CURRENT STATE

Reliably safe health care will be realized only when safety is embraced as a preeminent core value and is recognized as a top priority at the highest levels of a health care organization's leadership. Yet the role of executive leadership teams and governing bodies in fostering and sustaining a culture of patient safety is not consistently understood or practiced, and safety culture varies significantly among peer provider organizations across the continuum of care.

All provider organizations have leaders — from the owners of small medical practices to the chief executive officers and trustees of large hospitals — and those leaders are ultimately responsible for safety throughout their organizations. Research has shown that organizations whose leaders demonstrate a commitment to safety perform better on safety and quality measures.<sup>11</sup>

### VISION

Leaders and governing bodies of Massachusetts health care organizations across the care continuum:

- Study, understand and embrace safety principles, systems thinking, and improvement science;
- Strive to eliminate preventable harm to their patients, clinicians and staff;
- Stay informed about their own organization's safety and quality performance;
- Model and reward behaviors that will lead to better safety culture and outcomes;
- Allocate adequate resources to support and sustain safety improvement; and
- Are accountable for organizational expectations and results.

### GOALS

Meaningful, sustainable improvements in patient safety will be possible only when health care organizations embrace a culture of safety that prioritizes safety as a core organizational value. In order to take hold, safety culture must be championed by leaders at the highest levels of an organization and supported by appropriate incentives from health plans, employers and policymakers.

With these propositions in mind, Massachusetts can strive for a state of leadership and governance in health care safety in which:

- 1. Leaders of all Massachusetts health care provider organizations:**
  - Are proficient and current in their understanding of safety culture and safety management systems;
  - Regularly communicate and demonstrate leadership support for the organization's safety and harm prevention goals to all staff and are accountable for achieving those goals;
  - Ensure that their organizations have in place appropriately-scaled safety programs, including effective systems for safety reporting and analysis;
  - Institute regular assessments of their organizations' safety structures, processes, and short and long-term safety investments;
  - Ensure that all staff receive relevant, ongoing education and training on patient and workforce safety;
  - Prepare or receive regular reports suitable to their informational needs for tracking, trending or benchmarking safety performance and for identifying emerging risks within their organizations;
  - Utilize information about existing and emerging safety performance and risks to guide decision-making and resource allocation; and
  - Actively support and facilitate meaningful patient and family participation in safety and quality improvement efforts and initiatives.

2. In addition, executive leaders of health care provider organizations with governing bodies:
  - Ensure that all governing body members have received education in patient safety principles and about their role in advancing safety culture and improvement at their organizations, including an understanding of how patient safety is impacted by bias based on a patient's race, ethnicity, gender, sexual orientation, age and disability status;
  - Ensure that regular assessments of their organizations' safety structures, processes, and short and long-term safety investments are reviewed and approved by their governing bodies and available to the public;
  - Deliver safety and quality reports to board members or trustees at every regular meeting of the organization's governing body that enable tracking, trending, and benchmarking of culture, safety risks, and performance; and
  - Actively support and facilitate meaningful patient and family participation in governance structures, including safety and quality committees, and ensure that participants represent the diversity of the patient population served by the health care provider organization, particularly vulnerable populations.
3. Health care trustees or board members:
  - Participate in education about safety principles and the role of governing bodies in safety improvement;
  - Ensure that safety reports are included on the agendas of regular board meetings; and
  - Set improvement goals and hold executive leadership accountable for achieving those goals.
4. Health plans, employers, and other financers of care include targeted, standardized indicators of leadership and safety culture within provider contracts.
5. State agencies, professional and industry associations, and other policy influencers incentivize and ensure the availability of resources to support leadership engagement and safety culture in all health care settings.

## PILLAR II: CONTINUOUS ORGANIZATIONAL LEARNING AND IMPROVEMENT

### CURRENT STATE

Health care providers in all care settings face persistent and emerging risks to safety. Some Massachusetts provider organizations excel at discrete aspects of safety, but few have developed the operational capacity — the comprehensive safety systems and management practices — to routinely and proactively identify and address safety risks as they arise and to engage leadership, frontline staff and patients in improvement.

Many provider organizations face staffing and resource challenges that may contribute to an insufficient focus on establishing the underpinnings of safety. In larger organizations, responsibility for safety improvement is often siloed, relegated to individual managers rather than shared by a cohort of staff who represent all roles on all shifts and who have open lines of communication with leadership. Smaller organizations may lack designated staff responsible for coordination of safety efforts. And provider organizations of all types rarely include patient and family representatives in their improvement activities.

An extensive body of best practices for reducing risks to safety has been developed over the past two decades. These include both technical strategies to improve outcomes for specific threats such as health care acquired infections as well as adaptive strategies to improve basic processes such as communication, teamwork, and mechanisms for gathering and acting upon information relevant to safety. Provider uptake of these strategies is neither consistent nor widespread, however.

Collaborative learning activities through which peer provider organizations set improvement goals and exchange safety data and strategies have been proven to advance progress among participating organizations.<sup>12</sup> Yet, like most other states, Massachusetts does not coordinate a program of learning collaboratives to support provider organizations in achieving identified statewide safety improvement priorities.

### VISION

Health care provider organizations of all types are learning organizations with the capacity for continuous improvement. Leaders, managers, clinicians and staff at every level understand and take ownership of the unique roles they play in safety vigilance and improvement and are empowered and equipped with the information they need to proactively address existing and emerging safety risks. Improvement is monitored by substantial portion of an organization's clinicians and staff who recognize the difference that their participation can make.

Patients and families act as partners in continuous improvement. Health care organizations acknowledge their essential role and actively engage patient and family representatives, particularly those from underserved and vulnerable groups.

Massachusetts invests in collaborative learning by peer provider organizations throughout the health care continuum to advance statewide safety priorities and goals.

## GOALS

Achieving and maintaining a state of safety at the organizational or health care system level is a perpetual process that requires long-term commitment and investment. Continuous cycles of learning and improvement will occur when provider organizations have woven safety thinking and processes into their basic operations, and when leaders, frontline clinicians and staff, and patients and families recognize and carry out their respective roles in mitigating risk.

With these propositions in mind, Massachusetts can strive for a state of continuous health care safety improvement in which:

- 1.** All health care provider organizations are learning organizations with comprehensive and appropriately scaled safety systems and management practices built into their operations.
  - These safety systems include formal and informal channels of communication that are routinely used to alert care team members and management whenever a safety concern or a successful intervention to prevent harm is identified.
  - Organizational leaders regard frontline clinicians and staff as trusted sources of information about safety risks and solutions and regularly reach out to solicit their observations and their ideas for improvement.
  - All frontline clinicians and staff recognize proactive involvement in safety improvement as one of their core responsibilities.
  - Safety systems and interventions take address institutional racism and other forms of discrimination that put people of color, people with disabilities, older individuals, LGBTQ and non-binary individuals, and other marginalized populations at greater risk of preventable harm, and are designed to minimize disparities in safety outcomes.
- 2.** Leaders of health care organizations ensure that patients and families are represented and supported on institutional safety and quality improvement committees, with a special focus on encouraging participation by members of underrepresented and vulnerable groups.

## CHANGE IN ACTION

### Children's Hospitals' Solutions for Patient Safety Network (SPS)

The Children's Hospital SPS is a group of 135 Children's Hospitals from across the United States that work together to improve care in pediatric hospitals. Through the development, study and sharing of best practices, the Network has prevented serious harm in the care of almost 14,000 children for an estimated savings of \$249.4 million as of May 2019.

- 3.** Health plans incentivize improvement through plan design and contractual provisions that promote and reward health care safety.
- 4.** State agencies and professional and trade associations, as appropriate:
  - Provide coordination and other resources to help provider organizations across the health care continuum and at different stages of safety progress:
    - Operationalize safety management programs and processes;
    - Implement best practices in connection with priority safety challenges;
    - Locate existing safety improvement tools and resources; and
    - Access data to assess their own progress on priority safety metrics and benchmark their performance against peer organizations.
  - Promote efforts to equip patients and families to effectively engage with health care providers to reduce the risk of adverse events in their own care and contribute to broader safety improvement goals.

## PILLAR III: SUPPORTING PATIENTS, FAMILIES, CLINICIANS AND STAFF

### CURRENT STATE

In recent decades, the United States health care system has made unprecedented strides in improving and extending the lives of patients through medical research and innovation. These achievements, however, have been accompanied by forces that can make health care delivery more complex, time-pressured, insufficiently coordinated, impersonal and, ultimately, prone to error, affecting all who are present at the point of care.

Patients and families who experience medical error or other traumatic health care events often suffer long-lasting physical, emotional and financial harms.<sup>13</sup> Many lose trust in the health care system or avoid health care altogether.<sup>14</sup> Patients and family members who witness errors or other risks to safety are frequently reluctant to speak up.

Health care professionals, in the course of doing their jobs, often experience traumatic events such as preventable patient harm and workplace violence that can lead to or exacerbate burnout. Epidemic levels of burnout, characterized by high emotional exhaustion, cynicism and a low sense of personal accomplishment from work,<sup>15,16</sup> have been reported by health care professionals who encounter overwhelming demands exacerbated by insufficient resources and broken or inefficient processes.<sup>17,18</sup> Patients and families are in turn impacted by clinician and staff burnout, which not only reduces satisfaction and confidence in the care experience<sup>19</sup> but increases the risk of medical error.<sup>20,21,22</sup>

In the aftermath of adverse events or unexpected outcomes, transparent, structured, culturally competent communication and support can improve the wellbeing of patients, families and members of the care team alike.<sup>23</sup> Massachusetts is home to leading experts and programs on peer support, and communication and resolution.<sup>24</sup> Peer support, and communication and resolution programs not only help patients, families, clinicians and staff begin the recovery process but, in the case of health care professionals, may prevent burnout and the associated increased risk of future medical error.<sup>25,26</sup> Structured communication programs also improve patient safety by fostering systems for reporting and addressing errors.<sup>27,28</sup>

The Commonwealth has several ongoing initiatives aimed at preventing and addressing the problem of burnout among health care professionals.<sup>29</sup> While some Massachusetts provider organizations have leveraged these resources to institute comprehensive supports for patients in addition to care team members, these interventions are not yet widely implemented.<sup>30</sup>

### VISION

Patients and families receive ongoing, culturally competent support and compassion in the aftermath of adverse or traumatic events. Programs and policies to address these needs are planned, developed and carried out with active, meaningful and ongoing patient input and participation.

Patients and family members are supported in communicating effectively with clinicians and medical staff about their care, including any concerns they might have about safety. Clinicians and staff invite, and are prepared to receive and respond to, questions or concerns raised by patients and families.

Health care provider organizations offer support to clinicians and staff in the aftermath of adverse or traumatic events, to promote healing, and work to mitigate clinician and staff burnout.

## GOALS

Effective supports for patients, families, clinicians and staff following medical errors and other traumatic events prevent and relieve emotional harm, facilitate the prompt resolution of claims, and mitigate clinician and staff burnout.

With these propositions in mind, Massachusetts can strive for a state of health care safety in which:

- 1.** All health care facilities and physician organizations commit to an empathetic, fair, equitable and just approach to medical errors, promote a culture of safety focused on caring for patients and families, support in-depth event investigation and analysis, and facilitate expedited resolution of claims when appropriate.
- 2.** Patients and families affected by medical harm receive support from patient and family peer supporters that have received training in communication skills, emotional support, and sensitivity to the impacts of bias in health care based on race, ethnicity, age, disability, gender and sexual orientation.
- 3.** Clinicians and staff are able to access peer support programs and other resources to help them recover from unexpected, adverse or traumatic events.
- 4.** State policymakers promote the conditions, incentives, and resources necessary to support implementation of peer support and early resolution of safety-related concerns in all health care settings.
- 5.** Health care provider organizations actively seek out information and solutions to workplace conditions that challenge the ability of clinicians and staff to provide safe, quality care to patients.

## CHANGE IN ACTION

Massachusetts Alliance for Communication and Resolution following Medical Injury (MACRMI)

MACRMI is a health care alliance formed in 2012 that is dedicated to developing and implementing the Communication, Apology, and Resolution (CARe) model in provider organizations across the Commonwealth. Through this unique collaboration, MACRMI has developed a unique approach to responding to adverse events, and has demonstrated through research that communicating with patients in the aftermath of a medical error can build trust with patients without increasing liability costs.

## PILLAR IV: MEASUREMENT AND TRANSPARENCY

### CURRENT STATE

Our ability to monitor health care safety risks and to understand their impacts on diverse patient populations, clinicians and staff remains limited despite existing performance and quality measures in provider contracts and mandated reporting to government agencies. There also is no common understanding of what metrics might actually help advance safety at either the provider or the system levels. While information alone is not enough, it is an indispensable driver of improvement.

In Massachusetts, information about health care safety comes from various sources, including data submitted to the state or federal government, accrediting bodies, or confidentially shared among peer provider organizations through voluntary quality improvement activities. Other information comes from the safety concerns and experiences that clinicians, staff, patients and families report via the formal or informal systems of provider organizations. Some providers also are beginning to leverage health information technology, including electronic health records, to monitor and respond to safety risks and events.

Yet this information is too inconsistent or incomplete to support the system-wide transformation necessary for the transformative progress that is needed. Provider organizations may lack effective internal reporting mechanisms. Frontline clinicians and staff may not have the training and knowledge to recognize preventable harm events or near misses, and may not report these events because of competing demands on their time, skepticism about the likelihood of action, fear of reprisal, or concerns about legal or reputational consequences. Patients may be reluctant or face barriers to sharing their observations with providers or others. And state and federal reporting systems, designed to collect data for only a small subset of safety risks associated with a narrow group of providers, may be both over and under-inclusive, subject to variable participation and reporting bias, and not structured to meet the informational needs of different stakeholder groups, particularly patients.

Moreover, collected data often are not shared within or across organizations. Providers, regulators and policymakers alike may therefore lack access to information that could help them identify and prioritize safety challenges, support continuous improvement and, when appropriate, impose accountability. Patients' informational needs when choosing providers, minimizing the risk of harm when receiving care, or engaging in improvement work are not being met. And health plans do not have the data they need to drive safety improvement through mechanisms available to them such as value-based provider contracts and networks.

### VISION

Massachusetts, as a national leader in health care innovation, has a coherent approach for collecting and disseminating actionable information about health care safety that supports consumer choice and continuous improvement in all health care settings while minimizing administrative burden.

Health care leaders ensure that their organizations solicit diverse patient and family perspectives and experiences on safety and quality, and actively promote a just culture for their clinicians and staff that optimizes the impact of measurement and transparency. Providers, policymakers, payers and the public have access to the information they need to make informed decisions, prevent errors and advance continuous improvement.

### GOALS

Efforts to achieve major gains in health care safety in Massachusetts will be successful only if combined with new approaches to information gathering and management. These approaches must have the broad participation of diverse stakeholders and support the flow of useful information:<sup>31</sup>

- Within provider organizations (e.g., through internal systems that gather information from clinicians, staff or patients about adverse events or safety concerns both within the organization's walls and across transitions of care);

- Among peer provider organizations (e.g., through Patient Safety Organizations and other collaborative learning activities);
- Between provider organizations and the public (e.g., public reporting of relevant safety indicators); and
- Between providers and individual patients (e.g., communication after an adverse event).

Transparency in health care safety also must proceed from an understanding that no single set of measures will satisfy the needs of every stakeholder and that it is not feasible, or necessary, to measure every aspect of safety.

With these propositions in mind, Massachusetts can strive for a state of health care safety measurement and transparency in which:

- 1.** Stakeholders have delineated a set of essential questions that, when answered, will allow Massachusetts providers, policymakers or the public to consistently and reliably assess health care safety;
- 2.** Every program of safety measurement, whether at the state or provider organization level, is aligned with and responsive to the above-referenced essential questions and adheres to the Principles for Measuring Safety referenced herein, which includes the capacity to identify inequities in safety outcomes by race, ethnicity, age, disability, gender identity, LGBTQ status, and other key demographic characteristics;
- 3.** All provider organizations across the Massachusetts care continuum:
  - Have established internal processes appropriate to their settings for the exchange of safety information among clinicians, staff, patients and families to support continuous improvement and the advancement of safety culture;
  - Actively participate in Patient Safety Organizations and other collaborative learning activities through which they exchange information about priority safety challenges with peer organizations; and
  - Understand and comply with applicable state and federal mandated reporting requirements for patient safety.

#### PRINCIPLES FOR MEASURING SAFETY\*

- Measures focus on information that matters to provider organizations, the public, policymakers, and payers and are dynamic enough to meet stakeholders' evolving informational needs;
- Measures are designed to support and incentivize improvement while minimizing the possibility of ineffective actions and other unintended consequences that can impede patient care and progress on safety;
- Measures are evidence-based when possible, but an inability to apply scientific methods should not prevent provider organizations from testing and adopting measures identified through their own experience;
- Measures capture timely information that reflects current conditions and can be used proactively to prevent harm;
- Measures exist for settings across the continuum of care and cover the entire trajectory of a patient's health experience;
- Measures can be used to identify disparities in safety outcomes by key demographic characteristics so as to advance health equity;
- Measures are appropriately scaled to different care settings, and resource and cost-effectiveness are considered when adding new measures, reducing the burden of measurement;
- Members of the public are meaningfully engaged in the design of measures alongside providers and other stakeholders, and measures reflect a patient-centered approach to care and safety; and
- Measures and data collection systems continuously evolve and adapt to maintain relevance, reliability and efficiency.

\*Derived from *The Salzburg Statement / Moving Measurement into Action: Global Principles for Measuring Patient Safety* (2019).

4. Massachusetts state agencies, in consultation with provider organizations and other stakeholders, including members of the public, have:
  - Reexamined and coordinated their health care safety reporting systems to optimize the gathering of information that will be used by agencies, providers, or the public to monitor and advance safety, while eliminating duplicative or non-actionable reporting;
  - Opened channels for appropriate interagency sharing of health care safety data;
  - Developed policies to build provider acceptance of and compliance with safety reporting and survey requirements, while executing these oversight activities in a manner that supports learning and improvement; and
  - Created mechanisms through which members of the general public can access reliable, relevant information about health care safety.
5. Members of the Massachusetts public use available information about health care safety to reduce the risk of harm in their own or family members' care and to contribute to safety improvement more generally.

## NEXT STEPS

The *Roadmap to Healthcare Safety* articulates a vision and goals to guide health care safety improvement in Massachusetts now and in the future. Translating these higher-level principles and goals into concrete strategies and action plans with clear timelines is the next challenge. The Consortium will accomplish this work through a series of working groups that will leverage the vast expertise within the state to target specific items under each of the four Pillars of Safety. This approach will help sustain progress toward the ultimate goal of eliminating preventable harm in all settings where health care is delivered in the Commonwealth.

## GLOSSARY OF TERMS

1. **Adverse event:** an injury to a patient resulting from a medical intervention and not the underlying condition of the patient (M.G.L. c. 12C §15(a)) that requires additional care or leads to temporary or permanent physical or emotional impairment.
2. **Burnout:** a syndrome characterized by a high degree of emotional exhaustion and depersonalization (i.e., cynicism), and a low sense of personal accomplishment at work. (National Academies of Medicine, 2019).
3. **Communication and Resolution Program (CRP):** program that enables health professionals, health care facilities, and liability insurers to communicate openly with patients and families about adverse events, investigate their causes, explain what happened, apologize, and offer compensation if substandard care caused patient harm. (Mello et al., 2018)
4. **Health care provider:** an individual, licensed health professional who provides clinical health care services to patients. This definition may include but is not limited to physicians, advanced practice clinicians, nurses, dentists, and social workers.
5. **Health care provider organization:** a licensed entity of any size that delivers healthcare services to patients. This may include, but is not limited to hospitals, ambulatory surgery centers, community health centers, and independent or solo health care practices.
6. **Health care safety:** includes patient safety as defined below and includes the safety and well-being of clinicians and staff.
7. **Just culture:** balanced accountability for both individuals and the organization responsible for designing and improving systems in the workplace. Balances the need for an open and honest reporting environment with the end of a quality learning environment and culture. (Boysen, 2013)
8. **Learning collaborative:** shared learning teams formed by organizations to achieve sustainable change within a specific topic area and implement changes that lead to lasting improvement. (IHI, 2019)
9. **Learning system/learning health system:** a health system in which internal data and experience are systematically integrated with external evidence, and that knowledge is put into practice. (AHRQ, 2019)
10. **Medical error:** an act of commission or omission leading to an undesirable outcome or significant potential for such an outcome (AHRQ, 2019); defined in state law as “the failure of medical management of a planned action to be completed as intended or the use of a wrong plan to achieve an (M.G.L. c. 12C §15(a)).
11. **Near miss:** any event that could have had adverse consequences but did not and was indistinguishable from fully fledged adverse events in all but outcome. (AHRQ, 2019)
12. **Safety culture:** the product of individual and group beliefs, values, attitudes, perceptions, competencies, and patterns of behavior that determine the organization’s commitment to quality and patient safety (Joint Commission, 2017)
13. **Patients and families:** people seeking or receiving health care services and their family members who participate in their care, including other caregivers who have a close relationship with a patient and play a supporting role in that person’s interactions with health care providers.
14. **Patient safety:** the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the processes of health care. These events include “errors,” “deviations,” and “accidents.” Safety emerges from the interaction of the components of the system; it does not reside in a person, device, or department. Improving safety depends on learning how safety emerges from the interactions of the components. (NPSF, 2000); also defined as “freedom from accidental injury.” (M.G.L. c. 12C §15(a)).
15. **Peer support:** a process through which people who share common experiences or face similar challenges come together as equals to give and receive help based on the knowledge that comes through shared experience (Riessman, 1989).
  - **Clinician peer support:** a process through which a trained clinician peers offer support to colleagues who experience a medical error as part of the care team with the goal of helping the impacted clinician with emotional healing and wellness, facilitating early reporting of adverse events and enabling and promoting compassionate and transparent disclosure and apology. (Shapiro, 2016); (Center for Professionalism and Peer Support, Brigham and Women’s Hospital, 2013); (Penney, 2018)
  - **Patient and family peer support:** a process through which trained volunteers who have experienced a medical error or unanticipated medical outcome offer support to patients and families who have experienced a medical error with the goal of promoting emotional healing and wellness. (Betsy Lehman Center, 2019)
16. **Preventable harm:** injury that is avoidable unless the intervention would not be considered standard of care. (AHRQ, 2019)
17. **Quality:** the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Mitchell, 2008)
18. **Safety and quality improvement:** the framework to systematically improve the ways care is delivered to patients; continuous efforts to achieve stable and predictable results/to reduce process variation and improve the outcomes of these processes both for patients and the healthcare organization and system. (AHRQ, 2019)
19. **Safety reporting systems:** systems, both voluntary and mandated, that require reporting of medical errors or patient harm events to governmental agencies, health system leadership, or other entities. This may include but is not limited to federal or state-mandated reporting of errors, institutional-level reporting of errors by providers or care teams, or voluntary patient or family error reporting systems.

## REFERENCES

1. Betsy Lehman Center for Patient Safety. The Financial and Human Cost of Medical Error and How Massachusetts Can Lead the Way on Patient Safety. 2019. Available: <https://betsylehmancenterma.gov/assets/uploads/Cost-of-Medical-Error-Report-2019.pdf>.
2. John JT. A New, Evidence-Based Estimate of Patient Harms Associated with Hospital Care. *Journal of Patient Safety*. 2013; 9(3):122-128.
3. Betsy Lehman Center for Patient Safety. The Financial and Human Cost of Medical Error and How Massachusetts Can Lead the Way on Patient Safety. 2019. Available: <https://betsylehmancenterma.gov/assets/uploads/Cost-of-Medical-Error-Report-2019.pdf>.
4. Boyd RW, Lindo EG, Weeks LD, McLemore MR. On Racism: A New Standard for Publishing on Racial Health Inequities. *Health Affairs Blog*. July 2, 2020. Available: <https://www.healthaffairs.org/do/10.1377/hblog20200630.939347/full/>.
5. 2018 National Healthcare Quality and Disparities Report. Content last reviewed October 2019. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/research/findings/nhqrdr/nhqr18/index.html>.
6. National Academies of Sciences, Engineering, and Medicine 2017. *Communities in Action: Pathways to Health Equity*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24624>.
7. Prentice JC, Bell SK, Thomas EJ, et al. Association of Open Communication and the Emotional and Behavioural Impact of Medical Error on Patients and Families: State-wide Cross-sectional Survey. *BMJ Quality & Safety* 2020;29:883-894. Available: <https://qualitysafety.bmjjournals.com/content/29/11/883>.
8. Waterman AD, Garbutt J, Hazel E, et al. The Emotional Impact of Medical Errors on Practicing Physicians in the United States and Canada. *Joint Commission on Accreditation of Health care Organizations*. 2007; 33(8): 467-476.
9. Safer Together: A National Action Plan to Advance Patient Safety. Content last reviewed September 2020. Agency for Healthcare Research and Quality, Rockville, MD. Available: <https://www.ahrq.gov/patient-safety/reports/safer-together.html>.
10. Weick KE, Sutcliffe KM. 2015. *Managing the Unexpected* (3rd ed.) New York City, NY: John Wiley & Sons, Inc. doi: 10.1002/9781119175834.
11. Millar R, Mannion R, Freeman T, Davies HT. Hospital Board Oversight of Quality and Patient Safety: A Narrative Review and Synthesis of Recent Empirical Research. *Milbank Quarterly*. 2013 Dec; 91(4): 738-70.
12. Budrionis A, Bellika JG. The Learning Healthcare System: Where Are We Now? A Systematic Review. *Journal of Biomedical Informatics*, Volume 64, 2016, Pages 87-92. Available: <https://doi.org/10.1016/j.jbi.2016.09.018>.
13. Betsy Lehman Center for Patient Safety. The Financial and Human Cost of Medical Error and How Massachusetts Can Lead the Way on Patient Safety. 2019. Available: <https://betsylehmancenterma.gov/assets/uploads/Cost-of-Medical-Error-Report-2019.pdf>.
14. Id.
15. Reith TP. Burnout in United States healthcare professionals: a narrative review. *Cureus* 2018 Dec; 10(12): e3681.
16. Jha AK, Iliff AR, Chaoui AA, et al. A crisis in health care: a call to action on physician burnout. Massachusetts Medical Society, 2019. Available: <http://www.massmed.org/News-and-Publications/MMS-News-Releases/Physician-Burnout-Report-2018/>.
17. National Academies of Sciences, Engineering, and Medicine. 2019. *Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25521>.
18. Id.
19. Profit J, Sharek PJ, Amspoker, AB, Kowalkowski MA, Nisbet CC, Thomas EJ, Chadwick AW, Sexton JB. Burnout in the NICU setting and its relation to safety culture. *BMJ Qual. Saf.* 2014, 23, 806–813.
20. Lima Garcia C, Abreu LC, Ramos JLS, et al. Influence of burnout on patient safety: systematic review and meta-analysis. *Medicina* 2019;55(553).
21. Shanafelt TD, Balch CM, Gerald Bechamps, et al. Burnout and medical errors among American surgeons. *Ann Surg* 2010;251(6): 995-1000.
22. Tawfik DS, Profit J, Morgenthaler TI, et al. Physician burnout, well-being, and work unit safety grades in relationship to reported medical errors. *Mayo Clin Proc*. 2018 Nov; 93(11): 1571-1580.
23. Mello MM, Kachalia A, Roche S, et al. Outcomes in two Massachusetts hospital systems give reason for optimism about communication-and-resolution programs. *Health Affairs* 2017 Oct. 36(10):1795-1803.
24. See, for example, Massachusetts Alliance for Communication and Resolution Following Medical Injury. Information available: <https://www.macrmi.info/>.
25. Luff D, Cohen-Bearak A. How staff-driven peer support is helping clinicians (especially nurses) address burnout. Institute for Professional and Ethical Practice, 2019. Available: <http://www.ipepweb.org/staff-driven-peer-support-and-burnout/>.
26. Kachalia A, Sands K, Van Niel M, Dodson S, Roche S, Novak V, Yitsak-Sade M, Focarelli PH, Benjamin EM, Woodward A, Mello M. Effects of a Communication – And – Resolution Program on Hospitals’ Malpractice Claims and Costs. *Health Affairs* 2018;37(11):1836-1844.
27. Id at note 24.
28. Mello MM, Roche S, Greenberg Y, Focarelli P, Van Niel M, Kachalia A. Ensuring successful implementation of communication-and-resolution programs. *BMJ Quality and Safety*. 2020.
29. See, for example, Massachusetts Health and Hospital Association’s Caring for the Caregiver Initiative. Information available at: <https://patientcarelink.org/employee-well-being-mhas-caring-for-the-caregiver/>. See also Massachusetts Medical Society’s Physician Burnout initiative. Information available at: <http://www.massmed.org/News-and-Publications/MMS-News-Releases/A-Crisis-in-Health-Care--A-Call-to-Action-on--Physician-Burnout/#.XkrwPWhKiU>.
30. Examples of systems that have adopted these models can be found in: Mello MM, Kachalia A, Roche S, et al. Outcomes in two Massachusetts hospital systems give reason for optimism about communication-and-resolution programs. *Health Affairs* 2017 Oct. 36(10):1795-1803. See also: Shapiro J, Galowitz P. Peer support for clinicians: a programmatic approach. *Acad Med*. 2016 Sep;91(9):1200-4.
31. Lucian Leape Institute. Shining a Light: Safer Health Care Through Transparency. 2016. The National Patient Safety Foundation’s Lucian Leape Institute. Report of the Roundtable on Transparency.

## RESOURCES/LINKS

1. <https://psnet.ahrq.gov/primer/adverse-events-near-misses-and-errors>
2. [https://nam.edu/wp-content/uploads/2019/10/CR-report-highlights-brief-final.pdf; http://ahpnet.com/AHPNet/media/AHPNetMediaLibrary/White%20Papers/DPenney\\_Defining\\_peer\\_support\\_2018\\_Final.pdf](https://nam.edu/wp-content/uploads/2019/10/CR-report-highlights-brief-final.pdf; http://ahpnet.com/AHPNet/media/AHPNetMediaLibrary/White%20Papers/DPenney_Defining_peer_support_2018_Final.pdf)
3. [http://communicationandresolution.org/pix/Collaborative\\_CRP\\_Essentials.pdf](http://communicationandresolution.org/pix/Collaborative_CRP_Essentials.pdf)
4. <https://psnet.ahrq.gov/primer/high-reliability>
5. [https://www.who.int/patientsafety/research/methods\\_measures/human\\_factors/human\\_factors\\_review.pdf](https://www.who.int/patientsafety/research/methods_measures/human_factors/human_factors_review.pdf)
6. <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleI/Chapter12c/Section15>
7. <https://psnet.ahrq.gov/primer/reporting-patient-safety-events>
8. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3776518/>
9. <http://www.ihi.org/Engage/collaboratives/Pages/default.aspx>
10. <https://www.ncbi.nlm.nih.gov/books/NBK225182/>; <https://www.ahrq.gov/learning-health-systems/about.html>
11. <https://psnet.ahrq.gov/primer/adverse-events-near-misses-and-errors>
12. <https://psnet.ahrq.gov/primer/never-events>
13. <https://psnet.ahrq.gov/primer/adverse-events-near-misses-and-errors>
14. [https://www.jointcommission.org/assets/1/6/SEA\\_57\\_infographic\\_11\\_tenets\\_safety\\_culture.pdf](https://www.jointcommission.org/assets/1/6/SEA_57_infographic_11_tenets_safety_culture.pdf)
15. [https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/hospital/engagingfamilies/strategy1/Strat1\\_Implement\\_Hndbook\\_508\\_v2.pdf](https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/hospital/engagingfamilies/strategy1/Strat1_Implement_Hndbook_508_v2.pdf)
16. <https://medschool.ucsd.edu/som/hear/resources/Documents/CPPS%20Brigham%20and%20Womens%202016.pdf>; [https://www.brighamandwomens.org/assets/BWH/medical-professionals/center-for-professionalism-and-peer-support/pdfs/peer\\_support\\_overview\\_and\\_faq.pdf](https://www.brighamandwomens.org/assets/BWH/medical-professionals/center-for-professionalism-and-peer-support/pdfs/peer_support_overview_and_faq.pdf)
17. [https://www.medscape.com/viewarticle/408064\\_3](https://www.medscape.com/viewarticle/408064_3); <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleI/Chapter12c/Section15>
18. <https://psnet.ahrq.gov/primer/adverse-events-near-misses-and-errors>
19. <https://www.ncbi.nlm.nih.gov/books/NBK2681/>
20. <https://www.ahrq.gov/ncepqr/tools/pf-handbook/mod4.html>
21. <https://psnet.ahrq.gov/primer/root-cause-analysis>
22. <https://www.mass.gov/lists/reporting-serious-incidents-circular-letters>
23. [http://www.qualityforum.org/Topics/SREs>List\\_of\\_SREs.aspx](http://www.qualityforum.org/Topics/SREs>List_of_SREs.aspx)