

## MASSACHUSETTS ROADMAP TO HEALTH CARE SAFETY

Task Force: Continuous Improvement

*Final overview July 2023*



## Purpose

The Continuous Improvement Task Force task force was charged with developing practical recommendations, tools, and policy proposals to operationalize the *Roadmap to Safety* vision and goals related to organizational learning and continuous improvement.

The task force held its discussions with the guidance that recommendations should have potential for high impact, rely on best practices when possible, and be applicable or adaptable to health care organizations of all types and sizes. Recommendations should also serve to boost the agency and safety of people from communities that experience inequities in health care and safety outcomes.

## Guiding principles

The Consortium encouraged task force members to keep the following principles in mind as they developed their proposals, recommendations, and toolkits. The guiding principles below build on two decades of history and experience on health care safety improvement — what tends to work and what stymies success. Task force recommendations should strive 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 siloes and enable all stakeholders — including provider organization staff at all levels, patients, payers, and policymakers and regulators — to carry out their respective roles;
- Promote a “just culture” by adopting a fair and consistent approach to safety improvement that fosters psychological safety 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, language, 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;
- Remove all forms of waste from work, making it easier to do the right thing.

## VISION

The Task Force envisions a Massachusetts where all health care provider organizations are learning organizations with comprehensive and appropriately scaled safety systems and management practices. Managers, clinicians and staff understand and take ownership of their unique role in safety and improvement and are regularly consulted by leaders as trusted sources of information about safety risks and solutions. Safety plans and systems minimize disparities in safety outcomes and address institutional racism and other forms of discrimination that put people at greater risk of preventable harm. Patients and families are meaningfully engaged in safety improvement efforts, with particular attention to underserved and vulnerable groups. Health plans incentivize improvement through plan design and contractual provisions that promote and reward health care safety. The Commonwealth sets statewide safety priorities and goals, invests in collaborative learning by peer providers throughout the care continuum, and undertakes efforts to equip patients and families to effectively engage with providers to reduce the risk of adverse events in their own care and contribute to broader safety improvement goals.

## Background

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 sustained safety improvement and risk reduction. There is a substantial body of evidence on patient safety and quality improvement practices and processes. Despite the available research, practice changes are not implemented consistently or effectively to address patient safety challenges.<sup>1</sup>

Successful implementation requires a culture of improvement and continuous learning that involves whole system quality leadership principles to put the evidence into practice.<sup>2</sup> These principles are to 1) build a shared sense of purpose, 2) practice systems thinking, 3) engage in collective learning and dialogue, and 4) practice personal inquiry and reflection. Over time, successful commitment across the organization (e.g., unit, department, executive and board) to these principles can move organizations toward improved psychological safety, a culture of trust, constancy of purpose, equity, and innovation.

Achieving and maintaining health care safety at the organizational or system level is a perpetual process requiring long-term commitment and investment. Cycles of learning and improvement occur when provider organizations weave safety thinking and processes into their basic operations, and when leaders, clinicians and staff, and patients and families recognize and carry out their respective roles to mitigate risk and make improvements. Leadership support of a culture of safety and continuous organizational learning and improvement is a necessary condition, but alone is insufficient. Sustainable safety systems require a) education to build knowledge and awareness of safety science and so that all stakeholders are positioned to carry out their unique role, b) implementation support to put knowledge into practice, and c) motivation to incentivize organizations and individuals to prioritize safety improvement and culture change.

Education to increase health care professionals' understanding of quality, patient-centered care, and patient safety was first elevated in 1999 by the Institute of Medicine (IOM) report *To Err Is Human*, which defined harm to patients in the healthcare system as a significant, pervasive threat to public health, labeling it an issue of systems as opposed to one that could be blamed on individual failures. This was followed in 2003 by another IOM report entitled *Crossing the Quality Chasm: A New Health System for the 21st Century*, which identified six aims of care, stating that care should be: safe, effective, patient-centered, timely, efficient, and equitable. A 2003 IOM report, *Health Professions Education: A Bridge to Quality*, focused on education and training to achieve improvements in the six aims.<sup>3</sup>

*Health Professions Education* helped to usher in a renewed focus on core competencies in safety and quality education and contributed to changes in accreditation standards that reflected the need to emphasize and incentivize patient-centered care. Since that time, several quality and safety-focused curricula have been developed nationally and internationally and core competencies have been developed and incorporated into health systems, professional associations, and accreditation assessment criteria.

While there are many patient safety and quality improvement training resources, there is a substantial gap between what is known to work and what is done in practice. This implementation or “know-do” gap is found throughout health care and reflects the pressures on organizations that prevent them from committing the time and resources to explore a need or issue, lay the groundwork for change, and only then move to implement and sustain change. It also reflects a lack of capacity among many managers

and leaders to move teams, units and organizations through changes that result in a sustained new way of operating.

Implementation support is necessary so that provider organizations can understand *how* to change as well as *what* to change. It incorporates best practices from quality improvement, implementation science, practice change research, and people management. Implementation support can provide a framework to create the context where the various practices of these approaches are integrated and used with fidelity.

Clinicians and staff face a wide variety of priorities that compete for their time and attention. In the context of health care, many individuals who enter the field do so out of a desire to help others and to be part of an organization that plays a positive role in their community. Such intrinsic motivation, while important in motivating individual caregivers and leaders to do their best, is not sufficient on its own to drive and sustain system-level change within a healthcare organization. Extrinsic motivation, delivered within organizations and from outside of organizations to motivate organizational-level action, is also necessary and needs to be structured appropriately to align incentives from multiple external stakeholders.

For the task force, an additional consideration bridging implementation support and motivation is *external support*. Of the six components of quality identified by IOM, motivation may be most necessary to incentivize equity at an organizational level.<sup>4</sup> There is a role for technical assistance and coaching to support organizations through change processes, with external experts helping develop change process capacity.

## Challenges

The Task Force noted that activities to support and enhance continuous safety improvement in health care provider organizations all need to occur on a foundation of leadership commitment. Beyond challenges associated with a lack of leadership support, the Task Force identified the following barriers to continuous organizational learning and improvement:

- There is low knowledge among health care staff and managers about patient safety principles and practices;
- There is low awareness among staff of safety risks and events, and low awareness of their responsibility and role in safety improvement;
- Staff and management turnover, and worker shortages, challenge the sustainability of safety improvement efforts;
- Leaders and managers assume that training and education is sufficient to effect change;
- Leaders and managers assume that safety protocols and practices are applied as intended;
- Norms of power and authority in health care settings assume that clinical professionals are competent and capable leaders;
- Organizations lack effective processes to engage stakeholders, including patients and families, in identifying safety issues and opportunities to improve;
- Organizations tend to focus on individual events rather than broad contextual factors, and have limited systems to proactively identify safety risks;
- Organizations provide limited or no time or resources for effective training and development;
- Organizations do not take advantage of the synergies between patient safety and health care personnel safety;
- Mergers of organizations and systems degrade and destabilize existing safety systems; and

## Task Force: Continuous Improvement

- Misaligned incentives, both external and internal, don't reward safety improvement efforts and investments.

### Task Force recommendations

The task force asked what structures, resources, or incentives could contribute to overcoming the identified barriers. Below are the resulting recommendations.

#### Recommendation 1: Support implementation of a Continuous Improvement System by every provider organization across the continuum of care

The organizing principle for Task Force's recommendations is that every provider organization has a properly scaled "continuous improvement system" within a culture of safety. This system reduces known approaches to improvement into four essential parts: seeing information vital for improving safety, saying something about it, solving problems, and sharing learning. It embeds improvement in the daily cadence of how providers work.

A continuous improvement system integrates patient and workforce safety with other organizational priorities including caring for the workforce, financial success, health equity, patient experience, and patient engagement. Critically, it brings to life a unified strategic leadership approach that balances *human* aspects of leadership and positive safety culture with *operational* aspects of measurement and continuous improvement.

Interlinking the human and operational drivers of organizational safety improvement embeds safety in the culture and the day-to-day work of clinicians and staff throughout the organization. A continuous improvement system helps provider organizations advance safety culture and make safety their operational norm. Strategic leaders can use the rhythm and structure of the continuous improvement system to practice safety culture embedding mechanisms, especially positive leadership approaches.

With this system:

- The organization's managers use leadership to promote safety as the top priority.
- The common core system elements enable the organization to see and solve safety problems.
- The system is operationalized on the frontlines of care, engaging clinical and nonclinical staff as well as patients and families in problem solving.
- Responsibility for safety is decentralized — everyone plays a role.
- Accountability for safety is held by executives and managers, from senior to frontline. Leaders participate in the design of safety and continuous improvement systems and are accountable for safety performance. They are also accountable for ensuring that the system provides strong feedback loops across the organization.
- Executives, managers, and staff commit to safety improvement that is a continuous process and that the work is never done.

This approach is scalable to organizations large and small and at every level of complexity across the care continuum. Smaller and less complex organizations will need less formal, lower tech systems and processes, while larger and more complex organizations will need more formal systems and processes for gathering and sharing information about safety risks and improvement strategies across multiple units or locations.

## Task Force: Continuous Improvement

### Recommendation 2: Build baseline knowledge and skills on health care safety among all Massachusetts clinical and nonclinical frontline staff and managers through development of a statewide safety curriculum

The curriculum will include an array of modules tailored to:

- Provider organizations of varying size and complexity; and
- Different staff roles, including nonclinical frontline staff and managers, clinical frontline staff, and clinical managers.

The curriculum will be:

- Produced in a variety of formats (e.g., live classroom, virtual)
- Interactive, including learning through simulation
- High quality and engaging

For all clinical and nonclinical frontline staff, the curriculum will provide instruction in the following essential knowledge and skills:

- Fundamental safety improvement principles and practices with an emphasis on what is most relevant to their particular day-to-day roles and responsibilities for safety, including:
  - What a culture of safety is
  - What a just culture is
  - That systemic racism and implicit bias exist and contribute to unsafe care and disparities in health outcomes
  - How errors occur (e.g., process failures, cognitive biases, other pitfalls)
  - Continuous improvement strategies and techniques to mitigate risks
- How to identify safety risks in their own organization
- How to effectively participate in safety improvement activities within their own organization,
- How to communicate with patients and families to elicit and respond to safety risks and concerns and prevent harm
- How to communicate with patients and families following an adverse, unexpected, or traumatic event
- How to communicate about safety goals/concerns both up and down the chain of command and advocate for safety improvement

For all managers, the curriculum will provide additional instruction to:

- Support a culture of safety on their teams or units
- Ensure that staff understand and carry out their unique roles in a Daily Management System
- Facilitate huddles and other team activities
- Identify and assess gaps in safety
- Implement and sustain safety improvement interventions on their own units
- Positively recognize clinical and non-clinical staff who model safe practices and identify improvement safety opportunities
- Counsel and hold accountable clinicians and staff who engage in unsafe practices or don't follow safety protocols
- Meaningfully engage patients and families in safety improvement work
- Lead and engage staff on measurement activities essential to safety improvement

### Recommendation 3: Support and motivate all health care provider organizations to continuously educate and assess clinical and nonclinical managers and staff on safety culture and practice

- Leveraging the statewide safety curriculum described above, health care provider organizations across the continuum of care should implement appropriately scaled approaches for educating and assessing manager and staff safety awareness, knowledge, and skills as follows:
  - a. **Informal**, ongoing education and assessment (70% of value)
    - Leaders and managers should infuse safety thinking into culture by leading by example, regularly talking about safety goals and protocols, and making safety the focus of grand rounds or other organization-wide programming
    - Knowledge and skills related to safety improvement should be routinely developed through continuous improvement system mechanisms (e.g., daily huddles, leadership rounds, mentoring)
    - Ongoing counseling of staff who deviate from safety standards, and recognition of staff for “positive” deviance
  - b. **Formal** safety education and assessment at key points and intervals (30% of value)
    - Basic training during new staff onboarding
    - Staff/manager participation in relevant external conferences and courses
    - Manager participation in learning collaboratives with peer organizations or in mentorship programs (e.g., NEAHQ)
    - Assessment as a part of performance reviews
- Industry and professional associations, insurers, and the state should offer a coordinated array of technical assistance, experiential learning opportunities, and learning collaboratives through which peer provider organizations can receive guidance and support each other in implementing and sustaining safety management systems

### Recommendation 4: Make essential safety knowledge and skills a condition of initial licensure and license renewal for all health care professionals

- Advocate for licensing exams to include a set of questions that test baseline knowledge of health care safety.
- Require proof of safety essentials training by an accredited source as part of the application for initial licensure.
- Continuing education requirements for license renewal to include a minimum number of hours of content specific to safety culture and practice from an accredited source.

## Tools and resources

Members of the Task Force identified tools and resources that can be used or adapted by individual organizations to operationalize aspects of the Continuous Improvement System. The Betsy Lehman Center will continue to collect, curate and promote these materials, and will publish a complete version of the Continuous Improvement System with the most relevant tools and resources in future.

### Continuous Improvement System tools and resources

<i>Core element</i>	<i>Methods and resources</i>
<i>Solving problems</i>	Problem solving methods

- Simple Improvements skip the root cause style problem-solving methods, implement solutions, and test them for effectiveness.
  - [Daily Kaizen Methods](#)
  - [Toyota Suggestion System](#)
  - UMass Memorial Pediatric ICU idea boards
- Basic (four-step) Problem Solving (define the problem, find the cause, design countermeasures, check for control) as a building block for higher-order methods
  - Toyota pdCA-based basic problem-solving ([see the Toyota Way Fieldbook, Liker and Hoseus](#))
- Intermediate (seven-step) Problem Solving (adds observation and analysis before finding the cause, and standardization after control).
  - [RCA<sup>2</sup>](#)
  - Toyota QC Circle Style Intermediate Problem-Solving ([see the Toyota Way Fieldbook, Liker and Hoseus](#))
  - Kume's [Seven-Step Problem-Solving Story](#)
  - "A3" Problem-Solving Story templates
    - [Lean](#)
    - [AHRQ](#)

Analysis methods:

- Human factors
  - [Charles Vincent](#)
- Root cause analysis
  - [NPSF's RCA<sup>2</sup>](#)
- Just Culture algorithm
  - [James Reason](#)
  - [David Marx](#)
  - [NPSF/IHI](#)

Implementing sustained change and assessment methods

- Checks for control
  - Daily huddles checking for problems: new and updated ([see The Toyota Way to Lean Leadership, Liker and Convis](#))
  - Visual Management to detect recurrence of the problem ([see The Toyota Way to Lean Leadership, Liker and Convis](#))
  - Plan-Do-Check/Study-Act tools
    - [IHI worksheet](#)

*Seeing problems*

Sources and channels

- Patients and families can identify risks and problems
  - Patient and Family Advisory Councils
  - Patient "speak up" models
    - [Joint Commission](#)
  - Institute for Healthcare Improvement "Ask Me 3"
- Incident reporting systems
  - For clinicians/staff



## Task Force: Continuous Improvement

*Saying something*

- For patients/families
- Daily huddles at unit level
  - [Circle Up](#)
- Tiered leadership huddles and rounds to enhance awareness of safety priorities and collect information about problems
  - [IHI-Rounding to Influence](#)
  - [IHI Walkrounds](#)
  - [Cleveland Clinic](#)
  - [Intermountain Health](#)
  - BIDMC (linking unit and leadership huddles)
- Visual management/idea systems
  - UMass Memorial Pediatric ICU idea boards

### Creating fluid structures

- Frequent touchpoints with staff and patients to solicit and follow up on their safety observations
  - Linked daily huddles from the unit level to the executive level for escalation, de-escalation, and feedback (see notes on huddles above)
  - Leadership rounding (see notes on rounding under Seeing Problems)
  - Patient and Family Advisory Councils
- Leaders standard work that ensures information from rounding and huddling is processed into some form of improvement
  - [JONA LSW Case Study](#)
  - [Mann's Leader Standard Work method](#)

*Sharing something*

### Spreading and change principles

- [API/IHI Framework for Spread](#)
- [Grenny's Influence Model](#) (Find vital behaviors, Find influence channel)
- [Kotter's Eight-Step Change Cycle.](#)
- Adapting Best Ideas
  - Yokoten ([see The Toyota Way to Lean Leadership, Liker and Convis](#))

### Standardization; standard work

- [Training Within Industry methods: standardized work](#)

### Storying and celebrating

- Patient and Family Advisory Councils
- HBR [Telling Stories: How Leaders Can Influence, Teach, and Inspire](#)
- Yokoten ([see The Toyota Way to Lean Leadership, Liker and Convis](#))

## Summary and next steps

The recommendations of the Task Force were considered by the Consortium to help inform the final 2023 *Roadmap to Health Care Safety* goals, strategies and actions. The *Roadmap* provides the direction and key actions to achieve a health care system that delivers safe, quality care in settings across the continuum of care.

## Task Force: Continuous Improvement

The next phase of work to implement the *Roadmap* includes multiple projects to build resources and test ideas, begin an annual public reporting process on the state of health care safety in Massachusetts, and continued widescale engagement with stakeholders. Continuous improvement is a necessary core element of multiple workstreams, including developing capacity building support for ambulatory center safety as well as testing a system to automatically detect and respond to adverse events in acute care settings.

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## Endnotes

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<sup>1</sup> Canadian Patient Safety Institute. [A Guide to Patient Safety Improvement: Integrating Knowledge Translation & Quality Improvement Approaches](#). Edmonton, Alberta; 2020.

<sup>2</sup> Institute for Healthcare Improvement. [How to Build a Learning Organization Culture](#). July 20, 2021.

<sup>3</sup> Knebel, E. and Greiner, A.C. eds., 2003. Health professions education: A bridge to quality.

<sup>4</sup> O’Kane et al. 2021. [An Equity Agenda for the Field of Health Care Quality Improvement](#). NAM Perspectives. Discussion Paper, National Academy of Medicine, Washington, DC. <https://doi.org/10.31478/202109b>.