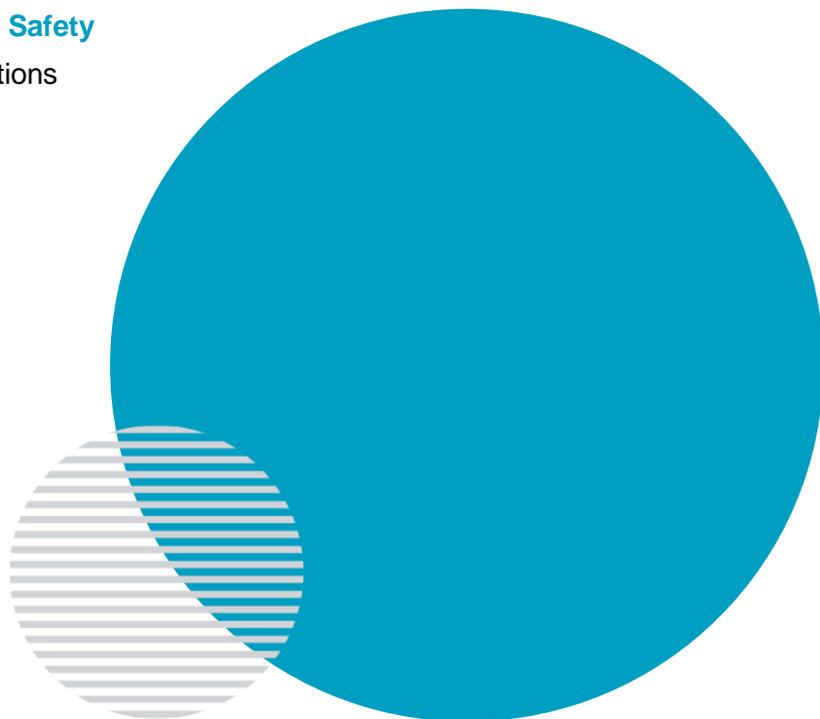# Implementation Resource Guide

A National Action Plan to Advance Patient Safety

The **Institute for Healthcare Improvement** convened the **National Steering Committee for Patient Safety** as a collaboration among 27 national organizations committed to advancing patient safety.

Institute for Healthcare Improvement

About the National Steering Committee for Patient Safety

The Institute for Healthcare Improvement convened the National Steering Committee for Patient Safety as a collaboration among 27 national organizations committed to advancing patient safety. IHI gratefully acknowledges the organizations and individual members who contributed their time, expertise, and insight to develop the National Action Plan to Advance Patient Safety and that have committed to advancing the recommendations outlined in this work.

For more than 25 years, the Institute for Healthcare Improvement (IHI) has used improvement science to advance and sustain better outcomes in health and health systems across the world. We bring awareness of safety and quality to millions, accelerate learning and the systematic improvement of care, develop solutions to previously intractable challenges, and mobilize health systems, communities, regions, and nations to reduce harm and deaths. We work in collaboration with the growing IHI community to spark bold, inventive ways to improve the health of individuals and populations. We generate optimism, harvest fresh ideas, and support anyone, anywhere who wants to profoundly change health and health care for the better. Learn more at ihi.org.

Contents

Please see Appendix B for a glossary of terms used in this document.

Executive Summary

This Implementation Resource Guide is a companion document to the report *Safer Together: A National Action Plan to Advance Patient Safety* and provides guidance for advancing the recommendations described in the National Action Plan. The guide includes:

- An overview of the aims, recommendations, and suggested tactics for implementing the recommendations for each of the four foundational areas of the National Action Plan; and
- Carefully curated organizational case examples, selected resources, and additional reading to support implementation efforts.

Acknowledgments

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*Denotes federal liaison member. Views and knowledge shared by federal liaisons to the NSC are limited to activities consistent with the missions of the respective federal agencies. Federal participants serving in their official capacity must not be interpreted as agency endorsement of NSC activities, business practices, or efforts to advocate or lobby for federal funds.

Subcommittee Co-Chairs and Members

See Appendix A for a list of subcommittee members.

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About the National Action Plan

Important progress has been made since the publication of the Institute of Medicine's seminal report, *To Err Is Human: Building a Safer Health System*. However, preventable harm in health care remains a major concern and there is more work to be done. Though many evidence-based, effective best practices related to harm reduction have been identified, they are seldom shared nationally and implemented effectively across multiple organizations. Reducing preventable harm requires a concerted, persistent, coordinated effort by all stakeholders and a total systems approach to safety.

Total systems safety requires a shift from reactive, piecemeal interventions to a proactive strategy in which risks are anticipated and system-wide safety processes are established and applied across the entire health care continuum to address them.[1,2] It also requires coordination at many levels, which in turn necessitates robust collaboration among all stakeholders.

> **Clarification of Terms**
>
> While total systems safety includes a unified approach to both patient and workforce safety, the terms "patient safety" and "workforce safety" are both used to ensure clarity in the National Action Plan. Similarly, the NSC recognizes that the use of the term "patient" does not always resonate. Striving for *person*-centered care is the ultimate goal. However, in the National Action Plan, the narrower term "patient" is used for simplicity.

The report, *Safer Together: A National Action Plan to Advance Patient Safety*,[3] illuminates the collective insights of 27 leading organizations on the National Steering Committee for Patient Safety (NSC), united in their efforts to achieve truly safer care and reduce harm to patients and those who care for them. The National Action Plan centers on recommendations in four foundational and interdependent areas, which the NSC deemed essential for effective stakeholder collaboration to create total systems safety and safer care across the continuum of care.

- **Culture, Leadership, and Governance:** The imperative for leaders, governance bodies, and policymakers to demonstrate and foster our deeply held professional commitments to safety as a core value and promote the development of cultures of safety.
- **Patient and Family Engagement:** The spread of authentic patient and family engagement; the practice of co-designing and co-producing care with patients, families, and care partners to ensure their meaningful partnership in all aspects of care design, delivery, and operations.
- **Workforce Safety:** Ensuring the safety and resiliency of the organization and the workforce is a necessary precondition to advancing patient safety; we need to work toward a unified, total systems-based perspective and approach to eliminate harm to both patients and the workforce.
- **Learning System:** Establishing networked and continuous learning; forging learning systems within and across health care organizations at the local, regional, and national levels to encourage widespread sharing, learning, and improvement.

The NSC considers these areas to be foundational because they create the fertile soil that allows broader safety initiatives to take root and be cultivated. They are also interdependent because advancing in one area alone is difficult without advancing in all of them. And they will benefit from widespread collaboration and coordination. The resulting recommendations in these four areas build on the substantial body of experience, evidence, and lessons learned that the NSC has gathered and will test and implement together to allow for future refinements as our understanding, experience, and evidence evolve over time.

National Action Plan: 17 Recommendations to Advance Patient Safety

Culture, Leadership, and Governance

1. Ensure safety is a demonstrated core value.
2. Assess capabilities and commit resources to advance safety.
3. Widely share information about safety to promote transparency.
4. Implement competency-based governance and leadership.

Patient and Family Engagement

5. Establish competencies for all health care professionals for the engagement of patients, families, and care partners.
6. Engage patients, families, and care partners in the co-production of care.
7. Include patients, families, and care partners in leadership, governance, and safety and improvement efforts.
8. Ensure equitable engagement for all patients, families, and care partners.
9. Promote a culture of trust and respect for patients, families, and care partners.

Workforce Safety

10. Implement a systems approach to workforce safety.
11. Assume accountability for physical and psychological safety and a healthy work environment that fosters the joy of the health care workforce.
12. Develop, resource, and execute on priority programs that equitably foster workforce safety.

Learning System

13. Facilitate both intra- and inter-organizational learning.
14. Accelerate the development of the best possible safety learning networks.
15. Initiate and develop systems to facilitate interprofessional education and training on safety.
16. Develop shared goals for safety across the continuum of care.
17. Expedite industry-wide coordination, collaboration, and cooperation on safety.

Reflecting the NSC's vision to ensure that health care is safe, reliable, and free from harm, *Safer Together: A National Action Plan to Advance Patient Safety* provides clear direction and actions to make significant advances toward total systems safety and the provision of safer care across the continuum. Many recommendations and implementation tactics also necessitate collaboration between stakeholders. The requirement for stakeholders to work together is in keeping with the need for greater coordination and collaboration across health care to achieve true advancement in patient safety.

The health care community needs broad and meaningful collaboration and coordination among all stakeholders to improve safety. Every stakeholder can play a part in advancing some or all of the recommendations in the National Action Plan. By planning and investing together, mobilizing resources together, learning together, and sharing lessons learned, we can drive meaningful change and advance the goal of creating the safest health care for patients and those who care for them.

NSC members are invested and mobilized together to implement the recommendations contained in the National Action Plan. We ask all stakeholders to join us and take decisive action to advance these recommendations.

Measurement Guidance

The National Steering Committee on Patient Safety, along with its Measurement Workgroup, developed measurement guidance to provide a roadmap of how to best evaluate the structures, processes, and outcomes in relation to the National Action Plan (NAP) recommendations — not to provide a finite list of measures to accompany the NAP. See the National Action Plan (Appendix D) for more details.[3] In addition, the Self-Assessment Tool[4] that accompanies the NAP serves as a guide to assess an organization's current state of patient safety efforts and can also be used to assess progress over time.

How to Use the Implementation Resource Guide

This Implementation Resource Guide provides guidance for advancing the National Action Plan recommendations. For each of the four foundational areas, the guide provides an overview of the aims, recommendations, and suggested tactics for implementing the recommendations. It also shares carefully curated organizational case examples, selected resources, and additional reading to support implementation efforts. Many resources exist and the guide does not provide a comprehensive list. The selected resources reflect the collective wisdom of the NSC members and the numerous participating subject matter experts who served on subcommittees.

The Implementation Resource Guide is intended to be used in conjunction with the Self-Assessment Tool to assist leaders and organizations in considering how best to proceed on their respective paths to providing better and safer care.

The recommendations and implementation tactics in the guide apply to multiple stakeholders, across the entire continuum of care, including but not limited to the following:

- Accreditors/regulators
- Advocacy organizations
- Credentialing departments
- Direct patient care professionals
- Educational foundations
- Educators
- Equity leaders
- Federal agencies
- Finance leaders
- Governance bodies
- Health care organizations
- Health care professionals
- Human factors leaders
- Human resources leaders
- Learning network leaders
- Licensing and certification bodies
- Medical practice owners and leaders
- National Steering Committee for Patient Safety

- Occupational health and safety leaders
- Patient advocates
- Patient and Family Advisory Councils
- Patient experience leaders
- Patients, families, and care partners
- Patient safety leaders and professionals
- Payors
- Policymakers
- Professional associations and societies
- Quality leaders and professionals
- Rating agencies
- Risk leaders
- Safety leaders and organizations
- Security personnel
- Senior leaders (CEO, COO, CMO, CNO, CFO, CQO, CMIO, CNIO, CHRO, and others)
- Wellness leaders

Recommendations and Implementation Tactics

Culture, Leadership, and Governance

Aim: Health care organization governing boards and CEOs across the care continuum establish and sustain a strong culture of safety in a way that is equitable and engaging of patients, families, care partners, and the health care workforce.

Recommendations

Leverage the influence of leadership and governance to commit to safety as a core value of the organization and drive the creation of a strong organizational culture.

- Recommendation 1. Ensure safety is a demonstrated core value.
- Recommendation 2. Assess capabilities and commit resources to advance safety.
- Recommendation 3. Widely share information about safety to promote transparency.
- Recommendation 4. Implement competency-based governance and leadership.

Recommendation 1. Ensure safety is a demonstrated core value. Senior leaders and governance bodies must prioritize safety as part of the organization's mission and values and hold themselves and their organizations accountable for engagement and improvement. They must take steps to build an organizational culture that encourages trust and transparency, provides physical and psychological safety for the workforce, and supports the workforce's joy in work.

Key Influencers	Implementation Tactics
• Senior leaders • Accreditors/regulators	Tactic 1a. Build a strong safety culture by implementing the practices of a just culture, ensuring that policies, procedures, and performance evaluations support a safety culture, regularly assessing culture, determining the root causes of culture issues, and continually taking steps to improve culture.
• Governance bodies • Senior leaders • Professional societies and associations • Safety and quality organizations • Educational foundations	Tactic 1b. Ensure physical and psychological safety of the workforce at all times, including times of crisis and natural disasters. Identify and address key contributors to workforce burnout such as staffing shortages, cognitive distraction and overload, and the use of electronic health records.
• Governance bodies • Senior leaders	Tactic 1c. Allocate and evaluate the effectiveness of time spent in leadership meetings and all board meetings to address quality and safety and share patient and family experiences with staff, leaders, and board members.
• Accreditors/regulators • Rating agencies	Tactic 1d. Educate health care leaders and governing board members about quality and safety best practices, exemplar organizations, and practical roadmaps.

Key Influencers	Implementation Tactics
• Safety and quality organizations • Educational foundations	
• Governance bodies • Senior leaders	Tactic 1e. Ensure alignment of leaders' selection, performance reviews, and compensation with safety goals and with prioritizing safety in strategic and operational plans.
• Governance bodies • Senior leaders • Safety and quality leaders	Tactic 1f. Revise performance standards to ensure prioritization of quality and safety focus and action within the organization's strategic and operational plans.

Recommendation 2. Assess capabilities and commit resources to advance safety. Governance bodies and senior leaders must regularly assess their personal and organizational capabilities, as well as the core competencies of everyone in the organization, to achieve sustained outcomes that are highly reliable and safe.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders	Tactic 2a. Ensure that leaders at all levels of the organization assess their organizational structure and allocation of resources to ensure patient and workforce safety and sustainable improvement during conventional, contingency, and crisis circumstances.
• Senior leaders • Educators • Human resources leaders	Tactic 2b. Ensure that staff and leaders are competent to provide equitable, accountable, and safe care.
• Governance bodies • Senior leaders • Occupational health and wellness	Tactic 2c. Identify, mitigate, and address system problems that contribute to physical, psychological, and emotional workforce harm, including burnout, and provide appropriate resources.
• Governance bodies • Senior leaders • Accreditors/regulators • Educators	Tactic 2d. Encourage and support the ongoing development and evaluation of workforce improvement and safety skills at all levels of the organization.
• Senior leaders • Health care professionals • Patients, families, and care partners • Patient and Family Advisory Councils	Tactic 2e. Engage patients, families, and care partners in the assessment of safety competencies, organizational capacities, and resource allocation, and in serving as representatives on boards.
• Senior leaders, CMIO, CNIO • Governance bodies • Safety and quality leaders	Tactic 2f. Dedicate the necessary resources to develop quality and safety data analytics and to translate data into practice improvements.
• Governance bodies • Senior leaders • Credentialing departments • Occupational health	Tactic 2g. Regularly examine resources dedicated to improving the organizational safety culture, workforce safety and competency development, the appropriateness of staffing and skill mix, as well as the usability of health information and other technologies.

Key Influencers	Implementation Tactics
• Senior leaders • Human resources leaders • Credentialing departments	Tactic 2h. Ensure hiring and evaluation practices are aligned with the organization's safety culture.

Recommendation 3. Widely share information about safety to promote transparency.

Governance bodies and senior leaders must ensure that their organizations develop, implement, and enforce standard processes to transparently share information and data about near misses, harm incidents, and lessons learned in a timely manner, within and across their organizations, as well as with patients, families, and care partners. In addition, processes must be established to address resourcing needs and implement solutions to mitigate harm.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders • Safety leaders • Health care professionals	Tactic 3a. Share key patient and workforce safety data, stories, and contextually relevant information with board members, leaders, and all members of the care team, including health care professionals, patients, families, and care partners. Promptly inform key leaders and governance bodies of serious reportable events and the status of root cause analyses and action planning.
• Governance bodies • Senior leaders • Occupational health and safety leaders	Tactic 3b. Commit to sharing key safety information across the organization and with patients, families, care partners, and the public.
• Senior leaders • Safety and risk leaders	Tactic 3c. Allocate resources to review and address patient and workforce near misses and harm events and, using a prioritization tool, determine which of these events require a higher level of investigation.
• Governance bodies • Senior leaders • Accreditors/regulators • Safety and quality organizations	Tactic 3d. Participate in learning networks to encourage internal and shared learning. (See Learning System recommendations)
• Accreditors/regulators • Safety and quality organizations • Payors	Tactic 3e. Require transparency among organizations as part of accreditation.

Recommendation 4. Implement competency-based governance and leadership. Senior leaders must ensure that quality and patient safety competencies are identified and assessed during onboarding and throughout the tenure of governance bodies and leaders. Competencies must include the knowledge, skills, and attributes needed to champion practices that lead to measurable improvement in safety.

Key Influencers	Implementation Tactics
• Senior leaders • Governance bodies • Accreditors/regulators • Professional associations and societies	Tactic 4a. Use a standardized assessment to ensure that board members and senior leaders demonstrate competencies in safety, equity, and data literacy. Track progress over time in their oversight of these areas and in their use of data. Ensure that ongoing education provides coordinated guidance, curriculum, and assessment for board members and leaders across governance-support organizations.
• Senior leaders • Governance bodies • Accreditors/regulators	Tactic 4b. Require board member competency in safety and completion of a minimal common annual board member assessment, allowing for comparison of core competencies across health systems and over time. The board chair and CEO should require this as a condition of board service.
• Accreditors/regulators • Professional associations and societies	Tactic 4c. Provide board and leader education in safety, quality, and improvement concepts. Governance and leadership professional associations should visibly demonstrate the importance of board education by encouraging their own board members to complete an annual common board assessment and learning needs assessment.
• Senior leaders • Professional associations and societies • Patient and Family Advisory Councils	Tactic 4d. Solicit the patient, family and care partners' point of view and expectations when defining the knowledge, skills, and attributes expected of leaders, clinicians, and staff.
• Governance bodies • Senior leaders • Professional associations and societies • Safety and quality organizations	Tactic 4e. Develop and encourage participation in a voluntary health care board member certification program, which includes a focus on quality, safety, and improvement.
• Governance bodies • Senior leaders • Patient safety leaders	Tactic 4f. Ensure every organization has at least one educated and experienced patient safety professional to advise leadership and guide practice and the safety strategy.

Culture, Leadership, and Governance Case Examples

- **Virginia Mason Health System**

  https://hbr.org/2018/11/building-a-culture-of-transparency-in-health-care

  Ensuring the safety of patients through the elimination of avoidable deaths and injuries is a primary organizational goal of the Seattle-based Virginia Mason Health System. Leaders have worked for nearly two decades to develop and support a culture in which team members are empowered and have the resources needed to work toward this goal. Every employee, regardless of role or title, is considered a steward of patient safety and all are expected and encouraged to report any risks. Transparency and the dissemination of information supported the culture change. Openly sharing information in employee forums and during individual conversations helped raise awareness of the need for change. Through the development of compacts with

physicians, leaders, and board members, new expectations were clarified — both in terms of what was expected of them and what they could expect from their organization.

- **Memorial Hermann Health System**

    http://www.memorialhermann.org/about-us/quality-report-relentless-focus-on-quality-an-patient-safety/

    At Memorial Hermann Health System, based in Houston, Texas, ensuring the safety of patients is everyone's responsibility. Employees are trained in high-reliability techniques to prevent harm and encouraged to think critically and communicate openly about safety concerns. To track progress, leaders, staff, and physicians review monthly outcomes and assess results in meeting the organizational goals. The development of a robust culture of safety began with engaging senior leaders and the board of directors around patient safety. With their support and guidance, Memorial Hermann embarked on a journey to become a high-reliability organization and achieve goals of 100 percent compliance with evidence-based quality measures and zero percent incidence of patient harm.

Culture, Leadership, and Governance Selected Resources

Resource	Description
Frankel A, Haraden C, Federico F, Lenoci-Edwards J. *A Framework for Safe, Reliable, and Effective Care*. White Paper. Cambridge, MA: Institute for Healthcare Improvement and Safe & Reliable Healthcare; 2017. http://www.ihi.org/resources/Pages/IHIWhitePapers/Framework-Safe-Reliable-Effective-Care.aspx	Provides guidance to health care organizations on the key strategic, clinical, and operational components involved in achieving safe and reliable operational excellence.
Communication and Optimal Resolution (CANDOR) Toolkit. AHRQ; 2017. https://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/candor/introduction.html	Provides guidance and tools to health care organizations for implementing the Communication and Optimal Resolution (CANDOR) process when unexpected events cause patient harm as well as how to advance an internal paradigm shift through assessment of culture, organizational buy-in, internal and external transparency, care of the caregiver, and commitment to use human factors/safety science to advance learning.
American College of Healthcare Executives and IHI/NPSF Lucian Leape Institute. *Leading a Culture of Safety: A Blueprint for Success*. Boston: American College of Healthcare Executives and Institute for Healthcare Improvement; 2017. http://www.ihi.org/resources/Pages/Publications/Leading-a-Culture-of-Safety-A-Blueprint-for-Success.aspx	Provides a tool for health care organizations to assess and advance a culture of safety.
Patient Safety Primer: Safety Culture. AHRQ PSNet; 2019. https://psnet.ahrq.gov/primer/culture-safety	Provides an overview of the patient safety field and covers key definitions and concepts.

Resource	Description
Sentinel Event Alert 57: The essential role of leadership in developing a safety culture. The Joint Commission; 2017. https://www.jointcommission.org/sea_issue_57/	Provides an overview of the role of leaders in developing a safety culture.
Daley Ullem E, Gandhi TK, Mate K, Whittington J, Renton M, Huebner J. *Framework for Effective Board Governance of Health System Quality.* IHI White Paper. Boston: Institute for Healthcare Improvement; 2018. http://www.ihi.org/resources/Pages/IHIWhitePapers/Framework-Effective-Board-Governance-Health-System-Quality.aspx	Provides an actionable framework with the core processes needed for effective board governance of all dimensions of health system quality, an assessment tool, and support guides for trustee oversight of quality.

Culture, Leadership, and Governance Additional Reading

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Patient and Family Engagement

Aim: Health care organizations institute strategies to improve safety, as defined by patients, families, care partners, and the workforce, in all setting across the care continuum.

Recommendations

Commit to the goal of fully engaging patients, families, and care partners in all aspects of care at all levels.

- Recommendation 5. Establish competencies for all health care professionals for the engagement of patients, families, and care partners.
- Recommendation 6. Engage patients, families, and care partners in the co-production of care.
- Recommendation 7. Include patients, families, and care partners in leadership, governance, and safety and improvement efforts.
- Recommendation 8. Ensure equitable engagement for all patients, families, and care partners.
- Recommendation 9. Promote a culture of trust and respect for patients, families, and care partners.

Recommendation 5. Establish competencies for all health care professionals for the engagement of patients, families, and care partners. Health care leaders in all care settings must ensure that health care professionals are prepared to form equitable and effective partnerships with patients, families, and care partners.

Key Influencers	Implementation Tactics
- Senior leaders - Educators - Educational foundations	Tactic 5a. Create competencies for health care professionals for the engagement of all patients, families, and care partners.
- Governance bodies - Senior leaders - Educators	Tactic 5b. Ensure that health care professionals and staff are trained to recognize and prevent unconscious bias and are competent in equitable, effective communication strategies.
- Senior leaders - Patients, families, and care partners - Educators - Health care professionals - Educational foundations - Safety and quality organizations	Tactic 5c. In partnership with patients and literacy experts, select and implement effective communication and training tools and materials in all care settings, including home and community settings, to assist patients, families, and care partners in understanding and identifying risks, potential hazards, urgent or additional care needs and problems. Ensure that materials use plain language and are designed and validated for varying literacy levels and languages. Examples of effective communication and training tools include: - AHRQ Questions Are the Answer - Ask Me 3 - Choosing Wisely - Prepare for Your Care - The Conversation Project - Cake

Key Influencers	Implementation Tactics
• Educational foundations • Advocacy organizations • Health care organizations • Federal agencies • National Steering Committee for Patient Safety	Tactic 5d. Launch a public education campaign to advise the public about what they can do to improve safety and reduce the risk of harm in their care.

Recommendation 6. Engage patients, families, and care partners in the co-production of care. Health care leaders and health care professionals need to fully engage with patients, families, and care partners in ongoing co-design and co-production of their care.

Key Influencers	Implementation Tactics
• Safety and quality leaders • Health care professionals • Patients, families, and care partners • Patient advocates	Tactic 6a. Seek to understand and address patient priorities by asking, "What matters to you?"
• Senior leaders • Accreditors/regulators • Federal agencies • Patients, families, and care partners	Tactic 6b. Recognize patients, families, and care partners as full partners on the health care team, such as by: • Inviting patients, families, and care partners to actively engage in their care by encouraging them to ask questions, speak up at any time, pause care activities when they are worried something is not right, and mobilize rapid response teams. • Involving patients as equal partners in the diagnostic process and in decisions about their care using evidence-based patient decision aids and reporting tools for patient-reported outcomes. • Involving patients, families, and care partners in patient care such as by ensuring 24/7 visiting hours, family-centered rounds, bedside change of shift, and patient-activated rapid response teams.
• Senior leaders • Accreditors/regulators	Tactic 6c. Ensure full transparency by ensuring that patients and authorized family or care partners have timely access to a patient's electronic health records, including visit notes, discharge summaries, and proxy access to patient portals to avoid errors, delayed diagnoses, or other safety risks.
• Safety and quality leaders • Educators • Educational foundations • Advocacy organizations • Patients, families, and care partners	Tactic 6d. Create and/or adopt educational tools and provide explicit training to help patients, families, and care partners effectively co-produce care, including proactive clinical care measures like stopping the line.
• Safety and quality organizations • Payors	Tactic 6e. Engage patients, families, and care partners to create metrics that reflect what matters most to patients in the delivery of safe, quality care.

Recommendation 7. Include patients, families, and care partners in leadership, governance, and safety and improvement efforts. Health care leaders and governance bodies need to involve patients, families, and care partners from all backgrounds in health care oversight, design, and improvement, as well as harm reduction efforts.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders • Patients, families, and care partners • Safety and quality leaders • Patient experience leaders	Tactic 7a. Ensure meaningful and equitable engagement of patients, families, and care partners in a variety of roles, including: • Serving as representatives on health system and health care organization governing boards and board quality committees • Serving on Patient and Family Advisory Councils • Serving on quality and safety committees • Serving as representatives on quality improvement teams and root cause analysis teams • Conducting routine interviewing of patients, families, and care partners after harm occurs • Reviewing patient reports and grievances to patient advocacy offices • Developing patient-reported safety outcomes measures
• Senior leaders • Patients, families, and care partners • Safety and quality leaders • Patient advocates • Patient experience leaders	Tactic 7b. Conduct organizational assessments of the availability and effectiveness of patient and family engagement strategies and address any identified gaps.
• Governance bodies • Senior leaders • Accreditors/regulators • Patient experience leaders • Safety and quality leaders	Tactic 7c. Ensure that patient and family perspectives and experience data are systematically included in board discussions and planning work.

Recommendation 8. Ensure equitable engagement for all patients, families, and care partners. To ensure the ongoing engagement of patients, families, and care partners in safety, health care leaders must actively and equitably partner with all patients, families, care partners, and relevant community organizations.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders • Safety and quality leaders • Patient experience leaders • Equity leaders	Tactic 8a. Provide equitable and appropriate care and services for all patients. Stratify and analyze data to ensure equitable care for underserved populations and to address inequities.
• Governance • Senior leaders • Safety and quality leaders • Equity leaders	Tactic 8b. Establish systems to analyze safety data to identify and address gaps related to the social determinants of health, such as being at risk for housing or food insecurity, and to share community resources that can provide support.

Key Influencers	Implementation Tactics
• Educators • Health care professionals • Equity leaders	Tactic 8c. Apply practices of equity and trauma-informed care that are contextually appropriate for the unique needs of patients, families, and care partners.

Recommendation 9. Promote a culture of trust and respect for patients, families, and care partners. Health care leaders must ensure that health care professionals and all personnel interact respectfully and transparently with patients, families, and care partners and with each other.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders • Safety and quality leaders	Tactic 9a. Transparently provide information related to the organization's safety and quality performance with patients, families, and care partners during the informed consent process.
• Senior leaders • Safety and quality leaders • Accreditors/regulators	Tactic 9b. Implement and maintain programs for providing appropriate ongoing support in the aftermath of harm. When preventable harm occurs, interview the patient and family and include them, as appropriate, in root cause analyses. Openly and honestly disclose when the standard of care is breached, apologize, address physical and psychological harm, and offer the opportunity to discuss appropriate remedies.
• Governance bodies • Senior leaders • Safety and quality leaders	Tactic 9c. Institute communication and resolution programs for patients, families, and care partners and encourage them to obtain and consult with their own legal counsel. Do not impose or permit gag and confidentiality clauses to be included in post-harm legal agreements with patients, families, and care partners.
• Governance bodies • Senior leaders	Tactic 9d. Ensure that preventable harm events and lessons learned are shared with patients, families, and care partners and within and among health care facilities.
• Senior leaders • Safety and quality leaders • Health care professionals • Human resources leaders	Tactic 9e. Apply rigorous safety and quality approaches to track and prevent nonphysical harm events such as emotional harm and disrespect, analyze these events, and promote corrective actions to deter recurrences.

Patient and Family Engagement Case Examples

- **OpenNotes**

  https://www.opennotes.org/about/

  OpenNotes facilitates open and transparent communication in health care by encouraging clinicians to share their visit notes with patients. Studies show that sharing notes with patients and families increases patient engagement, strengthens patient-provider relationships, and enhances safety. The OpenNotes academic research and advocacy group is based at Beth Israel Deaconess Medical Center and Harvard Medical School and works with collaborators nationally and internationally. The team is supported entirely by federal and philanthropic grants and does not develop software or products for sale.

- **MedStar Health**

  https://www.medstariqs.org/centers-of-expertise/center-for-engaging-patients-as-partners/

  MedStar Health is a not-for-profit health care organization that oversees 120 sites, including ten hospitals in the Baltimore–Washington metropolitan area. To engage patients as partners, it has embedded Patient and Family Advisory Councils for Quality and Safety (PFACQS) at the system level, in every hospital, and in its medical groups. The PFACQS report to the Board of Directors Safety and Quality Committees in each hospital as well as at the system level.

- **Emory Healthcare**

  https://www.emoryhealthcare.org/about/care-transformation/patient-family-advisor-program.html

  Emory Healthcare consists of 11 hospitals and offers health care services across more than 250 provider locations in Georgia, including primary care, urgent care and MinuteClinics. Emory leaders have established a robust Patient and Family Advisor (PFA) program that serves to guide decisions regarding a wide range of quality, safety, and operational improvement initiatives. Requests for partnerships are managed through the use of a database to match PFA's lived experiences, skills, and interests to relevant improvement initiatives.

Patient and Family Engagement Selected Resources

Resource	Description
Guide to Improving Patient Safety in Primary Care Settings by Engaging Patients and Families. AHRQ; 2018. https://www.ahrq.gov/patient-safety/reports/engage.html	Provides guidance to primary care on how to partner with patients and families to improve quality and safety.
Guide to Patient and Family Engagement in Hospital Quality and Safety. AHRQ; 2017. https://www.ahrq.gov/professionals/systems/hospital/engagingfamilies/guide.html	Provides guidance to hospitals on how to partner with patients, families, and care partners to improve quality and safety.
OpenNotes Implementation Toolkit https://www.opennotes.org/tools-resources/for-health-care-providers/implementation-toolkit/# f	Provides materials to prepare to introduce and effectively use OpenNotes.
Person and Family Engagement Implementation Guides for Hospitals. Consumers Advancing Patient Safety; 2019. https://www.patientsafety.org/resources/	Provides guidance for implementing a Person and Family Engagement (PFE) program and metrics.
National Patient Safety Foundation's Lucian Leape Institute. *Safety Is Personal: Partnering with Patients and Families for the Safest Care.* Boston: National Patient Safety Foundation; 2014. http://www.ihi.org/resources/Pages/Publications/Safety-Is-Personal-Partnering-with-Patients-and-Families-for-the-Safest-Care.aspx	Provides guidance for making patient and family engagement a core value in the provision of health care.
Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. *Achieving Health Equity: A Guide for Health Care Organizations.* IHI White Paper. Cambridge, MA: Institute for Healthcare Improvement; 2016. http://www.ihi.org/resources/Pages/IHIWhitePapers/Achieving-Health-Equity.aspx	Provides guidance on how health care organizations can reduce health inequities related to racial or ethnic groups, religions, socioeconomic status, and other characteristics historically linked to discrimination or exclusion.

Patient and Family Engagement Additional Reading

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Workforce Safety

Aim: Health care organizations across the care continuum implement strategies to measurably and equitably improve safety for health care professionals and all staff in their organizations.

Recommendations

Commit to workforce physical, psychological, and emotional safety and wellness, and full and equitable support of workers.

- Recommendation 10. Implement a systems approach to workforce safety.
- Recommendation 11. Assume accountability for physical and psychological safety and a healthy work environment that fosters the joy of the health care workforce.
- Recommendation 12. Develop, resource, and execute on priority programs that promote workforce safety.

Recommendation 10. Implement a systems approach to workforce safety. Ensure that every health care organization across the care continuum has comprehensive workforce safety programs in place. Senior leaders must develop and implement governance and oversight structures to support a systems approach to workforce safety, which includes leadership and engagement, safety management systems, risk reduction, and performance analytics and management.

Key Influencers	Implementation Tactics
- Governance bodies - Senior leaders - Educational foundations - Safety and quality leaders - Finance leaders - Occupational safety and health leaders - Human resources leaders - Safety and quality organizations - Accreditors/regulators - Government agencies	Tactic 10a. Educate leaders and governance bodies about the impact of workforce harm and the business case for prioritizing harm reduction.
- Governance bodies - Senior leaders - Occupational safety and health leaders - Safety and quality leaders - Human resources leaders - Security personnel	Tactic 10b. Develop a workforce safety strategy that aligns with the organizational mission, patient safety goals, responsiveness to workforce safety data, and resource allocation.

Key Influencers	Implementation Tactics
• Senior leaders • Safety and quality leaders • Occupational safety and health leaders • Accreditors/regulators	Tactic 10c. Engage managers and staff in preparing standardized job hazard analytics to systematically assess the hazard risks of all job tasks. Risks include ergonomic, chemical, infectious pathogens, assaults, slippery surfaces, and other conditions or activities that could result in injury or illness.
• Senior leaders • Occupational safety and health leaders • Human factors leaders • Human resources leaders • Wellness leaders • Accreditors/regulators	Tactic 10d. Establish mechanisms and systems to identify, assess, and mitigate hazards, including modified shift schedules, fatigue management, staffing levels, workloads after working hours, and other contributors to fatigue and burnout, including cognitive burden and human factors.
• Governance bodies • Senior leaders • Occupational safety and health leaders • Human factors leaders • Human resources leaders • Accreditors/regulators • Equity leaders • Wellness leaders	Tactic 10e. Adopt healthy work environment standards to promote physical and psychological safety as well as joy in work, and address individual and system opportunities to promote and ensure equity in the workplace.
• Governance bodies • Senior leaders • Accreditors/regulators • Human resources leaders • Occupational safety and health leaders	Tactic 10f. Deploy personnel to meaningfully support the physical and psychological safety and wellness of the workforce in relevant departments or external groups such as occupational health, human resources, organizational development, employee assistance programs, wellness programs, recovery programs, and ergonomics.
• Senior leaders • Health care professionals	Tactic 10g. Ensure that systems and accountability practices enable timely reporting and provide timely responses or mitigation. • Employ reporting tools to capture risk factors for workforce harm (e.g., improper equipment or environment) and key indicators (e.g., location, day, or provider credentials) to inform policy revision and prevention strategies. • Tools should include an efficient, streamlined reporting mechanism to limit tasks associated with reporting and improve participation. • Create opportunities for health care workers to voice concerns and participate in the design of processes and systems that improve workforce safety.
• Governance bodies • Senior leaders • Occupational safety and health leaders • Accreditors/regulators	Tactic 10h. Ensure that communication and accountability about the workforce safety plan, process and outcomes measures, and current status is transparent across the entire organization.
• Governance bodies • Senior leaders	Tactic 10i. Ensure that conventional, contingency, and crisis standards of care and practices relating to workforce safety are developed and ready for potential deployment across the continuum of care.

Recommendation 11. Assume accountability for physical and psychological safety and a healthy work environment that fosters the joy of the health care workforce. Organizational governance bodies must ensure that leaders in clinical care and operations across all care settings collaborate and are jointly accountable for the effectiveness of workforce safety programs.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders • Occupational safety and health leaders • Accreditors/regulators	Tactic 11a. Establish a safety system and ensure that key safety practices, including safe patient handling, ergonomics, falls, exposure, violence prevention, and safe sharps practices, are embedded into systems, workflows, practices, and care protocols.
• Senior leaders • Occupational safety and health leaders • Human resources leaders • Accreditors/regulators	Tactic 11b. Integrate workforce safety into job descriptions and management practices to role model and practice safety with huddles, rewards and recognition, storytelling, and rounding.
• Governance bodies • Senior leaders • Accreditors/regulators	Tactic 11c. Ensure the engagement of multidisciplinary personnel, including those in occupational health, infection prevention, human resources, security, loss prevention, legal, community services, and organizational development, as well as social scientists, industrial engineers, and infectious disease and human factors experts.
• Governance bodies • Senior leaders	Tactic 11d. Establish or reinforce safety management structures to include executives with key accountabilities, including high-risk departments (e.g., nursing and environmental services), occupational health, security, human resources, facilities design and maintenance, risk management, and others as appropriate.
• Governance bodies • Senior leaders • Human resources leaders • Wellness leaders • Educational foundations • Safety and quality organizations • Professional societies	Tactic 11e. Develop a robust strategy and programs to identify and address issues that impact workforce safety and wellness such as burnout, moral distress and injury, fatigue, psychological harm, and related causes (e.g., staffing and resource shortages, cognitive distraction and overload, use of electronic health records). Ensure that solutions address organizational resilience and provide support for the workforce.
• Governance bodies • Senior leaders	Tactic 11f. Support workplace safety through zero tolerance expectations and clear shared values (e.g., joy, respect, trust).

Recommendation 12. Develop, resource, and execute on priority programs that equitably foster and promote workforce safety. Governing bodies and senior leaders must establish and implement programs to prevent all workforce injuries. Special emphasis must be placed on the development of robust programs to prevent the injuries that are most prevalent and impactful, and programs that support psychological safety and joy in work.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders • Occupational safety and health leaders • Safety and quality leaders • Behavioral health leaders • Accreditors/regulators	Tactic 12a. Implement the following priority programs: • Safe patient handling: Review and implement guidance on safe patient handling. • Slips/trips/falls prevention: Review and implement guidance from National Institutes of Occupational Safety and Health. • Sharps and needlestick injuries • Exposures (pathogens, chemicals) • Violence prevention: Review and implement guidance related to current regulatory requirements for violence prevention in health care. • Psychological safety: Review and implement emerging science and practices related to improving psychological safety, joy in work, and reducing burnout.
• Governance bodies • Senior leaders • Occupational safety and health leaders • Safety and quality leaders • Wellness leaders • Accreditors/regulators	Tactic 12b. Promote worksite wellness behaviors through established programs.
• Governance bodies • Senior leaders • Accreditors/regulators	Tactic 12c. Adopt metrics and performance dashboards that are reflective of physical and psychological safety and joy in work (e.g., turnover and absentee rates, safety culture ratings, requests to reduce hours, safety culture index, staff suicide rates, likelihood to recommend organization).
• Governance bodies • Senior leaders • Behavioral health leaders • Wellness leaders • Accreditors/regulators	Tactic 12d. Develop comprehensive, responsive, and ongoing peer support programs to strengthen connections among health care professionals after adverse events involving patients or team members (e.g., debrief procedure following an incident or near miss of either patient or worker harm, including team member death; programs to support clinicians in the immediate and long-term aftermath of tragic or critical incidents; "post-vention" designated places of respite for staff to use after stressful incidents).
• Governance bodies • Senior leaders • Occupational safety and health leaders • Behavioral health leaders • Wellness leaders • Security personnel • Federal agencies • Accreditors/regulators	Tactic 12e. Ensure that every health care organization across the care continuum, including the home, has a detailed violence prevention program that follows a systems approach. Specifics might include: • Implement reporting of incidents that involve violence, including verbal and physical threats, disrespect, bullying, harassment, and incivility. Evaluate and determine contributing factors and develop action plans to mitigate occurrence and harm (e.g., medication, illness, behavioral health). • Explicitly define patient and/or visitor behaviors that require reporting and escalated behavior management. • Utilize visual indicators to alert staff and providers to patients with a history of aggressive or disruptive behavior toward health care workers.

Key Influencers	Implementation Tactics
	• Establish monitoring systems to self-assess, monitor, and evaluate the effectiveness of the organization's policy. • Reduce unsecured facility/department/unit access points. • Train health care workers to recognize cues for escalating behavior and in de-escalation tactics to help defuse a potentially violent situation. Encourage use of verbal and cognitive techniques and reasoning skills to redirect disruptive patient behavior while avoiding provocation. • Conduct proactive care planning that includes behavioral health.
• Safety and quality organizations • Professional societies • Federal agencies • Accreditors/regulators	Tactic 12f. Establish robust tools and processes for reporting and assessing workforce safety hazards and the overall impact on staff retention, satisfaction, and engagement, and evaluate opportunities for continuous improvement.

Workforce Safety Case Examples

- **Kaiser Permanente**

  https://about.kaiserpermanente.org/

  https://business.kaiserpermanente.org/thrive

  Kaiser Permanente is an integrated health care organization and one of the nation's largest not-for-profit health plans, providing high-quality, affordable health care services to 12.4 million members in 8 states and the District of Columbia. Its workforce of more than 23,000 physicians, 63,000 nurses, and 219,000 employees provides care at 39 hospitals and 714 medical offices, and through telehealth. Ensuring workforce safety is part of Kaiser Permanente's National Clinical Quality Strategy, with a goal of zero injuries. Monthly key performance indicators are shared widely with management, including quarterly presentations to the senior executive team and board of directors on the topics of leading and lagging indicators, trends, serious events, and root causes. Leading indicators include the Speaking Up Index, which measures employees' ability to speak up about hazards and errors; assessments on effectiveness of safety systems; the Workplace Safety Index; and the Culture of Health Index.

Workforce Safety Selected Resources

Resource	Description
Be Safe + Sound at Work: Find and Fix Hazards. US Department of Labor, Occupational Safety and Health Administration. https://www.osha.gov/safeandsound/docs/SHP_Find_Fix.pdf	Provides an overview of how to identify and address workplace hazards.
Culture of Safety Change Package: 2017 Update. Chicago: Health Research & Educational Trust; May 2017. https://patientcarelink.org/wp-content/uploads/2018/03/2017-safety_culture_change_package.pdf	Provides steps to integrate worker and patient safety strategies and actions.

Resource	Description
Guidelines for Preventing Workplace Violence for Healthcare and Social Service Workers. US Department of Labor, Occupational Safety and Health Administration. https://www.osha.gov/Publications/osha3148.pdf	Provides a general overview of worker rights under the Occupational Safety and Health Act.
Perlo J, Balik B, Swensen S, Kabcenell A, Landsman J, Feeley D. *IHI Framework for Improving Joy in Work*. IHI White Paper. Cambridge, MA: Institute for Healthcare Improvement; 2017. http://www.ihi.org/resources/Pages/IHIWhitePapers/Framework-Improving-Joy-in-Work.aspx	Provides a guide for health care organizations to engage in a participative process where leaders ask colleagues at all levels of the organization, "What matters to you?" — enabling them to better understand the barriers to joy in work and co-create meaningful, high-leverage strategies to address these issues.
Safe Patient Handling and Mobility/Falls Implementation Tools. Tampa Research and Education Foundation, Inc. http://www.tampavaref.org/safe-patient-handling/implementation-tools.htm	Provides a collection of safe patient handling and mobility/falls implementation tools.
Bell J, Collins JW, Dalsey E, Sublet V. *Slip, Trip, and Fall Prevention for Healthcare Workers*. Washington, DC: Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health; December 2010. https://www.cdc.gov/niosh/docs/2011-123/pdfs/2011-123.pdf	Provides an overview of the top 10 slip, trip, and fall hazards in health care facilities.
Lucian Leape Institute. *Through the Eyes of the Workforce: Creating Joy, Meaning, and Safer Health Care*. Boston: National Patient Safety Foundation; 2013. http://www.ihi.org/resources/Pages/Publications/Through-the-Eyes-of-the-Workforce-Creating-Joy-Meaning-and-Safer-Health-Care.aspx	Provides an overview of the state of health care as a workplace, highlights common vulnerabilities in health care organizations, and outlines what a healthy and safe workplace would look like.

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Learning System

Aim: Health care organizations and other stakeholders across the care continuum implement reliable learning systems. These learning systems actively engage with local, regional, state, or national learning systems to develop a national learning network of existing and future learning systems.

The Role of a Learning System

Learning systems are established organizational processes that integrate internal and external information, including patient and employee feedback and best practices, while leveraging technology to enable widespread learning and the implementation of changes to improve practices and promote safety.

Practice

Evidence

Data

Research

Systematically gather and create evidence

Apply the most promising evidence to improve care

Adapted from AHRQ

Recommendations

Commit to continuous learning within organizations by creating and strengthening internal processes that promote transparency and reliability, and through sharing as part of an integrated learning system and networks.

- Recommendation 13. Facilitate both intra- and inter-organizational learning.
- Recommendation 14. Accelerate the development of the best possible safety learning networks.
- Recommendation 15. Initiate and develop systems to facilitate interprofessional education and training on safety.
- Recommendation 16. Develop shared goals for safety across the continuum of care.
- Recommendation 17. Expedite industry-wide coordination, collaboration, and cooperation on patient safety.

Recommendation 13. Facilitate both intra- and inter-organizational learning. All health care organizations must take steps to become collaborative learning organizations by using high-reliability principles, ensuring robust learning feedback loops, and engaging with established local, regional, state, or national learning systems.

Key Influencers	Implementation Tactics
• Governance bodies • Senior leaders • Educators • Accreditors/regulators	Tactic 13a. Ensure that the elimination of risk and harm and sustained levels of safety over time are ultimate strategic goals of the learning system.
• Governance bodies • Senior leaders • Safety and quality organizations • Safety and quality leaders • Accreditors/regulators	Tactic 13b. Develop and implement processes to systematically learn from safety events, including input from patients, families, care partners, and health care professionals at the point of care. Integrate lessons learned into the process of setting goals and priorities for interventions to improve patient safety.
• Governance bodies • Senior leaders • Educators • Safety and quality leaders • Safety and quality organizations	Tactic 13c. Ensure that education about the importance and components of effective learning systems, including the appropriate use of data, occurs within and across organizations. Develop systems to engage all staff in continuous learning and use of data. Ensure that staff, health care professionals, managers, and leaders are trained and assessed on the principles and practices of a learning system.
• Governance bodies • Senior leaders • Safety and quality organizations • Accreditors/regulators	Tactic 13d. Use a systematic and systems-based approach to process improvement. This includes: • Developing robust, timely mechanisms for data collection and analytics • Developing and refining systems to report and analyze both risks and errors • Creating the necessary infrastructure to support continuous learning • Supporting and encouraging health care professional engagement with patients and peers

Key Influencers	Implementation Tactics
	• Supporting professional development of risk-reducing competencies
• Governance bodies • Senior leaders • Safety and quality leaders • Accreditors/regulators	Tactic 13e. Ensure that organizations link efficiently and effectively to promote inter-organizational learning throughout the organization and in real time where feasible.

Recommendation 14. Accelerate the development of the best possible safety learning networks. Leaders of existing safety learning networks must engage in the development of a network of networks to identify and increase adoption of best practices so that, working together, all can become the most effective learning networks possible.

Key Influencers	Implementation Tactics
• Safety and quality leaders • Safety and quality organizations • Learning network leaders	Tactic 14a. Develop a national network of existing safety learning networks. Start by inviting leaders of safety learning networks to join with the aim of accelerating the pace of improvement. Through collaboration, existing networks can identify and adopt best practices for learning networks, use data analytics to identify opportunities for improvement, learn from variation across networks to improve all, and support the growth and development of network leaders and infrastructure.
• Learning network leaders • Federal agencies • Safety and quality organizations	Tactic 14b. Spread greater awareness of federal and state legal protections to facilitate and accelerate sharing learning about patient safety that can be applied throughout the health care system.
• Learning network leaders • Senior leaders • Safety and quality leaders • Patients, families, and care partners	Tactic 14c. Solicit feedback from patients, families, and care partners, including people in higher risk communities and underserved populations, about what works and what needs improvement.
• Policymakers • Payors • Federal agencies • Accreditors/regulators	Tactic 14d. Work to align incentives (e.g., payment, regulatory, recognition) to enable participation in learning networks.

Recommendation 15. Initiate and develop systems to facilitate interprofessional education and training on safety. Academic institutions, professional educators, and leading patient safety and quality organizations must collaborate to better understand how to improve safety education and training for clinical and administrative staff. These organizations must identify and share openly all best practices on the creation, dissemination, and assessment of safety education and training methods and materials.

Key Influencers	Implementation Tactics
• Educational organizations • Safety and quality organizations	Tactic 15a. Create new multidisciplinary learning networks to better understand how to improve safety education and training for clinical and administrative staff. Identify and share best practices on the creation, dissemination, and assessment of education and training methods and materials.
• Educational foundations • Accreditors/regulators	Tactic 15b. Create standards for safety education for all types of health care professionals and for relevant job descriptions.
• Licensing and certification bodies	Tactic 15c. Create and evolve ongoing safety education and certification requirements for license renewal for all types of health care professionals.
• Licensing and certification bodies • Safety and quality organizations	Tactic 15d. Evaluate competencies for patient safety.

Recommendation 16. Develop shared goals for safety across the continuum of care. Leaders of health care organizations, employers, and policymakers must collaborate with leaders of safety learning networks to adopt national-level goals to eliminate specific types of harm across the continuum of care, ultimately advancing the development and dissemination of methodologies and processes to improve safety.

Key Influencers	Implementation Tactics
• Federal agencies • Safety and quality organizations • Professional associations and societies • Senior leaders • Safety and quality organizations • National Steering Committee for Patient Safety	Tactic 16a. Establish a national expert group to accomplish the following work: • Identify and prioritize specific safety issues for improvement, based on data and information from the providers of care • Establish goals • Identify data for measurement • Determine a means for measurement • Set time-bound targets for achieving them
• Federal agencies • Safety and quality organizations • Professional associations and societies • Senior leaders • National Steering Committee for Patient Safety	Tactic 16b. Ensure that this expert group works with the network of networks to share identified goals and partners with existing learning networks in working toward those goals. (See Recommendation 14)

Recommendation 17. Expedite industry-wide coordination, collaboration, and cooperation on safety. Modelling leaders in civil aviation, health care leaders representing all stakeholders must actively develop a public-private partnership to use the power of data sharing and cooperative learning to identify and solve the most urgent and emerging patient safety problems.

Key Influencers	Implementation Tactics
• US Congress • Federal agencies • Federally funded research and development centers (e.g., MITRE) • Advocacy organizations	Tactic 17a. Identify existing partnerships and explore funding options from governmental and non-governmental sources to convene and conduct activities. Model efforts after other industries that have successful public-private partnerships related to safety (e.g., civil aviation, nuclear power).
• Advocacy organizations	Tactic 17b. Seek out and include patient, family, care partner, and community perspectives to inform and guide all activities.

Learning System Case Examples

- **Children's Hospitals' Solutions for Patient Safety Network**

  https://www.solutionsforpatientsafety.org

  With an international network of more than 140 participating children's hospitals, the Solutions for Patient Safety (SPS) Network is built on "the fundamental belief that by sharing successes and failures transparently and learning from one another, children's hospitals can achieve their goals more effectively and quickly than working alone." Participating hospitals agree not to compete on safety or to use safety data for competitive purposes. In addition, participating hospitals are asked to follow an "all teach, all learn" philosophy to share and learn from others and work on developing a culture of safety in their organizations (Lyren et al., 2018; SPS website). Looking at results in the SPS Network, "in 2017, SPS reported a 9%–71% reduction in eight harm conditions by an initial cohort of 33 hospitals. SPS estimates that more than 9,000 children have been spared harm since 2012, with $148.5 million in health care spending avoided" (Lyren et al., 2018).

- **Partnership for Patients**

  https://innovation.cms.gov/innovation-models/partnership-for-patients

  The Centers for Medicare & Medicaid Services (CMS) implemented the Partnership for Patients (PfP) model in 2011, one of the first models tested using section 1115A of the Social Security Act. The PfP was a quality improvement network designed to reduce preventable hospital-acquired conditions (HACs) by supporting more than 3,700 acute care hospitals to achieve more than a 40 percent reduction in HACs and a 20 percent reduction in readmissions. While patients and private and federal partners worked to align policy and action toward the goal, government contractors called Hospital Engagement Networks (HENs) provided direct technical assistance to acute care hospitals in implementing evidence-based best practices of high-performing health care systems. Representing the next phase in the evolution of highly coordinated patient safety

efforts, the HENs integrated with the Quality Improvement Network–Quality Improvement Organization (QIN–QIO) program in 2016 to maximize the strengths of the QIO program while continuing to expand national reductions in patient harm and 30-day readmissions. Built on the collective momentum of the HENs and QIOs, CMS elected to refer to the contractors awarded as Hospital Improvement Innovation Networks (HIINs). CMS, through the 16 HIINs, further instilled best practices in harm reduction in more than 4,000 US acute care hospitals. The HIINs regularly engaged with hospitals, providers, and the broader caregiver community to implement evidence-based practices in harm reduction to improve care quality for Medicare beneficiaries.

- **Patient Safety Organization Program**

  https://pso.ahrq.gov

  The Agency for Healthcare Research and Quality administers the Patient Safety Organization (PSO) certification and listing process. PSOs were created as part of the Patient Safety and Quality Improvement Act of 2005, which encourages individual providers and health care organizations to voluntarily report quality and patient safety information to PSOs confidentially and without fear of legal discovery. One survey found that hospitals working with PSOs are able to prevent future patient safety events, and nearly two-thirds of surveyed hospitals working with PSOs say that the PSO's analysis resulted in measurable improvements in patient safety. Using this process, PSOs can help health care professionals learn from quality and patient safety concerns to prevent similar problems from happening in the future.

- **Pennsylvania Patient Safety Authority**

  http://patientsafety.pa.gov

  The Patient Safety Authority is an independent state agency in Pennsylvania that manages the largest mandatory patient safety reporting database in the US and works directly with health care facilities to improve care. Created by the Medical Care Availability and Reduction of Error Act in 2002, its mission is to improve the quality of health care in Pennsylvania by collecting and analyzing patient safety information; advising facilities through publication, education, and collaboration; and issuing recommendations for improvement.

Recommendation 14 seeks to create a national learning action network of existing and future learning systems, a novel undertaking not yet pursued on a large scale. There are, however, existing learning initiatives from which to draw guidance for such an effort, such as the following examples.

- **National Center for Interprofessional Practice and Education**

  https://nexusipe.org

  Established as a public-private partnership in 2012, the National Center for Interprofessional Practice and Education provides the leadership, evidence, and resources needed to guide the nation on interprofessional education and collaborative practice. The National Center Nexus aims

to challenge tradition and create a deeply connected, integrated learning system that will transform education and care together. Through the Nexus, both health care education and health care delivery are redesigned simultaneously to be better integrated and more interprofessional while demonstrating outcomes.

- **Learning Healthcare System Networks Project**
  https://www.pcori.org/research-results/2017/contract-advancement-pcornet-infrastructure-development-pilot-people-centered
  PCORnet awarded funding in 2017 to Dr. Peter Margolis at Cincinnati Children's Hospital Medical Center (CCHMC) and the Learning Healthcare System Networks Project (previously called the People-Centered Communities). Work is underway to develop four pilots based on CCHMC's successful learning network model that supports the design, development, and implementation of learning and data networks. The project will provide funding and technical assistance for pilot patient-powered research networks to plan and implement programs that pursue the Learning Healthcare System model as a central strategy. It will also help create a collaborative learning community designed to assist networks interested in evolving toward the Learning Healthcare System vision.

Recommendation 17 seeks to expedite industry-wide coordination, collaboration, and cooperation on patient safety. High-risk industries outside of health care that have made significant inroads in creating effective learning networks may be helpful to consider, such as the following examples.

- **Institute of Nuclear Power Operations**
  http://www.inpo.info/AboutUs.htm
  https://www.osti.gov/biblio/5931167
  The Institute of Nuclear Power Operations (INPO) was established in 1979 by nuclear facilities in the US following a serious accident at the Three Mile Island nuclear power plant. INPO identifies generic safety problems and precursors by reviewing and analyzing nuclear power plant operating experiences and communicates this information to its members to help reduce the possibility of similar occurrences at other plants. INPO also conducts evaluations of nuclear power plant operations to aid in identifying areas in which improvements can be made.

- **Aviation Safety Information Analysis and Sharing**
  https://www.mitre.org/publications/project-stories/government-and-industry-collaborate-to-improve-safety-through-data-sharing
  https://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=18195
  To ensure civil aviation safety, the Aviation Safety Information Analysis and Sharing (ASIAS) program works closely with the Commercial Aviation Safety Team and the General Aviation Joint Steering Committee to monitor known risks, evaluate the effectiveness of deployed mitigations,

and detect emerging risks. ASIAS brings together government agencies, aviation stakeholder organizations, aircraft manufacturers, and dozens of airlines and corporate operators. It also connects approximately 185 data and information sources across government and industry, including voluntarily provided safety data. Once analyzed, "the aggregated data helps to proactively identify safety trends and assess the impact of changes in the aviation operating environment."

Learning System Selected Resources

Resource	Description
ECRI Institute. Getting the most out of root-cause analyses. *Healthcare Risk Control.* March 16, 2018. https://www.ecri.org/components/HRC/Pages/RiskQual23.aspx	Provides an overview of how best to conduct reactive analyses, such as root cause analyses, to improve safety and help prevent future events.
Sentinel Event Alert 60: Developing a reporting culture: Learning from close calls and hazardous conditions. The Joint Commission; December 2018. https://www.jointcommission.org/resources/patient-safety-topics/sentinel-event/sentinel-event-alert-newsletters/sentinel-event-alert-60-developing-a-reporting-culture-learning-from-close-calls-and-hazardous-condi/	Provides guidance on how to establish a psychologically safe environment that eliminates fear of negative consequences for reporting mistakes, and actively encourages learning from "close calls."
Disch J, Kilo CM, Passiment M, Wagner R, Weiss KB. *The Role of Clinical Learning Environments in Preparing New Clinicians to Engage in Patient Safety.* National Collaborative for Improving the Clinical Learning Environment; 2017. https://storage.googleapis.com/wzukusers/user-27661272/documents/5c51cdfce7bf7LAUkpwQ/9736%20NCICLE%20Book%20layout%20FINAL.pdf	Provides guidance to stimulate enhanced engagement of new clinicians in efforts to improve patient safety.
Britto MT, Fuller SC, Kaplan HC, et al. Using a network organisational architecture to support the development of Learning Healthcare Systems. *BMJ Quality and Safety.* 2018;27(11):937-946. http://dx.doi.org/10.1136/bmjqs-2017-007219	Provides an overview of the development and implementation of a network organizational model for learning health care networks.
Lyren A, Coffey M, Shepherd M, et al. We will not compete on safety: How children's hospitals have come together to hasten harm reduction. *Joint Commission Journal on Quality and Patient Safety.* 2018;44:377-388. https://www.jointcommissionjournal.com/article/S1553-7250(18)30203-4/pdf	Provides an overview and impact of a collaborative of children's hospitals in the United States and Canada working together to eliminate patient and workforce harm across hospitals.

Learning System Additional Reading

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- ECRI Institute. Event reporting and response. *Healthcare Risk Control*. January 11, 2016. https://www.ecri.org/components/HRC/Pages/IncRep1.aspx

- ECRI Institute. PSO Deep Dive: Safe Ambulatory Care. https://www.ecri.org/landing-ambulatory-care-deep-dive

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- "Improving Physician Office Reporting: A Collaborative Approach to Learning about Issues in Ambulatory" (webinar). ECRI Institute; November 2017. https://www.ecri.org/components/PSOCore/Pages/PSOWebinar_111617_Improving_Physician_Office_Event_Reporting.aspx

- *Making Health Care Safer II*. Agency for Healthcare Research and Quality; 2018. https://www.ahrq.gov/research/findings/evidence-based-reports/ptsafetyuptp.html

- *National Action Plan for Adverse Drug Event Prevention*. Washington, DC: US Department of Health and Human Services; 2014. https://psnet.ahrq.gov/issue/national-action-plan-adverse-drug-event-prevention

- *National Action Plan to Prevent Health Care-Associated Infections: Roadmap to Elimination*. Washington, DC: US Department of Health and Human Services; 2013. https://www.healthypeople.gov/2020/tools-resources/evidence-based-resource/national-action-plan-prevent-health-care-associated

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- Partnership for Health IT Patient Safety. ECRI Institute. http://www.ecri.org/solutions/hit-partnership

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- "VA Selects 18 Medical Facilities to Start 'High Reliability' Journey." US Department of Veterans Affairs. March 7, 2019. https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5213

Appendix A: National Steering Committee for Patient Safety Subcommittee Members

Culture, Leadership, and Governance Subcommittee

Co-Chairs

- **Deborah J. Bowen, FACHE, CAE,** President and Chief Executive Officer, American College of Healthcare Executives
- **Sam Watson, MSA, MT (ASCP), CPPS,** Senior Vice President, Patient Safety and Quality, Michigan Health & Hospital Association

Members

- **Paul W. Abramowitz, PharmD, ScD (Hon), FASHP,** Chief Executive Officer, American Society of Health-System Pharmacists
- **Jay Bhatt, DO, MPH, MPA, FACP,** Former President, Health Research & Educational Trust; Senior Vice President and Chief Medical Officer, American Hospital Association
- **Catherine Carruth, CAE,** Executive Director, American Society for Health Care Human Resources Administration
- **Robert Connors, MD,** President, Helen DeVos Children's Hospital (Retired)
- **Paul L. Epner, MBA, MEd,** Chief Executive Officer and Co-Founder, Society to Improve Diagnosis in Medicine
- **Ernest J. Grant, PhD, RN, FAAN,** President, American Nurses Association
- **Ana Pujols McKee, MD,** Executive Vice President and Chief Medical Officer, The Joint Commission
- **Chris Power,** Chief Executive Officer, Canadian Patient Safety Institute
- **Marty B. Scott MD, MBA,** Senior Vice President, Chief Quality and Patient Safety Officer, Grady Health System
- **Sara Singer, MBA, PhD,** Professor of Medicine, Stanford University School of Medicine, and Professor of Organizational Behavior (by courtesy), Stanford Graduate School of Business
- **Beth Daley Ullem,** President, Quality and Safety First; Faculty, Institute for Healthcare Improvement
- **Gary Yates, MD,** Partner, Strategic Consulting, Press Ganey Associates

Patient and Family Engagement Subcommittee

Co-Chairs

- **Susan Edgman-Levitan, PA,** Executive Director, John D. Stoeckle Center for Primary Care Innovation, Massachusetts General Hospital
- **Steve Littlejohn, MA, MBA,** Patient and Family Partner

Members

- **Sigall K. Bell, MD,** Associate Professor of Medicine, Harvard Medical School
- **Kate Conrad, FACHE,** Vice President, Delivery System Transformation, Children's Hospital Association
- **Kathy Day, RN,** Patient Safety Advocate, Patient Safety Action Network
- **Lisa Gersema, PharmD, MHA, FASHP,** Residency Program Director, United Hospital
- **Helen Haskell, MA,** President, Mothers Against Medical Error
- **Martin J. Hatlie, JD,** President and CEO, Project Patient Care
- **Daniel Hyman, MD, MMM,** Chief Medical and Patient Safety Officer, Children's Hospital Colorado
- **Susan C. Reinhard, RN, PhD, FAAN,** Senior Vice President and Director, AARP Public Policy Institute
- **Margie Shofer, BSN, MBA,** Director, Patient Safety Program, Center for Quality Improvement and Patient Safety, Agency for Healthcare Research and Quality
- **Deborah Washington, RN, PhD,** Director of Diversity for Nursing and Patient Care Services, Massachusetts General Hospital
- **Donna L. Washington, MD, MPH, FACP,** Director, VHA Office of Health Equity/QUERI National Partnered Evaluation Initiative; Director of Health Services Research, VA Greater Los Angeles Healthcare System Department of Medicine
- **Yanling Yu, PhD,** Co-Founder and President, Washington Advocates for Patient Safety

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- **Mary Beth Kingston, MSN, RN, NEA-BC,** Chief Nursing Officer, Advocate Aurora Health

Members

- **Marie T. Brown, MD, MACP,** Professor, Rush University
- **Paul W. Bush, PharmD, MBA, BCPS, FASHP,** Vice President, Global Resource Development and Consulting, American Society of Health-System Pharmacists
- **Stan Cobb,** AVP, Employee Safety and Workers' Compensation, HCA Healthcare
- **Michael J. Hodgson, MD, MPH,** Chief Medical Officer and Director, Occupational Medicine and Nursing, Directorate of Technical Support and Emergency Management, Occupational Safety and Health Administration
- **Linda K. Kenney,** Director of Peer Support Programs, Betsy Lehman Center for Patient Safety
- **Carol Keohane, MS, RN,** Vice President, Quality, Safety and Experience, Kaiser Permanente
- **Kendra McMillan, MPH, RN,** Senior Policy Advisor, American Nurses Association

- **Leslie Porth, PhD, RN,** Senior Vice President of Strategic Quality Initiatives, Missouri Hospital Association
- **Linsey M. Steege, PhD,** Associate Professor and Mary W. and Carl E. Gulbrandsen Chair in Health Informatics and Systems Innovation, School of Nursing, University of Wisconsin–Madison

Learning System Subcommittee

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- **Stephen E. Muething, MD,** Chief Quality Officer, Cincinnati Children's Hospital Medical Center; Strategic Advisor, Children's Hospitals' Solutions for Patient Safety

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- **Teri Chenot, EdD, MS, MEd, MSN, RN, CCE(ACBE), FNAP, FAAN,** Associate Professor Keigwin of Nursing; Department Chair, Healthcare Quality and Safety Programs; Director, QSEN Institute Regional Center at Jacksonville University
- **Paula Distabile, RN, MSN, JD,** Health Scientist Administrator, Agency for Healthcare Research and Quality
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- **Thomas Granatir,** Senior Vice President, Policy and External Relations, American Board of Medical Specialties
- **John James, PhD,** Founder and CEO, Patient Safety America
- **Heidi King, MS, FACHE, BCC, CMC, CPPS,** Director, Department of Defense Patient Safety Program
- **Helen Macfie, PharmD, FABC,** System Chief Transformation Officer, MemorialCare; Executive Administrator, MemorialCare Clinically Integrated Network
- **David Mayer, MD,** Executive Director, MedStar Institute for Quality and Safety; CEO, Patient Safety Movement Foundation
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- **William R. Scharf, MD,** Director, Corporate Patient Safety, AdventHealth

- **Angela A. Shippy, MD,** SVP, Chief Medical and Quality Officer, Memorial Hermann Health System
- **Kevin B. Weiss, MD, MPH,** Chief Sponsoring Institution and Clinical Learning Environment Officer, Accreditation Council for Graduate Medical Education
- **Ronald Wyatt, MD, MHA,** Vice President and Patient Safety Officer, MCIC Vermont, LLC

Measurement Workgroup

Chair

- **Jeffrey Brady, MD, MPH,** Director, Center for Quality Improvement and Patient Safety, Agency for Healthcare Research and Quality

Members

- **Susan Edgman-Levitan, PA,** Executive Director, John D. Stoeckle Center for Primary Care Innovation, Massachusetts General Hospital
- **Paul L. Epner, MBA, MEd,** Chief Executive Officer and Co-Founder, Society to Improve Diagnosis in Medicine
- **Regina M. Hoffman, MBA, RN,** Executive Director, Pennsylvania Patient Safety Authority
- **Mary Beth Kingston, MSN, RN, NEA-BC,** Chief Nursing Officer, Advocate Aurora Health
- **Scott K. Winiecki, MD,** Supervisory Medical Officer, Safe Use Initiative, Center for Drug Evaluation and Research, US Food and Drug Administration

Appendix B: Glossary of Terms

Patient safety terms used in the National Action Plan and Implementation Resource Guide are defined below.

- **Adverse event:** An incident that results in harm to a patient that may be physical, social, or psychological; harm incident.
- **Adverse drug event:** An adverse event involving medication use.
- **Care partner:** A person, often a family member or friend, who takes an active role in the care of a patient.
- **Co-design of care:** Active partnering between patients and care providers to reshape care delivery for improved quality, safety, and person-centeredness.
- **Co-production of care:** A collaborative relationship between patients and care providers in which patients are considered experts in their own circumstances rather than passive recipients of care.[5]
- **Error:** Failure to carry out a planned action as intended or application of an incorrect plan. An error is an act of commission (doing something wrong) or omission (failing to do the right thing) that leads to an undesirable outcome or the potential for such an outcome.
- **Governance body:** The board of directors, or in health care organizations without a board, the governing body that convenes to make strategic and operational decisions for the organization.
- **Harm:** Physical or psychological injury, inconvenience, monetary loss, or social impact suffered by a person.
- **Harm incident:** An incident that resulted in harm to a patient.
- **Healthcare-associated harm:** Harm that arises from or is associated with plans or actions taken during the provision of health care rather than due to an underlying disease or injury.
- **Health care organization:** An entity that delivers health care services such as a hospital, health system, free-standing surgical center, clinic, or other ambulatory care setting.
- **Health care disparity:** Racial or ethnic differences in the quality of health care that are not due to access-related factors or clinical needs, preferences, and appropriateness of intervention.[6]
- **Health disparity and inequity:** Health disparity is defined as the difference in health outcomes between groups within a population. While the terms may seem interchangeable, they are different. "Health disparity" denotes differences, whether unjust or not. "Health inequity," on the other hand, denotes differences in health outcomes that are systematic, avoidable, and unjust.[7]
- **Health equity:** To define health equity, we turn to the work of Professor Margaret Whitehead, head of the WHO Collaborating Centre for Policy Research on the Social Determinants of Health. Most countries use the term "inequalities" to refer to socioeconomic differences in health — that

is, health differences "which are unnecessary and avoidable but, in addition, are also considered unfair and unjust." Whitehead goes on to state that, when there is equity in health, "ideally everyone should have a fair opportunity to attain their full health potential and, more pragmatically, no one should be disadvantaged from achieving this potential, if it can be avoided."[8] This is the definition IHI uses to guide its work on improving health equity.

- **Just culture:** An organizational climate in which "both the organization and its people are held accountable while focusing on risk, systems design, human behavior, and patient safety… [balancing] the need for an open and honest reporting environment with the end of a quality learning environment and culture."[9]

- **Leader:** Any individual in a leadership role within an organization, regardless of job title.

- **Leadership:** The action of leading a group of people or an organization.

- **Learning network:** A regional or national organization that helps form local learning systems into a trusted social network designed to achieve a common goal. Together, they relentlessly improve in a continuous cycle by sharing data and information via multiple modes and converting the shared insights into actionable knowledge through collaborative improvement efforts.

- **Learning system:** A learning health system integrates internal and external information, including safety data, best practices, and patient and employee feedback while leveraging technology to generate change ideas, test those changes, and either implement or amend the changes as necessary to improve the safety of both patients and employees. Key characteristics of a learning health system include a pioneering spirit, leadership engagement and commitment to learning and improvement, inclusion of patients and frontline employees in the learning and improvement process, a culture that supports transparency and process change to improve safety, and active engagement in a regional or national learning system if one is available.

- **Patient:** A person receiving care within the health care system.

- **Person- and family-centered care:** Putting people and communities, not diseases, at the center of health systems, and empowering people to take charge of their own health rather than being passive recipients of services.[10]

- **Preventable harm:** A harm that is accepted by the relevant community as being avoidable in the particular set of circumstances that occurred.

- **Senior leader:** An individual within an organization who has decision-making responsibility for strategy and operations at the organizational level, often with a C-suite title (e.g., CEO, executive leader, clinical or administrative leaders, practice owner).

- **Total systems safety:** Safety principles that are systematic and uniformly applied (across the total process).[11]

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