

2023-08-21 Board Quality Committee Meeting

(Revised on 08/14/2023 at 10:30 a.m.)

Monday, August 21, 2023 at 12:00 p.m. Tahoe Forest Hospital - Eskridge Conference Room 10121 Pine Avenue, Truckee, CA 96161



REVISED Meeting Book - 2023-08-21 Board Quality Committee Meeting

AGENDA

2023-08-21 Board Quality Committee_REVISED Agenda.pdf

ITEMS 1-5: See Agenda

6. APPROVAL OF MINUTES

2023-02-07 Board Quality Committee_DRAFT Minutes.pdf

7. ITEMS FOR COMMITTEE DISCUSSION AND/OR RECOMMENDATION

- 7.1. Informational Reports
 - 7.1.1. Patient & Family Centered Care

7.1.1.1. PFAC Summary for Quality Board August 2023.pdf

7.1.2. Patient Safety

7.1.2.1. BETA HEART Domain Update 07272023.pdf

7.2. Safety First

No related materials.

- 7.3. Care Compare Report July 2023.pdf
- 7.4. Future CEO Incentive Compensation Quality_Service Metrics.pdf
- 7.5. Leading_a_Culture_of_Safety-A_Blueprint_for_Success.pdf
- 7.6. FrameworkSafeReliableEffectiveCareWhitePaper 2017.pdf

7.7. Patient Experience No related materials.



QUALITY COMMITTEE AGENDA

(Revised Agenda posted on 08/14/2023 at 10:15 a.m.)

Monday, August 21, 2023 at 12:00 p.m. Eskridge Conference Room – Tahoe Forest Hospital 10121 Pine Avenue, Truckee, CA 96161

1. CALL TO ORDER

2. ROLL CALL Michael McGarry, Chair; Robert Barnett, Board Member

3. CLEAR THE AGENDA/ITEMS NOT ON THE POSTED AGENDA

4. INPUT – AUDIENCE

This is an opportunity for members of the public to address the Committee on items which are not on the agenda. Please state your name for the record. Comments are limited to three minutes. Written comments should be submitted to the Board Clerk 24 hours prior to the meeting to allow for distribution. Under Government Code Section 54954.2 – Brown Act, the Committee cannot take action on any item not on the agenda. The Committee may choose to acknowledge the comment or, where appropriate, briefly answer a question, refer the matter to staff, or set the item for discussion at a future meeting.

5. CLOSED SESSION

5.1. Hearing (Health & Safety Code § 32155)

Subject Matter: Case Review Number of items: One (1)

5.2. Approval of Closed Session Minutes 5.2.1. 02/07/2023 Closed Session Board Quality Committee

6. APPROVAL OF MINUTES OF: 02/07/2023 ATTACHMENT

7. ITEMS FOR COMMITTEE DISCUSSION AND/OR RECOMMENDATION

7.1. Informational Reports

7.1.1. Patient & Family Centered Care

7.1.2. Patient Safety

7.2. Safety First

- **7.4. Development of Quality Metric for future CEO Incentive Compensation Criteria**...... ATTACHMENT Quality Committee will discuss development of potential quality metrics for consideration in future CEO Incentive Compensation Criteria.

American College of Healthcare Executives and IHI/NPSF Lucian Leape Institute. *Leading a Culture of Safety: A Blueprint for Success*. Boston, MA (2017) Downloaded on 3/9/22 from https://www.ihi.org/resources/Pages/Publications/Leading-a-Culture-of-Safety-A-Blueprint-for-Success.aspx

7.6. Board Quality Education ATTACHMENT

Quality Committee will review the following article:

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

7.7. Patient Experience

A patient will share their health system experience with the Quality Committee.

8. REVIEW FOLLOW UP ITEMS / BOARD MEETING RECOMMENDATIONS

9. NEXT MEETING DATE

The next committee date and time will be confirmed.

10. ADJOURN

*Denotes material (or a portion thereof) may be distributed later.

Note: It is the policy of Tahoe Forest Hospital District to not discriminate in admissions, provisions of services, hiring, training and employment practices on the basis of color, national origin, sex, religion, age or disability including AIDS and related conditions. Equal Opportunity Employer. The telephonic meeting location is accessible to people with disabilities. Every reasonable effort will be made to accommodate participation of the disabled in all of the District's public meetings. If particular accommodations for the disabled are needed or a reasonable modification of the teleconference procedures are necessary (i.e., disability-related aids or other services), please contact the Executive Assistant at 582-3481 at least 24 hours in advance of the meeting.



QUALITY COMMITTEE DRAFT MINUTES

Tuesday, February 7, 2023 at 12:00 p.m.

Pursuant to Assembly Bill 361, the Board Quality Committee meeting for February 7, 2023 will be conducted telephonically through Zoom. Please be advised that pursuant to legislation and to ensure the health and safety of the public by limiting human contact that could spread the COVID-19 virus, the Eskridge Conference Room will not be open for the meeting. Committee Members will be participating telephonically and will not be physically present in the Eskridge Conference Room.

1. CALL TO ORDER

Meeting was called to order at 12:00 p.m.

2. ROLL CALL

Board: Michael McGarry, Chair; Robert Barnett, Board Member Staff in attendance: Harry Weis, President and Chief Executive Officer; Louis Ward, Chief Operating Officer; Jan Iida, Chief Nursing Officer; Janet Van Gelder, Director of Quality and Regulations; Dorothy Piper, Director of Medical Staff Services; Theresa Crowe, Risk Manager; Dr. Annamieka Conway,

Medical Director of Quality

3. CLEAR THE AGENDA/ITEMS NOT ON THE POSTED AGENDA

No changes were made to the agenda.

4. INPUT – AUDIENCE

No changes were made to the agenda.

5. APPROVAL OF MINUTES OF: 11/03/2022

Director Barnett moved to approve the Board Quality Committee minutes of November 3, 2022, seconded by Director McGarry.

Open Session recessed at 12:05 p.m.

6. CLOSED SESSION

6.1. Hearing (Health & Safety Code § 32155)

Subject Matter: Case Review Number of items: One (1) Discussion was held on a privileged item.

Open Session reconvened at 12:43 p.m.

7. INFORMATIONAL REPORTS

7.1.1. Patient & Family Advisory Council (PFAC) Update

No discussion was held.

7.1.2. BETA HEART Program Progress Report No discussion was held.

8. ITEMS FOR COMMITTEE DISCUSSION AND/OR RECOMMENDATION

8.1. Safety First

Janet Van Gelder, Director of Quality and Regulations, provided safety first on slips and falls with current winter ice conditions. Director of Quality and Regulations reviewed the efforts by the Facilities department such as providing sand buckets at all entrances.

8.2. Policy Review

8.2.1. Quality Assessment/Performance Improvement (QA/PI) Plan, AQPI-05

Director of Quality and Regulations reviewed changes to the policy. Quality Committee discussed item two under priorities regarding COVID-19. It will stay in the policy for the next year and removed at next year's review.

Director of Quality and Regulations had analyst submit a request for real time quality software.

8.2.2. Available CAH Services, TFH & IVCH, AGOV-06

Director of Quality and Regulations reviewed changes to the policy.

CEO title will need to be updated prior to going to the board for approval.

Policy will be approved by the board annually.

8.3. Care Compare Quality Metrics

Director of Quality and Regulations reviewed Care Compare Quality metrics plans for improvement. Age of the data varies and is outdated. It will take two years for poor scores to drop off.

Items highlighted white are above benchmark. Those highlighted red are performing below benchmark.

8.4. Leading a Culture of Safety

Quality Committee discussed the key question about our organization's capabilities and processes related to establishing a compelling vision for safety, including foundational and sustaining strategies from:

American College of Healthcare Executives and IHI/NPSF Lucian Leape Institute. *Leading a Culture of Safety: A Blueprint for Success*. Boston, MA (2017) Downloaded on 3/9/22 from https://www.ihi.org/resources/Pages/Publications/Leading-a-Culture-of-Safety-A-Blueprint-for-Success.aspx

Quality Committee discussed Value Trust, Respect and Inclusion section.

COO noted the organization is currently participating in a Justice Equity Diversity and Inclusion (JEDI) training. There are 10 staff members participating in the training, including Dr. Mwero.

8.5. Board Quality Education

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

Article will be deferred to the May Board Quality Committee.

9. REVIEW FOLLOW UP ITEMS / BOARD MEETING RECOMMENDATIONS

No discussion was held.

10. NEXT MEETING DATE

The next committee date and time will be confirmed.

11. ADJOURN

Meeting adjourned at 1:29 p.m.



Summary of Monthly Topics

February – Dr. Mark Ruggiero, Medical Director of Pediatrics, introduced our newest program in Pediatric Developmental and Behavioral Health. He is the only pediatric subspecialist both at Tahoe Forest and the community. With his background he is currently able to see about 90% of referred patients without having to make any additional referrals. Currently only accepting from internal Pediatric providers, though goal is to open to outside providers. These evaluations are outpatient based only, and not inpatient psychiatric care. Will be developing relationships with the local schools, and adjust to the needs of the community as well as available resources.

March – Abby Thomas, Cancer Center Clinic Manager, presented on our Outpatient Oncology program as well as our newest program, Outpatient Infusions. We discussed the need for transportation assistance to the community, given that there is currently a 52% in-migration of patients from other locations on top of our local capacity. Input/feedback was solicited regarding some ideas or pilot programs that could be explored for our region. We discussed ideas for improving our Outpatient Infusion facility, which has had mixed/negative reviews from patients due to space and ambiance factors.

April – Allie Devlin, Patient Access Supervisor, presented information about our Financial Customer Service team as well as billing/insurance services provided. She explained the process of setting up payment plans, how to qualify for setting up payment plans, applying for Financial Assistance, and what to expect from our provided "payment estimates." Michael Navarro, Manager of Patient Financial Services, provided some clarifying information regarding insurance billing questions.

May – Sadie Wangler, Director of Diagnostic Imaging, and Shayna Vosburgh, Manager of DI, presented on our upgraded 3T MRI machine as well as our new AI Mammography software. Highlights include improving availability and access to MRI appointments for patients due to the shorter procedure time, and advanced image quality. New AI software for mammography services have increased breast cancer detection rate by 0.5% Tahoe Forest was one of the first hospitals in the state of California to have this software. They also presented on our \$3.6M grant to upgrade DI services for Incline Village Community Hospital, hopefully to open December 2023.

June – Maria Martin, Director of Community Health and Wellness, presented on the findings from the Community Health Needs Assessment completed in 2021, to identify gaps, strengths and opportunities. The 5 key needs fall into the domains of health disparities, chronic disease, prevention and wellness, substance misuse, and mental/behavioral health. Wendy Buchanan, Director of Occupational Health and Wellness, presented on our health education resources available to patients, employees and the community as a whole. They sought feedback from members on advertising/marketing of these services, as well as ideas for other offerings.

PATIENT AND FAMILY ADVISORY COUNCIL (PFAC) SUMMARY REPORT

February 2023 – June 2023

Current Overview

- Members who are volunteering in other areas of the hospital in addition to the monthly PFAC meetings:
 - Kevin Ward assists the Quality Department tracking our service recovery toolkits. He also attends the quarterly Board Quality Committee meetings
 - Pati Johnson attends the quarterly Cancer Committee meetings
 - o Alan Kern attends the quarterly Medical Staff Quality Committee
- Ongoing goal is to have PFAC identify ways to help educate community on all services offered by TFHS, as well as provide input and feedback on current and future processes and systems.
- Plan for 2023 is to address the current concerns and topics of interests within PFAC and the community Access to care, behavioral and mental health, senior citizen resources and services, incoming providers, etc. There is also a request from the PFAC to revisit certain topics more frequently (i.e., patient access and scheduling, patient billing/insurance).
- PFAC meets every month, 9 months in the year. We do not meet during the months of July, August, or December.
- Next PFAC meeting is September 19, 2023

Current Members and Start Date

Doug Wright	2/4/2015
Anne Liston	3/9/2016
Pati Johnson	3/22/2018
Helen Shadowens	5/24/2018
Kevin Ward	9/20/2018
Sandy Horn	9/5/2019
Violet Nakayama	10/31/2019
Alan Kern	2/20/2020
Kathee Hansen	4/1/2021
Bill Poland	10/18/2022
Carina Toledo	11/17/2022
Cris Valerio	12/1/2022

Beta HEART Progress Report for Year 2023

(July 2023)

Beginning in 2020, Beta Healthcare Group changed their annual Incentive process to be "Annual", meaning that each year the five (5) domains have to be re-validated each year to be eligible for the incentive credit. General updates for 2023:

- Beta Heart Validation Survey completed May 2022, Validated in all 5 Domains with a total cost savings of \$149,654
- Beta Heart Validation Survey completed May 9, 2023; validated in all 5 domains with a total cost savings of \$152,971

Domain	History of Incentive Credits (2% annually)	Readiness for next Validation	Goal	Comments
Culture of Safety: A process for measuring safety culture and staff engagement (Lead: Ashley Davis, Beta Heart Lead)	Validated 2019: \$13,101 2020: \$19,829 2021: \$21,730.40 2022: \$29, 8930 2023: \$30,594.20	100%	Goal= Greater than 85%	Culture of Safety survey completed in March 2023. 1022 employees took survey (82% completion rate) Debriefings and action items will start in May 2023. 11 leaders attended February 2023 workshop in Palos Verdes; topics include Culture of Safety and Care for the Caregiver.
Rapid Event Response and analysis: A formalized process for early identification and rapid response to adverse events that includes an investigatory process that integrates human factors and systems analysis while applying Just Culture principles (Lead: Ashley Davis/Janet Van Gelder)	Validated 2020: \$19,829 2021: \$21,730.40 2022: \$29, 8930 2023: \$30,594.20	100%	Reinforce education related to timely event reporting and implementation of corrective action items.	 TFHD incorporates the transparent and timely reporting of safety events to ensure rapid change in providing safer patient care. All investigations utilize "just culture" and high reliability principles and encourage accountability. The Reliability Management Team reviews all action plans to address strength of action items. 10 leaders attended workshop in Dana Point in April 2023; topics include Rapid Event Response & Analysis and Communication & Transparency.
Communication and transparency: A commitment to honest and transparent communication with patients and family members after an adverse event (Lead: Ashley Davis/Janet Van Gelder)	Validated 2020: \$19,829 2021: \$21,730.40 2022: \$29, 8930 2023: \$30,594.20	100%	Reinforce Beta HEART principles through targeted education at meetings, emails, Pacesetter, weekly Safety First, etc.	Disclosure checklist updated and refined as we update process and leaders trained to respond to events. 10 leaders attended workshop in Dana Point in April 2023; topics include Rapid Event Response & Analysis and Communication & Transparency
Care for the Caregiver: An organizational program that ensures support for caregivers involved in an adverse event (Lead: Stephen Hicks, Peer Support Lead)	Validated 2020: \$19,829 2021: \$21,730.40 2022: \$29, 8930 2023: \$30,594.20	100%	Proactive support to peers, not just after adverse events	Ongoing training and monthly peer support meetings. Currently have 20 peer supporters available to all staff. Sunshine cart rounds weekly to remind everyone about talk space, peer support and Employee Assistance Program. Plan for Beta's train-the trainer education in 2023 so we can train new peer supporters in-house. 11 leaders attended February 2023 workshop in Palos Verdes; topics include Culture of Safety and Care for the Caregiver.
Early Resolution: A process for early resolution when harm is deemed the result of inappropriate care or medical error (Lead: Ashley Davis/Janet Van Gelder)	Validated 2020: \$19,829 2021: \$21,730.40 2022: \$29, 8930 2023: \$30,594.20	100%	"Pacesetter Article" and "Safety Firsts" to enforce the principles of the 5 Domains	12 leaders attended October 2022 training where TFHD Women & Family Center and Emergency Departments were recognized for achieving Tier 2 in Zero Harm (highest level of recognition for Beta). Plan for 12 leaders to attend Early Resolution workshop in Dana Point in September 2023.

Measure ID	Measure Name	Measure Reporting Periods	Measure Weight	Our Standardized Measure Score (0 or >0 better)	Champion
SEP-1 **	Severe Sepsis and Septic Shock	April 1, 2021 - March 31, 2022	11.1%	2.23	Heather Hiller/ Trent Foust
H-COMP-5 **	Communication About Medicines	April 1, 2021 - March 31, 2022	12.5%	1.92	Trent Foust
H-COMP-2 **	Communication with Doctors	April 1, 2021 - March 31, 2022	12.5%	1.83	Trent Foust
H-COMP-6 **	Discharge Information	April 1, 2021 - March 31, 2022	12.5%	1.80	Trent Foust
H-COMP-1 **	Communication with Nurses	April 1, 2021 - March 31, 2022	12.5%	1.79	Trent Foust
H-HSP-RATING / H- RECMND **	Overall Rating of Hospital	April 1, 2021 - March 31, 2022	12.5%	1.72	Trent Foust
EDAC-30-PN **	Excess Days in Acute Care after Hospitalization for Pneumonia (PN)	July 1, 2018 - December 1, 2019, July 1, 2020 - June 30, 2021*	12.5%	1.59	Karyn Grow
H-CLEAN-HSP / H- QUIET-HSP **	Cleanliness and Quietness of Hospital Environment	April 1, 2021 - March 31, 2022	12.5%	1.40	Trent Foust
H-COMP-7 **	Care Transition	April 1, 2021 - March 31, 2022	12.5%	1.19	Trent Foust
H-COMP-3 **	Responsiveness of Hospital Staff	April 1, 2021 - March 31, 2022	12.5%	0.88	Trent Foust
EDAC-30-HF **	Excess Days in Acute Care after Hospitalization for Heart Failure	July 1, 2018 - December 1, 2019, July 1, 2020 - June 30, 2021*	12.5%	0.78	Karyn Grow
OP-18b **	Median Time from ED Arrival to ED Departure for Discharged ED Patients	April 1, 2021 - March 31, 2022	11.1%	0.78	Katie Clifford
IMM-3 **	Healthcare Personnel Influenza Vaccination	October 1, 2021 - March 31, 2022	11.1%	0.74	Wendy B.
OP-36	Hospital Visits after Hospital Outpatient Surgery	January 1, 2021 - December 31, 2021	12.5%	0.68	ASD Manager
PC-01	Elective Delivery Prior to 39 Completed Weeks Gestation: Percentage of Babies Electively Delivered Prior to 39 Completed Weeks Gestation	April 1, 2021 - March 31, 2022	11.1%	0.62	Ellie Cruz
MORT-30-PN **	Pneumonia (PN) 30-Day Mortality Rate	July 1, 2018 - December 1, 2019, July 1, 2020 - June 30, 2021*	33.3%	0.54	Risk Manager
OP-22 **	ED-Patient Left Without Being Seen	January 1, 2021 - December 31, 2021	11.1%	0.49	Katie Clifford
OP-35 ADM	Admissions for Patients Receiving Outpatient Chemotherapy	January 1, 2021 - December 31, 2021	12.5%	0.48	Derek Baden
HAI-6	Clostridium Difficile (C.difficile)	April 1, 2021 - March 31, 2022	50.0%	0.33	Svieta Schopp
READM-30-COPD **	Chronic Obstructive Pulmonary Disease (COPD) 30-Day Readmission Rate	July 1, 2018 - December 1, 2019, July 1, 2020 - June 30, 2021*	12.5%	0.04	Karyn Grow
OP-29 **	Endoscopy/Polyp Surveillance: Appropriate Follow-up Interval for Normal Colonoscopy in Average Risk Patients	January 1, 2021 - December 31, 2021	11.1%	0.03	Trent Foust
OP-10	Abdomen CT Use of Contrast Material	July 1, 2020 - June 30, 2021	11.1%	-0.22	Sadie Wangler
MORT-30-COPD **	Chronic Obstructive Pulmonary Disease (COPD) 30-Day Mortality Rate	July 1, 2018 - December 1, 2019, July 1, 2020 - June 30, 2021*	33.3%	-0.28	Risk Manager
OP-8	MRI Lumbar Spine for Low Back Pain	July 1, 2020 - June 30, 2021	11.1%	-0.46	Sadie Wangler
OP-13	Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery	July 1, 2020 - June 30, 2021	11.1%	-0.63	Sadie Wangler
READM-30-HOSP- WIDE **	HWR Hospital-Wide All-Cause Unplanned Readmission	July 1, 2020 - June 30, 2021	12.5%	-0.78	Karyn Grow
MORT-30-HF **	Heart Failure (HF) 30-Day Mortality Rate	July 1, 2018 - December 1, 2019, July 1, 2020 - June 30, 2021*	33.3%	-0.90	Risk Manager
COMP-HIP-KNEE **	Hospital-Level Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA)	April 1, 2018 - October 2, 2019, July 1 2020 - March 31, 2021*	50.0%	-2.79	Heather Hiller/Danielle Moran
READM-30-Hip- Knee **	Hospital-Level 30-Day All-Cause Risk- Standardized Readmission Rate (RSRR) Following Elective Total Hip Arthroplasty (THA)/Total Knee Arthroplasty (TKA)	July 1, 2018 - December 1, 2019, July 1, 2020 - June 30, 2021*	12.5%	-3.28	Karyn Grow
OP-35 ED	Emergency Department (ED) Visits for Patients Receiving Outpatient Chemotherapy	January 1, 2021 - December 31, 2021	12.5%	-3.32	Derek Baden

Scored on a total of 30 measures, 9 are outliers, 4 of which are new (OP-8, OP-13, Mort-30-CPOD, Mort-30-HF), C-diff moved to a positive measure ***Note time frame for these

CEO Quality & Service Metrics

April 15, 2023

Beginning in FY 2022: This measure includes metrics at both facilities from the perspective of measuring compliance. No metric uses a SIR rate, rather a percentage (compliant/total). The numerator is defined to be the denominator minus number of fallouts. The denominator is the sum of all submetric denominators. Included metrics: SEP-1 (current CMS specifications), EDTC (Emergency Department Transfer Communication) ALL (current StratisHealth specifications), PC-01 (Perinatal Care, current CMS specifications), Class I SSI (Surgical Site Infection) rate, Class I Surgical Site Infections for TKA/THA (Total Knee Arthroplasty/Total Hip Arthroplasty) replacements rate, Medicare (Inpatient) readmission rate, and c. difficile (denominator is number of inpatients, numerator is denominator minus number of hospital onset c. difficile cases).

Goals: FY 2022: 97.20% or better FY 2023: 98.20% or better

In FY22, the quality metrics were revised to include some of the CMS Compare Quality Star rating metrics, including SSI for TKA/THA, and Medicare readmissions from the previous year metrics.

In FY 23, we may consider adding the other metrics that are below benchmark (all cause readmissions; complication rates for THA/TKA; ED visits for patient receiving outpatient chemotherapy; and abdomen CT use of contrast material). In addition, there has been discussion to add process measures related to SSI compliance and C.difficile testing compliance. This would require building reports to capture this data and this might be challenging to accurately calculate.

Other measures to consider that are below benchmark, include Home Health Star rating at 2.5-2.75, and Hospice comprehensive assessment measures.

In regards to **Service**, I would recommend focusing on our low performing areas, which is MSC and OP (Lab, DI, Registration).



Leading a Culture of Safety: A Blueprint for Success



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Leading a Culture of Safety: A Blueprint for Success



American College of Healthcare Executives

The American College of Healthcare Executives is an international professional society of 40,000 healthcare executives who lead hospitals, healthcare systems, and other healthcare organizations. Its mission is to advance its members and healthcare management excellence. ACHE offers its prestigious FACHE® credential, signifying board certification in healthcare management. Its established network of 78 chapters provides access to networking, education, and career development at the local level. In addition, ACHE is known for its magazine, *Healthcare Executive*, and its career development and public policy programs. Through such efforts, ACHE works toward its vision of being the preeminent professional society for healthcare executives dedicated to improving health. **The Foundation of the American College of Healthcare Executives** was established to further advance healthcare management excellence through education and research. The Foundation of ACHE is known for its educational programs — including the annual Congress on Healthcare Leadership, which draws more than 4,000 participants — and groundbreaking research. Its publishing division, Health Administration Press, is one of the largest publishers of books and journals on health services management, including textbooks for college and university courses.

For more information, visit www.ache.org.



The National Patient Safety Foundation's Lucian Leape Institute

Established in 2007, the NPSF Lucian Leape Institute is charged with defining strategic paths and calls to action for the field of patient safety, offering vision and context for the many efforts under way within healthcare, and providing the leverage necessary for system-level change. Its members are national thought leaders with a common interest in patient safety. Their expertise and influence are brought to bear as the Institute calls for the innovation necessary to create significant, sustainable improvements in culture, process, and outcomes that are critical to safer healthcare.

For more information, visit www.npsf.org/LLI.



TOGETHER FOR SAFER CARE

The National Patient Safety Foundation at the Institute for Healthcare Improvement

The Institute for Healthcare Improvement (IHI) and the National Patient Safety Foundation (NPSF) began working together as one organization in May 2017. The newly formed entity is committed to using its combined knowledge and resources to focus and energize the patient safety agenda in order to build systems of safety across the continuum of care. To learn more about our trainings, resources, and practical applications, visit ihi.org/PatientSafety.

Letter from the Project Co-chairs

Dear Colleagues:

Healthcare is one of the most complex industries in our world. Amid all of the pressing priorities, we must remember that the elimination of harm to our patients and workforce is our foremost moral and ethical obligation. In our roles as healthcare leaders, we have numerous responsibilities for ensuring the quality of care provided within our organizations, including patient and family experience, improving the health status of our communities, and maintaining the financial sustainability of our organizations. However, one of the most critical roles we must fulfill is ensuring the safety of patients who entrust their lives to our care, as well as ensuring the safety of a workforce—both clinical and non-clinical—that entrusts their livelihoods to our organizations. It is the ultimate duty of leaders to ensure the safety and prevention of unnecessary harm to these individuals and their loved ones. Healthcare executives must address the need to create sustainable cultures of safety throughout a healthcare system full of daunting challenges.

As our organizations aim to continually improve the reliability and safety of care, we can look to resources and successful practices to assist us, our Boards, our executive colleagues, our healthcare professionals, and the entirety of our workforce. The American College of Healthcare Executives (ACHE) and the National Patient Safety Foundation's Lucian Leape Institute (NPSF LLI) have partnered to collaborate with some of the most progressive healthcare organizations and globally renowned experts in leadership, safety, and culture to develop *Leading a Culture of Safety: A Blueprint for Success*. This document is an evidence-based, practical resource with tools and proven strategies to assist you in creating a culture of safety—an essential foundation for achieving zero harm. It is our hope that this guide will inspire and motivate, while providing approaches and tactics leaders can implement in driving cultural change, with the goal of elevating healthcare into the realm of recognized industries that have succeeded in reducing error and harm.

ACHE and NPSF LLI stand ready to assist you on this journey. We invite you to use this guide in both a strategic and tactical manner to direct your efforts in creating and sustaining a culture of safety, and to evaluate your success along your journey to zero harm.

Sincerely,

Maglen

Gary S. Kaplan, MD, FACMPE Co-chair

Charles D. Stokes, RN, BSN, FACHE Co-chair

Leading a Culture of Safety: A Blueprint for Success

Acknowledgments

The American College of Healthcare Executives and the NPSF Lucian Leape Institute gratefully acknowledge the experts that contributed to this work along with Gary S. Kaplan, MD, FACMPE, and Charles D. Stokes, RN, BSN,

Culture of Safety Roundtable Participants

Gary Kaplan, MD, FACMPE* Chairman and CEO Virginia Mason Health System Project Co-Chair

Charles Stokes, RN, BSN, FACHE* Senior Vice President and Chief Operating Officer Memorial Hermann Health System Project Co-Chair

Jason Adelman, MD, MS Chief Patient Safety Officer, Associate Chief Quality Officer New York-Presbyterian Hospital Columbia University Medical Center

Timothy Anderson, RN Patient Safety Supervisor Harry S. Truman Memorial Veterans' Hospital

Peter Angood, MD, FRCS(C), FACS, MCCM President and CEO American Association for Physician Leadership

Thomas Balcezak, MD, MPH, FACHE Chief Medical Officer, Senior Vice President Yale New Haven Health System

Barbara Balik, RN, EdD Cofounder Aefina Partners LLC Principal Common Fire Healthcare Consulting

Ruth Brinkley, FACHE President and CEO KentuckyOne Health

Christine Candio, RN, FACHE President and CEO St. Luke's Hospital

Pamela Cipriano, PhD, RN, FAAN President American Nurses Association

Carolyn Corvi, MS Former Vice President and General Manager The Boeing Company

Teresa Edwards, FACHE President Sentara Leigh Hospital

Derek Feeley* President and CEO Institute for Healthcare Improvement **David Fox*** President Advocate Good Samaritan Hospital

Vicki Good, RN, MSN, CENP, CPPS System Director for Quality and Safety CoxHealth

Deborah Grubbe, PE, CEng Senior Consultant DuPont Sustainable Solutions Owner and President Operations and Safety Solutions, LLC

Helen Haskell, MA President Mothers Against Medical Error

John Haupert, FACHE President and CEO Grady Health System

Mark Jarrett, MD, MBA, MS Senior Vice President, Clinical Excellence Chief Quality Officer Northwell Health

Cheryl Knapp, MBA, RN, CPPS, CPHQ Vice President, Chief Quality Officer Bronson Healthcare

Edward Lamb, FACHE President and CEO Mount Carmel Health System

Della Lin, MD Consultant Senior Fellow, Estes Park Institute Physician Lead, Hawaii Safer Care

John Lynch III, FACHE* President and CEO Main Line Health

David Marx, JD, BS President and CEO Outcome Engenuity

Michael Leonard, MD Managing Partner Safe & Reliable Healthcare

Steve Muething, MD* Vice President, Safety Cincinnati Children's Hospital

Jonathan Perlin, MD, PhD, MSHA, MACP, FACMI President, Clinical Services Chief Medical Officer Healthcare Corporation of America **Doug Salvador, MD, MPH*** Vice President, Medical Affairs Baystate Medical Center

Doron Schneider, MD Chief Safety and Quality Officer Abington Jefferson Health

Roger Seaver, FACHE President and CEO Henry Mayo Newhall Memorial Hospital

Lisa Shannon, MBA Chief Operating Officer KentuckyOne Health

Jack Silversin, DMD, DrPH Founding Partner Amicus

Sara Singer, PhD, MBA Professor of Healthcare Management and Policy Harvard School of Public Health

Maureen Swick, PhD, RN, MSN, NEA-BC CEO

American Organization of Nurse Executives Senior Vice President, Chief Nursing Officer American Hospital Association

Beth Daley Ullem, MBA Patient Advocate and Governance Expert

Kerry Watson President Arnot Ogden Medical Center Chief Operating Officer Arnot Health

Sam Watson, MSA, MT(ASCP), CPPS Executive Director Senior Vice President, Safety and Quality MHA Keystone Center

Nicolas Wolter Former CEO Billings Clinic

Gary Yates, MD Partner, Strategic Consulting Press Ganey Associates, Inc.

Raul Zambrano, MS, MD, FAAFP, FACHE Chief Medical Officer Aurora Health Care's Southeast Market

*Participated in both Culture of Safety Roundtable meetings (May and December 2016)

The Culture of Safety Imperative

Harm to Patients and the Workforce

In 1999, the Institute of Medicine (IOM) Committee on Quality of Health Care in America estimated that between 44,000 and 98,000 Americans die each year as a result of medical errors (IOM 1999). More recent estimates place this number closer to 200,000 deaths per year (James 2013). Though deaths due to medical error are notoriously difficult to measure, if this number is accurate within 100,000 deaths, medical error kills four times more Americans each year than motor vehicle accidents. It is important to note that these statistics, while disconcerting on their own, do not account for serious temporary or permanent physical and psychological harm caused by medical error, and they do not include harm to the healthcare workforce. Regardless of the measurement or estimation used, the rate of error and harm in healthcare is astounding, and sweeping, system-wide changes are imperative.

Moreover, when patients experience harm, clinicians find themselves negatively impacted as well. Being involved in an error that results in the harm or death of a patient is devastating for an individual who is committed to serving those who are sick. At its worst, this devastation can lead to self-harm, depression, isolation, and even suicide. The desolation that often results from causing harm is compounded for clinicians who work in organizations without supportive systems. Based on the 2016 Agency for Healthcare Research and Quality (AHRQ) Hospital Survey on Patient Safety Culture's hospital comparative database, only 64% of staff respondents felt that reported mistakes led to positive changes in their organization. Even fewer members of the workforce, only 45%, responded positively to questions related to their organization's non-punitive response to error (AHRQ 2016).

Considering the impact described above, every healthcare executive should prioritize enhancing the safety of patients and the workforce. As an industry, healthcare has taken steps in improving quality and patient safety. However, these small-scale, incremental improvements are not enough. Our immediate work requires a focus on safety not just as a key improvement initiative but as a core value that is fully embedded throughout our organizations and our industry.

In every healthcare organization, the ultimate responsibility for systembased errors and their resulting costs rests with the CEO and Board of Directors. CEOs and Boards will be held increasingly responsible for harm and death caused by error. In the long run, patient and workforce safety will not only be a moral imperative but will likely be critical to sustainability and essential to delivering on value. Based on data from James and the American Hospital Association, an average, 100-bed hospital committed errors in care that caused the death of 23 patients in 2013. Such statistics indicate that each organization contributed to the preventable death of almost one patient every other week (AHA 2014, James 2013).

The Business Case for Safety

While the business case for patient safety continues to expand and to change with new regulatory and reimbursement requirements, the general consensus within the healthcare research community is that organizational costs for error and harm are high and will likely increase in the coming years. In addition to the increase in direct cost of care for the impacted patient and family following an error, organizations must also consider personnel costs, regulatory costs, and resource costs including investigation of errors, pursuit of legal defense, and payment of settlements. Perhaps most important to consider are the potentially immense costs related to repairing reputation after a catastrophic event has occurred and been publically reported (Weeks and Bagian 2003). When each of these costs is considered on top of the direct cost of patient care, the business case for improving safety becomes abundantly compelling.

A Case Study in Culture:

Mr. Jones is a previously healthy 55-year-old man, with a recent history of shortness of breath that is related to exercise. He has been referred by his primary care physician for a cardiology consultation, at which a stress test is ordered. The results of the stress test indicate a positive finding for potential heart disease. These results are not communicated back to his primary care provider, and although they are sent to the referring cardiologist, he is away at a conference. Mr. Jones receives no communications about the results of his test. One week later, Mr. Jones presents to the emergency department with chest pain and is diagnosed with an acute myocardial infarction. Upon further review of his medical records, the care team reviews his past test results and learns about the positive stress test. Mr. Jones requires placement of a stent to open his coronary artery, and requires rehabilitation prior to discharge to his home due to reduced cardiac function. One week after discharge from inpatient rehabilitation, Mr. Jones returns to his primary care physician, who realizes that Mr. Jones is not taking one of the new cardiac medications that was ordered by his inpatient team.

A Tale of Two Organizations: Which is more like yours?

ORGANIZATION A:

The inpatient team notifies the patient safety department about the missed test result, and a root cause analysis is performed to determine why Mr. Jones' critical test result was not communicated to either him or his cardiologist. Action steps from the root cause analysis focus on re-educating the stress test department about the policy for communication of abnormal test results.

The lessons from the root cause analysis are not shared beyond the safety team. The action plan is not presented to the leadership team or the Board for approval, and does not include metrics for sustainability. The CEO and Board hear about the event only as a statistic presented quickly at the end of a quarterly Board meeting.

Mr. Jones is not informed about either the missed stress test result or the root cause analysis.

The primary care provider writes a new prescription for the cardiac medication. Mr. Jones ultimately misses several weeks of work.

ORGANIZATION B:

The inpatient team notifies the patient safety department about the missed test result, and a root cause analysis is performed. Action steps include designing a new process for communication of test results that includes an escalation policy when it is not immediately possible to communicate critical test results to the ordering provider and/or the patient.

The primary care provider ensures that Mr. Jones begins taking the cardiac medication and also notifies the risk management/patient safety department about the delay in medication use. An additional root cause analysis is conducted, with a clear tracing of the breakdown during transition from hospital to rehabilitation and rehabilitation to home, and how and why it may have occurred.

The results of both RCAs, including strong action plans for improvement and metrics for sustainability, are presented to the organization's leadership team for review and approval. The CEO presents the case and action plan at the next quality and safety meeting.

Mr. Jones' care team informs him about these breakdowns in communication, and how they may have contributed to his myocardial infarction and could cause future health issues. His care team extends an apology, as well as an offer for early resolution and compensation that helps Mr. Jones pay for his medical bills, his time away from work, and the additional costs associated with the need for his family to care for him.

Six months later, an assigned member of the leadership team follows up with the frontline care team involved in the event to evaluate and reassess the action plan and review improvement metrics. These results are presented at the next Board meeting.

DEBRIEF

Many organizations report that their response to handling Mr. Jones' situation is more similar to Organization A than to Organization B. This example is but one of many that illustrate why healthcare must create and improve systems that are committed to zero harm to patients and our workforce.

Introduction

Dr. Lucian Leape, widely regarded as the father of the modern patient safety movement, has repeatedly stated that "the single greatest impediment to error prevention in the medical industry is that we punish people for making mistakes." By prioritizing, developing, and sustaining an organizational culture focused on safety, we can drive the future of healthcare to a place where patients and those who care for them are free from harm. It is not only one of many priorities, but is the overriding ethical imperative for all leaders.

AHRQ defines a culture of safety as one "in which healthcare professionals are held accountable for unprofessional conduct, yet not punished for human mistakes; errors are identified and mitigated before harm occurs; and systems are in place to enable staff to learn from errors and nearmisses and prevent recurrence" (AHRQ PSNet Safety Culture 2014). The leaders of organizations must set and, more importantly, demonstrate the behaviors and expectations essential to a safe and transparent culture.

To help healthcare leaders achieve their mission of total system safety, ACHE and LLI have partnered to develop this guide, which is intended to assist leaders in creating, shaping, and sustaining the type of culture needed to advance patient and workforce safety efforts. It is designed to inspire, motivate, and inform you as you lead your organization on its journey to zero harm.

The information in this guide comes from industry leaders and experts who have had success in transforming their organizations into system-wide cultures of safety. It is designed for you and your team members to adapt to your organization, wherever you may be on your journey.

Cultures of Safety Across the Continuum

Because error and harm happen across the continuum, it is imperative that all improvement initiatives also encompass all care settings. While some of the tactics and recommendations throughout this document will be more relevant in certain environments than others, the key principles developed throughout the six domains are applicable to all who oversee the delivery of care—not just hospital settings. This work is intended to be adapted as needed to enhance applicability for all organizations. However, the key concepts-building trust, respect, and enthusiasm for improvement through behaviors and principles that focus on ameliorating systems issues while requiring fair and inclusive practices—are critical to safe care in all settings.

This resource is organized into six leadership domains that require CEO focus and dedication to develop and sustain a culture of safety:



Establish a compelling vision for safety. An organization's vision reflects priorities that, when aligned with its mission, establish a strong foundation for the work of the organization. By embedding a vision for total patient and workforce safety within the organization, healthcare leaders demonstrate that safety is a core value.



Build trust, respect, and inclusion. Establishing trust, showing respect, and promoting inclusion — and demonstrating these principles throughout the organization and with patients and families — is essential to a leader's ability to create and sustain a culture of safety. In order to achieve zero harm, leaders must ensure that their actions are consistent at all times and across all levels of the organization. Trust, respect, and inclusion are non-negotiable standards that must encompass the Board room, the C-suite, clinical departments, and the entire workforce.



Select, develop, and engage your Board. Governing Boards play a vital role in creating and maintaining safety cultures. CEOs are responsible for ensuring the education of their Board members on foundational safety science, including the importance of and processes for keeping patients and the workforce safe. Boards must ensure that metrics that meaningfully assess organizational safety and a culture of safety are in place and systematically reviewed, analyzed, and the results acted upon.



Prioritize safety in the selection and development of leaders. It is the responsibility of the CEO, in collaboration with the Board, to include accountability for safety as part of the leadership development strategy for the organization. In addition, identifying physicians, nurses, and other clinical leaders as safety champions is key to closing the gap between administrative and clinical leadership development. Expectations for the design and delivery of relevant safety training for all executive and clinical leaders must be set by the CEO and subsequently spread throughout the organization.



Lead and reward a just culture. Leaders must possess a thorough understanding of the principles and behaviors of a just culture, and be committed to teaching and modeling them. Human error is and always will be a reality. In a just culture framework, the focus is on addressing systems issues that contribute to errors and harm. While clinicians and the workforce are held accountable for actively disregarding protocols and procedures, the reporting of errors, lapses, near-misses, and adverse events is encouraged. The workforce is supported when systems break down and errors occur. In a true just culture, all workforce members—both clinical and non-clinical—are empowered and unafraid to voice concerns about threats to patient and workforce safety.



Establish organizational behavior expectations. Senior leaders are responsible for establishing safety-mindfulness for all clinicians and the workforce and, perhaps even more importantly, modeling these behaviors and actions. These behaviors include, but are not limited to, transparency, effective teamwork, active communication, civility, and direct and timely feedback. These cultural commitments must be universally understood and apply equally to the entire workforce, regardless of rank, role, or department.

Leading a Culture of Safety: A Blueprint for Success

The journey toward patient and workforce safety requires vigilance and the highest level of dedication. Safety cannot be merely a strategic priority, but must be a core value that is woven into the fabric of our organizations. A culture of safety demands the involvement and commitment of the full healthcare team, from patients to clinicians to the rest of the workforce. However, an organization cannot be what its leader is not. It is both the obligation and the privilege of every healthcare CEO to create and represent a compelling vision for a culture of safety: a culture in which mistakes are acknowledged and lead to sustainable, positive change; respectful and inclusive behaviors are instinctive and serve as the behavioral norms for the organization; and the physical and psychological safety of patients and the workforce is both highly valued and ardently protected.

A Note about Disparities in Care

Across the United States, individuals experience great differences in life expectancy and other health outcomes based on social determinants that may include ethnicity, religion, socioeconomic status, geographic location, sexual orientation, and gender identity, among others. It is impossible to envision an organization driving toward zero harm that is not also consciously focused on addressing these disparities.

Professor Margaret Whitehead, head of the World Health Organization (WHO) Collaborating Centre for Policy Research on the Social Determinants of Health, defines equity in health this way: "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" (Whitehead and Dahlgren 2006). The reality of healthcare today is that quality and safety cannot be achieved without equity. Healthcare organizations have the power to address disparities at the point of care and to make an impact on many of the determinants that create these disparities (Institute for Healthcare Improvement 2016). Because equity in health is essential to quality and safety, mitigation of health disparities must be prioritized across the six domains for developing a culture of safety. Not only is creating health equity part of the safety imperative, but it requires many of the same mechanisms recommended throughout this document.

A Note about Learning Systems

The IOM describes a learning healthcare system as one in which "science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the care process, patients and families are active participants in all elements, and new knowledge captured as an integral by-product of the care experience" (IOM 2013).

While this guide focuses on developing and sustaining a culture that drives patient and workforce safety outcomes, a CEO's accountability for developing and supporting a learning system is equally important. Change implementation is a vast interdisciplinary undertaking that requires all aspects of a safety culture, from safety science knowledge, to trust, respect, and visionary leadership (Friedman 2015). The design of learning systems may vary—from high reliability to Six Sigma[™] to the Toyota Production System and other Lean methodologies—but the key characteristics are the same. Zero harm to patients and the workforce is only possible with both a robust culture of safety and an embedded organizational learning system.

Recommendations for Use of This Guide

This guide was developed for CEOs and other executive leaders in order to provide a useful tool for assessing and advancing an organization's culture of safety. It can be used to help determine the current state of your organization's journey, inform dialogue with your Board and leadership team, and help you set priorities. The six domains are intended to be discussed with your Board, your leadership team, your workforce, and your community. These domains are interdependent, and each domain is an essential element that must be addressed along your journey. This guide contains recommendations for developing and evaluating plans to flourish in each of the six domains, and resources for helping you move forward and make measurable progress in your journey.

The high-level strategies and practical tactics in this guide are divided into two levels: foundational and sustaining. The foundational level provides basic tactics and strategies essential for the implementation of each domain. The sustaining level provides strategies for spreading and embedding a culture of safety throughout the organization. However, it is important to note that the journey to zero harm is more complex than this simple two-level structure. Each organization will be at a different place on the spectrum from developing the foundation of a culture of safety to embedding and sustaining these principles. An organization may work on strategies and tactics across the two levels, or may be at various levels of progress across each of the domains. In organizations that lack an empowering vision statement or trust and respect among leadership, clinicians, and the workforce, it may be most effective to begin improvement initiatives in these two domains. The keys to developing and sustaining a culture of safety are honest and transparent evaluation of your organization's current state, identification of gaps and goals, and an action plan that engages all members of the Board, leadership team, and workforce.

Whether an organization is just beginning the journey to a culture of safety or is working to sustain its safe culture, the following steps are recommended:



Share this document with your Board Chair and leadership team.

Complete the self-assessment with input from your Board, leadership team, clinicians and the frontline workforce, and patient and family representatives, as appropriate.

Develop action plans based on an understanding of the current state of your organization. Use assessment results to frame discussions with your leadership team and the Board that focus on identifying ways to close gaps and aligning the direction of your organization with key safety and culture initiatives.

Share the outcomes of the assessment, action plans, and progress with your senior leadership team, the Board, your workforce, and your patients and families, as appropriate and helpful.

Ask for periodic feedback from your Board, your leadership team, and the workforce.

Refer to this guide as a resource for systematic check-ins and adjustments, as needed.

A Culture of Safety: The Six Domains





Establish a Compelling Vision for Safety

GOAL: COMMIT TO DEVELOP, COMMUNICATE, AND EXECUTE ON AN ORGANIZATIONAL VISION OF ZERO HARM TO PATIENTS, FAMILIES, AND THE WORKFORCE.

To engage and inspire all clinical and non-clinical healthcare professionals and the public, an organization's vision should reflect long-term, aspirational goals. This vision must be clearly aligned with the organization's mission, which establishes the foundation of what an organization does.

A compelling vision enhances performance, promotes change, motivates individuals, and provides context for decision making (Lipman 1996). Clearly articulated, a strong vision addresses the why, the how, and the when of the aspirational goal (Lipman 2003). Many CEOs of healthcare organizations strive to include safety among their top strategic priorities, and this objective must be clearly reflected as a core value in the vision and mission statements. The CEO is responsible for launching the critical first step of establishing safety as the most important part of what everyone does, every day.

	Foundational	Sustaining
Strategies Overarching strategies for implementation at the CEO level	 CEO takes responsibility for educating himself/herself on how to develop vision and lead a culture of safety CEO communicates and models a shared vision of zero harm to patients, families, the community, and the workforce CEO communicates genuine, clear messages about vision, conveying purpose of safety culture to everyone, in all settings, repeatedly and for the long term CEO communicates how vision is critical to organizational success CEO prioritizes measurement, gap analysis, and improvement of culture of safety as foundational for vision CEO gains additional understanding of safety by participating in full harm investigation, including disclosure and apology and root cause analysis 	 CEO and leadership team provide consistent, personalized messaging about the importance of safety and zero harm CEO relays importance and urgency of safety vision to both internal and external audiences CEO practices transparency and shared accountability between Board and leadership team regarding vision and relevant measurement and reporting

Leading a Culture of Safety: A Blueprint for Success

Vision

Establish a Compelling Vision for Safety

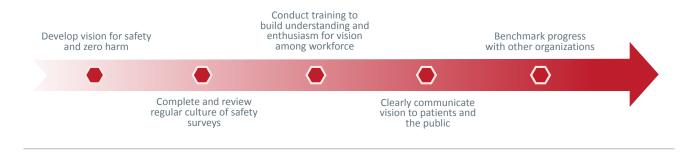
A compelling vision with patient and workforce safety as a core value is essential to achieving safe care. Zero harm is the aspirational "North Star." Healthcare CEOs demonstrate their belief that safety is a primary, non-negotiable goal by working with their Board, clinical leadership, and workforce to develop such a vision, to embed it in their organization, and to demonstrate their commitment and energize frontline workers through direct involvement in safety activities (NPSF 2015).

The first step for a CEO in creating this vision is to understand, acknowledge, and communicate the current state of their organization. A successful vision statement may be developed by top management and shared with the organization, or created in partnership with the workforce. The key is that the vision statement must encompass all organizational interests and engage the entire workforce. Visions that offer long-term perspective and include a degree of difficulty or stretch are often the most powerful. Finally, a vision statement should be clear and concise, allowing it to be easily remembered, repeated, and communicated (Kantabutra and Avery 2010).

Leaders must work with their teams, in direct partnership with physicians, nurses, and other clinical and non-clinical leaders, to assess the internal and external landscape of their organization. They must consider safety metrics, clinicians' attitudes and perceptions, patient and family experiences, and current practices, as well as trends and events that affect or might affect the healthcare industry. Landscape analysis is often accomplished through tactics including focus groups, safety culture surveys, safety rounds, analysis of safety metrics and reporting, and other diagnostic approaches. As one team of management researchers tell us, "The best way to lead people into the future is to connect with them deeply in the present" (Kouzes and Posner 2009). Understanding and communicating the current state enables leaders to connect and work with their teams and clinical experts to create a shared vision that can inspire everyone within the organization and the community.

While it is important to get input and buy-in from all levels when developing a vision, CEOs must be the ones to define and model the vision. Leaders at every level need to be visible in their commitment to patient and workforce safety and vocal about supporting actions that align with the organizational vision.

A clear and aspirational vision inspires the workforce and the public. The CEO works with the Board, leadership team, clinicians, and workforce to develop and embed this vision.





Establish a Compelling Vision for Safety

Organizational Readiness Level	Foundational	Sustaining
Tactics Examples of tactics that may be implemented to create change at each of these levels	 To engage your organization: Work with select individuals throughout the organization to develop understanding of key organizational interests and goals Work with leadership team to develop aspirational end state (e.g., zero harm) that will be incorporated into vision Communicate the definition and importance of a culture of safety Build awareness of current state through culture surveys, observations, and focus groups, and communicate this throughout the organization Include zero harm vision in all communications from leaders at all levels, and keep this communicate the definition and importance of health equity Include equity of care as part of vision statement and communicate the definition and importance of health equity Conduct training and information sessions for all employees to build understanding and enthusiasm for the vision Spend time on all floors and units communicating the connection of culture of safety and vision to the work of the frontline 	 To engage your organization: Clearly articulate your vision to the workforce and the public Benchmark culture progress and best practices with other similar organizations (e.g., participate in collaboratives) Develop and implement a recognition program for leaders, clinicians, and the workforce based on growth and adherence to vision Establish organizational goals that address safety and disparities in care To engage clinical leaders: Include physician, nursing and other clinical leaders in development of vision statement and strategic plan To engage patients and families: Clearly communicate the vision statement and values to patients Incorporate patient and family stories, along with statistics, when discussing vision at the Board level Include patient feedback in the development of vision statement
Assessing Execution List of questions that should be asked to further assess and measure progress	to all parties, in both internal ar Can all members of the organiza how it relates to their individua Is a patient safety and quality d	ation articulate the vision for safety and

Trust, Respect, and Inclusion

Value Trust, Respect, and Inclusion

GOAL: ESTABLISH ORGANIZATIONAL BEHAVIORS THAT LEAD TO TRUST IN LEADERSHIP AND RESPECT AND INCLUSION THROUGHOUT THE ORGANIZATION REGARDLESS OF RANK, ROLE, OR DISCIPLINE.

Trust, respect for others, and inclusion are essential to creating environments that are both physically and psychologically safe. Building trust involves managing conflict and making the environment safe for communicating bad news. It also involves practicing honesty, inclusion, transparency, and respect with everyone. Each member of the workforce must feel compelled and empowered to uphold mutual accountability and speak up for safety. Healthcare leaders develop trust within their organizations by having authentic relationships and conversations. For example, undertaking humble inquiry, asking questions to which you do not already know the answer, and building relationships based on genuine curiosity and interest all help leaders find information that might otherwise elude them (Schein 2013).

	Foundational	Sustaining
Strategies Overarching strategies for implementation at the CEO level	 CEO recognizes the critical importance of trust, respect, and inclusion in shaping organizational culture CEO creates expectation for trust, respect, and inclusion, and models these through his or her interactions with every individual at every level of the organization CEO holds the leadership team accountable for modeling trust, respect and inclusion CEO directs policies that empower the workforce to first and foremost act within the guidelines of trust, respect, and inclusion when making decisions CEO establishes the expectation that learning from failures and improving systems is a part of daily organizational activity 	 CEO establishes expectations and accountability for formal program focusing on trust, respect, and inclusion that includes patients and is implemented across the organization CEO and organization have clear, visible expectations of acceptable behavior and consequences for behaviors that do not meet standards of trust, respect, and/or inclusion CEO establishes transparent practices with the Board, senior leadership, workforce and community, as appropriate CEO takes ownership of partnering with similar organizations, through Patent Safety Organizations (PSOs) or other collaboratives, to share learning and best practices

Trust, Respect, and Inclusion

Value Trust, Respect, and Inclusion

The actions of leaders must be consistent over time and throughout the organization. Behavioral standards and expectations should apply to everyone, without exception. Respect for others—be they patients, family members, peers, or subordinates—is essential for creating and sustaining trust. Developing and holding all leaders and the workforce accountable to codes of conduct or code of ethics can help to solidify the practices and behaviors that encourage trust and respect (Chassin and Loeb 2013).

Beyond modeling behaviors of respect themselves, leaders may need to institute ongoing education for volunteers, students, clinicians, and the workforce about appropriate behavior, and continue to actively encourage changes designed to increase fairness, transparency, collaboration, inclusion, and individual responsibility (Leape et al., 2012).

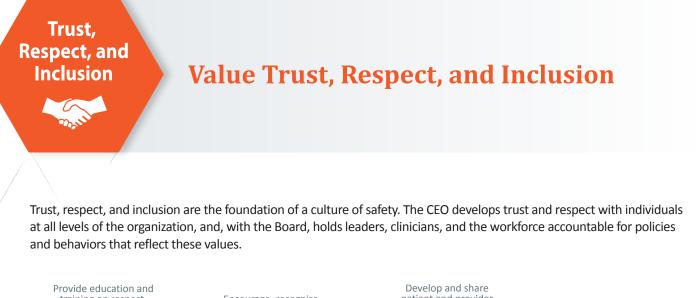
In pursuing safety as a core value, trust, respect, and inclusion are fostered by CEOs who make and keep commitments to the workforce, who communicate when a problem cannot be fixed immediately, who consistently display a sense of fairness, and who engage in and encourage reciprocal, helping behavior throughout the organization.

CEOs must also display their trust in others. Creating a strong team enables leaders to have confidence in delegating decisions and authority, though trust does not mean believing nothing will ever go wrong. Leaders can expect to continually work on building, sustaining, or repairing trust.

Cultural Diversity and Respect in the Workplace

It is imperative that CEOs understand the cultural makeup of both the community and the organization in which they serve. Implementing and modeling behaviors that reflect a respectful and inclusive environment is essential to a culture of safety. This should include placing a high value on the positive impact of greater diversity and inclusion among leadership as well as the workforce. It should also include efforts to evaluate and eliminate disparities in patient care. Unleashing the potential of workforce diversity depends on the establishment of inclusion, the building of trust and respect, and training in skills and behaviors that support an inclusive and respectful organization. With this approach, cultural diversity can be an effective resource for creative problem solving and organizational learning, and can help to identify and ameliorate disparities of care. (EU-OSHA 2013)

Leading a Culture of Safety: A Blueprint for Success





Organizational Readiness Level	Foundational	Sustaining
Tactics Examples of tactics that may be implemented to create change at each of these levels	 To engage your organization: Commit to implementing and holding all leaders and the work force accountable for processes and policies related to respect for people, just culture, and managing disruptive behavior Encourage and promote open discussion of safety issues via leadership rounds and reporting systems, and ensure follow-up and feedback Ensure that the workforce has dedicated time to devote to patient safety and safety culture work Implement workforce safety programs to reduce physical and psychological harm to the workforce Clearly define and encourage behaviors that show deference to expertise rather than hierarchy or title 	 To engage your organization: Aim for total transparency, but explain situations in which the organization is unable to be completely transparent Publicly share available information about events of harm, and plans for managing associated risks Ensure follow-up and feedback on identified safety issues, and be transparent if an issue cannot be resolved promptly Create compacts for leaders that clearly define expected behaviors in trust and transparency as they relate to other leaders, peers, and subordinates Build metrics for respect and trust (e.g., workforce psychological safety, error reporting) into the evaluation process for all leaders



Value Trust, Respect, and Inclusion

Organizational Readiness Level	Foundational	Sustaining
<section-header> Factics Examples of tactics that may be implemented to create change at each of these levels</section-header>	 To engage your organization (cont): Recognize and reward reporting with the goal of reducing and eventually eliminating anonymous reporting Provide education and training on diversity and inclusion at every level of the organization Track employee engagement and turnover as a metric to evaluate trust, inclusion, and respect Include care disparity metrics on regularly reviewed patient safety dashboards Translate tools and resources for both patients and the workforce into a variety of languages, keeping in mind cultural context and linguistic idiosyncrasies Adopt communication and resolution/reconciliation programs for patients and families after events of preventable harm Establish patient and family advisory councils 	 To engage clinical leaders: Provide training for physicians, nurses, and other clinical leaders around patient engagement and communication Provide cultural competency training for all clinical leaders that is relevant to the patient populations they serve To engage patients and families: Encourage and enable patients and families to speak up if they notice a risk to safety Ensure that crisis plans address how to communicate with patients and families in the event of an error, regardless of degree of harm Commit to shared decision making and consider patient preferences in all treatment plans Engage patients and families in creating and disseminating patient compacts that include what patients can expect from the organization, their care providers, and the workforce
Assessing Execution List of questions that should be asked to further assess and measure progress	 communicating with patients, in Are measures of respect include Is a formal program for respect regularly? Is there systematic training on o clinical and non-clinical workfor 	am regularly create and evaluate

Board Engagement

Select, Develop, and Engage Your Board

GOAL: SELECT AND DEVELOP YOUR BOARD SO THAT IT HAS CLEAR COMPETENCIES, FOCUS, AND ACCOUNTABILITY REGARDING SAFETY CULTURE.

Boards of healthcare organizations oversee the fiduciary performance, reputation, and key performance outcomes of an organization, including those related to quality, safety, and culture. The accountability for safety is shared between the CEO and the Board. The CEO is responsible for guaranteeing Board education on the importance of safety, ensuring that the Board understands quality and safety metrics, and recommending the appropriate representation of safety expertise on the Board, which could mean a safety expert from another field. In line with the CEO's responsibilities, the Board is responsible for making sure the correct oversight is in place, that quality and safety data are systematically reviewed, and that safety receives appropriate attention as a standing agenda item at all meetings. It is imperative that safety be a foundational factor in how healthcare Boards make decisions, so that patient and workforce safety culture is a sustainable focus for the organization.

	Foundational	Sustaining
Strategies Overarching strategies for implementation at the CEO level	 CEO guarantees Board education on importance of safety, the meaning of quality and safety metrics, and safety culture principles and behaviors CEO ensures Board membership includes clinical, safety, and patient/family representation CEO provides adequate agenda time for review and discussion of safety culture metrics and issues CEO sets up quality and safety committee(s) with Board representation CEO ensures each Board agenda includes time designated for Chief Medical Officer or Chair of Quality and Safety committee to present safety and quality data CEO develops a robust Board-level patient and workforce safety dashboard that includes culture of safety metrics 	 CEO works with the Board to set direction, goals, metrics, and systems of mutual accountability for zero harm to both patients and the workforce CEO provides for the appropriate level of oversight of the credentialing and re-credentialing process, including elements of quality and safety CEO works with the Board and/or compensation committee to align executive compensation with patient and workforce safety and culture metrics CEO leverages patient stories and presentations to educate the Board CEO provides opportunities for Board member representation on appropriate safety committees

Board Engagement

Select, Develop, and Engage Your Board

In recruiting new Board members, considerable thought should be given to the competencies, skills, experiences, and diversity needed to create and sustain a culture of safety. These skills may include specific competencies related to leading culture improvement efforts, as well as clinical and safety competencies. Ensuring that there is robust clinical expertise in the Board room is critical to incorporating frontline perspective into all conversations and initiatives, and allows for collaborative leadership in safety efforts throughout the organization (Goeshel et al. 2010). These decisions should also include measures of diversity that ensure the board is representative of the community and workforce it serves. Finally, leaders may encourage Boards or relevant committees to include a patient and family representative and safety experts from relevant industries. These recommendations should be made at the appropriate level based on each unique organization's needs.

A well-rounded and diverse Board empowers and supports the work of the CEO in creating and sustaining a culture of safety. The importance of Board education and training in safety science fundamentals, including just culture, human factors, and systems engineering cannot be overemphasized (NPSF 2015). There is real power in support for the CEO from the Board regarding issues of safety, allowing this focus to cascade to leadership and, ultimately, throughout all levels of the organization.

Effective Patient and Family Representation on Boards and Committees:

CEOs should consider the following characteristics of effective representation, while keeping in mind the appropriate voice and level of representation of patient/family member(s) to meet the needs of their organization and community:

 Culture of the Board encourages total engagement and involvement of patient/family member(s)

- 2 Patient/family member(s) are representative of the community the organization serves
- Patient/family member(s) have representation on quality and safety committee(s) and other committees, as appropriate

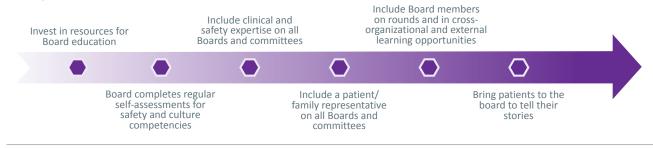
4 Patient/family representative is provided with ongoing learning opportunities in safety science and safety culture

Leading a Culture of Safety: A Blueprint for Success

Board Engagement

Select, Develop, and Engage Your Board

An engaged Board plays a key role in organizational culture and safety. The CEO encourages Board competencies and commitment regarding safety, while providing a transparent line of sight between the Board and the rest of the organization.



Organizational Readiness Level	Foundational	Sustaining
Tactics Examples of tactics that may be implemented to create change at each of these levels	 To engage your organization: Establish Board Quality and Safety Committee with oversight responsibility for culture change, safety, and performance improvement Include an individual with safety and culture expertise on Board and appropriate committees, or ensure an advisor with these skills is available to the CEO and the Board Begin each Board meeting with a slide detailing the number and names of patients and staff who experienced harm since last meeting, and include a story about at least one of these individuals Regularly share and discuss a dashboard that includes patient and workforce safety and culture metrics Utilize a Board self-assessment that includes inquiry on safety culture knowledge to determine educational opportunities Identify a list of required Board competencies specific to leading culture improvement 	 To engage your organization: Encourage the Board to link executive compensation to safety outcomes, while ensuring metrics chosen do not discourage safety efforts Include Board members on guided leadership rounds Align Board dashboards to show safety and quality metrics as segmented by categories related to disparities in care Ask Board members to participate in events to show their support during Patient Safety Awareness Week and to be present at major quality, safety, and culture-related events Bring frontline teams to Board meetings to share their success stories and receive recognition Consider a rotating position on the Board or Quality and Safety Committee reserved for the frontline workforce Request that Board members spend time on all floors and units communicating and supporting the safety agenda

Board Engagement

Select, Develop, and Engage Your Board

Organizational Readiness Level	Foundational	Sustaining
Factics Examples of tactics that may be implemented to create change at each of these levels	 To engage your organization (cont): Discuss whether Board reflects the community your organization serves and implement action plan to address any gaps Invest in resources for Board education, including patient safety science and quality Create a matrix of Board competency needs and seek candidates with those skills in mind Regularly review accreditation survey results with the Board Encourage ample clinical expertise, including physicians and nurses on the Board and/or on Board committees Include a presentation on a current organizational safety culture issue by an expert in safety and quality at each Board meeting Educate Board members on issues of disparities in care 	 To engage your organization (cont): ✓ Provide Board members with opportunities to learn from Boards and leaders of outside organizations and industries ✓ Require Board approval on resolutions to all serious safety events To engage clinical leaders: ✓ Involve physicians, nurses, and other clinical leaders to present clinical and quality improvement efforts regularly to the Board ✓ Bring clinical leaders dedicated to culture to Board meetings to share their experience and receive recognition To engage patients and families: ✓ Create positions for patient/family representatives on your Board and on your quality/safety committee(s) ✓ Present patient stories at Board and appropriate committee meetings ✓ Invite patients to attend Board meetings and personally share their stories and experiences (both positive and negative)
Assessing Execution List of questions that should be asked to further assess and measure progress	 understanding of culture of safety Are programs in place to build cor Board members? Is the amount of time spent on qu tracked and at least comparable to Do performance assessments for activities and measures of culture Do patient safety and quality lead Board meetings? 	npetencies in culture improvement for ality and safety during each Board meeting o time spent on finance and other items? the CEO include the organization's safety

Leadership Development

Prioritize Safety in Selection and Development of Leaders

GOAL: EDUCATE AND DEVELOP LEADERS AT ALL LEVELS OF THE ORGANIZATION WHO EMBODY ORGANIZATIONAL PRINCIPLES AND VALUES OF SAFETY CULTURE.

Healthcare CEOs, in collaboration with the Board, are responsible for establishing the direction and accountability for the design and delivery of their organization-wide leadership development strategy. Within this strategy, it is imperative that safety is part of the education for both current and emerging leaders. It is the responsibility of the CEO to establish the priority for safety and culture in the development of leaders at all levels and in all departments across the organization.

Emphasis on safety education can also help close the gap between administrative and clinical leadership, providing all leaders with the shared goal of driving toward a culture of safety for the betterment of the organization and the patients they serve. Identifying and developing physician, nursing, and other clinical leaders as champions for safety is a key responsibility of the CEO. Numerous studies indicate the positive impact clinical leaders can have on culture and safety, particularly in an era when healthcare leaders are often in a position to make decisions that affect care at the frontlines. Clinical leaders have extensive understanding of healthcare's "core business" of patient care, and are therefore in a unique position to connect administration with the clinical workforce, and to garner support for safety and culture initiatives. In addition to safety education, CEOs can commit to developing effective physician, nursing, and other clinical leaders by providing and encouraging training in non-clinical skills, including professionalism, emotional intelligence, team building and communication, and basic business principles (Angood 2014).

	Foundational	Sustaining
Strategies Overarching strategies for implementation at the CEO level	 CEO sets expectations and accountability for the design and delivery of the organization's leadership development strategy CEO ensures he/she and the leadership team receive necessary safety education, and provides the appropriate level of safety education throughout the rest of the organization CEO identifies physicians, nurses, and other clinical leaders as champions for safety 	 CEO serves as a mentor for other C-Suite executives CEO establishes expectation that quality and safety performance and competence are required elements for evaluating current and potential leaders for promotion and succession planning CEO assigns accountability for measurable outcomes of safety education as part of leadership development strategy CEO ensures patient and workforce safety are key parts of the organization's reward and recognition system

Leadership Development

Prioritize Safety in Selection and Development of Leaders

The selection process for both current and emerging leaders should be predicated on their understanding of, dedication to, and alignment with the organization's vision for patient and workforce safety, communication skills, and modeling of expected safety behaviors. Safety can be a topic for individual professional development as well as organization-wide succession planning to ensure that the commitment to safety is sustainable throughout all levels and functional areas. Many organizations already have a process in place for identifying individuals with high potential to succeed as leaders, into which a safety and culture program can be integrated (Garman and Anderson 2014).

Finally, it is critically important to provide regular feedback to both current and developing leaders that is valuable to them, whether that is a 360-degree review model or another structured review (Garman and Anderson 2014). Feedback should clearly define, communicate, and embody required leadership competencies in safety culture, and safety development plans should be reviewed at regularly scheduled check-ins. CEOs are responsible for not only setting this direction, but also participating in these reviews from the perspective of gathering feedback about their own competence in safety culture and behaviors, and sharing input for members of their leadership team.

A well-developed leadership team that is dedicated to a culture of safety provides a catalyst for the evolution of the organization. The CEO, in collaboration with the Board, is responsible for establishing the direction and accountability for the design and delivery of an organization-wide leadership development strategy.



Leadership Development

Prioritize Safety in Selection and Development of Leaders

Organizational Readiness Level	Foundational	Sustaining
Tactics Examples of tactics that may be implemented to create change at each of these levels	 To engage your organization: Define and develop organizational leadership competencies in safety culture and safety behaviors and ensure that all current and future leaders and the frontline workforce receive education in selected competencies Define cultural roles and expectations for all leaders within the organization, including clinical leaders Create systems to support leaders in culture work at all levels of the organization through training, coaching, and mentoring Consider safety expertise and credentialing along with leadership potential when considering emerging leaders Discuss whether leadership team reflects the community the organization serves and develop plan to address any gaps Create systems that ensure regular reporting on leadership development measures Develop and employ a talent review process that is candid and transparent Conduct gap analysis of CEO and leadership for knowledge, skills, and attitudes around patient safety and culture 	 To engage your organization: Build an incentive program into leadership reviews that is focused on reporting performance on key culture of safety metrics Provide continuing learning opportunities in safety and culture, with a focus on experiential learning Tie measures and performance on safety and culture to leadership development priorities, talent management reviews, and succession planning Provide opportunities and expectations for leaders to learn outside of the organization, both with similar organizations and outside industries Build a guiding coalition of champions, including clinicians and frontline workforce members, that provides candid and honest feedback to the CEO Incorporate leadership development into organizational people strategy Define talent as an organizational resource and allow for interdepartmental training and mobility Ensure leaders are trained to teach and coach their employees Recommend that each senior executive participate in communication and apology to patients and families who have experienced harm



Prioritize Safety in Selection and Development of Leaders

Organizational Readiness Level	Foundational	Sustaining				
Tactics <i>Examples of tactics that</i> <i>may be implemented to</i> <i>create change at each of</i> <i>these levels</i>	 To engage your organization (cont): ✓ Ensure all executives can clearly articulate how a culture of safety applies in their department, and that all leaders can do the same ✓ Develop systems that encourage deference to expertise rather than hierarchy or title in issues of safety 	 To engage clinical leadership: ✓ In leadership development programs, incorporate opportunities for clinical leader advancement To engage patients and families: ✓ Ensure leaders have competencies in how to partner effectively with patients at all levels of care ✓ Include patient and family representatives in leadership recruitment and hiring process 				
Assessing Execution List of questions that should be asked to further assess and measure progress	 Is at least one member of the exec Certified Professional in Patient Sa Are leadership development plans measures of key safety culture cor Do leadership development progr 	fety or a safety expert? s reviewed annually? Do they include mpetencies? ams include cultivation of a robust skill set istening, performance improvement, and				

Just Culture

Lead and Reward a Just Culture

GOAL: BUILD A CULTURE IN WHICH ALL LEADERS AND THE WORKFORCE UNDERSTAND BASIC PRINCIPLES OF PATIENT SAFETY SCIENCE, AND RECOGNIZE ONE SET OF DEFINED AND ENFORCED BEHAVIORAL STANDARDS FOR ALL INDIVIDUALS IN THE ORGANIZATION.

Healthcare organizations that are successful in improving safety and eliminating harm have leaders who understand and commit to the principles of just culture. A just culture "focuses on identifying and addressing systems issues that lead individuals to engage in unsafe behaviors, while maintaining individual accountability by establishing zero tolerance for reckless behavior. Just organizations focus on identifying and correcting system imperfections, and pinpoint these defects as the most common cause of adverse events. Just culture distinguishes between human error (e.g., slips), at-risk behavior (e.g., taking shortcuts), and reckless behavior (e.g., ignoring required safety steps), in contrast to an overarching 'no-blame' approach" (PSNet Safety Primer 2016).

	Foundational	Sustaining
Strategies Overarching strategies for implementation at the CEO level	 CEO encourages commitment to just culture framework as an essential business philosophy CEO communicates and models the use of just culture principles in all decisions and actions as part of daily responsibilities and interactions, including root cause analysis CEO educates Board and leadership team on principles of just culture and role models these principles 	 CEO employs just culture principles throughout organization and communicates that rules apply to all, regardless of rank, role and discipline CEO sets expectations for accountability for anyone interacting with the healthcare organization to commit to utilizing just culture principles in every day practice and decisions CEO ensures just culture principles are implemented in all interactions

A just culture is not a blame-free environment; clinicians and the workforce are still held accountable for following protocols and procedures. The vast majority of errors are not a result of individual failures, but are the result of systems that are inherently flawed and create environments of risk. A just culture acknowledges that punishing people for mistakes discourages reporting, fails to correct problems in the system, and sets up the likelihood of recurrence. Just culture also emphasizes the importance of the affected workforce after events occur, and focuses on support and peer-to-peer counseling for affected clinicians and the workforce.

When clearly defined, articulated, and implemented by leadership, a just culture approach encourages the reporting of errors, lapses, near-misses, and adverse events. It is through reporting and event analysis that the organization learns what went wrong, or could have gone wrong, and how to prevent it from happening again.

Just Culture

Lead and Reward a Just Culture

The hard work of establishing a just culture, however, goes well beyond agreeing to the concept itself. It involves incorporation of expertise in human factors engineering and systems design, full support and resources from the CEO and all leadership, and full engagement of departments such as Human Resources and Organizational Development. It also requires robust reporting systems with mechanisms in place to provide timely feedback to the workforce about not only what went wrong, but why it went wrong. This feedback also includes strong action plans to prevent future occurrence. Developing a just culture policy is just the first step, and organization-wide, systemic implementation is key.

While training of leaders and the patient safety workforce on just culture is vital, everyone at all levels of the organization must consistently integrate just culture principles as an organizational norm. The CEO's role in ensuring that just culture principles are understood and implemented across the organization is fundamental to success. If one individual within the organization is punished for a system flaw, just culture efforts can be severely undermined. Leaders must be transparent with the Board, physicians, the workforce, and the public about the organization's approach, so that when something does go wrong, the response is expected, practiced, and applied uniformly throughout the organization.

Just Culture Principles

Human behaviors within a just culture can be described as follows:

HUMAN ERROR = An inadvertent slip or lapse. Human error is expected, so systems should be designed to help people do the right thing and avoid doing the wrong thing.

Response: Support the person who made the error. Investigate how the system can be altered to prevent the error from happening again.

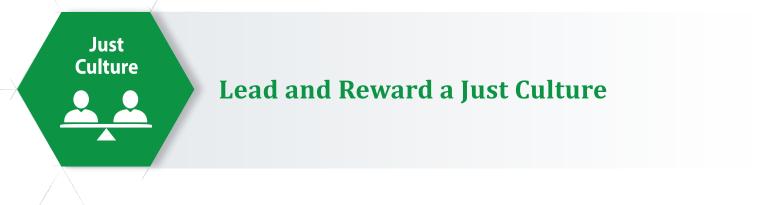
AT-RISK BEHAVIOR = Consciously choosing an action without realizing the level of risk of an unintended outcome.

Response: Counsel the person as to why the behavior is risky; investigate the reasons they chose this behavior, and enact system improvements if necessary.

RECKLESS BEHAVIOR (NEGLIGENCE) = Choosing an action with knowledge and conscious disregard of the risk of harm.

Response: Disciplinary action.

(PSNet Safety Primer 2016)



A just culture that focuses on identification and resolution of systems issues supports clinicians and the workforce when these systems break down. CEOs ensure that the principles of a just culture are implemented organization-wide and that they inform every action and decision.



Organizational Readiness Level	Foundational	Sustaining
Tactics Examples of tactics that may be implemented to create change at each of these levels	 To engage your organization: Educate Board, leadership, and workforce about just culture through integrated training programs Develop and implement a decision-making process and application of just culture that is behavior-based, rather than harm-based Ensure organization-wide leadership commitment to frameworks of just culture and accountability that are aligned across all departments Create an interdisciplinary just culture champion team to review organizational policies, provide training, and ensure policies are being followed at all levels Identify metrics to track performance on just culture implementation 	 To engage your organization: Educate organization to be responsive to and transparent about actions related to professional discipline Implement a peer support program Hold workforce accountable for implementing just culture principles in daily practice and decision-making Include actual and mock scenarios on meeting agendas that demonstrate application of just culture principles Involve the media as a way to explain errors, decisions, and data to the public Treat and respond to gaps in culture and expected safety behaviors as adverse events Expect that leaders utilize just culture tools in all situations, even those not significant or punishable, to ingrain principles and use into organizational norms



Lead and Reward a Just Culture

Organizational Readiness Level	Foundational	Sustaining
Tactics Examples of tactics that may be implemented to create change at each of these levels	 To engage your organization (cont): ✓ Align systems and standards for just culture across all organizational departments, including Human Resources ✓ Ensure employees are well-trained in just culture algorithm and tools and utilize them in daily activities and decisions ✓ Publicly reward positive examples of just culture 	 To engage clinical leadership: ✓ Include clinical leaders in the development of just culture policies ✓ Provide training for physicians, nurses, and other clinical leaders in just culture to build understanding and enthusiasm To engage patients and families: ✓ Ensure that patients and family members who serve on Board and committees are educated on just culture principles ✓ Include patients and families in mediation committees/tribunals to assist in resolving conflicts between departments
Assessing Execution List of questions that should be asked to further assess and measure progress	 training on just culture? Is there one set of defined behavior the organization, including leaders Is compliance with the established reviewed performance reviews, in leaders and the workforce? Does the organization use, evaluat measures of just culture on employ 	s regularly evaluated for assessing frontline

Behavior Expectations

Establish Organizational Behavior Expectations

GOAL: CREATE ONE SET OF BEHAVIOR EXPECTATIONS THAT APPLY TO EVERY INDIVIDUAL IN THE ORGANIZATION AND ENCOMPASS THE MISSION, VISION, AND VALUES OF THE ORGANIZATION.

Much of the work involved in creating a culture of safety in healthcare is intrinsically linked to the everyday behaviors that characterize an organization (PSNet Patient Safety Primer: Safety Culture 2016). In fact, culture is often defined as "the way we do things around here." CEOs set the tone and have the power and responsibility to establish behaviors, set expectations, and promote accountability for these behavioral norms for everyone, including both employed and non-employed individuals. It is essential for Board members, the CEO, and leaders at every level to model the behaviors they aim to cultivate throughout the organization.

	Foundational	Sustaining
Strategies Overarching strategies for implementation at the CEO level	 CEO creates, communicates, and models an organizational climate of personal and professional accountability for behavior CEO establishes systems to recognize and reward desirable behaviors CEO activates organization to develop, implement, and evaluate programs that address and improve personal, professional, and organizational behavior and accountability CEO engages Board by sharing metrics and dashboards related to organizational behavior CEO engages and holds all leaders and workforce accountable for defined behaviors 	 CEO prioritizes resources for professional accountability framework and programs to ensure and sustain behavioral excellence CEO ensures that succession planning and talent management programs prepare future leaders with competencies in organizational behavior and accountability CEO works with licensing bodies and medical executive committees, where applicable, to ensure behavioral expectations and accountability practices are consistent CEO and leaders at all levels of the organization encourage questions, increasing the likelihood that the right question will be asked at a critical time

Behavior Expectations

Establish Organizational Behavior Expectations

Chief among the behaviors that contribute to an environment of physical and psychological safety are transparency, effective teamwork, active communication, just culture, respect, and direct and timely feedback. Each of these can be learned, and the workforce should be educated about what is expected and why. For example, educating health professionals in effective communication with patients and families, whether disclosing an error, seeking informed consent, or practicing shared decision making, is a key part of cultivating teamwork, communication, and respect.

One of the first responsibilities of a CEO is to understand the current accepted behaviors within the organization. One way to achieve this understanding is through use of validated surveys of patient safety culture, which can help identify areas of strength as well as areas for improvement at organizational, departmental, and unit levels. Surveys can also reveal the strength or weaknesses of organizational culture and "subcultures," and provide leaders a better sense of where they may need to focus attention. In this manner, leaders are able to better connect with the frontline workforce on a regular basis, whether through leadership rounding, safety huddles, briefings/ debriefings, or other tactics, so they can hear about challenges firsthand. A Board, leadership, physician and other clinical professional, and workforce "credo" or compact also helps to communicate behavioral expectations. Such a compact can frame discussions and maintain accountability when someone violates the standard behavioral code (Webb et al. 2016).

It is also important to have a mechanism for escalating concerns when behavioral codes are violated and for dealing with disruptive and unsafe behaviors. Everyone within the organization should understand what that procedure is, and that it will be applied consistently across the organization, regardless of rank, department, revenue, or other considerations. It is essential to remember that the process of changing behavioral norms across an organization or system can be a long and challenging one. That is why it is equally important to ensure that there is also a system to reward individuals who are identified as modeling desired behavior. True progress can be accomplished with the dedication of a highly engaged, unwavering, and courageous CEO.

Importance of Physical and Psychological Safety of the Workforce

An environment that protects the physical and psychological safety of the workforce is fundamental to a culture of safety. Yet many healthcare workers suffer from harm, including bullying, burnout, and physical injury and assault, during the course of providing care. Under these conditions, it is difficult for care providers to find joy and purpose in their work, and patient safety is jeopardized. The prioritization of safety behaviors including respect, transparency, and teamwork is at the foundation of safety for the workforce, and therefore for patients. The workforce needs to know that their safety is an enduring, non-negotiable priority for the **CEO and Board. This commitment** is demonstrated when action plans are developed and implemented to ensure the workforce feels valued, safe from harm, and part of the solution for change (NPSF LLI 2013).

Behavior Expectations

Establish Organizational Behavior Expectations

Organizational safety behavior expectations are the daily demonstration of a true culture of safety. CEOs work with leaders and the workforce to develop these expectations and to personally demonstrate expected behaviors, while holding the leadership team accountable for doing the same.



Organizational Readiness Level	Foundational	Sustaining
FacticsExamples of tactics that may be implemented to create change at each of these levels	 To engage your organization: Complete culture of safety surveys every 12-18 months and review with Board, leadership team, and workforce; set targets for improvement and take deliberate action to achieve them Stratify and track culture and safety metrics by sociodemographic variables that are important to the organization's community and develop plans to address any gaps Develop required processes for teamwork, communication, and handoffs among the workforce and with patients, using tools like SBAR, read back, "stop the line," briefings, and de-briefings Require, participate in, and give context for existing safety processes, including safety huddles and operational briefings, and use these opportunities as forums to build better teamwork and safety culture 	 To engage your organization: Require annual signatures on compacts for Board members, leaders, and the workforce that clearly define expected professional accountability behaviors Educate and explain to your organization and the public what you will be transparent about, and what limits may exist on transparency Design and implement a crisis communications policy and plan for both internal and external audiences Align and integrate organizational safety and respectful behaviors with all departments across the organization Provide feedback to employees when they report a safety issue, closing the loop and demonstrating how frontline callouts improve safety Recognize and reward individuals and teams for demonstrating positive safety behaviors and reporting

Behavior Expectations

Establish Organizational Behavior Expectations

Organizational Readiness Level	Foundational	Sustaining
Factics Examples of tactics that may be implemented to create change at each of these levels of these levels	 To engage your organization (cont): Define organizational safety behavior expectations and respectful behaviors, as well as the organizational response to disrespectful behavior and conflict Proactively promote and encourage teamwork by implementing a formal team training program Break down hierarchical policies and systems for reporting, and encourage reporting without fear of punishment or retribution Break down power gradients by communicating and rewarding a policy that requires all staff to speak up for safety concerns Develop and abide by leadership behaviors, including appreciative or humble inquiry Celebrate and recognize individuals and teams who excel at key safety behaviors Work with key stakeholders to clearly communicate and enforce the same behavioral standards for both employed and non-employed practitioners and staff 	 To engage your organization (cont): Ensure the existence of measurement tools and/or report cards for individual performance CEO requires and accepts notification of any serious safety events within 24 hours, without exception SBAR for all serious safety events is shared with full administrative and clinical leadership teams and with the Board Leadership distributes awards for teams and organizations based on culture of safety metrics To engage clinical leaders: Recognize and reward physicians, nurses, and other clinical leaders who actively participate in teamwork and communication initiatives Create (and require signatures on) physician and leadership compacts that clearly define behavioral expectations Commit to and train the workforce on communication and resolution programs To engage patients and families: Include patients in the development of required processes for communication with patients, using tools like AskMe3[®] and shared decision making Encourage and enable patients and families to report safety concerns, and follow up with families who have reported Ensure that safety behavior expectations are centered around the patient, and involve patients in setting these expectations Create, supply, and use understandable tools for patient involvement and shared decision making Invite patients to utilize versions of communication and reporting tools (e.g., SBAR) and to participate in team processes Have a designated team available to provide support to patients, families, and the workfore when e a one one one of communication and reporting tools (e.g., SBAR) and to participate in team processes

the workforce when an error has occurred

Behavior Expectations

Establish Organizational Behavior Expectations

Organizational Readiness Level		Foundational	Sustaining
Assessing Execution List of questions that should be asked to further assess and measure progress	YES/NO	utilization of this system (including Are organizational behavior expect with follow-up plans and identified reviewed regularly? Are professional accountability stat behaviors) in place, used, and regu Are specific tools to encourage tea used, and regularly evaluated?	rly defined reporting system and measure g follow-up and feedback processes)? tations, such as use of huddles and briefings, d owners of action items, implemented and andards (e.g., a process to address disruptive ularly evaluated? amwork and clear communication in place, n/reconciliation programs in place, utilized,

Appendix

Key Terms Related to Patient Safety and a Culture of Safety

Based on AHRQ PSNet Glossary [nd], Runciman et al. 2009, and others as noted.

Adverse Event: Any injury caused by medical care. An undesirable clinical outcome that has resulted from some aspect of diagnosis or therapy, not an underlying disease process. Preventable adverse events are the subset that are caused by error.

Clinician: A health professional qualified in the clinical practice of medicine, such as a physician, nurse, pharmacist, or psychologist who is directly involved in patient care, as distinguished from one specializing in laboratory or research techniques or in theory.

Error: An act of commission (doing something wrong) or omission (failing to do the right thing) that leads to an undesirable outcome or significant potential for such an outcome.

Harm: An impairment of structure or function of the body and/or any deleterious effect arising therefrom, including disease, injury, suffering, disability, and death. Harm may be physical, social, or psychological, and either temporary or permanent.

Inclusion: Positively striving to meet the needs of different people and taking deliberate action to create environments where everyone feels respected and able to achieve their full potential (National Institute for Health Research 2012).

Just Culture: A culture that recognizes that individual practitioners should not be held accountable for system failings over which they have no control. A just culture also recognizes that many individual or "active" errors represent predictable interactions between human operators and the systems in which they work. However, in contrast to a culture that touts "no blame" as its governing principle, a just culture does not tolerate blameworthy behavior such as conscious disregard of clear risks to patients or gross misconduct (e.g., falsifying a record, performing professional duties while intoxicated).

Patient Safety: Patient safety refers to freedom from accidental or preventable injuries produced by medical care. Thus, practices or interventions that improve patient safety are those that reduce the occurrence of preventable adverse events.

Psychological Safety: Individuals' perceptions about the consequences of interpersonal risks in their work environment. These perceptions include taken-for-granted beliefs about acceptable interactions with co-workers, superiors, and subordinates, and how others will respond when one puts oneself on the line, such as by asking a question, seeking feedback, reporting a mistake, or proposing a new idea (Edmondson 2011).

Respect: The treatment of others with deference in daily interactions, weighing their values, views, opinions and preferences (Sergen's Medical Dictionary 2012).

Safety Culture /Culture of Safety: The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the characteristics of the organization's health and safety management. Organizations with a positive safety culture are characterized by communications based on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures (Health and Safety Commission 1993).

Total Systems Safety: Safety that is systematic and uniformly applied (across the total process) (Pronovost et al. 2013). A systems approach can help with the design and integration of people, processes, policies, and organizations to promote better health at lower cost.

Trust: The collective expectations by the public and other clinicians that health care providers will demonstrate knowledge, skill, and competence, and will act in the best interest of both patients and colleagues with beneficence, fairness, and integrity (Calnan 2008).

Workforce: Health professionals and all other workers employed in health service or other settings, including but not limited to clinicians, administrators, medical records personnel, and laboratory assistants.

Workforce Safety: Healthcare workforce safety refers to freedom from both physical and psychological harm for all those who work with patients as well as those who oversee or provide non-clinical support for those who work with patients.

Zero Harm/Free from Harm: The total absence of physical and psychological injury to patients and the workforce.

Bibliography

AHRQ PSNet. 2016, Patient Safety Primer, Safety Culture. https://psnet.ahrq.gov/primers/primer/5/safety-culture

AHRQ Patient Safety Network (AHRQ PSNet). [nd]. Glossary. http://www.psnet.ahrq.gov/glossary.aspx.

American Hospital Association (AHA). 2014. *Fast Facts on US Hospitals*. http://www.aha.org/research/rc/stat-studies/fast-facts2014.shtml.

American Hospital Association (AHA). #123forEquity Pledge to Act. http://www.equityofcare.org/pledge/resources/pledge_to_ act.pdf.

Anderson MM and Garman AN. 2014. *Leadership Development in Healthcare Systems: Toward an Evidence-based Approach*. National Center for Healthcare Leadership.

http://nchl.org/Documents/Ctrl_Hyperlink/NCHL_Leadership_Survey_White_Paper_Final_05.14_uid6232014300422.pdf

Angood P and Birk S. 2014. The value of physician leadership. *Physician Executive Journal* 40(3):6–22. http://csms.org/wp-content/uploads/2015/04/The-Value-of-Physician-Leadership.pdf

Calnan M and Rowe R. 2008. Trust Matters in Health Care. Berkshire, England: McGraw-Hill Open University Press.

Chassin MR and Loeb JM. 2013. High-reliability health care: getting there from here. *Milbank Quarterly* 91:459–490. https://www.jointcommission.org/assets/1/6/Chassin_and_Loeb_0913_final.pdf.

European Agency for Safety and Health at Work. 2013. Diverse cultures at work: Ensuring safety and health through leadership and participation. https://osha.europa.eu/en/tools-and-publications/publications/reports/ diverse-cultures-at-work-ensuring-safety-and-health-through-leadership-and-participation

Friedman C. http://www.learninghealthcareproject.org/section/evidence/25/50/professor-charles-friedman-interview

Goeschel CA, Wachter RM, Pronovost PJ. 2010. Responsibility for quality improvement and patient safety: hospital board and medical staff leadership challenges. *Chest* 138(1):171–178. http://journal.publications.chestnet.org/article. aspx?articleid=1086531

Institute of Medicine (IOM). 2000. Committee on Quality of Health Care in America; Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academy Press. [Report issued 1999, published 2000].

INVOLVE, National Institute for Health Research (NIHR). 2012. *Diversity and Inclusion: What's It About and Why Is It Important for Public Involvement in Research?* http://www.invo.org.uk/wp-content/uploads/2012/10/INVOLVEDiversityandInclusionOct2012.pdf.

James, JT. 2013. A new, evidence-based estimate of patient harms associated with hospital care. *Journal of Patient Safety* 9(3):122-128. doi: 10.1097/PTS.0b013e3182948a69.

Kantabutra S and Avery GC. 2010. The power of vision: Statements that resonate. *Journal of Business Strategy* 31(1):37-45. doi: 10.1108/02756661011012769.

Kouzes JM and Posner B. 2009. To lead, create a shared vision. *Harvard Business Review* 87(1):20–21. https://static1.squarespace.com/static/553fe02ae4b0bd34dd44ebb0/t/5630d297e4b074af2d07fc8a/1446040215026/To+Lead+Create+A+Shared+Vision.pdf

Leape LL, Berwick D, Clancy C, et al. 2009. Transforming healthcare: A safety imperative. *Quality and Safety in Health Care* 18:424–428. http://qualitysafety.bmj.com/content/18/6/424. doi: 10.1136/qshc.2009.036954.

Leape LL, Shore MF, Dienstag JL, et al. 2012. Perspective: A culture of respect, part 2: Creating a culture of respect. *Academic Medicine* 87(7):853–858. http://journals.lww.com/academicmedicine/Abstract/2012/07000/ Perspective____A_Culture_of_Respect,_Part_2___.11.aspx

Lipton M. 1996. Demystifying the development of an organizational vision. Sloan Management Review 37(4):83.

Lipton M. 2003. Guiding Growth: How Vision Keeps Companies on Course. Harvard Business Press.

National Patient Safety Foundation (NPSF). 2015. Free from Harm: Accelerating Patient Safety Improvement Fifteen Years After To Err Is Human. National Patient Safety Foundation, Boston, MA.

Bibliography (cont)

National Patient Safety Foundation's Lucian Leape Institute. 2014. *Through the Eyes of the Workforce: Creating Joy, Meaning, and Safer Health Care*. National Patient Safety Foundation, Boston, MA.

Runciman W, Hibbert P, Thomson R, Van Der Schaaf T, Sherman H, Lewalle P. 2009. Towards an international classification for patient safety: Key concepts and terms. *Int J Qual Health Care* 21(1):18–26.

Schein EH. 2013. *Humble Inquiry: The Gentle Art of Asking Instead of Telling*. San Francisco: Berrett-Koehler Publishers.

Schindlinger D. 2016. 7 rules of board engagement. *Great Boards*, Summer: 8–10. http://www.greatboards.org/ newsletter/2016/rules-board-engagement-summer16.pdf.

Segen JC. 2012. Segen's Medical Dictionary. [nd] respect. http://medical-dictionary.thefreedictionary.com/respect.

Smith M, Saunders R, Stuckhardt L, et al. 2013. Best care at lower cost: The path to continuously learning health care in America. *Committee on the Learning Health Care System in America; Institute of Medicine*. National Academies Press (US). https://www.ncbi.nlm.nih.gov/books/NBK207218/

Webb LE, Dmochowski RR, Moore IN, et al. 2016. Using coworker observations to promote accountability for disrespectful and unsafe behaviors by physicians and advanced practice professionals. *Joint Commission Journal on Quality and Patient Safety* 42(4):149–161.

Weeks WB and Bagian JP. 2003. Making the business case for patient safety. Joint Commission Journal on Quality and Patient Safety 29(1):51-54.

Whitehead M, Dahlgren G. Concepts and principles for tackling social inequities in health: Levelling up, Part 1. World Health Organization, Regional Office for Europe; 2006. www.euro.who.int/__data/assets/pdf_file/0010/74737/E89383.pdf

Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. 2016. Achieving health equity: A guide for health care organizations. IHI White Paper. Cambridge, MA: Institute for Healthcare Improvement.

Self-Assessment Tool

Culture of Safety Organizational Self-Assessment

Please Note: The questions in this self-assessment represent a selection of elements from the report, "Leading a Culture of Safety: A Blueprint for Success." This brief assessment may not accurately represent the full environment or state of each organization. It is recommended that teams review all strategies, tactics, and information in the full document for additional clarity and guidance.

Instructions:

- **1** Select a diverse team to lead the safety culture review and improvement process. It is recommended that this team include key C-Suite executives, clinical leadership, patient safety leadership, and a patient and family representative.

2 Share the guide, Leading a Culture of Safety: A Blueprint for Success with your team. Review the full document as a team or independently.

- **3** Ask each team member to complete this self-assessment independently. Conduct a series of meetings to:
 - A) Review self-assessment responses and scoring for each category as a team, and finalize your organizational score.
 - B) Develop action plans, metrics/dashboard, for assessment, and follow-up plans for low scoring domains (Refer back to Leading a Culture of Safety: A Blueprint for Success for assistance)

Note: if your team records low scores in Establish a Compelling Vision for Safety or Value Trust, Respect, and Inclusion, it is recommended that you begin with action plans for improvement in these domains.

C) Review improvement metrics, revisit action plans, and make adjustments as necessary. You should include additional team members and/or consultants where applicable.

Notes on Scoring:

Each statement should be scored on a scale of 1-5 based on the following:

- 1 Never true for my organization
- 2 Rarely true for my organization
- 3 Sometimes true for my organization
- 4 Almost always true for my organization
- 5 Always true for my organization

If you are **unsure** of the response, please check the box titled unsure. When adding responses for a total score, this box should be recorded as a **0**. For any item where a member of the leadership team is unsure of the response, it is recommended that he or she spend time speaking with frontline staff and other appropriate individuals in the organization to determine the best answer.

Reviewing Responses:

The **total score** is the sum of the response for each of the three questions. The total score will correlate with one of the three ranges in the boxes below, 0 - 4, 5 - 9, or 10 - 15. Confirm that the **organizational state** box accurately describes the current state of your organization. If it does not, you may need to reevaluate your responses, or speak with additional individuals to better understand the current state of your organization.

Use the **recommended next steps** box in the column that correlates with your total score as a quick reference when developing action plans for improvement. For additional information and recommendations, refer to *Leading a Culture of Safety: A Blueprint for Success*.

- 1 Never true for my organization
- 2 Rarely true for my organization
- **3 Sometimes** true for my organization
- 4 Almost always true for my organization
- 5 Always true for my organization
- **0 Unsure** of the response

Establish a compelling vision for safety

MEASURABLE ELEMENTS		SCORE					OBSERVATIONS
Key questions to ask about your organization's capabilities and processes.		2	3	4	5	Unsure O	Please provide a brief description of why you chose this score, considering all parts of each question.
1. My organization's safety vision statement and aspirational end state are clear and consistently communicated.							
 My organization completes and reviews culture of safety surveys every 12 – 18 months with evidence of improvement. 							
3. My organization's CEO and leadership team effectively build enthusiasm for and understanding of my organization's safety vision statement.							

	Score: 0 – 4	Score: 5 – 9	Score: 10 – 15
Organizational State <i>Brief description of current</i> <i>state of the organization</i>	Organization's vision statement does not reflect an end state of zero harm and is not regularly communicated to the workforce. Leaders and staff may have a difficult time understanding or communicating how their daily work contributes to advancement of the vision statement.	Organization has a defined vision with a clear, aspirational end state. Leaders communicate this vision consistently to the workforce, and understand how their work fits into the organizational vision statement. All members of the workforce are able to effectively communicate the vision statement.	Leaders and the workforce effectively communication the organization's vision to patients, families, and the public. The workforce is motivated by the vision statement and can clearly tie their daily work to the advancement of this vision. Metrics to benchmark progress toward vision are in place and regularly evaluated.
Recommended Next Steps Recommended next steps	Begin with review of Foundational tactics	Review Foundational and Sustaining tactics	Review Foundational and Sustaining tactics
for improvement and implementation are based on domain and included in Leading a Culture of Safety: A Blueprint for Success	Develop a vision statement with a clear end goal; Educate leaders and the workforce on the meaning of safety culture and zero harm; Host information sessions to build understanding and enthusiasm for the vision	Encourage leader visibility on front lines and communication about how daily work advances vision; Hold leaders accountable for regularly and consistently communicating vision to all units and departments	Share vision and action plans for change transparently with patients, families, and the public; Benchmark progress towards zero harm and share goals and strategies with similar organizations; Develop and support programs that recognize growth and adherence to vision

- 1 Never true for my organization
- 2 Rarely true for my organization
- **3 Sometimes** true for my organization
- 4 Almost always true for my organization
- 5 Always true for my organization
- **0 Unsure** of the response

Value trust, respect, and inclusion

MEASURABLE ELEMENTS		SCORE					OBSERVATIONS
Key questions to ask about your organization's capabilities and processes.		2	3	4	5	Unsure O	Please provide a brief description of why you chose this score, considering all parts of each question.
1. My organization uses and regularly evaluates formal respect programs that provide education and support to patients and the workforce.							
2. My organization implements workforce safety programs to reduce physical and psychological harm to the workforce.							
3. My organization transparently shares information and metrics around harm events and action plans for improvement across our organization.							

	Score: 0 – 4	Score: 5 – 9	Score: 10 – 15
Organizational State <i>Brief description of current</i> <i>state of the organization</i>	CEO and organizational leaders understand the criticality of trust, inclusion, and respect, but may not model these values in all situations. The workforce fears punishment from reporting and disclosing errors to patients. Hierarchies based on rank and role exist throughout the organization.	Formal respect and teamwork programs are in place across the organization, and all staff participate in regular trainings. The workforce reports errors and close calls anonymously and without fear of retribution. Leaders across the organization embody behaviors that focus on trust, respect, and inclusion in all interactions.	Open and honest reporting is standard across the organization and includes defined feedback cycles. Both patients and the workforce are empowered to speak up about safety concerns. Robust communication and support programs are in place for patients, families, and the workforce.
Recommended Next Steps Recommended next steps for improvement and implementation are based on domain and included in Leading a Culture of Safety: A Blueprint for Success	Begin with review of Foundational tactics Develop organization-wide respect for people programs; Train all leaders, staff, and clinicians on respect program; Develop, implement, and train on anonymous reporting systems; Establish a patient and family advisory council	Review Foundational and Sustaining tactics Educate leaders and workforce on inclusion, diversity, and communication with both patients and co-workers; Develop and implement disclosure and apology program; Include metrics for trust, respect, and inclusion as part of annual review process for all leaders	Review Foundational and Sustaining tactics Publically share information about harm events and plans to prevent recurrence; Enable and encourage patients and families to speak up for safety through available tools and education programs; Provide cultural competency training for leaders and workforce; Regularly evaluate metrics on disparities in patient care

- 1 Never true for my organization
- 2 Rarely true for my organization
- **3 Sometimes** true for my organization
- 4 Almost always true for my organization
- 5 Always true for my organization
- **0 Unsure** of the response

Select, develop and engage your Board

MEASURABLE ELEMENTS	SCORE					OBSERVATIONS	
Key questions to ask about your organization's capabilities and processes.	1	2	3	4	5	Unsure O	Please provide a brief description of why you chose this score, considering all parts of each question.
1. At all Board meetings in my organization, the amount of time spent reviewing and discussing a transparent dashboard on safety and culture is equal to or greater than time spent reviewing financial performance.							
 My organization's Board members are required to complete regular self- assessments and education related to safety culture and quality principles. 							
3. Performance assessments and incentives for my organization's leadership are inclusive of safety culture metrics and performance.							

	Score: 0 – 4	Score: 5 – 9	Score: 10 – 15
Organizational State <i>Brief description of current</i> <i>state of the organization</i>	Organization's Board members have strong financial backgrounds, but lack quality and safety expertise. Safety metrics are presented briefly at each Board meeting, and few questions are asked. The majority of the meeting focuses on financial review.	Organization has a quality and safety committee that reviews all serious harm events, but these are rarely presented to the full Board. Time spent on safety during Board meetings includes a story of harm told by the safety/ quality manager, and some questions are asked about the event. Board meetings prioritize financial review over safety review.	Organization's Board and committees include experts in safety, clinicians, and a patient and family representative. Patients are invited to meetings to present their experiences directly to the Board. Safety is a top priority and Board members understand how safety impacts the bottom line and feel empowered to ask questions.
Recommended Next Steps <i>Recommended next steps</i> <i>for improvement and</i> <i>implementation are based</i> <i>on domain and included in</i> <i>Leading a Culture of Safety:</i> <i>A Blueprint for Success</i>	Begin with review of Foundational tactics Provide educational opportunities in safety science and culture for all Board members; Include a safety expert on the Board; Develop a patient and workforce safety dashboard for regular review; Establish a quality and safety committee	Review Foundational and Sustaining tactics Consider including a patient/ family representative on Board and all committees; Provide opportunities for all Board members to participate on guided leadership rounds; Share all serious safety events and action plans with the full Board	Review Foundational and Sustaining tactics Link CEO compensation and bonuses to performance on safety and culture metrics; Provide opportunities for Board members to learn from other organizations and industries; Bring frontline teams to Board meetings to tell their stories and
			be recognized for exemplary performance

- 1 Never true for my organization
- 2 Rarely true for my organization
- **3 Sometimes** true for my organization
- 4 Almost always true for my organization
- 5 Always true for my organization
- **0 Unsure** of the response

Prioritize safety in the selection and development of leaders

MEASURABLE ELEMENTS	SCORE					OBSERVATIONS	
Key questions to ask about your organization's capabilities and processes.	1	2	3	4	5	Unsure O	Please provide a brief description of why you chose this score, considering all parts of each question.
 All leaders in my organization receive education and review opportunities in safety science and safety culture. 							
2. My organization has defined roles, safety competencies, and development programs for leaders at all levels.							
3. My organization allows leaders opportunities for learning across departments and from outside organizations and industries.							

	Score: 0 – 4	Score: 5 – 9	Score: 10 – 15
Organizational State <i>Brief description of current</i> <i>state of the organization</i>	Organization's leaders are considered for development opportunities and promotion based on business and financial competencies. Leader development programs focus on executive leadership. All leaders have semi-regular reviews that focus on financial performance.	Organization's executive leaders are provided basic safety science and culture educational opportunities. Leadership development programs are in place at all levels and throughout the organization. Both current and emerging leaders have access to peer coaching and mentoring programs.	Leaders at all levels of the organization are required to complete safety culture training. Regular reviews for all leaders include safety and culture metrics. Leaders are provided opportunities to learn from outside organizations and industries and are able to transfer among departments and units based on interest and organizational needs.
Recommended Next Steps Recommended next steps	Begin with review of Foundational tactics	Review Foundational and Sustaining tactics	Review Foundational and Sustaining tactics
for improvement and implementation are based on domain and included in Leading a Culture of Safety: A Blueprint for Success	Define required leadership competencies in culture and safety; Conduct regular gap analyses for CEO and senior leader competencies in safety culture; Develop and implement an organization-wide leadership development program	Provide continuing education opportunities in safety and culture for both new and emerging leaders; Develop systems that support leaders at all levels, including opportunities for cross-departmental training	Provide leaders at all levels opportunities for learning outside the organization; Define talent as an organizational resource; Tie performance on safety culture to leadership development priorities and promotional opportunities

- 1 Never true for my organization
- 2 Rarely true for my organization
- **3 Sometimes** true for my organization
- 4 Almost always true for my organization
- 5 Always true for my organization
- **0 Unsure** of the response

Lead and reward a just culture

MEASURABLE ELEMENTS	SCORE					OBSERVATIONS	
Key questions to ask about your organization's capabilities and processes.	1	2	3	4	5	Unsure O	Please provide a brief description of why you chose this score, considering all parts of each question.
 My organization uses a defined just culture policy during all review processes and decisions (e.g. not just harm event review). 							
2. My organization regularly reviews metrics for just culture education and understanding and defines improvement opportunities.							
3. My organization has one set of defined and employed behavior standards and accountability guidelines in place for all individuals, regardless of department, rank, or role.							

	Score: 0 – 4	Score: 5 – 9	Score: 10 – 15
Organizational State <i>Brief description of current</i> <i>state of the organization</i>	Organization may have just culture policy but it is not robust or embedded in decisions and processes across the organization. Patient safety and risk management professionals are systematically trained in just culture principles.	Organization has a robust just culture policy that is well- communicated internally and utilized in processes and departments across the organization and/or system. All staff are trained on just culture principles and use of just culture algorithm.	Just culture algorithm is embedded in all reviews and decisions across all departments. The Board, leaders, and the workforce are held accountable for utilizing the just culture policy. Patients and the public are educated on just culture and transparency around events through their providers and use of the media.
Recommended Next Steps Recommended next steps	Begin with review of Foundational tactics	Review Foundational and Sustaining tactics	Review Foundational and Sustaining tactics
for improvement and implementation are based on domain and included in Leading a Culture of Safety: A Blueprint for Success	Develop a robust just culture policy; Educate the Board, leadership team, and workforce on just culture principles and the daily use of the just culture algorithm; Ensure utilization of just culture principles in all event reviews	Work with the Board and organizational leaders to align just culture policies across all professions and departments; Develop and review metrics for just culture; Hold workforce accountable for the utilization of just culture algorithm	Treat gaps in culture as adverse events requiring review with the just culture algorithm; Educate providers on transparent communication of errors; Work with the media to educate and inform the public about just culture and plans for improvement

- 1 Never true for my organization
- 2 Rarely true for my organization
- **3 Sometimes** true for my organization
- 4 Almost always true for my organization
- 5 Always true for my organization
- **0 Unsure** of the response

Establish organizational behavior expectations

MEASURABLE ELEMENTS	SCORE					OBSERVATIONS	
Key questions to ask about your organization's capabilities and processes.	1	2	3	4	5	Unsure O	Please provide a brief description of why you chose this score, considering all parts of each question.
 My organization uses and regularly reviews a formal training program and defined processes for teamwork and communication. 							
2. Professional accountability standards, including processes to address disruptive behavior and disrespect, are implemented uniformly across my organization.							
3. My organization has a program for recognition and celebration when individuals or teams excel at key safety behaviors and culture metrics.							

	Score: 0 – 4	Score: 5 – 9	Score: 10 – 15
Organizational State <i>Brief description of current</i> <i>state of the organization</i>	Behavior expectations vary across the organization, often based on department, unit, or role. Leaders and the workforce are not aware of defined standards of respectful behavior or consequences for disrespectful behavior. Best practices and standard processes also vary.	Behavior expectations are consistent across care providers, but organizational response to disruptive behavior may vary. Non-clinical departments, including finance and human resources, may not utilize common behavioral standards. Leaders are held accountable for modeling expected behaviors.	All members of the organization are held accountable for the same behavior expectations and have the same consequences for disrespectful behavior. Organization provides transparency of these expectations through patient/ provider compacts. Leaders and the workforce are rewarded for exceptional teamwork and communication.
Recommended Next Steps <i>Recommended next steps</i>	Begin with review of Foundational tactics	Review Foundational and Sustaining tactics	Review Foundational and Sustaining tactics
for improvement and implementation are based on domain and included in Leading a Culture of Safety: A Blueprint for Success	Implement a formal team training program; Develop and communicate organization- wide behavioral expectations; Develop and implement standard processes for teamwork and communication	Measure implementation and compliance of teamwork and communication programs; Develop compacts detailing behavior expectations for signature by leaders and the workforce; Ensure measurement tools and report cards for individual performance exist and are utilized	Work with key stakeholders to ensure identical processes for employed and non-employed clinicians and staff; Develop required processes for communication and teamwork with patients and families; Develop standard tools for patient and family involvement in teamwork and communication processes

Members and Staff

Members of the National Patient Safety Foundation's Lucian Leape Institute

Gary S. Kaplan, MD, FACMPE

Chair, Lucian Leape Institute Chairman and CEO Virginia Mason Health System

Tejal K. Gandhi, MD, MPH, CPPS President and CEO, NPSF Lucian Leape Institute President and CEO, National Patient Safety Foundation President, Certification Board for Professionals in Patient Safety

Lucian L. Leape, MD Adjunct Professor of Health Policy

Harvard School of Public Health

Donald M. Berwick, MD

Former Administrator Centers for Medicare and Medicaid Services President Emeritus and Senior Fellow Institute for Healthcare Improvement

Susan Edgman-Levitan, PA Executive Director John D. Stoeckle Center for Primary Care Innovation Massachusetts General Hospital

Amy C. Edmondson, PhD, AM Novartis Professor of Leadership and Management Harvard Business School Gregg S. Meyer, MD, MSc, CPPS

Ex-Officio Member Immediate Past Chair, NPSF Board of Directors Chief Clinical Officer Partners HealthCare

David Michaels, PhD, MPH Professor Milken Institute School of Public Health George Washington University

Julianne M. Morath, RN, MS President and Chief Executive Officer Hospital Quality Institute of California

Charles Vincent, PhD, MPhil

Professor of Psychology University of Oxford Emeritus Professor of Clinical Safety Research Imperial College, London

Robert M. Wachter, MD Professor and Chair, Department of Medicine Director, Division of Hospital Medicine University of California San Francisco

ACHE Staff

Deborah Bowen, FACHE, CAE President and CEO

Eva Chess, JD Vice President, Communications and Marketing

Anita Halvorsen, FACHE Vice President, Professional Development

Allison Romer, MBA Vice President and Chief of Strategic Alliances

Megan Silverman, MHSA, CPPS Strategic Project Manager

NPSF Staff

Tejal K. Gandhi, MD, MPH, CPPS President and CEO

Joellen Huebner Program Manager, NPSF Lucian Leape Institute, Grants, and Special Projects

Patricia McGaffigan, RN, MS, CPPS Chief Operating Officer and Senior Vice President, Program Strategy

Patricia McTiernan, MS Assistant Vice President, Communications





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WHITE PAPER

A Framework for Safe, Reliable, and Effective Care



How to Cite This Paper: 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.



Allan Frankel, MD: *Co-Founder, Safe & Reliable Healthcare* Carol Haraden, PhD: *Vice President, IHI* Frank Federico, RPh: *Vice President, IHI* Jennifer Lenoci-Edwards, RN, MPH: *Director, Patient Safety, IH*

Acknowledgements:

The authors would like to thank the IHI Patient Safety Executive Development Program faculty and participants who, over 15 years, have helped to create and refine the framework described in this white paper. Special thanks to Michael Leonard and Terri C. Frankel for their extraordinary insights that have continuously made the framework stronger and more cohesive. Thanks also to Jana Dean, Doug Salvador, and Don Goldmann for their excellent and thorough review of our draft paper. We also thank Jane Roessner and Val Weber of IHI for their support in developing and editing this white paper.

The Institute for Healthcare Improvement (IHI) is a leader in health and health care improvement worldwide. For more than 25 years, we have partnered with visionaries, leaders, and frontline practitioners around the globe to spark bold, inventive ways to improve the health of individuals and populations. Recognized as an innovator, convener, trustworthy partner, and driver of results, we are the first place to turn for expertise, help, and encouragement for anyone, anywhere who wants to change health and health care profoundly for the better.

Safe & Reliable Healthcare (SRH) is at the forefront of measuring and improving culture, and building highly reliable learning systems. Our work across the healthcare continuum and around the globe has given us unique insights into the specific attributes, skills, and characteristics of effective leaders who are able to achieve the cultural transformation needed to improve operational excellence. We believe that safe, high-quality, cost-effective care is based on collaborative relationships, and we partner with organizations to transform their culture and foster nimble learning.

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Foreword

Patient safety has always been at the heart of the movement to improve quality in health care. More than 30 years ago, the Harvard Medical Practice Study helped kick off the quality movement by demonstrating that many, if not most, instances of harm in hospitals were caused by system failures. These system failures are what quality improvement methods and tools are designed to address, and applying these methods and tools is why IHI was founded.

In 1999, the Institute of Medicine's *To Err Is Human* report shocked the US with its estimate that at least 44,000 — and as many as 98,000 — people were dying in hospitals each year as a result of preventable medical errors. A few years ago, a new estimate suggested there may be as many as 400,000 preventable deaths per year. And in 2016, a study published in *The BMJ* estimated the number at more than 250,000, which, the authors asserted, would make preventable patient harm the third leading cause of death in the US. Understanding the true impact of preventable harm is important, but whether the number is 40,000 or 400,000, we can all agree that it's far too many.

I believe we are at an inflection point in the history of improving patient safety. Changing payment models, the uncertainty surrounding health reform, and the ever-increasing scrutiny of the modern digital age demand fresh and creative thinking on how best to ensure harm-free care.

At IHI's National Forum in December 2016, I proposed six patient safety "resolutions" for the new year — to ensure the great strides already made are sustained *and* to expand our thinking about safety:

- 1. Focus on what goes right as well as learning from what goes wrong;
- 2. Move to greater proactivity;
- 3. Create systems for learning from learning;
- 4. Be humble build trust and transparency;
- 5. Co-produce safety with patients and families; and
- 6. Recognize that safety is more than the absence of physical harm; it is also the pursuit of dignity and equity.

The first five aren't wholly new, and they align with IHI's approach to quality improvement in general. The sixth is one I've been thinking a lot about over the past few years. Now that we know how to reduce and even eliminate harms that some once thought inevitable — ventilator pneumonias, central line infections — we need to devote our efforts to eliminating harms we've yet to focus on explicitly. Harms caused by indignities and inequities in health care are just as preventable, and just as unacceptable, as wrong-site surgeries and medication errors. We're only beginning to understand how physical health is affected by psychological trauma. Ensuring patient safety is about ensuring the right all patients have to a free-from-harm care experience, which includes being treated equitably and with dignity.

This white paper doesn't address all six "resolutions" directly. It is focused, rightly, on creating systems of safety. The paper clearly and compellingly lays out a practical framework for how any health care organization or system can continuously and reliably improve patient safety. The core domains of creating a culture of safety and a learning system to ensure reliability, improvement, and sustainability are foundational, not only for solving the kinds of safety issues we have experience with, but also for those we haven't yet imagined. The individual components of the

framework — leadership, transparency, accountability, etc. — are the necessary ingredients to create a culture of safety and a system for continuous learning. Health care organizations of any type or size can build on this foundation to create systems and processes that ensure our *first* promise to patients — do no harm — is fulfilled.

Derek Feeley President and CEO Institute for Healthcare Improvement

Executive Summary

Efforts to improve the safety, reliability, and effectiveness of health care are not new; organizations have been diligently working toward these goals for years. However, they often pursue various strategies in a vacuum, not fully appreciating how different approaches and initiatives impact one another. When attempting to achieve more ambitious goals, these health care organizations sometimes need guidance about how to integrate and sequence their improvement efforts.

In this context, a group of subject-matter experts at the Institute for Healthcare Improvement (IHI) and Safe & Reliable Healthcare (SRH) have collaborated over 15 years to develop the Framework for Safe, Reliable, and Effective Care highlighted in this white paper. Made up of two foundational domains — culture and the learning system — along with nine interrelated components, with patients and families at the core, the framework brings together succinctly and in one place all the strategic, clinical, and operational concepts that are critical to achieving safe, reliable, and effective care.

This white paper describes the domains of culture and the learning system, outlining what is involved with each and how they interact; provides definitions and implementation strategies for the nine components (leadership, psychological safety, accountability, teamwork and communication, negotiation, transparency, reliability, improvement and measurement, and continuous learning); and discusses patient and family engagement. Throughout the paper, we provide real-world examples so readers can get a more complete understanding of the various components and their impact on the framework as a whole.

This paper provides organizations with a clearer understanding of how to achieve safe, reliable, and effective care. Organizations can use the framework as a roadmap to guide them in applying the principles contained therein, or as a diagnostic tool to determine how well (or even if) they are pursuing the different components of the framework. A commitment to using the framework will enable health care organizations of all shapes and sizes to take the next step toward achieving safe and reliable operational excellence.

Introduction

Health care organizations have an absolute responsibility to deliver safe, reliable, and effective care to patients. Yet consistently meeting this obligation can be daunting, and organizations are often challenged to design a balanced portfolio of improvement projects that will enable them to meet system-level quality and safety goals. They may have stand-alone safety improvement projects underway, or regularly conduct staff surveys to better understand the organization's current safety culture, but it remains unclear how these various efforts interweave and interact to provide safer, more reliable care. Diverse data streams are difficult to combine, making it challenging to develop sustainable, system-wide programs focused on all-cause harms and errors.

The Framework for Safe, Reliable, and Effective Care provides clarity and direction to health care organizations on the key strategic, clinical, and operational components involved in achieving safe and reliable operational excellence. It comprises two foundational domains — culture and the learning system — along with nine interrelated components: leadership, psychological safety, accountability, teamwork and communication, negotiation, transparency, reliability, improvement and measurement, and continuous learning. Engagement of patients and their families is at the core of the framework — the engine that drives the focus of the work to create safe, reliable, and effective care.

The framework serves several purposes. First and foremost, organizations can use it as a roadmap to guide them in applying the principles contained therein. Second, they can use it as a diagnostic tool to determine how well (or even if) they are pursuing the different components of the framework.

By employing this framework, organizations can, over time, improve the safety, reliability, and effectiveness of the care they provide. Redesigning a system of care is complicated, however, and cannot be rushed. Although the framework can help a health system organize its efforts to build systems of safe, reliable care, and ensure it pursues the key components necessary to achieve ongoing success, it is essential for organizations to allocate the time and resources to do the work. In addition, they must assess their current performance with respect to the different domains and components: Are they currently working toward implementing any aspects of the framework? How far have they progressed? What is working? What isn't working? By establishing this benchmark, it becomes clearer where the organization needs to focus its attention and efforts.

Background

Throughout its evolution, the Framework for Safe, Reliable, and Effective Care has been a collaborative effort between subject-matter experts at the Institute for Healthcare Improvement (IHI) and Safe & Reliable Healthcare (SRH). The components of the framework emerged as part of collective work to develop the curriculum for the IHI Patient Safety Executive Development Program, which teaches the concepts and strategies with which a patient safety officer must be familiar.^{1,2}

Based on in-depth analyses of numerous high-performing, proactive, and generative work settings, IHI and SRH continuously refined the ideas contained within the framework and, over time, observed that it yields positive results. Every safe and reliable health care organization the team has encountered is in the process of applying most — if not all — of the framework's components. Although initially focused on the acute care setting, the framework has evolved to be more broadly applicable in any setting — in acute care, ambulatory care, home care, long-term care, and out in the community. Like any good model, the framework continues to evolve as organizations weigh in with their own experiences.

The purpose of this white paper is to explain the framework, describe each domain and its components in more detail, and offer definitions, strategies, and real-world examples to help organizations fully understand each facet and get started on the work. There are various tools and methods organizations need to have in place to support safe, reliable, and effective care, many of which are noted throughout the paper. It is not the purpose of this paper, however, to cover all of these; see the Appendix for additional information on select methods and tools.

The Overarching Domains: Culture and the Learning System

Underpinning the framework are two essential and interrelated domains: culture and the learning system. In this context, culture is the product of individual and group values, attitudes, competencies, and behaviors that form a strong foundation on which to build a learning system.

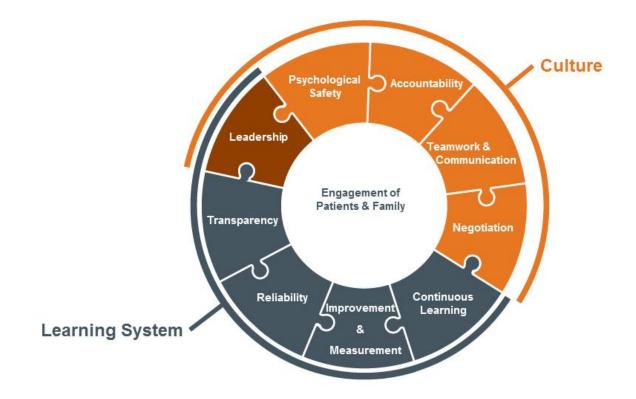
A learning system is characterized by its ability to self-reflect and identify strengths and defects, both in real time and in periodic review intervals. In health care, this entails leaders highlighting

the importance of continuous reflection to assess performance. It entails consistently performing agreed-upon team behaviors like briefings and debriefings where the self-reflection occurs. Learning systems identify defects and act on them; they reward proactivity rather than reactivity. Learning and a healthy culture reinforce one another by identifying and resolving clinical, cultural, and operational defects. By effectively applying improvement science, organizations can learn their way into many of the cultural components of the framework.

Figures 1 and 2 make it easier to understand the framework holistically. The figures depict the framework as a circular model where each component locks together with the others. This reinforces the idea that all parts are interconnected and interdependent, and success in one area is predicated on success in another. The framework helps make sense of an organization's prior work on safety, highlighting areas of strength as well as gaps.

At the core of the framework is the engagement of patients and their families — that is, all the effort involved in executing the framework should be in the service of realizing the best outcomes for patients and families across the continuum of care.

Figure 1. Framework for Safe, Reliable, and Effective Care



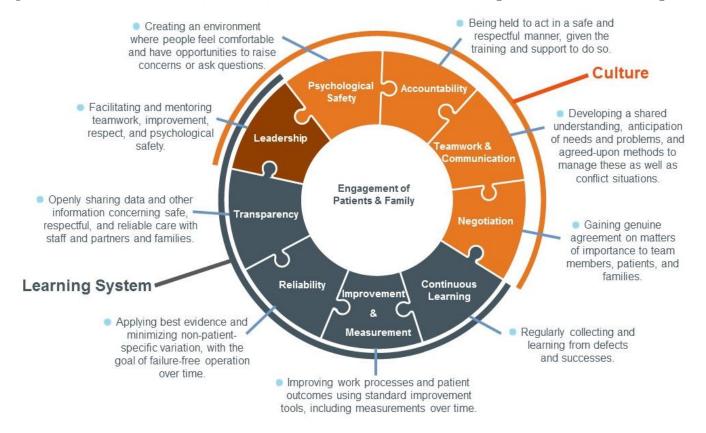


Figure 2. Framework for Safe, Reliable, and Effective Care - with Descriptive Detail for the Components

Because the culture and learning system domains are both foundational to the framework, it can be difficult to know where to begin work. It is somewhat of a chicken-and-egg problem: organizations need to have the culture to be able to do the learning, and need to do the learning to change the culture. In the end, there is no perfect place to start; there is justification to pursue either domain first.

This white paper begins by first deconstructing the components of culture and then those of the learning system. However, readers should keep in mind that the two domains are synergistic, and in many cases organizations will simultaneously work on multiple components, spanning the two domains. The eventual goal is to have all the components in place and working together to form a reliable system that consistently delivers safe, reliable, and effective care to patients.

The Components of Culture

As shown in Figure 1, the framework includes four cultural components (psychological safety, accountability, teamwork and communication, and negotiation) in addition to one shared component (leadership) that falls within both domains (culture and the learning system). Below we closely examine each of these cultural components, providing a definition and steps to implementing the ideas in daily practice.

Leadership

The primary function of leaders in health care is to influence their "followers" to develop behaviors, habits, processes, and technologies that result in outstanding and ever-improving performance. In

the framework, leaders are not identified by position or rank; they exist at all levels and in all groups, including patients and their families. In fact, the framework is indifferent to the leadership title: it tacitly acknowledges that senior leaders develop strategy or create alignment; middle-level leaders predominantly manage; and clinical leaders focus on the clinical acumen of their staff. These different attributes are key to each specific leadership role; however, the framework indicates that there are some similar expectations of every leadership position, regardless of role.

The framework requires that all formal and informal leaders are committed to achieving safe, reliable, and effective operational excellence. Essentially, leaders have four main responsibilities:

- **Guarding the learning system:** Fully engaging in the work of self-reflection that leads to transparency; understanding and applying improvement science, reliability science, and continuous learning; and inspiring that work throughout the organization.
- **Creating psychological safety:** Making sure that anyone in the organization, including patients and families, can comfortably voice concerns, suggestions, and ideas for change.
- **Fostering trust:** Creating an environment of non-negotiable respect, ensuring that people feel their opinions are valued, and any negative or abusive behavior is swiftly addressed.
- **Ensuring value alignment:** Applying organizational values to every decision made, whether in service of safety, effectiveness, patient-centeredness, timeliness, efficiency, or equity.

When leaders consistently deliver on these responsibilities, they set the stage for a culture and learning system centered on safety and reliability.

Moving from Concept to Reality

Strong leadership involves a series of behaviors that manifest themselves in actions. Consequently, organizations can assess and cultivate leadership by checking for, monitoring, and encouraging certain actions.

The following questions can assist organizations in evaluating the current leadership landscape and identifying opportunities for improvement:

- In what ways does the organization train people for leadership positions?
- How effectively does the organization pursue succession planning?
- How much time and energy do senior leaders and the board spend on quality and safety topics at board meetings? (The recommended amount of time is about 25 percent.³) Are safety and reliability issues prioritized in the meeting agenda?
- Do leaders have at least a tacit understanding of the framework and its components, as well as their roles as leaders?
- Are leaders committed to reviewing learning boards that document the problems people are having and what is being done to resolve them? (For more information about learning boards or white boards, see the Transparency section below.)
- Do leaders at every level set clear aims that are actionable? Does everyone know how they can contribute to the organization's overarching aim?

Culture surveys are especially valuable in that they can provide insight about leadership and the perceptions of staff. Some things to look for in culture surveys include whether staff feel that they

are coached by leaders, whether there is the perception that senior leaders' values align with stated organizational values, and whether these values are manifest in leaders' actions.

Leaders should also be accessible, listen more than they talk, and respond to concerns. Internal communications must exist in organizations that link leaders' responses to frontline provider concerns, in essence ensuring that staff feel their voices are heard. This feedback is critical because studies have shown that when leaders talk with people and respond with feedback and action, people feel their voices are heard, and engagement scores go up by 20 to 50 percent, including the scores that measure leadership effectiveness. However, when leaders listen but don't respond, or responses are not known to the frontline staff, engagement scores and perceptions of leadership effectiveness drop by 10 to 20 percent, according to 2016 SCORE results.⁴

Psychological Safety

This concept originated with James Reason's book, *Managing the Risks of Organizational Accidents*,⁵ and was popularized by Amy Edmondson in her early writings and in her book, *Teaming*.⁶ Although thought of colloquially as "I can speak up about concerns," the specific elements of psychological safety are much more nuanced and entail the following four attributes:⁶

- Anyone can ask questions without looking stupid.
- Anyone can ask for feedback without looking incompetent.
- Anyone can be respectfully critical without appearing negative.
- Anyone can suggest innovative ideas without being perceived as disruptive.

Each attribute emerges in different places and times within work settings and is supported by different activities. For example, asking questions without looking stupid relates to learning in the clinical environment, whereas asking for feedback without looking incompetent is a major component of how frontline staff relate to the person they report to.

Unfortunately, many common social settings, even in our schools or with family and friends, reinforce the opposite of psychological safety and don't support the value of asking questions, seeking feedback, or suggesting innovations. An environment of psychological safety breaks the cycle; such activities are not only welcomed but expected.

Moving from Concept to Reality

Achieving psychological safety requires a flat hierarchy and a solid learning system that create an environment in which people can comfortably make suggestions, even somewhat outlandish ideas that might not fit at the time, but that others can mold to be useful. Leaders, in a coaching role, must be role models for applying learning judiciously and judgment sparingly, and admitting to their own failures and mistakes. These types of coaching and feedback are the primary mechanisms for achieving psychological safety. Regular one-on-one meetings with staff offer a prime setting for this work. Managers should meet individually with the people who report to them — at least 10 minutes per month — and ask pointed questions, such as the following:

- What's working well?
- What's not working well that makes it difficult to do the job?
- How am I doing in managing the environment?

- Who are the people that we should be highlighting for excellent work?
- What improvement suggestions do you have?

As mentioned before, responding to feedback is key. Staff members need to see that their concerns and comments are being heard and addressed.

In addition to individual meetings, leaders should conduct huddles — brief meetings where groups come together to quickly share information, and people are encouraged to speak up. Before the first huddle, a leader may want to ask specific people to bring up issues so other team members can see that it is okay to suggest ideas and provide constructive criticism. Once team members realize that feedback and input are welcome, it will become more natural.

To lay the groundwork for psychological safety, organizations need to clearly convey to all staff and leaders that it is an expectation. Everyone must create and support psychological safety as part of their job. Frontline staff may not realize they should expect this, and thus do not watch for these supportive behaviors in their leaders and colleagues.

Accountability

This framework component underscores the importance of holding people to account for their actions, but not for flaws in processes or systems. Each individual is accountable to others for acting in ways that embody organizational values, and each individual is accountable as a team member to be committed, self-managing, competent, and courageous.⁷ In return, the organization is accountable for treating individuals fairly and justly "when things go wrong."⁸

The concept of a fair and just culture requires a simple and precise algorithm that fosters an environment in which staff members accept responsibility for their own actions, but know the organization will treat them fairly and not blame them for something out of their control. The algorithm, and the policies and practices that manifest it, must be practiced regularly so they are applied accurately when needed. This entails periodic application through simulation and regular discussions about the concepts in staff meetings.

The literature presents a few different accountability algorithms; the best known are the Just Culture Algorithm based on the work of David Marx⁹ and the Incident Decision Tree by James Reason.⁵ The algorithm we present here takes into account aspects of both models.¹⁰

When something goes wrong and a patient is harmed, evaluate the involved staff member's actions using the following algorithm:

- Were their actions malicious? Did they intend to cause harm?
 - Yes This points to potential criminal activity, and the organization's response should proceed accordingly.
 - \circ No The evaluation should move to the next question.
- Was their sensorium intact? Were they thinking clearly?

Clear thinking is commonly adversely affected by health issues, severe social stressors such as divorce or a sick child, drugs (legal or illegal), or alcohol abuse.

- No The organization should engage the employee assistance program or pursue discipline as needed.
- \circ Yes The evaluation should move to the next question.
- Were their actions reasonable and appropriate?

At this point, organizations should use Reason's Substitution Test to guide the answer, asking if it is likely that three other people in a similar situation with similar skills would do the same thing. If the answer is yes, chances are it's a system problem.

Note, however, that this isn't always the case; there are times when entire groups deviate from safe and reasonable behavior. As one example, an analysis of a post-delivery opioid overdose in a new mother found that a hospital maternity service of 30 obstetricians and 300 RNs came to agree that a reasonable standing order for post-C-section pain was 2 mg morphine, repeated as needed up to 30 mg morphine — an extremely high dose to administer. Using this standing order, patients received an average dose of 17 mg morphine. (One modification to the standing order — that the RNs discuss pain medication with the attending doctors once 10 mg morphine had been administered — decreased the average morphine dose to 11 mg.)

When groups collectively deviate, the organization must ask the entire group to reflect on their behaviors and then recalibrate. If someone was hurt as a result of the group's behavior, the individuals involved are still accountable for their decisions and the organization must deftly manage the balance between accountability and psychological safety. Regrettably, outside influences, such as malpractice law, sway the response toward accountability. Organizational leaders need to continually reflect on their values as they navigate these complex events.

• Were their actions risky, reckless, or unintentional?

If the action was unintentional, then, in all likelihood, there's a system issue at play. If it was risky, then that points to possible judgment issues. Usually, education or group discussion, in which participants agree on standards, can help. If the behavior is reckless, meaning the person willingly took unnecessary risks, then he or she is culpable for the behavior and should be held accountable.

• Does the individual have a history of unsafe behavior?

If an individual has been involved in multiple adverse events, then it's entirely possible that the individual is not fit for the position he or she holds. In these situations, it is reasonable for managers to evaluate the individual's ability to perform his or her role; possible outcomes might include reassignment or termination.

Moving from Concept to Reality

Whether an organization chooses to use the algorithm discussed above or another accountability algorithm, policies and practices that reflect the algorithm need to be implemented and shared with everyone in the organization, setting the shared expectation that the algorithm must be followed when adverse events occur.

The organization should engage all staff in regular simulations, evaluating cases when things go wrong, to help staff practice the desired behavior so it is applied accurately when needed and becomes the norm. At least twice per year, convene middle managers to review an example case together, whether real or simulated, using the algorithm. After this simulation, middle managers should then

review the case in their monthly meetings with frontline staff. In doing so, organizations can ensure that only one set of rules is used throughout the organization and applied to all equally.

Teamwork and Communication

Effective groups develop norms of conduct that lead to shared understanding, that anticipate needs and problems, and that use agreed-upon methods to manage situations — including those that involve conflict. Groups that do this well reflect a high degree of teamwork and robust communication.

Hallmarks of a strong team include working together to plan forward, reflect back, communicate clearly, and manage risk. This applies to all types of teams, whether a surgical team in the operating room or a group of community nurses who work for the same home care agency.

- **Plan forward:** Take time even briefly, for example, in a safety briefing or a surgical timeout to outline next steps, talk about potential risks, and agree on a path that best manages risk, safety, and efficiency.
- **Reflect back:** Use team debriefs to "reflect back" and evaluate what went well and what didn't go well, in order to identify potential areas for improvement. Truly robust teams evaluate not just the clinical and operational activities, but also the cultural ones. Did the group cohere well as a team? Did everyone know the plan? Was psychological safety assured?
- **Communicate clearly:** High-functioning teams use structured communication in which they consistently, succinctly, and respectfully share critical information. A prime example is SBAR^{11,12} (Situation, Background, Assessment, Recommendation), which team members can employ to rapidly communicate a comprehensive set of facts based on which team members can make decisions. Read back/call back¹² is another structured communication tool to reconcile the transmission and reception of information, in which the person hearing the message reads back what he or she heard to prevent miscommunication and encourage accuracy.
- **Manage risk:** In some critical moments, teams may use a designated word or phrase that indicates there is perceived risk, and which gives the team permission to stop what they're doing and take stock of the situation. Perhaps the team is not following the agreed-upon plan, or the dynamics of the situation have changed. This might occur when a team member no longer understands what the group is doing relative to the plan, or the team member perceives increased risk.

For example, when the general surgeon performing a difficult laparoscopic cholecystectomy has spent 30 minutes ineffectively trying to identify the common bile duct amidst the scar tissue surrounding the gall bladder, and frustration is evident, an experienced circulating nurse or anesthesiologist might suggest that another set of experienced eyes on the problem may be helpful. In most operating rooms today, this would be perceived as intrusive and an affront to the surgeon's skill. The reality is that everyone is at risk for task fixation and can benefit from the many perspectives of a multidisciplinary team.

In a culture that espouses teamwork and communication in the pursuit of safe, reliable, and effective care, team members explicitly give permission to hold each other accountable across a flat hierarchy. During each team interaction, team members know the plan and there is a dynamic that supports psychological safety. Teams agree on norms of conduct, and team members are reminded of them when necessary.

According to Kelley,⁷ achieving these ambitious yet necessary goals requires team members to be committed, competent, self-managing, and courageous. This enables them to plan forward, reflect back, communicate clearly, and manage risk.

Moving from Concept to Reality

In most cases, teams act their way into embodying the aforementioned characteristics only after regular practice. To gauge where a team is on the continuum, senior leaders should periodically enter a work setting and ask and receive answers to the following questions:

- How do you brief as a team? What's the process for ensuring that everyone on the team knows the plan?
- When do you brief? How do you manage the team's work with team members coming on shift at different hours?
- How do you debrief? What activities do you do to debrief and identify what has worked and what hasn't? When does this occur?

Organizations need to set the expectation that middle managers are responsible for establishing these norms of conduct and team behaviors, adapting them to meet the nuances of their work settings, so that the norms and behaviors are perceived by team members as constructive supports to their work. If a manager is unable or unwilling to take on this responsibility, then he or she is unlikely to be effective in this management role.

Negotiation and Conflict Management

Given the level of complexity in health care and the need to make decisions among groups of smart and passionate people who have different points of view, organizations must find ways to successfully manage conflict and negotiate in pursuit of gaining genuine agreement on matters of importance.

According to Kenneth Thomas, there are five kinds of negotiation that occur among individuals and groups:¹³

- **Avoidance:** One party avoids interaction altogether, usually leaving loose threads and unclear pathways and opening up opportunities for further disagreements and problems.
- Accommodation: One party acquiesces to the other to avoid conflict.
- **Competition:** Both parties strive to be the "winner," such as when buying a car or some other product in which haggling comes into play. The end result is a perception that one side wins while the other side loses.
- **Compromise:** Both parties "lose" a little bit, with each party giving up something to reach an agreement.
- **Collaboration:** Both parties work together to find a mutually agreeable solution so as to maintain the ongoing relationship and achieve win-win results. Collaborative negotiation also incorporates the idea of innovative thinking that leads to finding new opportunities that benefit both parties.

Health care teams should commit to using collaborative negotiation whenever possible. This is the only negotiation approach that yields workable solutions that manage resources, provide the best options for patients, and preserve the relationships between parties.

The hallmarks of collaborative negotiation are appreciative inquiry and self-reflection, which allow negotiators to tease out the underlying reasons behind participants' positions. Appreciative inquiry involves asking simple questions to gain greater insight into the other person's needs and interests. Self-reflection occurs when each participant works to understand the desires they bring to the table. During negotiations, both parties should work to acknowledge their own emotions and keep them in check; as participants become frustrated or angry, for example, they are less capable of distinguishing positions from interests, and less able to effectively participate in collaborative negotiations.

Throughout a negotiation, individuals should try to be aware of when their mental state is holding them back from the negotiation process. This may require the individual to step away — which may necessitate briefly looking away, taking a couple of breaths, or actually making the statement, "I think we should take a break."

Although challenging, the benefits of collaborative negotiation are worth the effort. By simultaneously engaging in appreciative inquiry and self-reflection, participants are more likely to come up with ideas that meet both parties' needs and identify aspects of a problem that hadn't been considered initially. This can result in inventive solutions that lead to resolving problems in everyone's best interests.

Moving from Concept to Reality

Negotiation is a skill that requires training and must be regularly practiced with an intentional focus on the concepts. Otherwise, participants in disagreements are far more likely to succumb to less effective or satisfactory interactions. Organizations should consider building ongoing awareness of collaborative negotiation and its various components as part of briefings and timeouts. Courageous team members will embrace this idea, and the presence of psychological safety lays the groundwork for such negotiation to occur.

The Components of the Learning System

Like the culture domain, the learning system domain has four components (transparency, reliability, improvement and measurement, and continuous learning), in addition to the shared component of leadership. Below is a discussion of each of these components, along with steps to realizing them within daily practice.

Leadership

As with the culture domain, leaders play a critical role in supporting a robust learning system. They serve as guardians of the learning system, meaning they must fully understand, encourage, and apply the concepts of improvement, reliability, and continuous learning. Through regular self-reflection, they encourage transparency at every level and inspire learning in their areas of responsibility and throughout the organization.

Transparency

On the whole, operational transparency exists when leaders, staff, patients and their families, organizations, and the community are able to visibly see the activities involved in the learning process. In transparent organizations, it is clear how the entities make decisions and track performance, and they have the courage to display their work openly.

When used to describe the interplay among people, groups, and communities, transparency implies openness, communication, and accountability. This manifests differently depending on the context, but always in pursuit of operational transparency:¹⁴

- **Transparency among clinicians** exists when there is no fear of giving suggestions, pointing out problems, or providing feedback.
- **Transparency with patients**, specifically after an adverse event, involves clearly describing what happened and what is being done to prevent it from happening again.
- **Transparency among organizations** includes sharing good practices and applying lessons learned.
- **Transparency with the community** requires robust information sharing so that patients can make informed decisions and easily access the care they need.

Learning boards — digital or analog white boards used to visually display key processes, measures, and improvement tests at the unit level — are essential in promoting operational transparency because they offer a way for people to observe the learning process in action. Learning boards direct staff to specific processes or activities that will help achieve not only operational success, but also improvements in learning. They also inform the team about who is responsible for different parts of a task. Frontline teams must have the expertise to interact with the boards, so they can understand which parts of a process are working reliably and which are not. Organizations and managers must learn how to configure information on these boards so that they are of interest to frontline providers.

How a learning board might work may be best understood if applied to a real example, such as working to decrease surgical site infection by improving the reliability of perioperative practices. A learning board highlights some key steps — and the measures of those steps — that are known to influence surgical infection: ensuring that antibiotics are administered appropriately and on time as required; ensuring that patients are normothermic when they arrive in the recovery room; and ensuring that patients' blood glucose levels are appropriately managed intraoperatively. Each day, anesthesiologists, surgeons, and nurses must get the right antibiotics to the right patients at the right time, keep patients warm, and monitor and manage blood glucose levels in diabetic patients. A robust learning board also displays the improvements tested in the operating room, telling a visual and easily understood story that links the tests to the measures, generating insights into which actions influenced the measures. The board should also link the performance of each process to the overarching aims — in this case, linking antibiotic administration, intraoperative normothermia, and glucose management to the perioperative services surgical site infection rate.

Another example of how learning boards might be used in a community setting is in highlighting the effort to reduce unnecessary hospital readmissions after discharge. This is a problem with complex underpinnings; however, some very real and essential determinants of readmission in many communities include whether patients have access to a local pharmacy, have the money to obtain the appropriate medications, and then take those medications as directed. Other factors are specific to diagnoses — for example, whether patients with heart failure weigh themselves every day. Measures of how effectively caseworkers and community health personnel evaluate and manage these factors can populate learning boards to inform clinical groups of the effectiveness of support being given to particularly vulnerable patient subgroups.

Moving from Concept to Reality

The use of learning boards should be an integral part of daily work. Leaders must set expectations that managers will create learning boards to highlight and communicate about the ongoing activities and work in their areas. To this end, organizations must train managers on how to create, use, and respond to the boards.

Senior leaders need to routinely visit work settings to discuss the learning system components of the framework at the learning boards. During these visits, frontline providers and managers have the opportunity to describe the learning board, including the overarching aims, the tests of changes to achieve those aims, and measures of current performance. Senior leaders, through coaching in these sessions, can also highlight the importance of self-reflection and the desire to identify defects and make them visible.

Reliability

Reliability is the ability of a system to successfully produce a product to specification repeatedly. In the case of health care, that product is safe, efficient, person-centered care. The challenge in achieving reliability in health care is the complexity of the processes, which heavily depend on human beings and their interactions with each other. Vigilance and exhortation are inadequate to counter human foibles, and sometimes good people err and the consequences can be dire. Great organizations design systems that take advantage of people's intrinsic strengths and support their inherent weaknesses, and in doing so increase the likelihood of reliable performance. Mediocre organizations, by comparison, assume that vigilance and intrinsic strengths overcome human fallibility and inherent personal and organizational weaknesses.

To achieve high levels of reliability across processes and systems, organizations must apply best evidence and minimize non-patient-specific variation, with the goal of failure-free operation over time. This is the science of reliability.

There are four foundational principles for making systems and processes more reliable:15

- **Standardize:** This involves designing processes so that people do the same thing the same way every time. Standardization makes it easier to train people on the processes, and it becomes more apparent if the processes fail and where they fail, enabling the organization to better target improvements.
- **Simplify:** The more complex something is, the less likely it is to be successful because there are more opportunities for mistakes, and staff may avoid following processes that are too difficult or time consuming. Simplified processes, however, make it easy for people to do the right thing.
- **Reduce autonomy:** Health care professionals have historically been autonomous, making decisions based on personal preference or an individualized belief in their perspective. However, this can result in care variation and less consistent outcomes. To achieve greater reliability, organizations must set the expectation that care delivery follows evidence-based best practices, unless contraindicated for specific patients.

• **Highlight deviation from practice:** Clinicians sometimes have good reasons for departing from standardized processes. Smart health care organizations create environments in which clinicians can apply their expertise intelligently and deviate from protocols when necessary, but also relentlessly capture the deviations for analysis. Once analyzed, the new insights can lead to educating clinicians or altering the protocol. Both result in greater reliability.

When contraindications exist, health care professionals need to document the reasons why departing from standard care practice is warranted, so that the organization can learn and determine whether the process should be modified. For example, for patients on a ventilator, there is evidence that the head of the bed should be elevated between 30 and 45 degrees.¹⁶ For most patients, this is the right thing to do. However, there are some individuals who, because of their medical situation or characteristics specific to them, will not benefit from an elevated head of the bed. In these cases it is okay to depart from best practice, provided the patient's treatment team has duly considered the evidence-based care and documented the reasons why they're choosing to follow another method.

For most clinical conditions and situations, there is evidence-based care that patients should receive every time, unless contraindicated. When evidence does not dictate a particular care path, clinicians need to work together to identify the simplest and most reliable path and agree to abide by the group's decisions. In so doing, they simplify the care pathway, enabling organizations to be more efficient and making care more reliable. As new evidence develops, care pathways must be reviewed periodically to ensure that the agreed-upon care practices remain relevant.

Moving from Concept to Reality

Reliability does not happen by accident; it has to be planned. This entails applying reliability principles — methods of evaluating, calculating, and improving the overall reliability of a complex system — to each process or system that needs to be improved.

To get started, teams can use high-level flowcharts to visualize the current process or system. Next, target one segment or subset of the patient population and work to improve the reliability of care for this group. Once reliable care can be delivered consistently for this population, then populations with greater complexity can be addressed.

Organizations should strive for the highest level of reliability possible for each process. In some circumstances, 100 percent is necessary — for example, preventing wrong-site surgery and correct administration of blood. However, in certain situations which we refer to as non-catastrophic processes (that is, the patient will not experience harm within the next few hours), 95 percent reliability is perfectly acceptable because reaching that last 5 percent necessitates a big investment in time and resources, and the cost-benefit is not feasible. In such cases, ensure that other processes are in place to identify and correct these defects.

As work progresses, the team should continuously monitor the process, checking if it yields the expected outcomes. At this point, the team needs to make sure that the reliability extends to all aspects of the process — not just whether the process occurs reliably, but also whether the desired outcomes are in line with goals. If the process is not generating the desired outcomes or performance begins to slip over time, then the team needs to revisit the process and identify and address any root causes.

Consider the transfer of patients from an emergency department (ED) to an inpatient setting. The ED may do a great job evaluating the patient and identifying that he or she needs to be admitted to the hospital. The staff on the unit might do an equally great job of caring for the patient once he or she is admitted. However, if the transfer time is prolonged and the patient languishes in a hallway for hours without delineation of whether the ED or the unit is responsible for his or her care, then the system is not as reliable as it should be.

Just as reliability must be planned, it also has to be encouraged and nurtured. Leadership needs to be supportive in giving staff the time, space, and training to apply improvement methods and tools to build reliable processes. Providing more clinical training and education, or asking staff to work harder or be more vigilant without also creating the environment that makes this feasible, won't lead to improved results. Staff also need to build improvement capability and skills, and get coaching on applying these skills in their daily work to deliver safer, more reliable care. Leaders must also ensure there is psychological safety, so staff feel comfortable offering ideas about making processes more reliable.

Consider the example of a hospital where a staff member suggests during a leadership team huddle that medication reconciliation is not at a high level of reliability because the current process is not successful for all patients. When people arrive in the emergency department, for instance, doctors and nurses are busy and may begin treatment before they have a complete medication list. By contrast, patients scheduled for elective surgery almost always have a complete list. In the elective surgery setting, the care team has time to discuss the medications with the patient prior to the procedure and there is a back-up plan that involves the anesthesiologist reviewing the patient's medication list just before surgery. If the list is not complete or available, the anesthesiologist and preoperative nurses take action to remedy this. In the ED, there is little time to employ a back-up plan.

The team analyzes the two situations and determines that the process for patients scheduled for elective surgery does not work for ED patients; however, some aspects of the preoperative evaluation are amenable to testing in the ED. A back-up plan is put into place for staff to review the patient's medication list on the inpatient unit, utilizing some of the techniques applied by anesthesiologists in the elective surgery environment. Reliability is improved, made possible by the psychological safety that allows a team member to speak up, and because there is opportunity to reflect on current activities and spread a best practice.

Similarly, consider the example in which, during leadership rounds, staff members report that they are having difficulty ensuring that all eligible patients receive their pneumococcal pneumonia vaccine before discharge. The leader asks what processes are in place. Staff members respond that they have tested and implemented a standardized process where, on the day before discharge, all patients are assessed to determine if they meet criteria for the vaccine. The medical staff has agreed to a standard protocol for nurses to administer the vaccine if a patient meets criteria. According to the standardized process, this responsibility falls to the nurse caring for the patient on the day before discharge. However, due to staffing changes, early discharge, or lack of available vaccine on the ward, sometimes patients are sent home without receiving the vaccine.

The leader asks the staff for suggestions about how to improve the process. Since the initial process was standardized and works well about 80 percent of the time, the staff suggest implementing a back-up plan to identify all eligible patients who don't receive the vaccine prior to discharge. They suggest that, as part of post-discharge communication, the nurse who reaches out to the patient asks if he or she received the vaccine. If the patient answers "yes," then the matter is closed. If the patient answers "no" or "I don't know," the nurse notifies the patient that the nurse will contact the primary care provider to inform the practice that the patient will need the vaccine.

Improvement and Measurement

This component of the framework deals with enhancing work processes and patient outcomes using standard improvement tools, including measurement over time. It involves leveraging improvement science to develop, test, implement, and spread changes that result in better outcomes.

Note that improvement doesn't always mean there is a defect; it could just mean there's a better way to do something. Sometimes improvements are initiated in response to clinical, cultural, and operational defects, such as an increase in infections or poor patient and staff engagement. Increasingly, however, improvement projects are focusing on preventing problems before they arise by deeply understanding the processes of care and operations.

Before starting an improvement project, organizations have to first understand the system they are trying to improve. There are many tools that can make the steps in the process or system visible — visual process maps or flowcharts, for example. Combining learning from flowcharts, user experience, and data, it is possible to "see" where defects are occurring and identify opportunities to improve the process.

Model for Improvement

Once defects are identified, a systematic improvement approach like the Model for Improvement¹⁷ enables teams to redesign processes and achieve outcomes that matter to patients, families, and staff.

The Model for Improvement combines a systematic methodology with subject-matter knowledge to create the desired improvements. The Model is made up of three questions and a Plan-Do-Study-Act (PDSA) cycle for testing changes to assess whether or not they lead to improvement.

Question 1: What are we trying to accomplish? (Aim)

Answering this question gives the improvement team a clear vision for the project. The best aim statements specify how much improvement is expected and by what date — for example, "We will reduce patient falls in the skilled nursing unit by 25 percent in the next six months," or "We will reduce the rate of blood clots in

Model for Improvement



patients with atrial fibrillation by 20 percent in the next 12 months," or "We will reduce the incidence of pneumococcal pneumonia in patients over age 65 by 30 percent in the next 16 months." An aim statement that is clear, concise, measureable, and time-bounded helps everyone understand the goals of the work and the timeframe in which it will be accomplished.

Question 2: How will we know that a change is an improvement? (Measures)

This is the measurement component of the Model for Improvement. At first, a team might want to pursue rather simple measurements, asking questions like, "Did the change we implemented get the results we wanted — yes or no?" or "Was it easy to do — yes or no?"

As improvement work expands, measurement becomes more complex. At this time, organizations want to look at process measures — the steps taken to achieve an outcome. Ultimately, health care

organizations are seeking to make improvements in outcomes. An outcome won't improve, however, without improving the process that drives it. Once an organization has a reliable process, it then can check to see if the process is capable of producing the desired outcome — the actual results.

Organizations also need to collect and review balancing measures. These measures reveal whether improvements to one part of the system have had an unintended negative impact on other parts of the system. See Table 1 for examples of these three types of measures.

Table 1. Example Process, Outcome, and Balancing Measures

Process Measure	Outcome Measure	Balancing Measure
Percent of patients assessed for risk of developing a blood clot	Percent of patients with blood clots	Percent of patients who experienced bleeding due to aggressive use of anti-clotting medication
Percent of patients who received pneumococcal pneumonia vaccine	Incidence of pneumococcal pneumonia	Percent of patients receiving the pneumococcal pneumonia vaccine who experienced an allergic reaction to the vaccine

Measures data is displayed over time on either run charts or statistical process control (SPC) charts, enabling the team to see if changes they are testing result in the desired effect. These charts also enable the team to distinguish between special and common cause variation in the process being improved.

Question 3: What change can we make that will result in improvement? (Change Ideas)

This part of the Model for Improvement is about generating change ideas for testing. Ideas for testing can come from anywhere. In fact, the best sources are the people who are involved in the process to be improved, as well as the patients for whom the process is designed. Adapting ideas for testing from other organizations or industries can also be a creative and useful method to expand team thinking. Standard change concepts, such as those offered in *The Improvement Guide*,¹⁷ are often extremely useful when identifying and implementing changes.

Testing Changes: Plan-Do-Study-Act (PDSA) Cycle

Once the Model for Improvement's three questions are answered, there is clarity around the planned improvement and testing can begin. Using the change ideas generated from Question 3, the team begins testing those changes using PDSA:

- Plan: Plan the test or observation, including a plan for collecting data.
- **Do:** Try out the test of change on a small scale.
- **Study:** Set aside time to analyze the data and study the results.
- Act: Refine the change, based on what was learned from the test.

PDSA cycles of testing are iterative: each new testing cycle builds on what was learned in the previous one. Testing begins on a small scale and is repeated until the desired results are achieved, and then testing spreads to a larger and larger group until the new process is implemented everywhere that patients will benefit from its use.

The team charged with making the improvements does the testing. As such, it is vitally important that this team includes clinicians and staff who use the process to be improved; they are the subject-matter experts. They should be frequently coached by quality improvement personnel who are experts in improvement science. Bringing these two groups together is more likely to ensure a successful project.

For example, for an improvement team focused on preventing blood clots in patients, let's explore change ideas the team might test using PDSA cycles. First, the team needs a process to identify patients who are at risk and then treat them with anticoagulation medication and other modalities, such as compression stockings. The team discusses how they might identify high-risk patients and decides to develop and then test a patient checklist designed for that purpose. The subject-matter experts contribute information about the specific risk factors to be included on the checklist. The clinicians and staff who work in the particular area know the workflow. Even if the technical information on the checklist is correct, the team does not yet know if the checklist is usable by staff or effective at preventing blood clots in at-risk patients, so testing is required.

The team starts asking questions:

- Does the checklist present the information in a logical and readable format?
- How long will it take to complete the checklist?
- Who will administer the checklist?
- Where will they administer it?

These and many other questions will require iterative tests of change using PDSA cycles to develop a successful process for identifying patients at risk for developing a blood clot. Once the team determines answers to these questions, it uses the same steps to develop the process for ensuring that high-risk patients get the preventive treatment they need.

The team can only improve the process if they have information, and that information can only be gained by testing and measuring. So, if the team tests changes daily, it can learn and improve daily until the process reaches a point where it runs smoothly within the time allocated, and high-risk patients are identified reliably in the pilot area. The improvement is then spread or scaled up to all areas where patients may benefit.

Moving from Concept to Reality

All staff in the organization should have knowledge of how to use a systematic improvement approach, such as the Model for Improvement, Lean, or Six Sigma.¹⁸ Some organizations create their own system-specific model as a compilation of different improvement methods. Since there are many improvement models and tools from which to choose, create clarity for staff by simplifying the selected approach and terminology to develop a shared model and language of improvement across the organization.

Regardless of the specific model used, leaders and managers need a sufficient depth of understanding of the model to drive improvement throughout the organization, as well as use it in improving their own work. They must be able to provide coaching and ask appropriate questions of staff and managers around the learning board. They also have to be able to interpret data on run charts and control charts, and to distinguish between special and common cause variation. Managers need a deeper knowledge of improvement methods to coach and help frontline staff with improvement challenges. They also have to know how to collect, display, and analyze data in the form of run charts and control charts.

Frontline staff must know how to run small tests of change, apply improvement methodology, track data for key measures, and interpret data displayed on run or control charts to gauge performance and the effect of their improvement efforts.

Improvement Advisors (IAs), individuals within an organization who have advanced training in improvement and measurement, need the most in-depth knowledge, so they can offer advice and coach staff throughout the organization. IAs don't lead or implement the actual improvement work; this is the frontline team's responsibility, since they know the process best and improvement needs to be part of their daily work. Improvement Advisors provide valuable knowledge and guidance for creating effective and reliable measurement systems (i.e., defining measures and developing methods for data capture and display), a critical component of improvement.

Overall, there must be an expectation that the organization will use a chosen improvement methodology and collect data over time, displaying it on run charts and control charts. Decisions based on data reflect a deeper understanding of improvement.

Continuous Learning

Continuous learning entails the proactive and real-time identification and prevention of defects and harm. Some argue that health care needs to broaden the definition of harm to include, for example, harm caused by health inequities and lack of respect, in addition to harm resulting from medical errors and adverse events.^{19,20}

Increasingly, more time and focus are being placed on proactive rather than reactive learning. Learning organizations are becoming obsessed with searching for ever better ways of working toward and achieving results that improve the lives of patients, families, and staff.

An enormous amount of data and information is continuously generated at every level of the health care system — in hospitals, outpatient practices, home health agencies, and other care settings. Unfortunately, this data is often not converted to information that is shared with practitioners in a useful format or in a timely manner so that it can be acted upon to improve care. Currently, practitioner-generated data — from self-reported incident systems, leadership walkrounds, learning boards, and care team huddles and briefings — are fed into reports that meet legal and regulatory requirements, but are often underutilized to effect real change and improvement at the point of care.

Continuous learning requires feedback loops to provide data back into the various reporting systems to share information and generate insights to prompt action and learning.

Moving from Concept to Reality

In organizations with robust learning systems, data becomes grist for the learning process. A continuous learning organization exhibits several characteristics:

• Both clinical and operational data of importance to patients, families, and staff are shared widely and transparently, as are the associated action plans and timeframes. Examples of clinical data include infection rates, hand hygiene rates, and rates of falls with harm. Operational data might include waiting times.

- Learning generated by defects, and also by successes and improvements, is broadly shared.
- Data generated from near misses, when staff intercept potentially harmful events, are viewed as valuable learning opportunities, and are shared to improve the culture of safety by demonstrating transparency and psychological safety.
- The search for possible solutions to current and potential problems extends far beyond the confines of the organization itself, seeking to learn from other organizations or industries.
- Time and resources are dedicated to learn from both what is working and what is failing.
- Learning occurs between staff, between operational units within an organization, and between organizations.
- Feedback loops are timely and actionable. The organization examines the aggregate effort of the various data reporting systems, and makes decisions about the relative importance of the information.
- There is a commitment to proactively identify problems using huddles, learning boards, and structured communication.
- Patients and families are active team members in their own care, as well as in developing deeper system-wide learning about what it means to be part of the health care community.

To nurture a robust learning system, organizations must embed operational excellence into everyday work and operations, not treat it as a standalone improvement project. Continuous learning and improvement is part of the culture — always seeking opportunities to deliver safer, more reliable, and effective care based on new science, new approaches, or new medicine.

Engaging Patients and Families

Engagement of patients and families resides at the core of the framework — that is, all the effort involved in executing the framework should be in the service of engaging patients and families, and realizing the best outcomes for them across the continuum of care.

In safe and reliable organizations, patients and families are as much members of the care team as clinicians and other health care staff. Thus, the framework has direct and significant implications for them. Below we describe ways in which patient and family engagement dovetails with the framework's culture and learning system domains.

Leadership and Accountability

For each care episode, patients and the rest of the health care team need to agree on a set of goals and clearly define roles and accountability for what it takes to achieve those goals. Clinical team members advise on the clinical components, and patients give their perspectives until there is agreement on what constitutes a reasonable goal. When people are in accord and feel accountable, there is a higher likelihood of success. For example, for an individual with chronic pain, the person and the treatment team may determine that being 100 percent pain-free is not a reasonable outcome, whereas reducing the pain to a sustainably tolerable amount is an achievable goal. With all team members pursuing the same goals and having the same expectations, it is easier to reach targets and recognize success.

Psychological Safety

Patients should feel psychologically safe to share their concerns with the clinical team. Opinions, ideas, questions, and concerns expressed by patients are received openly and without judgment. The response of the clinical team, beginning with the first clinical interaction, sets the tone for the ongoing relationship.

Patients should also be encouraged to be transparent about their clinical signs and symptoms and treatment adherence. This information enables clinicians to provide appropriate and adequate treatment. Without psychological safety, a patient might be tempted to hold back for fear of being shamed. For example, if a patient feels the doctor will be angry or disappointed if he or she does not completely follow a medication regimen, then the patient may not be totally honest about whether they are taking medications as indicated and, if not, why. However, if a physician encourages the patient to share complete information and does not react negatively, it fosters more comprehensive and accurate information exchange.

Negotiation

As with negotiation between clinicians, the health care team should engage in collaborative negotiation with patients and families. To help the care team determine if the patient has the will to make changes, this involves a shift from asking, "What is the matter with you?" to asking, "What matters to you?"²¹ A key aspect of successfully achieving health goals is knowing the patient's and family's priorities, as well as their worries and desired outcomes. For instance, an elderly patient who takes care of her grandchildren on a daily basis may refuse to take her hypertension medicine because it makes her dizzy, lessening her ability to provide care. Knowing this information, the care team can then identify a solution that preserves her health and also meets her goals.

Transparency

Transparency with patients and families is important because it removes the stigma of clinical team infallibility. When serious clinical adverse events occur, transparency is especially important; the risks of the health care organization not responding to such events in a timely and effective manner include loss of trust, absence of healing, and no learning from improvement.²²

As individuals understand that the health care organization is trying to improve processes to enhance safety and reliability, patients will recognize the need for their engagement in the system. For example, if physicians are transparent about not always following up to communicate test results or make referrals, then patients might be more activated to take responsibility for directly obtaining their tests results when patient portals are available to them, and to otherwise close gaps when they occur. This is not to suggest that organizations should rely on patients to follow up, but that transparency about potential gaps can serve as a component of a reliable process.

Reliability

With regard to reliability, patients want to be confident that they always receive care that is safe and effective. No one wants to receive "less than perfect" care — or worse, experience unintended harm from their care. Patients are an important asset in uncovering ways to develop more reliable processes that lead to long-term sustainability of clinical and operational excellence in health care organizations.

Improvement and Measurement

Patients are valuable assets when it comes to improvement because they bring their unique perspectives, particularly about how they experience care delivered by an organization. One way to involve patients and families in improving care is to ask for input on their experiences and ideas, and share data with them about ongoing improvement efforts. Run charts are one easy-to-understand method for sharing data on measures that matter to patients (e.g., waiting time). Posting run charts of data a team is tracking in visible patient-accessible areas (like the waiting room) is one way to engage patients and families in improvement, and also builds transparency. In many progressive health systems, patients also participate directly as members of multidisciplinary improvement teams.

To ensure that patients and families are invested partners in their care, organizations must keep in mind both their clinical and social needs. Although many of the social aspects of care are difficult to understand and address, organizations cannot overlook that this is a significant predictor of clinical success. Committing to a patient-centered culture and learning system helps ensure that organizations get this work right.

Without engaging patients and families in the two overarching framework domains and their respective components, organizations are likely to fall short of their goal to build systems that provide safe, reliable, and effective care.

Conclusion

The reality of today's health care environment is that the systems that support patient care are complex and error prone, and most organizations lack a comprehensive method for making them less so. The Framework for Safe, Reliable, and Effective Care is designed to guide organizations on their journey. The two overarching domains and nine components — with patients and families at the core — reinforce the idea that all parts of the framework are interconnected and interdependent, and success in one area is predicated on success in another.

Although the framework will continue to evolve, it is a robust starting point. It is our hope that organizations will use the framework to guide their efforts to improve the safety, reliability, and effectiveness of the care they provide — and share their learning with us so that we can continue to refine it based on their experience.

Appendix: Resource List for Select Patient Safety Methods and Tools

Botwinick L, Bisognano M, Haraden C. *Leadership Guide to Patient Safety*. IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2006. www.ihi.org/resources/Pages/IHIWhitePapers/LeadershipGuidetoPatientSafetyWhitePaper.aspx

Conway J, Federico F, Stewart K, Campbell MJ. *Respectful Management of Serious Clinical Adverse Events* (Second Edition). IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2011.

www.ihi.org/resources/Pages/IHIWhitePapers/RespectfulManagementSeriousClinicalAEsWhite Paper.aspx

Griffin FA, Resar RK. *IHI Global Trigger Tool for Measuring Adverse Events* (Second Edition). IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2009. www.ihi.org/resources/Pages/IHIWhitePapers/IHIGlobalTriggerToolWhitePaper.aspx

Langley GL, Nolan KM, Nolan TW, Norman CL, Provost LP. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (Second Edition). San Francisco, CA: Jossey-Bass Publishers; 2009.

Nolan TW. *Execution of Strategic Improvement Initiatives to Produce System-Level Results*. IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2007. www.ihi.org/resources/Pages/IHIWhitePapers/ExecutionofStrategicImprovementInitiativesWhitePaper.aspx

Nolan T, Resar R, Haraden C, Griffin FA. *Improving the Reliability of Health Care*. IHI Innovation Series white paper. Boston, MA: Institute for Healthcare Improvement; 2004. www.ihi.org/resources/Pages/IHIWhitePapers/ImprovingtheReliabilityofHealthCare.aspx

RCA²: Improving Root Cause Analyses and Actions to Prevent Harm. Boston, MA: National Patient Safety Foundation; 2015. <u>www.npsf.org/?page=RCA2</u>

VA National Center for Patient Safety. "The Basics of Healthcare Failure Modes and Effects Analysis." <u>www.patientsafety.va.gov/docs/hfmea/FMEA2.pdf</u> [See also: Institute for Healthcare Improvement. "Failure Modes and Effects Analysis Tool." <u>www.ihi.org/resources/Pages/Tools/FailureModesandEffectsAnalysisTool.aspx</u>]

Weick K, Sutcliffe K. *Managing the Unexpected: Assuring High Performance in an Age of Complexity*. San Francisco, CA: Jossey-Bass Publishers; 2001.

When Things Go Wrong: Responding to Adverse Events. A Consensus Statement of the Harvard Hospitals. Burlington, MA: Massachusetts Coalition for the Prevention of Medical Errors; March 2006.

www.ihi.org/resources/Pages/Publications/WhenThingsGoWrongRespondingtoAdverseEvents.a spx

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. www.ihi.org/resources/Pages/IHIWhitePapers/Achieving-Health-Equity.aspx

References

¹ Institute for Healthcare Improvement. Patient Safety Executive Development Program. www.ihi.org/education/InPersonTraining/PatientSafetyExecutive/Pages/default.aspx

² Leonard M, Frankel A, Federico F, Frush K, Haraden C (editors). *The Essential Guide for Patient Safety Officers*. Chicago, IL: Joint Commission Resources with the Institute for Healthcare Improvement; 2013.

www.ihi.org/resources/Pages/Publications/EssentialGuideforPatientSafetyOfficers.aspx

³ 5 Million Lives Campaign. *Getting Started Kit: Governance Leadership "Boards on Board" Howto Guide*. Cambridge, MA: Institute for Healthcare Improvement; 2008. www.ihi.org/resources/Pages/Tools/HowtoGuideGovernanceLeadership.aspx

⁴ Michigan Health and Hospital Association. "Creating a Culture of High Reliability: Safety, Communication, Operational Reliability and Engagement (SCORE)." <u>www.mha.org/MHA-Keystone-</u> <u>Center-Patient-Safety-Organization/High-Reliability-in-Healthcare/High-Reliability-Culture</u>

⁵ Reason J. Managing the Risks of Organizational Accidents. Aldershot, Hants, England: Ashgate; 1997.

⁶ Edmondson AC. *Teaming: How Organizations Learn, Innovate, and Compete in the Knowledge Economy*. San Francisco: Jossey-Bass Publishers; 2012.

⁷ Kelley RE. In praise of followers. *Harvard Business Review*. 1988 Nov;66:142-148.

⁸ When Things Go Wrong: Responding to Adverse Events. A Consensus Statement of the Harvard Hospitals. Burlington, MA: Massachusetts Coalition for the Prevention of Medical Errors; March 2006.

www.ihi.org/resources/Pages/Publications/WhenThingsGoWrongRespondingtoAdverseEvents.aspx

⁹ Marx D. *Patient Safety and the "Just Culture": A Primer for Health Care Executives*. New York, NY: Columbia University: Trustees of Columbia University in the City of New York; 2001.

¹⁰ Leonard M, Frankel A. The path to safe and reliable health care. *Patient Education Counsel*. 2010;80:288-292.

¹¹ Institute for Healthcare Improvement. "SBAR Technique for Communication: A Situational Briefing Model."

www.ihi.org/resources/Pages/Tools/SBARTechniqueforCommunicationASituationalBriefingModel.aspx

¹² Leonard M, Graham S, Bonacum D. The human factor: The critical importance of effective teamwork and communication in providing safe care. *Quality and Safety in Health Care*. 2004;13 Suppl 1:i85-90.

¹³ Thomas KW. Conflict and conflict management. In: Dunnette MD (ed). *Handbook of Industrial and Organizational Psychology*. Chicago, IL: Rand-McNally; 1976:889-935.

¹⁴ National Patient Safety Foundation's Lucian Leape Institute. *Shining a Light: Safer Health Care Through Transparency*. Boston, MA: National Patient Safety Foundation; 2015.

¹⁵ Nolan T, Resar R, Haraden C, Griffin FA. *Improving the Reliability of Health Care*. IHI Innovation Series white paper. Boston, MA: Institute for Healthcare Improvement; 2004. www.ihi.org/resources/Pages/IHIWhitePapers/ImprovingtheReliabilityofHealthCare.aspx

¹⁶ Centers for Disease Control and Prevention. Pneumonia (Ventilator-Associated [VAP] and non-ventilator Pneumonia [PNEU]) Event. January 2016.

¹⁷ Langley GL, Nolan KM, Nolan TW, Norman CL, Provost LP. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (Second Edition). San Francisco, CA: Jossey-Bass Publishers; 2009.

[See also: Institute for Healthcare Improvement. "How to Improve." www.ihi.org/resources/Pages/HowtoImprove/default.aspx]

¹⁸ Scoville R, Little K. *Comparing Lean and Quality Improvement*. IHI White Paper. Cambridge, MA: Institute for Healthcare Improvement; 2014. www.ihi.org/resources/Pages/IHIWhitePapers/ComparingLeanandQualityImprovement.aspx

¹⁹ Feeley D. "A Second Look at the Report on Medical Errors." Institute for Healthcare Improvement Blog. July 14, 2016.

²⁰ 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. www.ihi.org/resources/Pages/IHIWhitePapers/Achieving-Health-Equity.aspx

²¹ Barry MJ, Edgman-Levitan S. Shared decision making: Pinnacle of patient-centered care. *New England Journal of Medicine*. 2012 Mar;366(9):780-781.

²² Conway J, Federico F, Stewart K, Campbell MJ. *Respectful Management of Serious Clinical Adverse Events* (Second Edition). IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2011.

www.ihi.org/resources/Pages/IHIWhitePapers/RespectfulManagementSeriousClinicalAEsWhitePaper.aspx



Institute for Healthcare Improvement 20 University Road Cambridge, MA 02138 USA



Safe & Reliable Healthcare 1152 Woodland Lane Evergreen, CO 80439 USA