CLARITY PSO
A Patient Safety Organization

White Paper

Journey to an Effective Safety Culture

Part III of III Exploring the Role of Culture in Safety Outcomes

Effective Change for Quality Improvement

Introduction

The purpose of this three-part white paper series is to bring awareness and understanding of safety culture from a healthcare perspective. Furthermore, we hope to provide you with a pathway in which to navigate the current programs and tools available for patient safety. The knowledge gained from this process can facilitate improvement processes, such as Plan-Do-Study-Act (PDSA) and Standardize-Do-Study-Act (SDSA), which impact patient outcomes and organizational safety culture.

In this final white paper, we look at how understanding high reliability organizations (HROs), change, and human behavior can help drive effective cultures of safety. Adapting characteristics of HROs to healthcare settings and carefully choosing change strategies will not only help drive improvements within an organization, but also nurture a safe culture.

High Reliability Organizations

We often hear about the inherent characteristics of HROs and the success stories in the aviation and nuclear industries that have incorporated them. Like healthcare, these two industries involve complex, potentially hazardous environments with challenging and high-pressure work conditions that include people; so one might ask: How are HROs defined in healthcare? In an organization? On a unit? While the answer to this question varies, Weick & Sutcliffe (2007) propose five specific traits of HROs to be considered:

1. Preoccupation with failure - *welcoming weaknesses and vulnerabilities, anticipating the unexpected*
2. Reluctance to simplify interpretation - *causes are not always what they seem*
3. Sensitivity to operations - *awareness of both active (individual/frontlines) and latent (system) failures and the multifactorial nature of errors*
4. Commitment to resilience - *transparency; effective improvement and recovery processes in place*
5. Deference to expertise - *multidisciplinary approaches, frontline perspectives/feedback, insights from other industries*

Nelson, Batalden, & Godfrey (2011) further break this concept down to successful characteristics of high-performing clinical microsystems, which include:

- Leadership of microsystem
- Macrosystem support of microsystem
- Patient focus
- Staff focus
- Interdependence of care team
- Information and information technology
- Process improvement
- Performance results

Furthermore, Chassin & Loeb (2013) developed a framework that identifies three major domains of change along with four stages of maturity evolvement toward high reliability. As we are all aware, Rome wasn't built in a day, and Chassin & Loeb (2013) provide a practical framework for improvement. In their Joint Commission article, *High-Reliability Health Care: Getting There from Here,* the authors concede that obtaining and sustaining levels of safety suggested by HROs are not easily transferred to today's hospitals, but they offer strategies for healthcare organizations to help them achieve this goal.

The three major domains of change:

1. Leadership (6 components)
2. Safety culture (5 components)
3. Robust process improvement (3 components)

The four stages of maturity:

1. Beginning
2. Developing
3. Advancing
4. Approaching

The key ingredient to all of these concepts is the people included in the processes. The power of groups cannot be underestimated, positively or negatively, and must be considered when thinking about change within a culture. Terms such as collective mindfulness, shared mental models, teamwork, communication, collaboration, multidisciplinary approaches, etc., all inherently speak to the integration of people working toward a common goal, a shared vision in patient care. There can be great diversity among groups and this is a good thing. Diversity brings differences of ideas that stimulate growth and change. The challenge is facilitating a delicate balance of commonalities and differences within a group to create the synergy seen in the best of safety cultures. Easy? No. Possible? Yes!

Change

There is one certainty in this world that we can all count on – change. Recognizing and initiating change happens often, but maintaining and sustaining change is an entirely different story. It is also likely that assessment results rarely move beyond the review stage. Many of us have probably experienced a change initiative that disrupted our daily routine in a whirlwind only for it to eventually fall to the wayside, victim of a failed process for one reason or another. How organizations address and execute change to improve the performance of processes will determine its ultimate success. In this section, we look at some well-known change theories, which may be considered by providers to guide improvement efforts.

>> Lewin (Barnes, 2004)

1950s change management model from psychologist Kurt Lewin who identified the three stages of change:

1. Unfreezing - preparing, motivating and giving people time to engage change
2. Transition - time period after initiation when consistency and reassurance are critical to its success
3. Refreeze - essentially this is equivalent to sustainment where the process is hardwired into everyday practice

>>Prochaska (Prochaska & Velicer, 1997)

Trans-theoretical change model where stages of change are represented as ordered categories along a continuum of individual readiness to change. These five stages include:

1. Pre-contemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance

>>Kotter (Disch, 2012)

Eight step change model by Harvard professor John Kotter depicting the engagement process needed to prepare and accept change:

1. Increase the urgency for change
2. Build a team dedicated to change
3. Create the vision for change
4. Communicate the need for change
5. Empower staff with the ability to change
6. Create short term goals
7. Stay persistent
8. Make the change permanent

>> Diffusion of Innovations (Rogers, 1995)

Another consideration is how change is adopted among those experiencing it. Everett Rogers' Diffusion of Innovations theory looks at how change ideas are spread and received among groups from early adopters to the most resistant laggards. In the theory, Rogers disperses participants of a given group into adopter categories reflecting a typical bell curve. The adopter categories separate individuals in terms of their innovativeness. Knowing who your early adopters are helps to get an initiative going in a positive direction,

and understanding that there will likely be laggards in your groups allows you to focus efforts in other areas instead of trying to persuade an unlikely supporter. Letting the group influence the laggards may be the best approach as it will allow change teams to direct valuable time in more productive directions.

Implementing and Sustaining Change Initiatives

A culture of safety must be a top priority at the organizational level. To create transparent, psychologically safe environments, you need the support of the organization's overall mission and values as well as the strategic plan. It takes everyone, from the executives to the frontline staff, to make changes happen, and the messages surrounding safety culture need to be communicated and apparent from top to bottom and bottom to top. High-level leadership in an organization can talk the talk and walk the walk, but messages can be lost among administrative layers once reaching the frontlines. Somehow fear of punitive responses to error are still ingrained and reinforced at the local level. AHRQ's Culture of Safety Surveys reaffirm this by showing non-punitive responses to error as a top improvement item since the inception of the surveys.

Before change can occur, it is vital to ensure that there is organizational readiness and commitment as well as the resources needed to support such initiatives. Team formation is then created followed by engagement in an effective improvement process, such as Plan-Do-Study-Act (PDSA), and evaluation of measurable outcomes. Once the PDSA cycle has normalized a process improvement, sustainment will be key. It is also important to make sure that other change initiatives do not create competing priorities or change fatigue among those involved. In the following section, we provide resources and suggestions for each step to help you create change and build an effective culture of safety at your organization.

>>Organizational Readiness: Are You Ready for Change?

- Determine if you have the following pieces to start the change process:
    - Executive commitment
    - Leadership/staff readiness
    - Time and financial commitment
    - Environmental, financial and human resources
    - Organization consensus on alignment with its mission, values, goals, strategic plan, and clinician commitment; resource and infrastructure readiness
- Identify a model for safety and a process for improvement
    - Example safety models: TeamSTEPPS®, Comprehensive Unit-based Safety Program
    - Example improvement process: PDSA, Six Sigma

>>Team Formation

- Identify a leadership champion
- Pin point inter-professional champions
- Create committees/task force

>>Assessments

- Perform assessments and review the results
    - Clinical Microsystems Assessment
    - Organization/unit results of Press Ganey/HCAHPS/NDNQI/CMS core measures/other
    - Culture of Safety Survey **note - while this is a free survey from AHRQ, it is important to determine who can effectively interpret the results*
    - Provider and patient surveys
        - TeamSTEPPS® Teamwork Perceptions Questionnaire (T-TPQ) – Measures four specific areas of teamwork; Subdomains of team performance; Includes scoring instructions.
        - Safety Attitude Questionnaire (SAQ)

>>Planning

- Identify Global and specific AIM for improvement - AIM template – Dartmouth Institute Clinical Microsystems
- Establish change opportunities - determine improvement options based on where the greatest risk exists in the system and/or an area most identified to be a safety risk
    - Consider the CMS Partnership for Patients Ten Core Areas or IOM Six Aims
- Involve providers and patients

>>Evaluation Measures, Outcomes

- Outcomes: Start with the end in mind
- Evaluate tangible/quantitative measures: events/100 days, before/after measures such as time, use, etc., observations pre/post
- Review and analyze regulatory/mandatory reporting
- Evaluate qualitative measures: surveys, informal comments/observations
- Track select measures - IHI's Improvement Tracker allows you to track measures currently available in its topics area
- Additional measures to consider:
    - National Quality Forum (NQF) - Website library of potential outcome measures
    - AHRQ Quality Indicators™ Toolkit for Hospitals
    - IHI Global Trigger Tools for Measuring Adverse Events

>>Implementation

There are several known improvement processes that exist including the Plan-Do-Study-Act (PDSA) cycle. This process, which conducts small cycles of change, is used repetitively to test change and encourage further improvements until the process produces the intended outcomes.

- Begin the PDSA process and *plan* the test - refer to the Clinical Microsystem Greenbook for your setting and consider using the Clinical Microsystem accompanying PDSA-SDSA Worksheet
- Review literature for best practices
- Obtain input/feedback from providers, non-clinical staff, and patients as indicated to determine interventions
- Involve leadership; administrative lead for unit/initiative; executive walk rounds

- *Do* - (test the change on a small scale) Gather feedback; how will you support this change and address any barriers/fears of change; praise/rewards as indicated to create positive momentum and empower providers to own the process; celebrate the wins, however small
- *Study* - (before/after outcomes) Analyze data; obtain feedback on more changes if needed
- *Act* - Make changes, refine, etc. with input from staff and prepare a plan for the next test
- Conduct follow-up progress evaluations
- Share results with frontline providers and leadership
- Repeat PDSA until improvement enters sustainment phase

***>>Sustainment* -** Standardize-Do-Study-Act (SDSA)

- Switch to SDSA for sustaining the change; refer to the PDSA-SDSA Worksheet from the Clinical Microsystems website
- Once sustained, continue to gather data and share with staff through regular "touch base" meetings to address any imminent concerns or need for change based on culture/environment/etc.
- Maintain transparency and encourage an environment where anyone in the process can speak up and identify concerns

>>Sustaining Change

- Conduct regular assessments of current status, actual and potential threats, vigilance of trends/complexity/need for change
    - Examples: root cause analysis (as prompted by events), failure mode and effects analysis (FMEA) (perform quarterly/bi-annually)
- Promote continuous learning and sharing at all levels across the organization
    - Share stories and outcomes during staff meetings, lunch and learn events, etc.
    - Provide refreshers of process concepts to current staff and include in new staff orientation

A 2013 Becker's Hospital Review article (Gamble, 2013), *5 Traits of High Reliability Organizations: How to Hardwire Each in Your Organization*, offers additional strategies to develop and maintain the five traits of HROs:

1. Preoccupation with failure
    - De-stigmatize failure, encourage near miss reporting
    - Identify successful processes, shamelessly steal ideas that work - adapt accordingly
2. Reluctance to simplify interpretation
    - Challenge stereotypes, ingrained beliefs
    - Dig deeper in the data
3. Sensitivity to operations
    - Transparency
    - Frontline rounds
    - Avoid assumptions; ask for feedback from providers and ensure their voices are heard
4. Commitment to resilience
    - Ensure use of the most effective evaluation tools/processes
    - Emphasize leadership skill development by those who lead
    - Communicate the "why" of what is asked of staff

5. Deference to expertise
    - Include ideas/feedback from those who do the work
    - Redefine "meetings" - bring the meeting to the point of care
    - Welcome experiences in prior organizations

Conclusion

In our three-part white paper series, we introduce a well-known topic of discussion in healthcare – safety culture. Part I of the series presents an overview of safety culture including definitions, historical perspectives and the current status of safety culture. In Part II, we explore complexity and chaos' effects on systems, systems thinking, human factors, Just Culture, and their potential impacts on patient safety. And finally, in Part III, we discuss principles of change and microsystems thinking that go hand-in-hand with culture to create evidence-based, quality and safety improvement processes that can be successfully sustained within an organization.

One cannot underestimate the power of groups or the reality that humans can, and will, make mistakes. These same groups mold and shape an organization's safety culture. Our hope is that these thought papers emphasize the importance of safety culture in the business and practice of healthcare. When looking at patterns that emerge in the best of recommendations for improvement and high reliability, all revolve around people either directly or indirectly - their attitudes, behaviors, previous experiences, leadership abilities and involvement. Our belief is that if an organization makes safety culture a top priority, it will be rewarded with the patient outcomes it seeks!

"Never doubt that a small group of thoughtful, committed, people can change the world. Indeed, it is the only thing that ever has." - Margaret Mead

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To learn more about culture of safety, read Part I in the series, *Embracing Patient Safety Culture*, and Part II, *Awareness & Assessment of Safety Culture*.

For more information on Clarity PSO, please visit www.claritypso.com

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