The Framework for High Reliability Healthcare

Pursuing clinical, cultural and operational excellence

KaufmanHall
a Vizient® company

Contents

Introduction to high reliability in healthcare

High reliability in healthcare reflects a bold commitment to relentlessly pursue clinical, cultural and operational excellence—for every patient, every time. Organizations embrace high reliability as **a collection of principles, practices, behaviors and approaches designed to ensure that healthcare systems can provide the best possible care to patients and families, and the best working environment to their teams**. It applies to all we do and is in no way limited to clinical quality. High reliability has been successfully used in some of the world's highest risk industries to create exceptional quality in outcomes, process and experience.

How is high reliability healthcare different?

Most healthcare improvement initiatives require more time and involve more tasks, adding to an already overwhelming workload for many teams. High reliability healthcare is not additional work but rather a mindset that means we approach our work differently. With enough institutional high reliability knowledge, healthcare organizations think, behave and respond to data, events and daily operations with a high reliability approach that manages complexity, improves performance and maximizes safety. When done right, high reliability healthcare saves time, money and energy.

High reliability healthcare is more proactive than reactive, focusing on resilience as a core risk mitigation strategy. Healthcare has traditionally focused on retrospective approaches to improvement, for example using adverse event investigations to improve quality and safety. With a high reliability approach to all aspects of quality and safety, we carefully examine the past while simultaneously looking ahead to the future, engaging those closest to the work in our learning and improvement efforts.

High reliability healthcare clarifies that everyone working in the system has two core responsibilities: to do the work, and to improve the work. High reliability is a contact sport, where leaders and teams at all levels consistently model high reliability skills, activities and behaviors in everything they do.

Transformational, rapid, and sustainable improvement requires significant courage and clarity. High reliability healthcare focuses on continual improvement as an integral part of every person's individual job, and the strategic accountability of the senior-most leaders.

High reliability is something that everyone in the organization collectively and individually aspires to every day. It's a continuous journey with no room for complacency. As individuals, teams and organizations move toward high reliability, they improve their ability to manage complexity and perform effectively, despite constant change and inherent risk.

Healthcare often operates in silos, but high reliability cannot be broken down and assigned in that way. High reliability ensures that we view every event, meeting, process and interaction through one inclusive lens that automatically leads us to less reactive, more thoughtful, and highly balanced solutions. It is a system made up of interdependent elements that together amplify positive impact on all aspects of healthcare.

Does the Framework for High Reliability Healthcare have history?

Over the years, a number of structures have emerged that aim to guide healthcare organizations on their own journey to high reliability. High reliability in healthcare grew from a need to prevent unnecessary harm to patients and improve the quality and consistency of healthcare. Sentinel works by The Joint Commission, The Institute for Healthcare Improvement (IHI), the National Patient Safety Foundation and the IHI Lucian Leape Institute have advanced the field toward a greater appreciation of what it means to be a high reliability organization (HRO).

In 2022, Safe & Reliable Healthcare, in partnership with Vizient, published the *Framework for High Reliability Healthcare*, which at the time represented the next step in healthcare's ongoing journey toward high reliability.

Kaufman Hall, a Vizient company, is delighted to share the next iteration of our Framework. This updated version reflects our learning, and our clients' learning over the past three years, and cements our commitment to high reliability through our own processes of continual reflection, learning and improvement.

Why do we need a Framework for High Reliability Healthcare?

The Framework provides a vision for high reliability efforts and a memorable lens that all leaders and team members can use in their daily work. It unites all the philosophies, guiding principles, concepts and theories that are required to create high reliability healthcare, using language accessible to everyone. Most importantly, the Framework is designed to be sophisticated enough to encompass the interconnected tools, approaches and theories needed to address the complexity of healthcare today, but also simple enough that anyone in an organization can see it, make sense of it and remember it.

Framework overview

Our research and experience show that healthcare organizations need to excel in the following areas, collectively and simultaneously, to provide consistently great care in a high reliability environment:

- Putting **people**—patients, families and teams—at the center of all we do, in both words and actions
- Understanding that patients', families' and teams' experiences are a direct result of how successfully we **do the work**, and transforming those experiences requires that we **improve the work**
- Creating healthy **cultures** where employees thrive in an accountable, inclusive and curious environment
- Cultivating **knowledge** through perpetually balanced collection, analysis and response to clinical, cultural and operational data
- Continuously **learning** from successes and failures in pursuit of better, using tried and tested methodologies, ensuring learning becomes sustained improvement
- Transforming **leadership** to consistently model, support and drive all the above—high reliability leadership is hands on, authentic and agile

These characteristics make up our Framework's domains, with each one comprising several essential components that can help organizations translate concepts into actionable strategies.

Visually, the Framework is represented as a gear in constant motion demonstrating the never-ending nature of a high reliability journey and the need to continuously work towards better—for our patients, families and teams.

Note that the Framework is not a linear roadmap with one domain following the other. Instead, every component is necessary at the same time. It only works if we do everything all at once, maximizing connections and interdependencies between the different domains. Throughout this white paper, some of those interdependencies and connections are emphasized, helping to highlight the intersections of concepts and characteristics.

The Framework can and should apply at every level in an organization, acting as a unifying approach through which everyone understands and contributes to their individual role, in their team, and as part of the greater organization to fulfill the vision and mission.

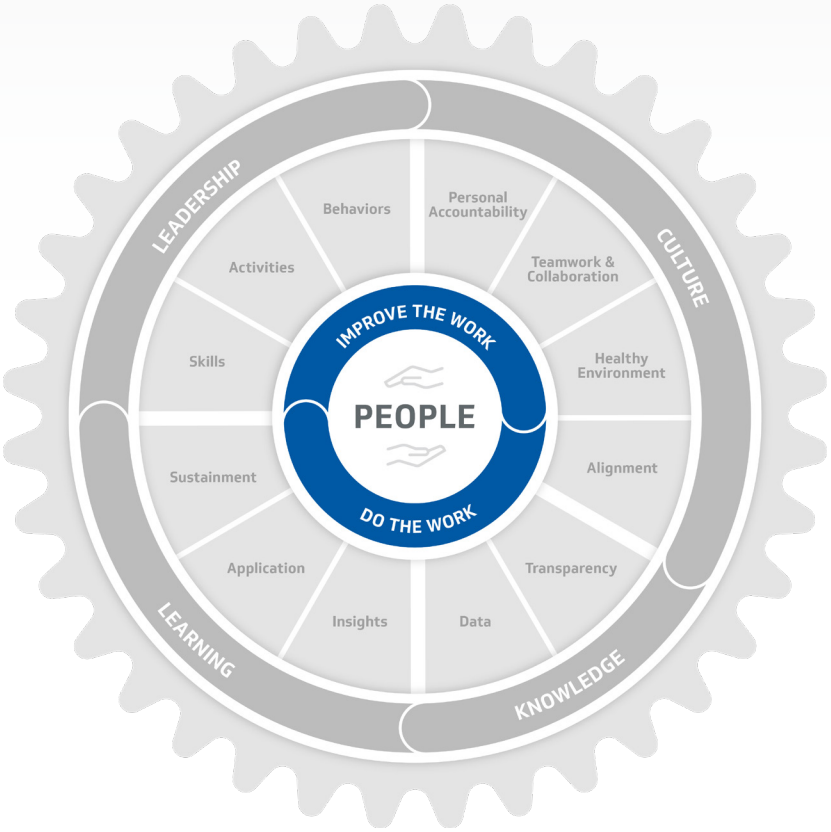
With all that in mind, let's now explore each of the six domains in more detail.

People: At the center of what we do

Healthcare is an industry grounded in collective purpose—we care for all people. This purpose unites us all—patients, families, teams, leaders—behind a common goal and firmly places people at the center of all we do, and at the center of the Framework. Every other domain, and high reliability as an approach, is designed to serve this purpose. Our work, culture, knowledge, learning and leadership all exist to serve our people and our purpose together. There are two core groups of people that we refer to: those receiving care (patients and families) and those delivering care (teams and leaders).

Patients and families experience care firsthand. Their voices, stories and experiences should be present in all our reflections, decisions and actions—they are experts in how it feels to receive care. They notice details that others will not, and their outcomes are our shared priority. High reliability healthcare organizations can comfortably say that every decision they make positively impacts patients and families, because their purpose is deeply ingrained in their day-to-day work.

Healthcare teams deliver daily work, directly and indirectly impacting experiences and outcomes for patients and families. High functioning, happy, and healthy teams provide the best possible experiences, driven by the relentless pursuit of highly reliable, exceptional healthcare. Every single person working in healthcare plays a role in this—no matter how far removed they may be from direct care.



Do the work, improve the work

Our work serves our purpose—to care for all people. All of us working in healthcare have two core responsibilities, to **do the work** of our role, and to **improve the work** of our role. How effectively an organization's leaders and teams carry out and improve the daily tasks of their roles determines whether the organization becomes highly reliable in practice. Everyone must model their culture, knowledge, learning and leadership as they approach, execute and improve their daily work—keeping patients, families and colleagues top of mind.

Embedding improvement into daily work through a structured management system

Doing the work and improving the work with a high reliability mindset does not happen organically. A structured, intentional approach, commonly referred to as a management system, is essential. Within this Framework, management system principles are woven throughout and between all domains, ensuring that improvement is not an isolated initiative, but rather a core component of daily operations.

This white paper explores several foundational management system practices, including tiered huddles, strategy deployment, scorecard reviews, visual management, and leader coaching. These practices are not standalone tools—they are expressions and examples of a cohesive system composed of four key elements:

1. **Strategic alignment**
2. **Process improvement**
3. **Management development**
4. **Work standardization**

Together, these components define how leadership is exercised, how knowledge is shared, how continuous learning is fostered, and how team members are empowered to perform at their best. This system enables improvement to be embedded in the routine flow of work and sustained through deliberate, skillful leadership behaviors.

Across the organization, the management system reinforces a central tenet: improvement is not separate from operations—it is how operations are executed. By integrating strategy, accountability, and coaching into everyday activities, organizations create a culture where improvement is sustained, scalable, and part of how work is done.

Doing the work—and improving it

A structured system to build and sustain excellence

The management system consists of four integrated subsystems that reinforce both execution and continuous improvement:

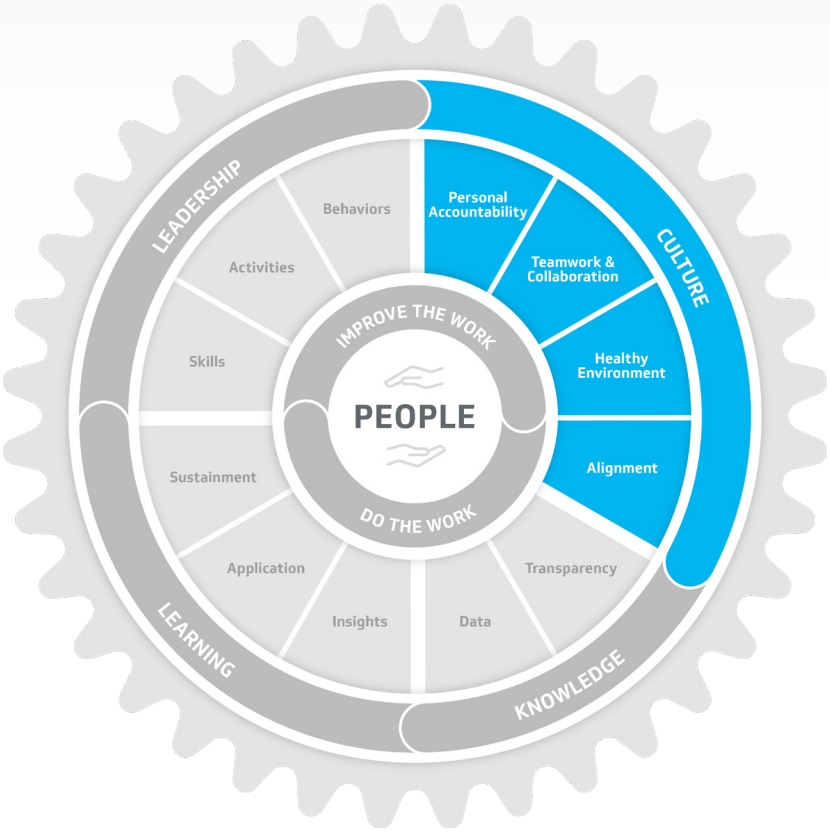
Strategic alignment
Clear direction enables focused improvement. Strategy deployment and scorecard review translate enterprise-level goals into actionable priorities for every team. Strategy deployment identifies the "vital few" opportunities, while scorecards track performance and ensure all levels remain connected to shared objectives. This alignment ensures that daily efforts contribute meaningfully to long-term success.

Process improvement
Improvement becomes part of the daily rhythm through tiered huddles and scientific method problem solving (e.g., PDSA cycles, A3 thinking). Huddles surface real-time issues and align teams across levels. Scientific method problem solving helps teams investigate root causes, test changes, and sustain results—transforming challenges into opportunities for learning and growth.

Management development
Leaders model and coach improvement by balancing urgent operational demands with strategic focus. Through leader standard work and process observation, leaders schedule time to engage in purposeful rounding, coaching, and understanding how work is actually done. This builds capability across the organization and ensures leaders are actively developing people, solving problems, and aligning effort with strategy.

Work standardization
Standardizing work reduces variation and creates a foundation for reliable performance. Process standard work documents the best-known way to complete a task, while visual management makes work visible, and problems identifiable. Standardization not only improves consistency but also exposes gaps—paving the way for learning and innovation.

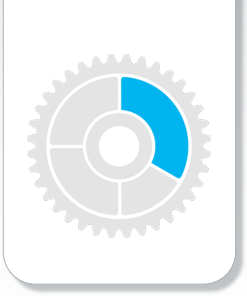
Doing the work well ensures safe, effective care. Improving the work every day ensures that excellence is attained and sustained. The management system enables healthcare organizations to embed improvement into their culture—turning intentions into routines, and routines into results. Through this system, organizations build the habits and capabilities needed to deliver high reliability and better outcomes—by design, not by chance.



Creating healthy cultures

Culture is how we treat each other, the behaviors we exhibit, our actions or inactions, and the reactions we receive. Individuals create culture; it extends into teams and affects our environment. **Culture changes when our behavior changes.**

The four elements of culture—personal accountability, teamwork and collaboration, healthy environment and alignment—weave together to create a sense of community where respect is consistently experienced at an individual, team and environmental level. People feel valued as individuals and as team members. They know that the organization does not shy away from things that are difficult to talk about or areas in which the entity is not excelling. When all components exist simultaneously, the culture creates a place where groups can identify opportunities, understand them together, test ideas, and improve. When we seek to understand problems so that we can get better, we take a step toward high reliability. And it's our response to those problems that creates the culture we want.



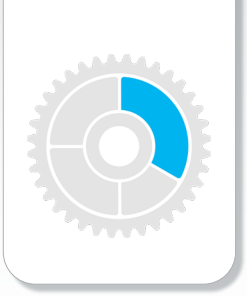
Personal accountability

Most of us acknowledge that culture plays a vital role in creating and sustaining high reliability; however, we often struggle with what that means for us individually. The Framework's personal accountability component tackles this issue head-on, requiring each person in an organization to own their behavior and commit to high reliability principles, including:

- **Choosing behaviors that foster trust and respect**
- **Stopping behaviors that diminish trust and respect**
- **Knowing and performing our jobs to the best of our ability**
- **Identifying and speaking up about issues**
- **Participating in self-reflection and team activities**
- **Testing, enabling and embracing change**

There is a difference between personality and behavior. Although our personalities are innately ours, we can and must be accountable for choosing to exhibit behaviors that positively impact the culture around us. That means that when we show up to work, we commit to being professional and respectful in every interaction. We take responsibility for our actions and behaviors, knowing that how we behave immediately and directly influences the culture around us, regardless of our role. We follow standardized processes and systems for our daily work, acknowledge when we are approaching burnout, and actively seek help from our teammates and leaders. We commit to self-reflection and learning and continuously model the behaviors that support and manifest organizational values. And we don't just do this once or with certain groups and not others. We engage in these behaviors consistently across every interaction at every point every day, reliably.

We also have a responsibility to enthusiastically participate in a continuous learning system focused on high reliability. We continuously look for process defects, suggest ideas and seek deeper understanding when things go wrong—and when things go right. We follow our organization's agreed-upon improvement methodology. And when a better way of doing things is presented, we willingly change practice and commit to making those changes sustainable.



Personal accountability, as described here, may seem daunting. However, it does not mean perfection, and people will be better at these activities on some days than others. But that's why we commit to continuous learning because as we reflect on our behaviors and interactions, we should become better at engaging with others more consistently. And when there's a slip or lapse, or our behavior doesn't match our intentions, we can reflect and grow individually and as a team.

Bottom line: *Personal accountability is not an expectation of perfection but rather an expectation of commitment to these principles. How well an individual understands and embraces their personal accountability can determine whether the other elements of culture function effectively.*

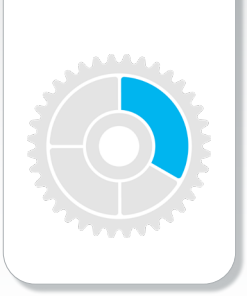
Teamwork and collaboration

Personal accountability builds into shared accountability. When we are committed to personal accountability, we can work effectively together in teams—groups of people from diverse backgrounds and disciplines who have a shared purpose and set of clear and commonly understood goals. Teams work together to solve problems, identify opportunities, continuously learn, and improve.

Strong teams exhibit certain codified behaviors. They regularly plan forward to anticipate issues and reflect on what could go better next time. They use briefings and huddles to plan the work and stay connected during the work, and they debrief to discuss what went well and what could improve, using these insights to refine the work for the future. All of this allows the team to improve their work while doing it.

Teams also use defined communication strategies that encourage feedback and ensure information is clearly stated, heard, and understood. Opportunities for bidirectional communication with direct reports become routine, occurring at defined times and with a predetermined structure. During these interactions, we discuss progress toward priorities, potential risks, and the need for support. We also use this time for coaching.

The effectiveness of these team behaviors is largely determined by the way team members interact. When individuals are accountable for behaviors that promote psychological safety—feeling comfortable to speak up about ideas or concerns—information is shared more freely in all directions, creating a shared understanding of what is happening around the team and helping the group recognize potential risks or opportunities. Known as situational awareness, this shared understanding is necessary for effective teamwork and collaboration.



High functioning teams:

- Treat all members with respect
- Acknowledge that information and expertise lie with different individuals
- Are fully comfortable turning to that expertise, independent of hierarchy or role
- Ask for feedback
- Provide feedback, without blaming or shaming others
- Agree to resolve conflicts collaboratively and in a way that maintains and strengthens team-member relationships.

Bottom line: *Teamwork is what you do and how you do it.*

Healthy environment

The success of individuals and teams is heavily influenced by the environments in which they work. The environment—shaped through our behaviors and activities—creates an expectation of trust, respect and professionalism, regardless of role, hierarchy or professional background. We extend these to everyone, all the time, with no exceptions.

A healthy environment is one where everyone feels:

- Part of a community
- Autonomy to make decisions that influence their surroundings
- Psychologically safe
- Supported by functional processes and systems
- Fairly treated when things don't go according to plan, such as when processes and systems fail them

In a healthy environment, community flourishes. Individuals come to work with a general sense of comfort and camaraderie with their colleagues and should feel that "the people here care about me and about the work that I do." Leaders regularly round with their teams to foster trust and engagement and make it easier to do and improve the work. They actively seek input from those closest to the work and listen for ways to resolve issues, provide support, and make connections to the bigger picture.

We see this level of community and camaraderie frequently within certain disciplines, such as when a group of nurses rely on one another and feel a close bond. However, in high reliability organizations, community transcends disciplines. Organizational structures and effective leadership create a sense of inclusion and community for all, regardless of discipline, role, gender, or race.

The environment also governs how we capture the richness of perspectives and grow together as teams in a way that is fair, equitable, and just. And when things go wrong, we focus on learning versus judgment, considering the system, process and cultural factors that may be contributing to an issue before looking at the individual's contribution. That's not to say that people aren't responsible for their behaviors and actions, but rather that a consistent set of rules is applied to determine the appropriate accountability and avoid simply blaming a person for an error. This is not only a fair and just approach, but one likely to yield insights that lead to stronger, more impactful improvements.

Alignment

This aspect of the culture domain keeps the other components functioning collectively toward a common goal. Without alignment, inconsistencies in individual and team behaviors can flourish, which can undermine a respectful and psychologically safe culture and slow an organization's progress toward its goals.

Every individual in a team or organization must be able to describe a sense of purpose that connects their daily work with organizational goals, priorities, and strategies. This ensures that everyone is "pulling in the same direction" to achieve shared objectives. Effective communication ensures that everyone understands what the priorities are and why they're important to the organization, team and individual.

To spread and scale alignment, there must be an infrastructure in place that manages the work around shared priorities and goals. Leaders at all levels must work with their teams to periodically review, reflect on and update daily work and processes to ensure they align with what the organization is committed to doing. Without this infrastructure, good ideas can languish.

Gaining commitment is another key element in strengthening alignment. Setting the expectation upfront that collaboration will be used to resolve conflicts can help us gain commitment faster and more reliably. When disagreements arise, individuals, teams and the organization must have the courage and sensitivity to take up issues quickly, especially when they involve concerns about professionalism and respect. Rapidly acknowledging and responding to these issues ensures they do not fester and demonstrates the organization's commitment to a safe, reliable and just culture. We strive to achieve professional consensus, where all individuals may not hold the same views, but inclusivity, conflict resolution, and transparency enable all individuals to align and work toward the same goals.

Individuals should know that resolving disagreements is expected, and that resolution is based on what is right, not who is right. Disagreements should be addressed quickly, kindly and clearly. Managers should stay attuned to when disagreements occur and help ensure they are resolved, either by the individuals involved or through a facilitated process. The organization should also have an effective chain of command responsible for assisting in managing disagreements that can't be resolved at the local level.

When decisions are rooted in the organization's mission, vision and values, it can decrease the likelihood of conflict and make it easier to resolve disagreements. Engaging in an exercise to develop and refine these elements will help generate agreement around goals, establish priorities and ensure all parties are journeying in the same direction.

Note that an individual or team's ability to embrace and execute organizational priorities can waver when their basic needs are not met. When people are just trying to survive the workday—due to technical issues, unmanageable work levels, lack of direction or cultural dysfunction—they will struggle to articulate and reflect a sense of purpose in a meaningful way. They will also struggle to maintain high levels of curiosity and transparency, necessary in our daily work. Having an understanding of a team's experience is crucial to ensure basic needs are met and alignment occurs and lasts over time.

Resolving conflicts collaboratively involves gaining insights into what's driving the other person's request and coming up with innovative ideas for solving the disconnect. By engaging in appreciative inquiry and open dialogue—asking open-ended questions to understand the other person's point of view—team members distinguish positional statements from underlying inputs and interests, gaining critical information that allows the team to reach consensus. When team members notice that teammates are showing signs of frustration and burnout, they are called on to offer compassion, support, and encouragement.

DO THE WORK, IMPROVE THE WORK

The four subsystems are fully embedded within all aspects of the entire Framework, helping us view healthcare as a single, interconnected complex system. They play a critical role in supporting transitions between domains and in breaking down the silos that often hinder progress.

Culture → Knowledge: Strategic alignment subsystem

Through structured alignment processes, the organization translates cultural values into shared goals and measurable outcomes. This ensures strategic clarity, focus on what matters most, and nested accountability across all levels.

Cultivating knowledge

Much of an organization's progress toward high reliability depends on the accuracy and completeness of the knowledge on which its teams and leaders base actions and decisions.

We gain knowledge when we transparently share clinical, cultural and operational data that is as complete and timely as possible and that is designed to create the most accurate understanding of the current state.

Knowledge aids in creating clarity and alignment around our greatest opportunities for improvement and focuses everyone on goals and outcomes.

When we share knowledge for the purpose of learning (and not judgment)—and we discuss and react to it in alignment with our cultural values—we position individuals, teams and the whole organization to learn and improve. Patients and families should be meaningfully included in the knowledge-generating process as their voices and suggestions only make our knowledge more robust. To ensure a full range of knowledge, we must have transparency and access to data.

Transparency

Transparency is a cultural attribute of knowledge. It is impossible to have transparency without a culture of respect, inclusion, and psychological safety. And, conversely, it's impossible to have a healthy culture unless the attributes of that culture are openly discussed and evaluated. When leaders and teams transparently discuss data, the information becomes knowledge, which fuels learning.

Transparency makes opportunities—and the expectations for meeting them—visible to leaders and teams. It reduces confusion, enables engagement, uncovers risk, mitigates misalignment, and ensures those leading and doing the work have the necessary insights to design and make meaningful improvements. Be aware that we're describing the complete picture when we talk about transparency, not just the data we feel comfortable with or are proud of.

Underpinning transparency is the idea that we need to view issues and defects as opportunities to improve instead of something that should be hidden or swept away. When we are willing to reflect on issues with a learning mindset, then improvement is the next logical step, and we can progress further toward the ultimate goal of zero defects.

High reliability organizations are transparent when they communicate information in all directions about how they are doing the work and how they are improving the work for patients, families, and teams. Not only does transparent information sharing help us identify ways to improve, but it also highlights strengths to celebrate, spread, and sustain.

Although leaders and teams can work to be more transparent as they share information and respond to problems, we also need systems and processes to ensure transparency is a consistent and standard part of how we do things. For example, defined processes for reviewing data ensure that everyone in the organization understands how well we're doing in reaching our goals and where our areas of focus should be to help us improve.

Data

High reliability leaders and teams measure and monitor data to understand how they are performing. When we have a clear vision of what we want to achieve, we can better design the data we collect to provide the most meaningful insights.

It takes skill and understanding to use and respond to data effectively. To ensure it is used for learning versus judgment, it must be displayed, presented, and transparently discussed in alignment with an organization's cultural values. High reliability leaders are characteristically reluctant to simplify interpretations, instead choosing to dive deeper into data to truly understand complex causes.

There are a variety of tools that help leaders and teams effectively share, discuss, respond to, and learn from data. For example, scorecards enable us to regularly review current performance around our top priorities to understand how well we are managing day-to-day operations, advancing toward goals and highlighting further improvement opportunities.

Putting these tools in context is important. They can serve as valuable indicators, a place to begin in terms of developing an understanding of what needs to change and why. However, everyone must have full context before reacting and making changes. This requires embracing complexity, engaging with curiosity, not criticism, and inviting details and dialogue that will yield the insights necessary to develop thoughtful, impactful, and prioritized improvements.

When we are curious about what the data shows, we increase the chances that our improvement efforts are focused on the interventions that will yield the greatest benefit. Conversely, when we look for someone or something to blame, we can reduce the likelihood that teams will continue to share information out of fear of judgement or retribution.

Having complete, balanced, timely and accurate clinical, cultural and operational data helps leaders identify specific opportunities for action. The measurement of clinical and operational data is well established in healthcare, and the information gleaned often drives decision-making. However, it is worth noting that the accuracy and timeliness of such data is often questioned. Healthcare organizations typically have less cultural data available and may remain constrained by outdated perceptions that culture is "hard to change" and can take "years to do." Good data on culture is available, and if effectively analyzed and transparently shared across an organization, it can powerfully and rapidly change cultural norms. When high quality cultural data is combined with clinical and operational data, organizations can truly seek to become highly reliable through informed and effective decision-making.

A combination of quantitative and qualitative information tells the most complete and compelling story about cultural issues. Quantitative data—things that are easy to measure—can show how many people feel a certain way. Qualitative data—more subjective information—can offer greater detail as to why they feel that way. That is why good culture surveys quantify attitudes and perceptions while also collecting and analyzing comments to help understand the nuances and details around strengths and challenges and pinpoint where improvement opportunities should be focused.

When we combine culture data with clinical, operational and financial data, operational activities become much more understandable. The rich variety of information helps set intelligent strategies for achieving high reliability.

By collecting information in real-time, we can spot problems or defects early before they cause harm or disruption, allowing us to be proactive rather than reactive. This lets us understand defects when they're small and get ahead of issues before they spiral out of control.

DO THE WORK, IMPROVE THE WORK

The four subsystems are fully embedded within all aspects of the entire Framework, helping us view healthcare as a single, interconnected complex system. They play a critical role in supporting transitions between domains and in breaking down the silos that often hinder progress.

Knowledge → Learning: Work standardization subsystem

Standardizing work practices creates a clear baseline for learning by defining expected processes and supporting visual management. This allows teams to spot variations, address gaps, and drive continuous improvement using real-time insights.

Continuously learning

Learning in the context of high reliability is "knowledge applied to advance improvement."

Continuous learning entails using a perpetual cycle of reflection, problem-solving, improvement and systematization, and applying cultural principles and knowledge to make learning and improvement effective and meaningful. As organizations improve, they continue to learn, and spreading what we learn helps accelerate the pace and slope of improvement.

The learning system is the structure, processes, and activities that enable learning. It requires leaders to employ clearly defined, systematic processes for reflecting and planning forward. A functional learning system is built on a supportive culture where team members feel personally accountable to identify and share successes, failures and improvement opportunities—and feel safe and encouraged to do so. Everyone—leaders and teams—commits to learning from these experiences and each other, with the goal of making the work we do more effective, safe and reliable. In this context, learning does not happen by accident but instead is intentional and occurs at a rate ahead of normal change.

For individuals and teams to learn, they need the capacity, energy and tools to do so. Leaders can support this by intentionally adopting strategies that build energy and capacity, engaging their teams in improvement work that yields lasting change.

Insights

To learn, we need to fully understand why things are the way they are or why they happen, and design interventions based on those insights. As mentioned earlier, complete data, when approached with curious and collaborative dialogue, generates insights into processes, risks, outcomes or bright spots that warrant deeper understanding and heightened attention.

When leaders and teams seek input from those closest to the work including patients and families, they capture perspectives that promote innovative ideas that can inform intentional, reliable process design. Gathering this information may involve listening during rounds, observing processes in real-time, conducting surveys and/or actively listening in tiered huddles.

Getting to this level of understanding requires commitment, capability, and a defined approach to understanding the issue. True learning comes when we have the technical skill to dig into underlying causes while committing to keep asking "why" questions and the willingness to self-reflect and say, "Yes, there's a better way of doing this." Such learning involves resisting the temptation to jump to solutions that may, on the surface, seem to work but may not address the underlying problem. We also need to avoid implementing the same flawed action plans repeatedly, hoping for different results.

High reliability organizations have processes and systems that enable them to constantly seek out strengths, challenges, and emerging defects; aim to understand their cause, and then spread, address, eliminate, or mitigate them. In doing so, variation decreases, and systematic processes become more stable while not diminishing ingenuity or innovation but rather creating more space for both.

As we build capacity and capability for this work, we can drive greater learning throughout an organization. And when we learn, if we can connect those insights to improvements and implementation, we can start to see changes in behavior, processes and practices for the best.

Application

This part of the journey is where we connect learning to outcomes, coming up with ideas that reliably address the issues we've uncovered. With insights into what needs improvement and why, we can engage the people who do the work to improve it by applying the scientific method to implement suitable, measurable, and sustainable outcomes.

Tests of change and Plan-Do-Study-Act (PDSA) cycles are critical to this component as they are a fundamental part of every improvement method. They involve conducting small tests of change to rapidly determine whether an idea might deliver the desired outcome and lead to improvement. If test outcomes align with what is hypothesized, then we can consider expanding the tests until we are confident that the suggestion is a change worth deploying.

Complex systems, when combined with normal human behavior, tend to deviate over time. Human beings have an extraordinarily strong drive to streamline, create workarounds, and change processes to make them easier or more personally beneficial. Many of these alterations can make complex systems better, but others can increase risk.

Consequently, process changes should incorporate human factors principles where possible. These are design strategies rooted in reliability science that make it easier for people to do the right thing and harder to do the wrong thing. The most common human factors principles are process standardization and simplification. The most powerful are forcing functions, which involve acts individuals must perform to move onto the next step in a process. For example, a driver must step on the brake to turn on a car. These design strategies can build resilience and encourage buy-in, a combination that can yield greater sustainability over time.

As discussed in the culture section, every individual has the responsibility to participate in improvement efforts as part of their day-to-day work life. They also must be encouraged and supported in their work. When people are accountable to participate in improvement work, improvements are designed with human factors in mind, and potential changes have been robustly tested in real-world environments, then there is a greater likelihood the changes will have a meaningful effect on system reliability.

Agreeing on a defined and repeatable improvement methodology that promotes learning on a daily basis can ensure problems are managed early before they negatively impact outcomes. When everyone knows the process, and it is standardized across the organization, it embeds into daily work more easily and is more likely to be followed.

Sustainment

At this point, we want to ensure that our improvements become embedded in the normal practice of everyone affected by the change. Again, a defined, structured and standardized improvement methodology is important here to make sure any improvements are sustainable. This step frequently requires allocating resources, a task that should not be taken lightly, given the often-scarce resources that must be carefully allotted to have the biggest effect.

As part of implementation, we need to remove the old way of doing things, which tends to be an overlooked step when changing practice.

Quality control is critical as well. As teams implement new processes, they must monitor performance over time to prevent natural degradation and determine if gains are sustained. This allows them to quickly identify when performance is falling off and intervene rapidly. Teams should continue monitoring performance as long as the outcomes continue to be a priority for the organization, although the frequency of such monitoring may be reduced relative to the stability of the process and associated outcomes.

The final piece of implementation involves spreading and scaling good ideas. When we are transparent about learning and improvement insights, we can examine all the areas in which we can apply learning and improvement. For example, we discover something in the process of investigating a pressure injury event related to risk assessment. We may be able to apply that learning to other kinds of risk assessments for other conditions. Or perhaps we could apply the strategies to other departments, clinics, or units.

Note that this step is not just about sharing best practices broadly but applying reliability science and design principles to any changes, so that everyone interacts with the process in the same way, no matter where they are in the organization or what their experience with the process has been in the past. Only then can one hope to make the process truly reliable and accelerate the pace and slope of improvement.

DO THE WORK, IMPROVE THE WORK

The four subsystems are fully embedded within all aspects of the entire Framework, helping us view healthcare as a single, interconnected complex system. They play a critical role in supporting transitions between domains and in breaking down the silos that often hinder progress.

Learning → Leadership: Process improvement subsystem

Empowering frontline teams to solve problems using scientific thinking cultivates leadership at every level. This transition transforms daily operations into learning systems, where reflection, experimentation, and shared learning drive sustained improvement.

Transforming leadership

Leaders have a profound responsibility to enable, support, foster and safeguard all aspects of high reliability as represented in the Framework. Because of their pivotal role, leaders are a significant determinant of an organization's success or failure with high reliability.

Leaders are accountable for modeling and setting clear expectations for the desired culture that ensures the organization appropriately uses knowledge to drive continuous learning and improvement. They understand "the why" behind the desire to become highly reliable and communicate that why across the organization at every opportunity. They prioritize and maintain focus on the critical tasks that move the work forward, making sure that their standard work is not displaced by the urgent "fire drills" that often plague complex organizations. By modeling the skills, activities and behaviors they want to see, they enable managers and teams to do and improve their work for the benefit of patients, families and each other.

High reliability skills

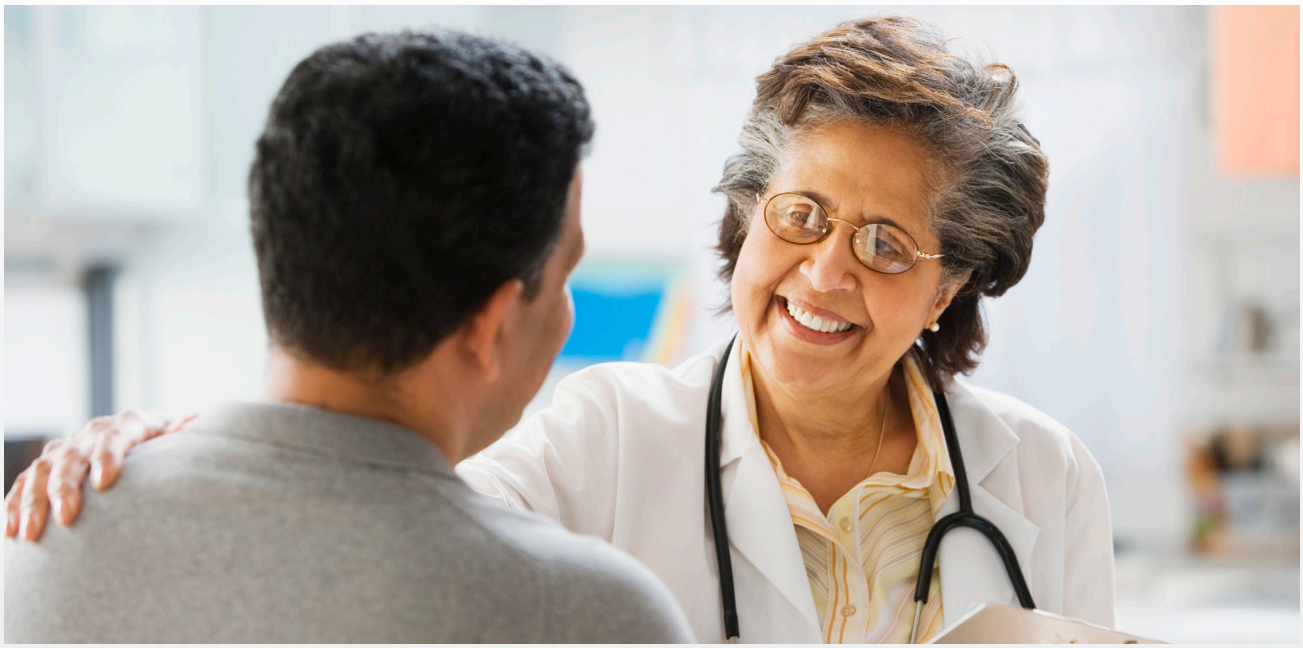
High reliability skills are what leaders need to know to make the Framework come alive. Fundamentally, a high reliability leader is able to use these skills to model, apply and coach high reliability concepts well while continuously learning and improving themselves. At the same time, they keep an organization's mission, vision, goals, values and standards top of mind and live these guiding principles through their interactions.

They also help create the character of the culture. This requires a balancing act between having a high regard for every individual, which allows the leader to set high expectations, and creating a comfortable relationship in which the leader is perceived as approachable. The combination, when done well, ensures mutual respect and a willingness to talk openly, ask questions, request feedback and be respectfully critical and innovative—all the hallmarks of psychological safety.

Achieving this balance means that a leader must know how to coach and give feedback in positive and empowering ways while still setting expectations for completing daily tasks as designed, surfacing problems immediately and participating in continuous improvement.

Note that setting expectations and coaching are not just skills for executive leaders. These proficiencies should interlock and extend across an organization's entire leadership structure.

Some people lead more naturally and effectively than others. That said, the skills necessary to become a strong leader can also be taught. However, leaders must have a fundamental willingness to receive and apply that training and continually work to improve their own abilities, engage in self-reflection, and apply improvement concepts to their management styles.



High reliability activities

High reliability leadership is all about being active and modeling all that you expect of others. A leader can't be passive, pushing others to continuously learn and improve while avoiding the work themselves. Being a high reliability leader is about digging into every element of the Framework and enthusiastically participating in the work of high reliability. For those reasons, high reliability leaders must go first on the journey; leadership cannot be delegated.

When leaders take part in activities that enable a healthy culture, cultivate knowledge and foster continuous learning, they drive the effectiveness of those activities and help their peers and teams do and improve their work. People want to see leaders actually engage in high reliability activities and demonstrate their skills. This encourages everyone to participate and embrace those activities. Leaders play a critical role connecting people and teams to purpose and organizational priorities—each individual in the system should know how their role contributes to progress and goals, and leaders carry responsibility for ensuring that this is the case.

What does this look like in practice?

High reliability activities are what leaders do to help their organization pursue high reliability every day. For example:

- Participating in team briefings, huddles and rounding, actively listening and inviting conversation (as opposed to merely transmitting information)
- Normalizing vulnerability and destigmatizing tough topics like burnout and asking for help
- Aligning work around the vital few priorities and developing an infrastructure to deploy strategies that advance the work
- Prioritizing continuous learning and improvement by modeling the use of small tests of change to identify, spread, scale and monitor new processes

Another crucial leadership activity is routinely using visual management systems to engage and respond to front line teams. Leaders cannot expect units or departments to engage with visual management systems if the leadership team is not willing to do the same. And, in fact, embedding visual management at every organizational level is a key strategy for jumpstarting a high reliability transformation and building multi-directional communication in the broadest sense.

High reliability behaviors

These are the characteristics a leader demonstrates consistently across every interaction. They set expectations for how the rest of the organization acts, interacts, and responds to challenges and change. Our behaviors illustrate our values.

Leadership behaviors should not be confused with a leader's temperament. Effective leaders can be introspective, demonstrative, restrained, or even flamboyant. However, some characteristics shine through in organizations that are most successful with high reliability efforts. One is that leaders in these organizations have an unwavering commitment to the Framework and its concepts. They also have shared values that guide them every day to make sure the organization is a self-reflecting, improvement-capable entity. These values involve being humble and curious at the same time as committed and courageous. And there can't be any tension between these values.

Being humble and curious and getting insights from across the organization does not mean that leading is a democracy. Leaders make difficult decisions all the time. However, gathering the information to make the right decisions is a key part of being an effective leader.

The other attribute of the best leaders is that they're inclusive. They can relate to, respect and care for people across the organization, whether those individuals manage facilities and supplies, provide clinical care, or handle the administrative and financial aspects of the organization. In every interaction, expectations are high, as is caring and respect, which fosters personal accountability in others.

Leadership behaviors are inextricably linked to personal accountability. This is where things come full circle, serving as a reminder that leadership behaviors are the ones that set the foundation for the individual behaviors we expect and encourage. In other words, what leaders do, the rest of the organization will follow.

The Framework's idea of leadership is a paradigm shift from traditional models. Instead of having all the answers, leaders become people who have good questions, embodying the humility and curiosity that helps the entire organization make high reliability the way we do things around here. Instead of an atmosphere of control that comes from hierarchical leadership, high reliability suggests one that is more trusting of colleagues and creates a shared set of high expectations where everyone is contributing to something in a diverse and inclusive way.

DO THE WORK, IMPROVE THE WORK

The four subsystems are fully embedded within all aspects of the entire Framework, helping us view healthcare as a single, interconnected complex system. They play a critical role in supporting transitions between domains and in breaking down the silos that often hinder progress.

Leadership → Culture: Management development subsystem

This transition focuses on developing leaders at all levels to model high reliability behaviors and build problem-solving capability. By reinforcing coaching, accountability, and learning, leaders shape a culture where improvement is the norm, and psychological safety enables team performance.

Returning to our purpose: People

Every single element described above is meant to enable progress toward a set of outcomes described in the Framework's core—our people are our purpose, and their experiences and outcomes our priority. Each domain of the Framework, and each component therein, is connected and interdependent, weaving together to ensure that patients and families receive exceptional care, and that teams are engaged, happy, successful and thriving.

Closing thoughts

We share this *Framework for High Reliability Healthcare* as a living approach that aims to unite all the tools, approaches, behaviors and actions necessary to deliver exceptional care, to every patient, every time. It is intended to be used as a whole, ensuring that we break down the silos that limit progress, and design solutions that accommodate the complexity of healthcare today. The Framework will continue to evolve for all of us as we apply, learn and improve the model in our collective and relentless pursuit of the best possible healthcare for all people.

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