

# Key Components for Effective Patient Safety Culture Measurement of Healthcare Systems

## Considerations and Recommendations

### Introduction

Improving patient safety culture improves quality, reduces preventable harm, and increases patient satisfaction. According to The Joint Commission, the majority of sentinel or serious patient safety events are the result of the failure to deploy effective non-technical skills, including mismanaged human factors, ineffective communication, and poor leadership.<sup>1</sup> By conducting a safety culture assessment, healthcare leaders can proactively identify gaps in these non-technical skills between leadership and the frontline units, micro-cultures, clinical domains, and professional roles. Once gaps are identified, leaders have actionable information necessary to set goals, prioritize resources, promote continuous improvement, implement necessary training, increase resilience, and achieve higher reliability.

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Healthcare systems have a significant opportunity to derive greater improvement value by developing a comprehensive patient safety culture measurement, analysis, and reporting system. Health systems that robustly measure safety culture and disseminate results throughout their facilities are able to:

- Develop more powerful internal benchmarking and track historic trends
- Create a broader context for micro-culture analysis
- Identify recurring themes across the system
- Locate internal best practices
- Connect safety culture with other quality improvement metrics
- Aggregate data to inform system-wide improvement strategies

Unfortunately, many healthcare systems fail to realize the benefits of a system-wide measurement program. The resources dedicated to system-wide safety culture measurement are often focused on data collection and analysis, leaving little time for supporting the optimal utilization of the data. Leaders are often not equipped to make sense of their safety culture data, making it impossible to properly support frontline teams in using the data for improvement. These factors and others contribute to the overall disappointing rate in positive change in patient safety culture across U.S. healthcare facilities. From 2012-2014, the average improvement on the Hospital Survey on Patient Safety Culture (HSOPS) was 1%.<sup>2</sup>

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<sup>1</sup>[http://www.jointcommission.org/assets/1/18/Root\\_Causes\\_by\\_Event\\_Type\\_2004-2014.pdf](http://www.jointcommission.org/assets/1/18/Root_Causes_by_Event_Type_2004-2014.pdf)

<sup>2</sup><http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/hospital/2014/hosp14summ.html>

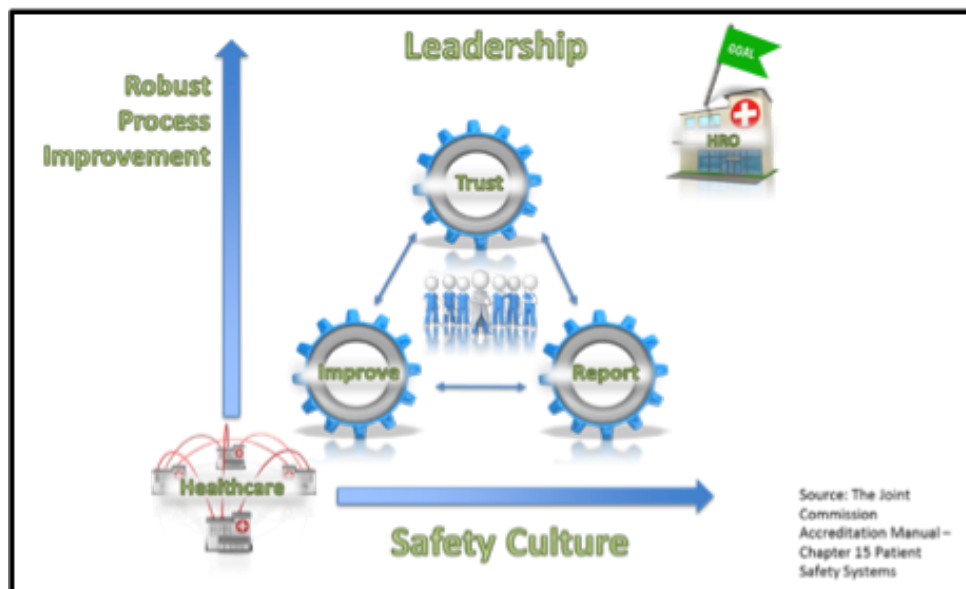
To achieve a maximal return for the investment in safety culture measurement, system leaders must overcome known barriers to data use and leverage proven strategies to turn “data” into “information.” When these techniques are combined with a robust strategy for safety culture improvement, significant improvements in quality, safety, and patient satisfaction are possible. This paper will discuss select challenges healthcare systems face, as well as key components for successful measurement.

### Connecting Safety Culture Measurement and High Reliability

To achieve High-Reliability Organizational (HRO) outcomes, organizations must improve their culture of safety. A robust safety culture measurement system provides leadership with actionable safety culture information to set improvement goals, integrate culture enhancement programs with robust process improvement (RPI) initiatives such as Lean.

Without a systematic approach to measurement and continuous action to improve a culture of safety, the journey to HRO will be impeded and unsustainable. Safety culture information must be used tactically as a tool and strategically as a roadmap – one without the other will not yield a reduction in preventable patient harm, which is the ultimate goal of an HRO in healthcare.<sup>3</sup> Leaders who only speak about the need for a culture of safety without the accompanying proof that it is measured, tracked, and positively trended will not achieve transformational change in this model of a healthcare HRO. Leaders at all levels in all facilities must understand the who, what, where, and how of improving a culture of safety. To do this, leaders need easy-to-access information, easy-to-understand reports, and easy-to-apply solutions for continuous improvement. Leaders also need new skills to manage change, promote new behaviors, and encourage safe, patient-centered choices every day with every patient. The culture of safety measurement system must be tightly coupled to the HRO leadership development program to ground leaders with actionable safety culture information about their organization, their micro-cultures, and their existing gaps. Leaders cannot improve what they cannot measure. Today, healthcare leaders have scarce actionable data or information that helps them improve their culture of safety in any meaningful way. Closing this information gap is essential to the success of any broad HRO investment.

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<sup>3</sup> [http://www.jointcommission.org/patient\\_safety\\_systems\\_chapter\\_for\\_the\\_hospital\\_program/](http://www.jointcommission.org/patient_safety_systems_chapter_for_the_hospital_program/)

## Challenges for System-wide Safety Culture Measurement

The challenges healthcare systems face in safety culture measurement are similar to the challenges with the collection and use of other perception data sets, such as patient satisfaction and staff engagement. The quantity of data and data users across systems increases the complexity of successfully supporting measurement and data use. Additionally, many healthcare systems choose to conduct safety culture measurement without third-party support. The level of effort for internal resources to conduct this analysis and the periodic nature of culture measurement often leads to sub-optimal or failed measurement efforts.

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The following is a select list of challenges healthcare systems face optimizing safety culture measurement:

1. **Data Validity** – Before any safety culture data can be properly analyzed or utilized, system leaders must first ensure a valid collection of data. The U.S. average response rate to the AHRQ HSOPS survey is 54% - significantly less than the optimal response rate of 60% or higher.<sup>4</sup> System leaders often roll out a survey without sufficient time for preparation. High response rates across each facility, and each micro-culture within the facilities, can only be obtained with a sufficient communications and leadership engagement plan. A successful system-wide communications effort often takes multiple months to build awareness and engagement, but systems all too frequently roll out a survey within weeks of announcing the effort, with corresponding poor results.
2. **Data Structure** – Properly using safety culture data requires the proper identification of micro-cultures (or work units) prior to the administration of the survey. Healthcare systems often don't allow for the proper identification of micro-cultures. To make optimal use of the data, these micro-cultures need to also have an expected number of responses and a mapping to AHRQ clinical domains. This information allows for the calculation of response rates and proper benchmarking.
3. **Timeliness** – Safety culture is dynamic and constantly shifting based on improvement initiatives, personnel changes, environment changes, and external factors. To be useful, safety culture data must be analyzed and returned to the facilities as quickly as possible, whereas most healthcare systems struggle to provide analysis to the facilities and micro-cultures in a reasonable time period. Systems often take six months to one year to provide reports back to facilities. This lack of timely reporting decreases the usability of the data and creates significant frustration across the system. In contrast, successful systems often return data to facility and micro-culture leaders within one month of surveying.
4. **Meaningful Reports** – Patient safety culture reports are notoriously difficult for users to understand, making it nearly impossible to draw meaningful, proper conclusions. Perception-based data derived from surveys, such as the HSOPS, often confuses users – a challenge that is compounded by nuances such as reverse-worded questions. Most safety culture reports are based on the publicly available AHRQ analysis tool, which creates a basic analysis that is insufficient to make sense of the data. Micro-culture reports are often worse, with little likelihood that middle managers will be able to properly make sense of the data for their units.

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- 5. Lack of Use** – Despite the significant amount of effort required to collect and analyze patient safety culture data, many of the reports are underutilized or never used. Lack of a clear engagement plan with data users or any accountability systems makes it difficult for system leaders to ensure the reports are being accessed and shared. Beyond the initial roll-out of results, facility and micro-culture leaders rarely access the valuable information from safety culture surveys when engaging in quality and safety improvement initiatives in the periods between culture surveys, which often span as much as three years. In contrast, leaders in the field survey every 12 months. Report files and printouts are rarely accessed even though they contain valuable information regarding barriers and enablers to change. Systematic and ongoing use of safety culture data is essential in order to improve culture and not just measure it.
- 6. Lack of Sense Making** – Safety culture data sets are known to be difficult to make sense of. Leaders struggle to understand the data because of the periodic nature of the measurement, the difficulty in analyzing the data, and a general lack of familiarity with the core concepts of patient safety culture. Healthcare systems must go beyond providing data to facility and micro-culture leaders – they must also enable these leaders to make sense of the data by providing the necessary access to interpretation and improvement resources and education.
- 7. Lack of System-wide Learning** – Healthcare systems are best equipped to efficiently measure patient safety culture, as measurement resources can be deployed across the system. However, the burden of conducting the analysis for the facilities and micro-cultures often forces healthcare systems to stop short of fully learning from the data at a system-wide level. Systems must move beyond aggregate analysis and conduct internal comparison across facilities and micro-cultures. This in-depth system analysis provides significant insight into needed improvement resources across the system, local facility or micro-culture risks, and identifies internal high performers. Systems that properly learn from their data can more efficiently and effectively set improvement strategies.
- 8. Connection to Improvement Strategies** – Healthcare systems often struggle to connect safety culture measurement results with current improvement strategies. Too frequently, culture is measured in a silo, leading to incremental improvement efforts that are not grounded in broader improvement strategies. This is true at both the system and facility levels. To move beyond measurement into actual improvement of safety culture, system leaders must align the results of culture measurement activities with current improvement strategies, such as the pursuit of high reliability, just culture, event reporting, or engaging leadership with safety improvement.

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## Key Components for Successful Measurement

There are many components to successfully measuring patient safety culture across a healthcare system. System leaders must approach safety culture not as a survey, but as a foundational component of quality and safety improvement. The following three components are frequently overlooked by healthcare systems, but are essential to maximizing the return on investment from safety culture measurement. These components assume that the healthcare system has the capability to properly administer safety culture surveys and achieve meaningful response rates.

### 1. Data Engagement Strategy

All the efforts of collecting and analyzing data are meaningless if system, facility, and micro-culture leaders are not all engaged in using the data. As discussed above, using the data requires more than the simple dissemination of reports. The following aspects are key to a Data Engagement Strategy:

**Marketing** – System leaders should deploy a full multi-level communications plan to engage users. This plan should provide users with valuable information regarding accessing and utilizing the data. This plan should stretch far beyond the initial roll-out of the results to ensure users are continuing to use the data for improvement.

**Support Understanding** – System leaders must support the understanding and sense making of the data set across system, facility, and micro-culture leaders. This support can take various forms including webinars, on-site presentations, online learning, and access to interpretation resources. The most effective resources are delivered in a just-in-time fashion. These resources are available to the user while the user is consuming the data. An example of a just-in-time resource would be the inclusion of action plan templates in a web based portal where the results are displayed.

**Tracking Utilization and Adoption** – If results of safety culture surveys are distributed across the system in document form, it is very difficult for leaders to measure the utilization of the reports. When results are deployed through a web-based portal, system leaders can track the access to the reports as well as directly engage users who have not accessed their data.

**Ongoing Support** – Healthcare systems rarely provide the level of ongoing support needed for individual facility and micro-culture leaders to utilize the data. When technology is leveraged, support can be offered directly to the user of the data when they are consuming the analysis. This support can be used to answer questions about the data, the underlying methodology, or how to use the data. For example, data users should be able to quickly and easily ask questions about how results are calculated or what a particular data visualization means. For web-based portals, users should be consistently supported in being able to use the portal effectively.

**Outcome: The outcome of a strong Data Engagement Strategy is increased understanding and utilization of the data across the system, leading to an increased likelihood of improvement.**

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## 2. Leadership Engagement

Leadership is a critical component of patient safety culture. Without the interest, engagement, and commitment of leadership, safety culture cannot improve. System leaders must determine the proper channels to engage leaders in leading safety culture improvement. This requires more effort than simply ensuring the results are accessed. System leaders must ensure the why, the what, and the how of safety culture improvement are clearly understood throughout the organization.

**Senior Leadership** – The executive team of the system and each facility are best engaged in person as a team. A high-level brief that explains the importance of the data, the overall results, and comparisons to benchmarks and historical data should be given with plenty of time for discussion. This is best conducted by a third party with safety culture expertise and no internal bias. Following the initial brief, senior leaders should provide input to the communication strategy and begin to build an improvement strategy. Senior leaders should focus on setting expectations for middle management, sharing findings with the front line, and removing barriers to a vibrant safety culture.

**Mid-level Leaders** – Middle management of facilities usually need some education on safety culture in order to properly understand their micro-culture results. Systems can efficiently conduct this education through online learning, webinars, or large in-person sessions. These sessions should focus on the foundations of safety culture, the role of the leader in improving culture, how to interpret the data, and what tools exist to improve. It is often helpful to ask middle level leaders to bring their results to these sessions.

**Quality and Safety Leaders** – Quality and safety leaders often have an in-depth understanding of patient safety culture. However, most quality and safety leaders have not had the tools and resources to dive deeply into the results. If more advanced tools such as cloud-based analytics engines are utilized for analytics and reporting, then quality and safety leaders will need to be educated on how to effectively utilize these tools and how they can assist in making deeper connections in the data sets. These leaders should also be equipped to support, advise, and coach micro-culture leaders in their sense-making and improvement efforts.

**Outcome: The outcome of focused Leadership Engagement is increased urgency, buy-in, and momentum.**

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## 3. Enhanced Analytics

Analytics is the discovery and communication of meaningful patterns and trends in data. Since the widespread adoption of computerized data sets in hospitals in the 1980s, healthcare systems have increasingly leveraged the power of analytics to identify opportunities and track progress. In our experience, this has not been true with standalone data sets such as safety culture. These data sets are often manually analyzed or supported by vendors that do not provide advanced analytics tools. Therefore, the powerful information derived from other data sets is rarely captured with safety culture data.

**Advanced Benchmarking** – Safety culture data is based on survey questions that each have psychometric properties (some questions are answered more positively due to how the question is asked). Therefore, properly analyzing this data requires comparison to valid and reliable benchmarks. Fortunately, a significant number of publicly available benchmarks exist according to hospital and micro-culture characteristics. Advanced analytics allow for these benchmarks to be utilized properly to identify meaningful positive and negative differences.

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**System-wide Comparisons** – Healthcare systems can often serve as a meaningful internal benchmark for their facilities and micro-cultures. Set characteristics such as ownership, resources, policy, and improvement philosophy are often shared to some extent across the system. This shared context creates a unique opportunity for meaningful benchmarking and comparison. Healthcare systems should move beyond basic support of the facilities and look for internal best practices. For example, systems should look at their data to find internal best practices such as the Intensive Care Unit with the highest perceptions of culture. When this internal data is used collaboratively, systems can reduce the significant costs of identifying external best practices.

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**Access and Interactivity** – Cloud-based analytics allow healthcare systems to easily disseminate reports and allow users to interactively explore the data over time. In contrast, PDF reports or PowerPoint slides are rarely revisited or explored following their initial dissemination. A few quality options currently exist in the marketplace. Healthcare systems should consider the value of these options and the capability they offer to be able to instantly push access to the data to all leaders across their system, and allow those users to manipulate charts and graphs to answer key questions about the results.

*The outcome of leveraging Enhanced Analytics is increased insights, learning, and use of the data.*

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## Conclusion

Safety culture data provides key insights into barriers and enablers to all types of improvement across facilities and micro-cultures. Healthcare systems have a unique opportunity to maximize investment in measurement and support actual use of the data. When the barriers to successful measurement are avoided and best practices are adopted, healthcare systems can harness the power of this data set to reduce harm and increase quality.

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## How Beterra Could Help

Our **SafeCulture** is an industry leading analytics portal built from the ground up to automate and optimize safety culture analysis. It is tested and used by clients in the US and abroad. SafeCulture significantly reduces the analysis burden, increases speed to sharing the results, and provides ongoing insights for end users. Our offering also includes expert analysis and leadership engagement support – ensuring that your system will understand the results and be ready to take action.

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