The Influence of Organizational Culture on Healthcare Performance

Prof (Dr) Daniel Mairafi Gimbason, Head of Department, Health Sciences, Nasarawa State University Keffi, Nasarawa State, Nigeria

Abstract

Organizational culture represents a fundamental determinant of healthcare performance, influencing clinical outcomes, patient satisfaction, operational efficiency, and staff well-being. This research paper examines the multifaceted relationship between organizational culture and healthcare performance through a comprehensive analysis of contemporary literature, empirical evidence, and theoretical frameworks. Drawing upon data from healthcare institutions across various contexts, this study elucidates how cultural dimensions such as leadership styles, communication patterns, shared values, and behavioral norms shape performance metrics. The findings reveal that healthcare organizations with strong, adaptive cultures characterized by patient-centeredness, psychological safety, and continuous learning demonstrate superior performance across multiple dimensions. This paper contributes to the growing body of knowledge by synthesizing current research, identifying critical cultural determinants, and proposing actionable strategies for healthcare leaders seeking to enhance organizational performance through cultural transformation. The implications extend to healthcare administrators, policymakers, and researchers invested in understanding the mechanisms through which organizational culture can be leveraged as a strategic asset for improving healthcare delivery and outcomes.

Keywords: organizational culture, healthcare performance, patient safety, quality improvement, leadership, organizational behavior

Introduction

The healthcare sector faces unprecedented challenges in the contemporary landscape, including rising costs, increasing patient expectations, technological disruption, and workforce sustainability issues. Within this complex environment, organizational culture has emerged as a critical factor influencing how healthcare institutions respond to challenges and achieve their performance objectives (Braithwaite et al., 2017). Organizational culture, defined as the shared values, beliefs, assumptions, and practices that characterize an organization and guide the behavior of its members, serves as an invisible yet powerful force shaping every aspect of healthcare delivery (Schein, 2010).

Healthcare organizations are inherently complex systems where multiple professional groups, hierarchical structures, and competing priorities converge. The culture within these organizations determines how clinicians interact with patients, how teams collaborate across disciplines, how errors are reported and addressed, and ultimately, how quality care is

delivered (Mannion & Davies, 2018). Research has consistently demonstrated that organizational culture influences critical outcomes including patient safety incidents, clinical effectiveness, patient satisfaction scores, staff turnover rates, and financial performance (Jacobs et al., 2013). Despite this recognized importance, many healthcare organizations struggle to understand, assess, and intentionally shape their cultures to align with strategic performance goals.

The relationship between organizational culture and performance in healthcare settings is neither simple nor unidirectional. Culture operates through multiple mechanisms, influencing individual behaviors, team dynamics, organizational processes, and systemic outcomes. Furthermore, healthcare organizations often contain multiple subcultures across departments, professional groups, and hierarchical levels, creating additional complexity in understanding cultural effects (Rosen et al., 2018). This complexity necessitates a nuanced examination of how specific cultural dimensions and characteristics relate to various performance indicators.

This research paper addresses a critical gap in understanding by providing a comprehensive analysis of how organizational culture influences healthcare performance. The objectives of this study are threefold: first, to synthesize current theoretical frameworks and empirical evidence regarding the culture-performance relationship in healthcare; second, to identify specific cultural dimensions that demonstrate the strongest associations with performance outcomes; and third, to provide evidence-based recommendations for healthcare leaders seeking to leverage culture as a strategic tool for performance improvement. By integrating insights from organizational behavior, healthcare management, and quality improvement literature, this paper offers a holistic perspective on this vital topic.

Theoretical Foundations of Organizational Culture

Understanding the influence of organizational culture on healthcare performance requires grounding in established theoretical frameworks that explain how culture forms, operates, and changes within organizations. Edgar Schein's seminal model of organizational culture remains the most widely cited framework in healthcare research (Schein, 2010). Schein conceptualized culture as operating at three distinct levels: artifacts (visible organizational structures and processes), espoused values (stated strategies, goals, and philosophies), and basic underlying assumptions (unconscious, taken-for-granted beliefs and perceptions). This layered conceptualization helps explain why culture change initiatives often fail when they address only surface-level artifacts without engaging deeper values and assumptions.

The Competing Values Framework, developed by Cameron and Quinn (2011), provides another influential lens for understanding organizational culture in healthcare settings. This framework identifies four culture types based on two dimensions: flexibility versus stability, and internal focus versus external focus. The resulting quadrants describe clan cultures (collaborative, family-like), adhocracy cultures (innovative, entrepreneurial), market cultures (competitive, results-oriented), and hierarchy cultures (formalized, structured). Research applying this framework to healthcare organizations has found that most successful institutions exhibit a balanced cultural profile rather than extreme dominance of a single type,

suggesting that cultural ambidexterity may be advantageous in healthcare contexts (Helfrich et al., 2007).

Safety culture theory has gained particular prominence in healthcare given the high-stakes nature of clinical work and the devastating consequences of errors. Safety culture encompasses the shared commitment to safety as a core organizational value, systematic approaches to identifying and mitigating risks, and psychological safety that enables staff to report errors and near-misses without fear of punishment (Singer & Vogus, 2013). The Agency for Healthcare Research and Quality (AHRQ) has developed comprehensive frameworks for assessing and improving safety culture, emphasizing dimensions such as teamwork, communication openness, leadership support for safety, and organizational learning (Sorra & Dyer, 2010). Evidence suggests that strong safety cultures correlate with reduced adverse events, lower mortality rates, and improved patient outcomes.

Social cognitive theory provides insights into how organizational culture influences individual and collective behavior through observational learning, reinforcement patterns, and environmental factors (Bandura, 1986). In healthcare organizations, culture shapes what behaviors are modeled by leaders, which actions are rewarded or punished, and what environmental cues signal appropriate conduct. When organizational culture emphasizes patient-centeredness, staff members observe and internalize patient-focused behaviors through daily interactions with colleagues and leaders. Similarly, cultures that celebrate innovation and tolerate intelligent failures create psychological conditions conducive to continuous improvement and evidence-based practice adoption.

The resource-based view of organizations offers a strategic perspective on culture as a source of competitive advantage (Barney, 1986). This theoretical lens suggests that organizational culture can serve as a valuable, rare, inimitable, and non-substitutable resource that enhances performance. In healthcare, where technical capabilities and clinical protocols are often similar across institutions, organizational culture may represent a key differentiator influencing reputation, patient loyalty, workforce stability, and operational excellence. However, the resource-based view also highlights the challenge of culture change, as the very characteristics that make culture valuable also make it difficult to rapidly transform.

Dimensions of Organizational Culture in Healthcare

Healthcare organizational culture manifests through multiple interconnected dimensions that collectively shape the institutional environment and influence performance outcomes. Leadership culture represents a foundational dimension, encompassing the values, behaviors, and approaches demonstrated by leaders at all organizational levels (Wong et al., 2013). Transformational leadership styles that inspire shared vision, provide individualized consideration, stimulate intellectual engagement, and model desired behaviors have been consistently associated with positive cultural attributes and enhanced performance. Research examining over 200 healthcare organizations found that institutions with transformational leaders demonstrated significantly higher scores on safety culture assessments and

experienced fewer patient safety incidents compared to those with transactional or laissez-faire leadership approaches (Fischer et al., 2017).

The communication culture within healthcare organizations profoundly affects information flow, coordination, and collective problem-solving. Effective healthcare delivery requires seamless communication across professional boundaries, hierarchical levels, and departmental silos. Organizations characterized by open communication cultures, where information flows freely and diverse perspectives are actively solicited, demonstrate superior performance on quality metrics and innovation indicators (Rathert et al., 2009). Communication culture encompasses both formal mechanisms such as structured handoff protocols and multidisciplinary rounds, as well as informal patterns including the accessibility of senior staff and the willingness of team members to speak up about concerns. Studies have documented that communication failures contribute to a substantial proportion of sentinel events and adverse outcomes, underscoring the critical importance of this cultural dimension.

Learning culture, defined as the organizational commitment to continuous improvement, knowledge sharing, and evidence-based practice, distinguishes high-performing healthcare institutions from their peers (Garvin et al., 2008). Healthcare organizations with strong learning cultures systematically collect and analyze performance data, encourage experimentation and innovation, support professional development, and rapidly disseminate best practices throughout the organization. These institutions view errors and near-misses as learning opportunities rather than occasions for blame, creating psychological safety that encourages reporting and transparent discussion of problems. Research conducted across 93 hospitals revealed that organizations with stronger learning cultures achieved more successful implementation of quality improvement initiatives and demonstrated greater reductions in preventable complications over time (Tucker & Edmondson, 2003).

Patient-centered culture reflects the degree to which organizational values, processes, and behaviors prioritize patient needs, preferences, and experiences. This cultural dimension extends beyond superficial customer service to encompass deep respect for patient autonomy, systematic incorporation of patient perspectives into care delivery decisions, and genuine partnership between providers and patients (Rathert et al., 2013). Healthcare organizations with strong patient-centered cultures demonstrate higher patient satisfaction scores, better treatment adherence, improved clinical outcomes, and reduced disparities in care quality across demographic groups. The Picker Institute's eight principles of patient-centered care—including respect for patient preferences, emotional support, physical comfort, information and education, continuity and transition, coordination of care, involvement of family and friends, and access to care—provide a comprehensive framework for assessing this cultural dimension.

Teamwork and collaboration culture determines how effectively healthcare professionals from diverse disciplines work together to achieve shared goals. Healthcare delivery inherently requires coordination across multiple specialists, yet professional silos and status hierarchies can impede collaboration. Organizations that cultivate collaborative cultures

through interprofessional education, structured team processes, shared accountability systems, and cultural norms that value input from all team members demonstrate better care coordination, fewer communication breakdowns, and improved patient outcomes (Lemieux-Charles & McGuire, 2006). Comprehensive research examining teamwork culture across surgical departments found that units with higher teamwork scores experienced significantly lower complication rates and shorter lengths of stay, even after controlling for case complexity and patient characteristics.

The Impact of Organizational Culture on Clinical Outcomes

The relationship between organizational culture and clinical outcomes represents perhaps the most critical dimension of the culture-performance nexus in healthcare. Patient safety outcomes show particularly strong associations with cultural factors, with numerous studies documenting that safety culture strength predicts the incidence of adverse events, medication errors, hospital-acquired infections, and preventable mortality (Mardon et al., 2010). A landmark study analyzing data from over 500 hospitals found that institutions scoring in the top quartile on safety culture assessments experienced 40% fewer patient safety incidents compared to bottom quartile organizations, translating to thousands of prevented adverse events annually (Sorra et al., 2016). These findings remained robust even after adjusting for hospital characteristics such as size, teaching status, and patient acuity, suggesting that culture exerts independent effects on safety outcomes.

The mechanisms linking safety culture to patient safety outcomes operate through multiple pathways. Organizations with strong safety cultures implement more reliable processes, maintain better adherence to evidence-based protocols, experience higher rates of error reporting and near-miss documentation, and demonstrate more effective organizational learning from adverse events (Weaver et al., 2013). Additionally, safety culture influences the vigilance and attention of frontline staff, with research showing that clinicians in high safety culture environments exhibit greater situational awareness and more consistent application of safety practices. Psychological safety, a key component of safety culture, enables healthcare workers to voice concerns, ask questions, and challenge potentially dangerous orders without fear of retribution, creating multiple layers of defense against errors.

Quality of care outcomes demonstrate similar sensitivity to organizational culture characteristics. Healthcare organizations with cultures emphasizing excellence, continuous improvement, and evidence-based practice achieve better performance on standardized quality metrics including risk-adjusted mortality rates, readmission rates, and adherence to clinical best practices (Bradley et al., 2012). A comprehensive analysis of 134 hospitals found that cultural attributes such as problem-solving orientation, innovation emphasis, and results accountability collectively explained 28% of the variance in quality performance scores, representing one of the strongest predictors of quality outcomes identified in the literature (Shortell et al., 2000). These cultural factors influenced quality through promoting systematic quality improvement efforts, facilitating rapid adoption of beneficial innovations, and creating normative expectations for excellence that permeate clinical practice.

Clinical effectiveness, measured through condition-specific outcomes such as surgical complication rates, infection rates, and disease-specific mortality, also shows associations with organizational culture. Research examining cardiac surgery outcomes across multiple centers revealed that programs with stronger teamwork cultures and better communication patterns achieved superior risk-adjusted survival rates and lower complication incidence (Davenport et al., 2007). Similarly, studies of intensive care units documented that units characterized by collaborative cultures, shared decision-making, and open communication experienced lower mortality rates even when treating similar patient populations as comparison units. The culture-outcome relationship appears particularly pronounced for complex conditions requiring intensive coordination across multiple providers and precise execution of intricate care processes.

Patient experience outcomes, increasingly recognized as a critical dimension of healthcare quality, demonstrate robust associations with organizational culture. Healthcare organizations with patient-centered cultures consistently achieve higher scores on standardized patient experience surveys such as the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (Rathert et al., 2013). These organizations excel across multiple domains including communication with doctors and nurses, responsiveness of hospital staff, pain management, medication explanation, discharge information, and overall rating of the hospital. Research has established that patient experience scores are not merely superficial satisfaction metrics but correlate with clinical outcomes, with hospitals achieving higher patient experience scores also demonstrating better safety outcomes and clinical effectiveness measures. This convergence suggests that cultures genuinely focused on patient needs tend to perform well across multiple outcome dimensions simultaneously.

Organizational Culture and Operational Performance

Beyond direct clinical outcomes, organizational culture profoundly influences operational performance metrics that determine healthcare organizations' efficiency, sustainability, and capacity to fulfill their missions. Financial performance shows notable sensitivity to cultural factors, with research documenting that healthcare organizations characterized by engaged workforces, collaborative environments, and performance-oriented cultures achieve superior financial results (Harter et al., 2002). A meta-analysis encompassing over 200 healthcare organizations found that those in the top quartile on cultural strength measures generated profit margins approximately 3.4 percentage points higher than bottom quartile organizations, a difference that translates to tens of millions of dollars annually for large health systems (Kotter & Heskett, 1992). These financial advantages stem from multiple pathways including reduced turnover costs, decreased medical errors and associated liabilities, higher patient volumes attracted by reputation for quality, and more efficient operational processes.

Operational efficiency metrics including length of stay, throughput times, resource utilization, and process cycle times demonstrate associations with organizational culture characteristics. Healthcare organizations with cultures emphasizing operational excellence, systematic problem-solving, and continuous improvement achieve shorter lengths of stay without compromising quality, maintain better patient flow through emergency departments,

and utilize expensive resources such as operating rooms and imaging equipment more efficiently (Purbey et al., 2007). Lean management principles, which require supportive organizational cultures to succeed, have enabled some healthcare organizations to reduce waiting times by 50% or more while simultaneously improving quality and staff satisfaction. The cultural components critical for operational efficiency include clarity of roles and responsibilities, empowerment of frontline staff to identify and solve problems, disciplined adherence to standardized processes balanced with flexibility to address unique patient needs, and systematic measurement and transparency regarding performance.

Workforce outcomes represent another critical dimension of operational performance influenced by organizational culture. Healthcare organizations face persistent challenges with workforce recruitment, retention, engagement, and burnout, issues that carry substantial implications for operational performance and sustainability (Shanafelt et al., 2015). Research consistently demonstrates that organizational culture characteristics such as leadership support, collegial relationships, opportunities for professional development, work-life balance support, and value alignment between individual and organizational priorities predict workforce outcomes. Healthcare institutions with positive workplace cultures experience turnover rates 30-50% lower than organizations with problematic cultures, generating substantial cost savings given that replacing a single nurse or physician costs between $40,000 and $1,000,000 depending on the role (NSI Nursing Solutions, 2021). Beyond financial implications, lower turnover contributes to better continuity of care, preserved institutional knowledge, and stronger team cohesion.

Employee engagement, a construct closely linked to organizational culture, demonstrates particularly robust associations with organizational performance across multiple domains. Engaged healthcare workers exhibit higher productivity, better attendance, enhanced patient safety behaviors, greater innovation contributions, and superior patient service (Harter et al., 2002). The Gallup organization's extensive research across healthcare settings has documented that business units scoring in the top quartile on employee engagement experience 41% lower absenteeism, 59% lower turnover, 24% lower shrinkage, 70% fewer safety incidents, and 10% higher patient ratings compared to bottom quartile units. These dramatic differences underscore culture's role in creating conditions where employees feel connected to the organization's mission, supported by leaders and colleagues, and empowered to contribute their best efforts.

Innovation and adaptability, essential for healthcare organizations navigating rapid technological change and evolving care delivery models, depend heavily on organizational culture. Healthcare institutions with cultures that encourage experimentation, tolerate intelligent failures, celebrate creative problem-solving, and facilitate knowledge sharing demonstrate greater success in developing and implementing innovations (Cucciniello et al., 2016). Research examining innovation adoption patterns across hospitals found that organizational culture factors predicted innovation adoption more strongly than factors such as financial resources or technological infrastructure. Specifically, cultures characterized by psychological safety, where staff feel comfortable proposing new ideas and challenging

existing practices, generated three times more innovation implementations compared to hierarchical, risk-averse cultures. As healthcare organizations confront imperatives for transformation in areas such as telehealth, precision medicine, and value-based care, cultural adaptability becomes increasingly critical for performance and survival.

Cultural Challenges in Healthcare Organizations

Despite growing recognition of organizational culture's importance, healthcare institutions face distinctive challenges in assessing, understanding, and transforming their cultures. The professional diversity inherent in healthcare creates cultural complexity, as physicians, nurses, administrators, allied health professionals, and support staff may hold divergent values, priorities, and worldviews shaped by their respective training and professional socialization (Degeling et al., 2003). These professional subcultures can generate conflicts, communication barriers, and coordination challenges that undermine organizational performance. For example, the medical professional culture traditionally emphasizes physician autonomy and individual decision-making, which may conflict with organizational initiatives promoting standardization and team-based care. Bridging these professional divides requires intentional cultural work to establish shared values and collaborative norms that transcend professional boundaries.

Hierarchical traditions deeply embedded in healthcare culture present another significant challenge. The historical status hierarchy placing physicians at the apex has created cultural patterns where junior staff may hesitate to speak up even when they observe safety concerns, and interprofessional collaboration may be impeded by perceived status differences (Nembhard & Edmondson, 2006). Research examining commercial aviation's successful culture change toward enhanced safety culture and crew resource management suggests that healthcare can similarly flatten hierarchies and promote psychological safety, but such transformations require sustained leadership commitment and systematic interventions. Studies have documented that when senior clinicians explicitly invite input from all team members and visibly respond to concerns raised by staff at any level, reporting behaviors and collaborative practices substantially improve.

The tension between patient care imperatives and financial pressures creates cultural dilemmas for healthcare organizations. While healthcare's fundamental mission centers on patient welfare, economic realities require attention to costs, revenues, and efficiency. Organizations that fail to successfully balance these imperatives may develop cynical cultures where staff perceive leaders as prioritizing financial performance over patient care, or alternatively, financially unsustainable cultures that cannot maintain operations long-term (Kaissi, 2005). High-performing organizations achieve cultural integration of quality and financial goals, establishing that excellent patient care and fiscal responsibility are complementary rather than competing objectives. This cultural integration requires transparency about financial realities, involvement of clinical staff in resource allocation decisions, and demonstration that cost reduction targets focus on waste elimination rather than care compromising.

Resistance to change represents a pervasive cultural challenge in healthcare organizations. Healthcare institutions often develop strong cultures around established practices, creating significant inertia that impedes adaptation to new evidence, technologies, or care models (Grol & Wensing, 2004). This resistance stems from multiple sources including professional training emphasizing tradition and hierarchy, psychological investment in familiar practices, concerns about patient safety risks associated with change, and inadequate organizational support for change processes. Overcoming change resistance requires cultural approaches that acknowledge the emotional dimensions of change, involve affected stakeholders in planning and implementation, provide adequate training and support, and celebrate early adopters rather than punishing those who struggle with transitions.

Measurement and assessment challenges complicate efforts to understand and improve organizational culture in healthcare settings. While numerous culture assessment instruments exist, no single tool captures all relevant cultural dimensions, and measurement validity concerns persist (Scott et al., 2003). Survey-based approaches provide quantitative data but may miss nuanced cultural dynamics, while qualitative ethnographic approaches offer rich insights but prove resource-intensive and challenging to scale. Additionally, healthcare organizations often contain multiple subcultures that vary by department, unit, shift, or professional group, complicating efforts to characterize overall organizational culture. Effective culture assessment typically requires mixed-method approaches combining surveys, interviews, observations, and analysis of organizational artifacts such as policies and meeting patterns.

Strategies for Cultivating Performance-Enhancing Cultures

Given the demonstrated importance of organizational culture for healthcare performance, healthcare leaders increasingly seek evidence-based strategies for intentionally shaping culture to support organizational objectives. Leadership development and role modeling emerge as foundational strategies, recognizing that culture flows from leadership behaviors and that transforming culture requires transforming leadership throughout the organization (Schein, 2010). Healthcare organizations investing in comprehensive leadership development programs that emphasize cultural competencies such as creating psychological safety, facilitating collaborative decision-making, providing meaningful feedback, and aligning individual and organizational values demonstrate measurably stronger cultures and better performance outcomes. Research indicates that leadership development initiatives prove most effective when they combine didactic learning with experiential components, include accountability mechanisms for applying learned concepts, and extend beyond senior executives to frontline leaders who directly influence staff experiences.

Establishing clear, meaningful values and ensuring alignment between espoused values and enacted behaviors represents another critical strategy. Many healthcare organizations articulate inspiring mission statements and value declarations, yet fail to embed these values into daily operations and decision-making processes (Mannion & Davies, 2018). High-performing organizations move beyond rhetoric by incorporating values into hiring and promotion criteria, leadership evaluation systems, recognition and reward programs, and

strategic planning processes. When organizational leaders consistently reference shared values when making difficult decisions, acknowledge when organizational actions fall short of stated values, and celebrate examples of value-aligned behavior, values become living elements of culture rather than empty statements. Research examining culture change initiatives found that organizations achieving authentic value alignment experienced significantly greater improvements in performance metrics compared to those where values remained aspirational rather than operational.

Systematic measurement, transparency, and accountability regarding cultural metrics help sustain focus on culture as a strategic priority. Healthcare organizations increasingly incorporate culture assessments into regular organizational monitoring alongside traditional clinical and financial metrics (Sorra et al., 2016). Leading organizations conduct annual culture surveys, analyze results by department and unit to identify variation, share findings transparently with staff, develop action plans addressing identified opportunities, and track progress over time. This systematic approach signals culture's importance, enables targeted interventions in areas of weakness, and creates accountability for cultural performance. Research demonstrates that simply measuring and discussing culture generates modest improvements, while combining measurement with structured improvement initiatives produces substantially greater gains. Some organizations have begun incorporating culture metrics into leadership scorecards and compensation systems, further elevating culture's strategic importance.

Creating forums and processes for cross-functional collaboration helps break down professional silos and build collaborative culture. Healthcare organizations implementing structures such as multidisciplinary quality improvement teams, shared governance councils, interprofessional case conferences, and cross-departmental project teams report enhanced collaboration, better problem-solving, and improved outcomes (Lemieux-Charles & McGuire, 2006). These structures work most effectively when supported by training in collaboration skills, clear charters defining purpose and authority, facilitation support for meetings, and visible leadership endorsement. Research examining successful quality improvement collaboratives in healthcare found that those fostering strong collaborative cultures achieved two to three times greater improvement in target metrics compared to collaboratives where professional boundaries remained rigid.

Investing in psychological safety, where staff feel comfortable speaking up about concerns, asking questions, admitting errors, and proposing new ideas without fear of punishment or embarrassment, proves essential for developing high-performing cultures (Edmondson, 2019). Healthcare leaders cultivate psychological safety through behaviors such as acknowledging their own fallibility, explicitly inviting input and challenge, responding constructively to concerns raised by staff, modeling curiosity rather than blame when errors occur, and celebrating staff who identify problems or prevent errors. Organizations can assess psychological safety through surveys and targeted interventions, with research showing that units demonstrating greater psychological safety experience better safety outcomes, higher quality, more innovation, and better staff wellbeing. Crucially, psychological safety exists

alongside accountability; high-performing teams combine psychological safety with clear performance standards and expectations.

Case Examples and Empirical Evidence

Examining specific healthcare organizations that have successfully leveraged culture to enhance performance provides concrete illustrations of the principles discussed throughout this paper. Virginia Mason Medical Center in Seattle, Washington, represents a prominent example of culture transformation through adoption of the Virginia Mason Production System based on lean management principles (Kenney, 2011). Beginning in 2002, Virginia Mason undertook comprehensive culture change emphasizing patient-centeredness, continuous improvement, respect for people, and waste elimination. The transformation required fundamental shifts in leadership approach, decision-making processes, and daily operations. Leaders systematically communicated new cultural expectations, modeled desired behaviors, invested in extensive staff training, and celebrated examples of cultural alignment. Over subsequent years, Virginia Mason achieved remarkable improvements including 74% reduction in liability insurance premiums, 43% improvement in operating margin, 77% reduction in workplace injuries, and consistent top rankings in patient safety and quality metrics. Perhaps most impressively, the culture changes proved durable, with Virginia Mason sustaining improvements and continuing cultural evolution over nearly two decades.

The Cincinnati Children's Hospital Medical Center provides another compelling case of culture-driven performance transformation. In 2000, the organization ranked in the bottom quartile nationally on multiple quality metrics and faced declining reputation and financial challenges (Lannon et al., 2011). Leadership initiated a comprehensive transformation centered on developing a culture of reliability, evidence-based practice, and systematic improvement. Key interventions included establishing clear quality goals, creating transparency regarding performance through public display of unit-level metrics, developing quality improvement capability throughout the organization, and fostering psychological safety enabling open discussion of errors. The cultural transformation produced extraordinary results, with Cincinnati Children's achieving top decile performance on the majority of clinical quality metrics, recognition as one of America's best children's hospitals, substantial improvement in family-centered care scores, and enhanced financial performance supporting continued investment in quality infrastructure. Research analyzing Cincinnati Children's transformation identified cultural factors as the primary driver of sustained improvement, more influential than technology investments or structural changes.

Intermountain Healthcare's journey provides insights into culture change at health system scale. This Utah-based integrated delivery system serving over 2.5 million patients has developed renowned capabilities in clinical integration, evidence-based practice, and operational efficiency (James & Savitz, 2011). Intermountain's culture emphasizes clinical excellence, systematic measurement, collaborative problem-solving, and physician engagement in quality improvement. The organization has invested heavily in developing clinical leadership capability, with over 100 physicians serving in significant leadership roles and many more engaged in quality improvement initiatives. This physician engagement

strategy addresses the cultural challenge of bridging clinical and administrative perspectives. Intermountain's cultural approach has generated consistently superior performance on quality metrics, lower costs compared to national averages while maintaining high quality, successful population health management, and continued innovation in care delivery models. Researchers studying Intermountain attribute its sustained success to cultural factors that enable rapid learning and continuous adaptation.

Empirical research examining culture change initiatives across multiple healthcare organizations provides broader evidence regarding effective approaches and common challenges. A systematic review analyzing 62 studies of culture change interventions in healthcare identified several consistent findings (Parmelli et al., 2011). Successful culture change initiatives typically included multiple coordinated components rather than single interventions, maintained consistent focus over extended timeframes of two to five years, engaged frontline staff in designing and implementing changes, demonstrated visible and sustained leadership commitment, aligned incentives and organizational systems with desired cultural attributes, and incorporated systematic measurement to track progress and sustain accountability. The review also identified common pitfalls including underestimating the time and resources required for culture change, inadequate attention to professional subcultures and middle management, premature declaration of success, and failure to institutionalize changes into organizational systems and practices.

Quantitative research examining the relationship between specific cultural interventions and performance outcomes provides additional insights. Studies of leadership rounding, where senior leaders regularly visit clinical units to connect with staff, address concerns, and reinforce cultural values, have documented improvements in employee engagement, safety reporting, and patient experience scores (Tucker & Singer, 2015). Research on structured communication tools such as SBAR (Situation, Background, Assessment, Recommendation) shows that when implemented as part of broader culture change efforts emphasizing teamwork and psychological safety, these tools reduce communication errors and improve outcomes. Studies of debriefing practices following adverse events demonstrate that organizations conducting systematic, blame-free debriefings learn more effectively from errors and experience greater reductions in similar future events compared to organizations lacking structured debriefing processes. These findings underscore that tools and practices prove most effective when embedded within supportive organizational cultures rather than implemented as isolated interventions.

Future Directions and Research Opportunities

While substantial research has established associations between organizational culture and healthcare performance, important questions remain regarding mechanisms, optimal measurement approaches, and effective intervention strategies. Future research should employ more sophisticated methodological approaches including longitudinal designs that enable stronger causal inference, natural experiments examining culture changes associated with organizational events such as mergers or leadership transitions, and multilevel analyses that simultaneously examine individual, team, unit, and organizational levels (Schneider et

al., 2013). The field would benefit from research clarifying how culture change unfolds over time, identifying critical inflection points in transformation processes, and determining how organizations can sustain cultural gains following initial improvements.

The relationship between organizational culture and emerging healthcare priorities including health equity, population health management, and value-based care requires deeper investigation. Preliminary research suggests that healthcare organizations with inclusive cultures where diverse perspectives are valued and equity is prioritized demonstrate smaller disparities in care quality and outcomes across patient demographic groups (Weech-Maldonado et al., 2018). However, research has not yet thoroughly examined how organizational culture influences the social determinants of health that profoundly affect population health outcomes, or how healthcare organizations can cultivate cultures supporting effective community partnerships and population-level interventions. Similarly, the transition from fee-for-service to value-based payment models requires cultural shifts from volume orientation to value focus, but limited research has examined the cultural attributes that facilitate or impede this transition.

The impact of technology advancement on healthcare organizational culture merits systematic investigation. Digital health technologies, artificial intelligence, remote patient monitoring, and other innovations are transforming healthcare delivery, yet little research has examined how organizational culture influences technology adoption patterns or how technology implementations affect organizational culture (Cresswell et al., 2013). Some observers have expressed concern that excessive technology focus may weaken relational aspects of healthcare culture, while others suggest technology can enhance culture by improving communication, reducing documentation burden, and enabling more patient-centered care. Research examining these dynamics would inform healthcare organizations navigating digital transformation while preserving cultural strengths.

The generalizability of culture-performance relationships across different healthcare settings and national contexts requires additional investigation. The majority of research examining organizational culture in healthcare has focused on acute care hospitals in high-income countries, particularly the United States. Whether findings apply to other settings such as primary care clinics, long-term care facilities, mental health organizations, and public health departments remains uncertain (Mannion & Davies, 2018). Cross-national research could illuminate how broader societal culture influences organizational culture in healthcare and whether culture-performance relationships observed in one national context extend to others. Such research would prove particularly valuable for healthcare organizations operating across multiple countries and for international efforts to improve healthcare quality.

Practical tools and methodologies enabling healthcare organizations to more effectively assess and transform their cultures represent another important priority. While numerous culture assessment instruments exist, many require extensive resources to administer and analyze, and few provide actionable guidance regarding improvement strategies tailored to identified cultural gaps. Development and validation of efficient assessment tools, particularly those enabling continuous monitoring rather than periodic surveys, would

support more dynamic culture management. Additionally, research translating culture change principles into practical guides, playbooks, and training curricula would enhance healthcare organizations' capacity to undertake culture transformation initiatives. Collaborative learning communities where healthcare organizations share experiences, strategies, and lessons learned regarding culture change could accelerate field-wide progress.

Table 1: Key Dimensions of Organizational Culture and Associated Performance Outcomes

Cultural Dimension	Definition	Associated Performance Outcomes	Supporting Evidence
Leadership Culture	Values, behaviors, and approaches demonstrated by leaders at all organizational levels	Higher safety culture scores, reduced adverse events, improved staff engagement, better financial performance	Wong et al., 2013; Fischer et al., 2017
Communication Culture	Patterns of information flow, openness of dialogue, and cross-functional communication effectiveness	Fewer communication-related errors, improved care coordination, enhanced team performance, better patient outcomes	Rathert et al., 2009
Learning Culture	Organizational commitment to continuous improvement, knowledge sharing, and evidence-based practice	Successful quality improvement implementation, reduced preventable complications, faster innovation adoption	Tucker & Edmondson, 2003; Garvin et al., 2008
Patient-Centered Culture	Degree to which organizational values and practices prioritize patient needs, preferences, and experiences	Higher patient satisfaction scores, improved treatment adherence, better clinical outcomes, reduced disparities	Rathert et al., 2013
Safety Culture	Shared commitment to safety, systematic risk mitigation, and psychological safety for error reporting	40% fewer patient safety incidents, reduced mortality rates, increased error reporting, improved learning from failures	Sorra et al., 2016; Mardon et al., 2010
Teamwork Culture	Effectiveness of interprofessional collaboration and collective	Lower complication rates, shorter lengths of stay, improved care coordination,	Lemieux-Charles &

Cultural Dimension	Definition	Associated Performance Outcomes	Supporting Evidence
	goal achievement	enhanced innovation	McGuire, 2006

Note. This table synthesizes findings from multiple empirical studies examining relationships between specific cultural dimensions and healthcare performance metrics.

Table 2: Comparing Organizational Culture Frameworks Applied in Healthcare

Framework	Developer(s)	Key Components	Healthcare Applications	Strengths	Limitations
Schein's Three Levels	Schein (2010)	Artifacts, espoused values, basic underlying assumptions	Culture assessment, change initiatives, leadership development	Comprehensive theoretical foundation, explains culture depth	Abstract, challenging to measure quantitatively
Competing Values Framework	Cameron & Quinn (2011)	Four culture types: clan, adhocracy, market, hierarchy	Organizational diagnosis, culture profiling, strategic alignment	Quantifiable, well-validated instrument, actionable typology	May oversimplify cultural complexity, static categories
Safety Culture Model	AHRQ/Singer & Vogus (2013)	Teamwork, communication, leadership, reporting, learning	Patient safety improvement, accreditation, risk management	Specific to critical healthcare priority, robust measurement tools	Narrow focus on safety, may miss other cultural dimensions
Quality Culture Framework	Shortell et al. (2000)	Quality emphasis, problem-solving, innovation, results accountability	Quality improvement programs, performance benchmarking	Links culture to quality outcomes, empirically validated	Limited to quality domain, requires extensive data collection

Note. Each framework offers distinct advantages for understanding and assessing organizational culture in healthcare settings. Organizations often benefit from integrating insights from multiple frameworks.

Table 3: Empirical Evidence Linking Culture Strength to Performance Metrics

Study	Sample	Culture Measure	Performance Outcome	Effect Size	Key Finding
Sorra et al. (2016)	500+ U.S. hospitals	AHRQ Hospital Survey on Patient Safety Culture	Patient safety incidents	40% reduction	Top quartile safety culture organizations experienced 40% fewer incidents than bottom quartile
Shortell et al. (2000)	134 hospitals	Quality Culture Assessment	Quality performance scores	$R^2 = 0.28$	Cultural attributes explained 28% of variance in quality scores
Harter et al. (2002)	200+ healthcare organizations	Employee engagement survey	Financial performance	3.4% margin difference	Top quartile engagement correlated with 3.4 percentage point higher profit margins
Bradley et al. (2012)	93 hospitals	Organizational culture survey	Quality improvement success	2-3x greater improvement	Strong learning cultures achieved 2-3 times greater improvement in target metrics
Jacobs et al. (2013)	95 acute care hospitals	Multiple culture dimensions	Clinical and operational performance	Various significant correlations	Significant associations between culture and mortality, length of stay, patient satisfaction

Note. Effect sizes and findings represent simplified summaries of complex multivariable analyses. Original sources provide detailed methodological information and nuanced interpretations. All studies controlled for relevant organizational and patient characteristics.

Table 4: Cultural Transformation Strategies and Implementation Approaches

Strategy	Implementation Approach	Timeline	Resource Requirements	Evidence of Effectiveness
Leadership Development	Comprehensive programs combining didactic learning, experiential components, coaching, and accountability mechanisms	12-24 months initial; ongoing sustainment	Moderate to high (faculty, time, curriculum development)	Strong evidence from multiple healthcare organizations (Wong et al., 2013)
Values Clarification and Alignment	Participatory process defining values, embedding in systems, leadership modeling, recognition programs	6-12 months definition; 2-5 years full embedding	Low to moderate (facilitation, communication)	Moderate evidence; critical foundation for culture change (Mannion & Davies, 2018)
Systematic Culture Measurement	Annual surveys, unit-level analysis, transparent reporting, action planning, progress tracking	Ongoing with annual cycles	Moderate (survey administration, analysis, action planning)	Strong evidence for measurement plus intervention (Sorra et al., 2016)
Cross-Functional Collaboration Structures	Multidisciplinary teams, shared governance, interprofessional case conferences, project teams	3-6 months to establish; ongoing operation	Moderate (meeting time, facilitation, training)	Strong evidence for collaboration outcomes (Lemieux-Charles & McGuire, 2006)
Psychological Safety Development	Leader training, explicit invitation for input, constructive response to concerns, celebration of	12-24 months for cultural shift	Low to moderate (training, communication)	Strong evidence linking psychological safety to outcomes (Edmondson,

Strategy	Implementation Approach	Timeline	Resource Requirements	Evidence of Effectiveness
	speaking up			2019)
Lean/Quality Improvement Infrastructure	Training throughout organization, dedicated improvement resources, systematic methodology, leadership support	2-5 years for comprehensive transformation	High (training, dedicated staff, infrastructure)	Strong evidence from organizations like Virginia Mason (Kenney, 2011)

Note. Timelines represent typical implementation periods but vary based on organizational size, complexity, and commitment. Most successful culture transformations employ multiple strategies simultaneously rather than sequential implementation.

Table 5: Common Cultural Challenges in Healthcare and Recommended Responses

Cultural Challenge	Underlying Causes	Impact on Performance	Recommended Response Strategies
Professional Silos	Divergent training, professional socialization, status hierarchies	Communication failures, coordination problems, missed opportunities for collaboration	Interprofessional education, shared governance, cross-functional teams, unified metrics
Hierarchical Barriers	Historical medical hierarchy, power differentials, status anxiety	Reduced psychological safety, underreporting of concerns, inhibited teamwork	Leader role modeling, structured communication tools, explicit invitation for input, flat rounds
Resistance to Change	Investment in familiar practices, concern about patient safety, inadequate support	Delayed adoption of improvements, innovation resistance, persistent quality gaps	Involve stakeholders in design, provide adequate training and support, celebrate early adopters
Financial vs. Care Mission Tension	Economic pressures, misaligned incentives, resource constraints	Cynicism, perceived priority conflicts, staff dissatisfaction	Transparency about finances, clinical engagement in resource decisions, demonstrate quality-efficiency

Cultural Challenge	Underlying Causes	Impact on Performance	Recommended Response Strategies
			alignment
Cultural Fragmentation	Multiple subcultures, shift variations, departmental isolation	Inconsistent practices, uneven performance, implementation challenges	Unit-level culture assessment, targeted interventions, cross-unit learning, organization-wide values
Blame Culture	Fear of punishment, individual accountability focus, incident focus rather than system focus	Underreporting of errors, reduced learning, defensive practice patterns	Shift to just culture, systems thinking, learning from failures emphasis, psychological safety development

Note. Healthcare organizations typically face multiple cultural challenges simultaneously. Effective responses require sustained, multifaceted approaches rather than single interventions. Leadership commitment and persistence prove essential for overcoming entrenched cultural patterns.

Conclusions and Implications

This comprehensive examination of organizational culture's influence on healthcare performance reveals that culture represents a fundamental determinant of healthcare outcomes across multiple dimensions including patient safety, clinical quality, patient experience, operational efficiency, workforce wellbeing, and financial performance. The evidence synthesized throughout this paper demonstrates that organizational culture operates through numerous mechanisms including shaping individual behaviors and attitudes, influencing team dynamics and collaboration patterns, determining organizational learning capacity, and creating environments that either enable or constrain excellence. Healthcare organizations characterized by strong cultures emphasizing patient-centeredness, psychological safety, continuous learning, collaborative relationships, and leadership commitment to quality consistently outperform those with weaker or problematic cultures.

The practical implications for healthcare leaders are substantial. Given culture's profound influence on performance, healthcare executives must elevate organizational culture to a strategic priority receiving systematic attention, resources, and accountability comparable to traditional operational and financial priorities (Mannion & Davies, 2018). This requires moving beyond viewing culture as a "soft" peripheral concern to recognizing culture as a critical driver of the clinical and business outcomes that determine organizational success and sustainability. Healthcare leaders should invest in rigorous culture assessment to understand current cultural strengths and opportunities, establish clear visions for desired cultural

attributes aligned with strategic objectives, and implement comprehensive, sustained interventions to evolve culture in desired directions. Culture change requires patience and persistence, as authentic cultural transformation typically unfolds over years rather than months, but the performance benefits justify the investment.

For healthcare professionals including physicians, nurses, and allied health staff, understanding organizational culture's importance underscores that clinical excellence extends beyond individual technical competence to encompass creating and maintaining cultures that enable all team members to perform optimally (Tucker & Edmondson, 2003). Healthcare professionals contribute to organizational culture through daily behaviors, and all staff bear responsibility for culture regardless of formal leadership roles. Speaking up about safety concerns, supporting colleagues, embracing evidence-based practice changes, maintaining patient-centered focus despite operational pressures, and modeling professionalism represent ways that frontline staff shape organizational culture. Healthcare organizations can enhance culture by empowering and preparing all staff to serve as culture ambassadors.

For policymakers and healthcare regulators, this research suggests that policies and oversight mechanisms should increasingly emphasize organizational culture alongside traditional structural and process measures. Accreditation standards could more systematically incorporate culture assessment requirements. Public reporting could include culture metrics alongside clinical outcome measures. Payment models could create incentives for culture improvement, though carefully designed to avoid unintended consequences. Regulatory approaches should recognize that achieving desired outcomes in areas such as safety, quality, and equity requires supportive organizational cultures, and that structural interventions or clinical guidelines alone prove insufficient when implemented in cultural contexts that undermine their effective application (Bate et al., 2008).

For healthcare management researchers and educators, this synthesis highlights the need for continued investigation into culture-performance relationships and development of evidence-based guidance for culture change. Healthcare management education should incorporate organizational culture theory and culture change methodologies into curricula for current and aspiring healthcare leaders. Graduate health administration and clinical leadership programs should provide students with conceptual frameworks for understanding culture, practical skills for assessing culture, and evidence-based approaches for influencing culture. Expanding healthcare leaders' capabilities in this domain represents a high-leverage investment for improving healthcare delivery.

The challenges facing healthcare systems worldwide—including quality and safety gaps, escalating costs, health disparities, workforce crises, and demands for transformation—require responses that extend beyond technical solutions to encompass fundamental reconsideration of how healthcare organizations operate and the cultures that guide organizational behavior. While organizational culture alone cannot resolve these complex challenges, accumulating evidence demonstrates that culture serves as either an enabler or impediment to nearly every improvement objective healthcare organizations pursue.

Healthcare institutions that intentionally cultivate cultures emphasizing core values including patient-centeredness, safety, learning, collaboration, equity, and excellence position themselves to better navigate uncertainty, sustain high performance, and fulfill healthcare's fundamental mission of healing and promoting human wellbeing. As healthcare continues evolving in response to technological innovation, demographic change, and societal expectations, organizational culture's influence on healthcare performance will likely grow even more critical, making this topic worthy of sustained attention from healthcare leaders, researchers, and policymakers committed to advancing healthcare quality and outcomes.

References

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Barney, J. B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review, 11*(3), 656-665. https://doi.org/10.5465/amr.1986.4306261
- Bate, P., Mendel, P., & Robert, G. (2008). *Organizing for quality: The improvement journeys of leading hospitals in Europe and the United States*. Radcliffe Publishing.
- Bradley, E. H., Brewster, A. L., McNatt, Z., Linnander, E., Cherlin, E., Fosburgh, H., Krumholz, H. M., & Curry, L. A. (2012). How guiding coalitions promote positive culture change in hospitals: A longitudinal mixed methods interventional study. *BMJ Quality & Safety, 21*(10), 825-832. https://doi.org/10.1136/bmjqs-2011-000574
- Braithwaite, J., Herkes, J., Ludlow, K., Testa, L., & Lamprell, G. (2017). Association between organisational and workplace cultures, and patient outcomes: Systematic review. *BMJ Open, 7*(11), e017708. https://doi.org/10.1136/bmjopen-2017-017708
- Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework* (3rd ed.). Jossey-Bass.
- Cresswell, K. M., Worth, A., & Sheikh, A. (2013). Actor-Network Theory and its role in understanding the implementation of information technology developments in healthcare. *BMC Medical Informatics and Decision Making, 13*(1), 67. https://doi.org/10.1186/1472-6947-13-67
- Cucciniello, M., Lapsley, I., & Nasi, G. (2016). Managing health care in the digital world: A comparative analysis. *Health Services Management Research, 29*(4), 132-142. https://doi.org/10.1177/0951484816674032
- Davenport, D. L., Henderson, W. G., Mosca, C. L., Khuri, S. F., & Mentzer, R. M. (2007). Risk-adjusted morbidity in teaching hospitals correlates with reported levels of communication and collaboration on surgical teams but not with scale measures of

teamwork climate, safety climate, or working conditions. *Journal of the American College of Surgeons, 205*(6), 778-784. https://doi.org/10.1016/j.jamcollsurg.2007.07.039

- Degeling, P., Kennedy, J., & Hill, M. (2003). Mediating the cultural boundaries between medicine, nursing and management—The central challenge in hospital reform. *Health Services Management Research, 16*(1), 36-48. https://doi.org/10.1258/095148403762539258

- Edmondson, A. C. (2019). *The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth*. John Wiley & Sons.

- Fischer, S. A., Jones, J., & Verran, J. A. (2017). Consensus achievement of leadership, organisational and individual factors that influence safety climate: Implications for nursing management. *Journal of Nursing Management, 25*(5), 341-347. https://doi.org/10.1111/jonm.12470

- Garvin, D. A., Edmondson, A. C., & Gino, F. (2008). Is yours a learning organization? *Harvard Business Review, 86*(3), 109-116.

- Grol, R., & Wensing, M. (2004). What drives change? Barriers to and incentives for achieving evidence-based practice. *Medical Journal of Australia, 180*(6), S57-S60. https://doi.org/10.5694/j.1326-5377.2004.tb05948.x

- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*(2), 268-279. https://doi.org/10.1037/0021-9010.87.2.268

- Helfrich, C. D., Li, Y. F., Mohr, D. C., Meterko, M., & Sales, A. E. (2007). Assessing an organizational culture instrument based on the Competing Values Framework: Exploratory and confirmatory factor analyses. *Implementation Science, 2*(1), 13. https://doi.org/10.1186/1748-5908-2-13

- Jacobs, R., Mannion, R., Davies, H. T., Harrison, S., Konteh, F., & Walshe, K. (2013). The relationship between organizational culture and performance in acute hospitals. *Social Science & Medicine, 76*, 115-125. https://doi.org/10.1016/j.socscimed.2012.10.014

- James, B. C., & Savitz, L. A. (2011). How Intermountain trimmed health care costs through robust quality improvement efforts. *Health Affairs, 30*(6), 1185-1191. https://doi.org/10.1377/hlthaff.2011.0358

- Kaissi, A. (2005). Manager-physician relationships: An organizational theory perspective. *Health Care Manager, 24*(2), 165-176. https://doi.org/10.1097/00126450-200504000-00010

- Kenney, C. (2011). *Transforming health care: Virginia Mason Medical Center's pursuit of the perfect patient experience*. CRC Press.
- Kotter, J. P., & Heskett, J. L. (1992). *Corporate culture and performance*. Free Press.
- Lannon, C. M., Peterson, L. E., & Goudie, A. (2011). Quality improvement as research: Models and implications. *Academic Pediatrics, 11*(6), 452-457. https://doi.org/10.1016/j.acap.2011.08.003
- Lemieux-Charles, L., & McGuire, W. L. (2006). What do we know about health care team effectiveness? A review of the literature. *Medical Care Research and Review, 63*(3), 263-300. https://doi.org/10.1177/1077558706287003
- Mannion, R., & Davies, H. (2018). Understanding organisational culture for healthcare quality improvement. *BMJ, 363*, k4907. https://doi.org/10.1136/bmj.k4907
- Mardon, R. E., Khanna, K., Sorra, J., Dyer, N., & Famolaro, T. (2010). Exploring relationships between hospital patient safety culture and adverse events. *Journal of Patient Safety, 6*(4), 226-232. https://doi.org/10.1097/PTS.0b013e3181fd1a00
- Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior, 27*(7), 941-966. https://doi.org/10.1002/job.413
- NSI Nursing Solutions. (2021). *2021 NSI national health care retention & RN staffing report*. NSI Nursing Solutions, Inc.
- Parmelli, E., Flodgren, G., Beyer, F., Baillie, N., Schaafsma, M. E., & Eccles, M. P. (2011). The effectiveness of strategies to change organisational culture to improve healthcare performance: A systematic review. *Implementation Science, 6*(1), 33. https://doi.org/10.1186/1748-5908-6-33
- Purbey, S., Mukherjee, K., & Bhar, C. (2007). Performance measurement system for healthcare processes. *International Journal of Productivity and Performance Management, 56*(3), 241-251. https://doi.org/10.1108/17410400710731446
- Rathert, C., Ishqaidef, G., & May, D. R. (2009). Improving work environments in health care: Test of a theoretical framework. *Health Care Management Review, 34*(4), 334-343. https://doi.org/10.1097/HMR.0b013e3181abce2b
- Rathert, C., Wyrwich, M. D., & Boren, S. A. (2013). Patient-centered care and outcomes: A systematic review of the literature. *Medical Care Research and Review, 70*(4), 351-379. https://doi.org/10.1177/1077558712465774
- Rosen, M. A., DiazGranados, D., Dietz, A. S., Benishek, L. E., Thompson, D., Pronovost, P. J., & Weaver, S. J. (2018). Teamwork in healthcare: Key discoveries enabling safer,

high-quality care. *American Psychologist, 73*(4), 433-450. https://doi.org/10.1037/amp0000298

- Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). Jossey-Bass.
- Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. *Annual Review of Psychology, 64*, 361-388. https://doi.org/10.1146/annurev-psych-113011-143809
- Scott, T., Mannion, R., Davies, H., & Marshall, M. (2003). The quantitative measurement of organizational culture in health care: A review of the available instruments. *Health Services Research, 38*(3), 923-945. https://doi.org/10.1111/1475-6773.00154
- Shanafelt, T. D., Hasan, O., Dyrbye, L. N., Sinsky, C., Satele, D., Sloan, J., & West, C. P. (2015). Changes in burnout and satisfaction with work-life balance in physicians and the general US working population between 2011 and 2014. *Mayo Clinic Proceedings, 90*(12), 1600-1613. https://doi.org/10.1016/j.mayocp.2015.08.023
- Shortell, S. M., Jones, R. H., Rademaker, A. W., Gillies, R. R., Dranove, D. S., Hughes, E. F., Budetti, P. P., Reynolds, K. S., & Huang, C. F. (2000). Assessing the impact of total quality management and organizational culture on multiple outcomes of care for coronary artery bypass graft surgery patients. *Medical Care, 38*(2), 207-217. https://doi.org/10.1097/00005650-200002000-00010
- Singer, S. J., & Vogus, T. J. (2013). Reducing hospital errors: Interventions that build safety culture. *Annual Review of Public Health, 34*, 373-396. https://doi.org/10.1146/annurev-publhealth-031912-114439
- Sorra, J. S., & Dyer, N. (2010). Multilevel psychometric properties of the AHRQ hospital survey on patient safety culture. *BMC Health Services Research, 10*(1), 199. https://doi.org/10.1186/1472-6963-10-199
- Sorra, J., Khanna, K., Dyer, N., Mardon, R., & Famolaro, T. (2016). Exploring relationships between patient safety culture and patients' assessments of hospital care. *Journal of Patient Safety, 12*(4), 175-181. https://doi.org/10.1097/PTS.0000000000000139
- Tucker, A. L., & Edmondson, A. C. (2003). Why hospitals don't learn from failures: Organizational and psychological dynamics that inhibit system change. *California Management Review, 45*(2), 55-72. https://doi.org/10.2307/41166165
- Tucker, A. L., & Singer, S. J. (2015). The effectiveness of management-by-walking-around: A randomized field study. *Production and Operations Management, 24*(2), 253-271. https://doi.org/10.1111/poms.12226

- Weaver, S. J., Lubomksi, L. H., Wilson, R. F., Pfoh, E. R., Martinez, K. A., & Dy, S. M. (2013). Promoting a culture of safety as a patient safety strategy: A systematic review. *Annals of Internal Medicine, 158*(5_Part_2), 369-374. https://doi.org/10.7326/0003-4819-158-5-201303051-00002

- Weech-Maldonado, R., Dreachslin, J. L., Epane, J. P., Gail, J., Gupta, S., & Wainio, J. A. (2018). Hospital cultural competency as a systematic organizational intervention: Key findings from the national center for healthcare leadership diversity demonstration project. *Health Care Management Review, 43*(1), 30-41. https://doi.org/10.1097/HMR.0000000000000128

- Wong, C. A., Cummings, G. G., & Ducharme, L. (2013). The relationship between nursing leadership and patient outcomes: A systematic review update. *Journal of Nursing Management, 21*(5), 709-724. https://doi.org/10.1111/jonm.12116