



JOHNS HOPKINS
CAREY BUSINESS SCHOOL

Center for
Innovative Leadership

A FIELD GUIDE TO **LEADING** IN HEALTH CARE



About CIL Field Guides

The Center for Innovative Leadership aims to advance knowledge and build capacity for innovative leadership in modern organizations. Housed at the Johns Hopkins Carey Business School, the Center is a hub for new ideas and insights on leadership, combining faculty-led research, student-facing programming, and community-focused impact. The Center's thought leaders explore a range of topics related to leading modern organizations, from managing effective teams in dynamic environments, to building cultures of learning and resilience, and developing inclusive leadership practices. Learn more about CIL at cil.carey.jhu.edu

CIL designed the Field Guide series to help leaders navigate the increasingly complex world of work, armed with a nuanced understanding of key challenges identified in cutting-edge organizational research. Each guide is designed to illuminate a core challenge facing today's leaders and deliver effective, evidence-based guidance and practices for leaders to deploy in their own work. These in-depth resources are intended for use by leaders in all industries and at all levels of an organization, not only as a "how-to" guide for key leadership decisions and actions, but also as a broader resource for personal development, learning, and growth as a leader.

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Foreword from the Directors

Health care is advancing at an unprecedented pace. Genomics, immunotherapy, mRNA vaccines, artificial intelligence, telemedicine, and digital health tools are transforming patient care and reshaping what is possible. Yet while medicine and science are moving forward rapidly, leadership practices and organizational models often lag behind; constrained by outdated hierarchies, rigid systems, and divides between the clinical and business sides of care.

This Field Guide recognizes that there is no single formula for leadership success in health care. Each setting faces unique challenges, but evidence from research and practice highlights strategies that consistently matter: strengthening teams, fostering collective responsibility, building cultures of safety, and keeping patients at the center of decision-making.

Leadership must be understood as integral to the clinical mission. Clinicians with leadership roles require support to build management and interpersonal skills, while non-clinical leaders need a deeper appreciation of the clinical environment. Both perspectives are essential to bridging divides and guiding organizations effectively. Technologies, such as artificial intelligence, will increasingly aid decision-making and system performance, but it is leadership that will determine how these tools are applied in ways that advance patient care, ethical practice, and organizational resilience.

We hope you find this Field Guide to be a practical resource that helps to inform and support leaders at every level in strengthening their impact. Thoughtful, evidence-based leadership will improve quality, support staff well-being, and sustain growth in the health care system. Effective leadership is not an addition to health care, it is at the core of it.

Center for Innovative Leadership

Michael Doyle
Executive Director

Christopher Myers
Faculty Director

Email us at carey_cil@jhu.edu or message us on LinkedIn with your stories and feedback.

Lead on!

About this Field Guide

The past decade has seen huge advances in medical treatment, pharmacology, and biotechnology. Genomics and personalized medicine, cancer immunotherapy, mRNA and vaccine technology, are but a few of the developments that are revolutionizing health care. Advances in AI and machine learning have also brought new capabilities in clinical decision making and risk assessment—providing invaluable predictive analytics, as well as diagnostic tools for interpreting medical images which are as accurate as the most up-to-date, experienced clinicians.

New technologies and health behaviors

In addition, telemedicine has become more mainstream in primary health care, pushed through in response to the COVID-19 pandemic, allowing remote consultations and monitoring. There has also been a growth of health-related apps for managing chronic conditions, fitness, mental health, and medication adherence. Wearables and home monitoring devices for conditions like hypertension, diabetes, and heart disease have become commonplace. More generally—at least in advanced societies—healthier lifestyles and attention to personal well-being have been a boon to the underlying health of populations. On the other hand, there remain two important areas where health care is not keeping pace with these positive advances. The first is in the funding of national systems of health care; where both state-funded, ‘free-at-the-point-of-need,’ and private insurance-based structures are struggling to deliver high quality care in the face of supply versus demand pressures—aging populations,

staff shortages, and ever-rising patient expectations.

When progress outpaces leadership

The second area where health care is failing to keep pace—and the focus of this Field Guide—is in the quality of its leadership and the evolution of organizational structures and cultures that fit the modern world of work. In the corporate business world, the past few decades have seen the development of new approaches to leadership and the adoption of modern management techniques that have brought great benefits. Sclerotic, rigid managerialism and top-down hierarchies that previously stifled effective leadership and innovation are fewer and farther between. Barriers such as bureaucracy, slow decision-making, and lack of accountability that were impediments to improvement have been challenged by internal and external forces, resulting in new organizational forms and leadership strategies. Yet, in many respects, the leadership and structure of health care remains stuck in outdated practices that are out-of-step with modern realities.

A turning point for health care systems

While many attempts at improvement were underway before the COVID-19 pandemic, the COVID crisis revealed critical threats and challenges to the well-being of patients and health care workers and the sustainability of past practices. As a result, attending to the leadership needs of health care organizations is as urgent as ever.

For health care systems to deliver to their full potential today and in the future, evidence-based strategies from organizational research need to be brought from “over the fence” and into the health care sphere. Training and education should focus on leadership and interpersonal abilities alongside clinical or technical skills—neither alone is sufficient to guide health care in the future. This means that clinicians with management responsibility will need to hone their leadership skills, while simultaneously health system leaders without clinical experience will need to build their contextual awareness to collaborate with clinicians more effectively. This Field Guide intends to offer takeaways for both these audiences.

How this Field Guide can help

Specifically, the aim of this Field Guide is to point to the key areas where the latest research on leadership in health care suggests improvements can be made and where effective leadership can be allowed to flourish. There is growing—but often fragmented—evidence that key leadership behaviors and strategies can have a positive role to play in health care, but there is as yet no clear template for success. The health care workplace—where lives are at stake, decisions are made under intense pressure, and where multi-disciplinary teams are the norm—is a far cry from many other sectors. Furthermore, no two health care settings are the same. Yet the need for change and improvement abounds across the health care industry.

Adopting more focused, thoughtful, and innovative leadership strategies—where, for example, leaders engage with and motivate others, paying attention to their needs, and

provide a vision and ethical framework for decisions—is key to driving high-quality care, high-performance teams, and high-reliability organizations. Leadership, when done well, is the force that helps build and sustain cultures devoted to patient safety, and where open communication, learning and employee engagement are the norm.^{ii iii}

Section 1

Why leadership matters in health care

Why effective leadership is now the most powerful lever for improving patient outcomes, staff well-being, and system performance—and how clinical leadership can be embedded as core to the medical mission.

Section 2

Leading in the unique environment of health care

Explores the realities of leading in complex, high-stakes systems; rethinking structures, ethics, and cultures for reliability, resilience, and integrity in patient care.

Section 3

Actionable, evidence-based practices for reliable health care leadership

Translates research into practical tools—team communication frameworks, learning practices, and adaptive change strategies—to build safer, smarter, more engaged organizations.

Section 4

Building the future of health care leadership

Looks ahead to AI-enabled, tech-fluent, and human-centered leadership—preparing today’s leaders to guide transformation, foster innovation, and shape the next era of care.

Section 1:

Why leadership matters in health care

1.1

The case for prioritizing clinical leadership development

Across the world, the health industry is at a difficult inflection point where many health care systems, with limited human and financial resources, are failing to match the ever-increasing demands put upon them. A lack of effective leadership capacity within these systems makes it very difficult for organizations to counter, alleviate, and rise above these pressures. To secure the future of health care, systems need effective leaders equipped to manage a daunting array of resource pressures, to drive change, exploit new opportunities to save and improve lives, inspire commitment, and reduce the burnout and suffering of a beleaguered health care workforce.

For the past ten years or so researchers have argued the next major gains in patient safety would not come from new technologies or stricter regulations, but from how health care teams are led and how they work together in real time.^{iv} To be clear, there have of course been huge improvements in health care treatment and outcomes over recent years. Yet, while ongoing technological advancements have improved safety, their marginal gains may now be limited relative to past eras.

For instance, the marginal safety gains of moving from open to laparoscopic (minimally invasive) surgery were larger than those of moving from laparoscopic to robotic surgery. As

Ghaferi et al. (2016) observed, “the largest gains in patient safety (and reductions in mortality) may have already been realized now that these minimally invasive techniques are in wide use,” and the complexity and case-by-case nature of care delivery may mean the medical community has reached “the point of diminishing returns with process compliance.”^v

However, unlike these technical improvements, advancing leadership and interpersonal coordination in health care has yet to reach the point of diminishing returns. The quality of health care leadership has therefore emerged as an area most likely to significantly improve outcomes in complex, high-risk health care environments. Again, referring to Ghaferi et al. (2016), it is not only about refining procedures to reduce complications, but also about how providers organize their work to detect early warning signs and respond effectively. As they put it, “It isn’t only about standardizing or improving techniques to reduce complications, but it is also about how health care providers organize their work so that they recognize when something is going wrong... and can adapt to rescue patients.”^{vi}

Many of the daily decisions that shape performance and commit the resources of a health care organization are made by clinical experts, who are very close to the front line, but who lack many of the business and management skills that leaders typically possess in the corporate world.

The downside to this gap in clinicians' education was badly exposed during the COVID-19 pandemic, when sustaining quality patient care depended as much on business acumen and interpersonal coordination as on medical judgement—from thinking strategically and assessing overall systems capacity, to assessing risk, coping with limited financial budgets, and managing badly disrupted supply chains—as well as critical individual leadership skills such as ethical decision making and resilience.^{vii}

Advancing health care requires clinicians to understand the foundational tenets and principles of what it means to lead in a modern organization, and for non-clinician managers to understand how clinicians think and what matters most to them.

1.2

Embedding leadership as a core part of the clinical mission

There is now a wealth of compelling empirical evidence linking leadership effectiveness to improved health care outcomes.

Transformational leadership, for example, has been found to play a critical role in driving high-quality patient care and reliable performance, shaping and inspiring organizational cultures where high safety standards are the norm, and connected to that, continuous quality improvement. Analyzing data from 204 U.S. hospitals, one study showed how this specific leadership style was the key factor in driving improvements: *“The hospital CEOs’ transformational leadership style was directly related to employees’ perception of a strong safety climate,”* McFadden et al. (2015).^{viii}

At the same time, patient safety frameworks based on principles of shared leadership—such as CUSP (Comprehensive Unit-based Safety),

developed by Johns Hopkins Medicine—show how clinical leadership at the frontline, when built on trust, reflection, and shared accountability, can drive measurable improvements in care. In one study, CUSP implementation was associated with a 33% reduction in surgical site infections.^{ix}

Yet, on top of the many other pressures they face, clinicians taking leadership roles are also hampered by an unhelpful dichotomy, whereby physicians and clinical teams have traditionally seen leadership and management as a secondary administrative function of lesser importance than their medical mission. As Myers, et al. observe, *“The medical profession’s historical focus on autonomy, rigid hierarchy, and individual performance... can lead some physicians to view [business skills] as a threat to their identity.”*^x

The practice of medicine and the organizational environments in which it occurs have grown increasingly complex, exacerbated by constant changes to health care policy, funding, and structures. This is all the more reason for clinicians to embrace management education, to understand business principles and acquire skills in decision making, interpersonal communication, team knowledge sharing, and developing future-ready organizational cultures.

Unfortunately, management responsibilities have been too often treated as separate from the ‘real work’ of medicine. This in turn has fostered an attitude where leadership is overlooked or dismissed as not part of the clinical mission.

This approach can lead to serious skills gaps in communication, team coordination, and organizational dynamics. It can also mean too many leadership roles are filled based on clinical or academic achievement alone, a situation that can result in a “double loss”: the removal of a highly skilled clinician from a clinical role and the appointment of a leader who may not be adequately prepared.^{xi}

Clinical excellence and good leadership are interconnected—every clinical choice affects costs, resource allocation, and workflows. Thus, leadership is part of the fabric of health care professionals’ daily lives. A high level of leadership skill throughout all levels and domains of health care is thus required to get doctors, nurses, medical experts, and support staff to work together harmoniously, spanning organizational boundaries both within and between organizations, prioritizing overall patient care rather than the success of their departments, and working collectively to build cooperative, integrative leadership cultures.

Section 2: Leading in the unique environment of health care

Facing multiple challenges at once, leaders in large and complex organizations are always under pressure, as well as often under intense scrutiny from various stakeholders. Nowhere is this more so than in health care where patient safety is at stake, and where the demands on leaders come from patients, regulators, professional bodies, unions, politicians, the press, and—exacerbated by social media—the general public.

In such a complex working environment, clinicians' lack of management skills can be the cause of preventable errors, undermining patient safety and outcomes. Numerous headline-grabbing incidents have raised public awareness that more needs to be done to make patients safer. Preventable medical error is responsible for 3%–5% of hospital deaths, or 21,000–35,000 preventable deaths in the U.S. alone.^{xii}

Over and above the defensive role of ensuring patient safety, health care leadership is about tuning and improving all-round organizational performance. Leaders must develop inspiring visions, set clearly aligned objectives for their teams, and support individuals through enabling people management. Well directed leadership can stimulate high levels of staff engagement, encourage learning, innovation and quality improvement and collaborative team working. As highlighted by The King's Fund and the Center for Creative Leadership (2015).



There is clear evidence of the link between leadership and a range of important outcomes within health services, including patient satisfaction, patient mortality, organizational financial performance, staff well-being, engagement, turnover and absenteeism, and overall quality of care.

The King's Fund and Center for Creative Leadership ^[xiii]



Besieged by competing demands from stakeholders while managing interdisciplinary teams to address the unique demands of complex clinical problems, health care leaders and their teams often suffer from stress, burn-out, and turnover.

This is exemplified in the findings of a large-scale survey of physicians at the Mayo Clinic, which found that:^{xiv}

Burnout is not just an individual issue—it is shaped by the leadership environment clinicians work within;

Small improvements in supervisor leadership were linked to meaningful reductions in burnout;

Physicians working under stronger leaders were significantly more satisfied in their roles;

Effective leaders inform, engage, inspire, develop, and recognize their team members—skills that are teachable and observable.

One key factor for this is that these teams typically operate with outdated leadership approaches in legacy organizational structures and cultures that cannot keep pace. In this context errors can creep in, and team morale will suffer. In a time of widespread labor shortages, when health care facilities are employing more temporary and mobile workforces than ever, a burn-out and morale-related staffing crisis can quickly spiral.

2.1

Rethinking leadership structures and organizing for reliability in health care

In recent years leadership practice in forward-looking business organizations has shifted away from rigid management hierarchies and siloed structures in favor of leadership models that decentralize authority, empower teams, and prioritize collaboration and adaptability. The COVID-19 pandemic revealed that such a shift has rarely taken place in health care systems around the world. As Lobdell et al. (2020) note, *“Medicine and surgery have deeply ingrained individualism... transcending self and focusing on teammates... can enable health care organizations to break traditional hierarchical tendencies.”* The pandemic experience, as well as some high-profile hospital scandals, increased calls for a new kind of leadership: one that prioritizes agility, knowledge sharing, innovation, cross-functional teams, joint decision making, and organizational resilience.^{xv}

One approach that has shown considerable promise in the complex domain of health care comes from the study of High Reliability Organizations (HROs). HROs are organizations working in high-stakes, high pressure working environments which succeed or fail based on the quality of their leadership, communication, and team culture. As Lobdell et al. (2020) observe, *“Our research has revealed that high reliability organizations fuel a culture of trust, foster strong relationships, and tend to demonstrate five key characteristics... including preoccupation with failure, reluctance to simplify, and deference to expertise.”*^{xvi}

Approaches to high-reliability organizing in health care focus on prioritizing safety, quality, and efficiency by adopting a core set of principles from other complex, high-risk environments, aiming to mitigate errors and prevent harm—e.g., from nuclear powered aircraft carriers. As Pozzobon et al. (2023) found, “Applying HRO principles enhanced the organization’s ability to provide high quality care, as well as understand the complexity of the system during a large-scale clinical transformation.”^{xvii}

Weick & Sutcliffe’s 5 Principles of High Reliability Organizing:^{xviii}

1

Sensitivity to operations:

Heightened awareness of the state of relevant systems and processes.

2

Reluctance to simplify:

Acceptance that work is complex and not always predictable.

3

Preoccupation with failure:

A focus on anticipating potential problems and learning from mistakes.

4

Deference to expertise:

Respect for the knowledge and skills of frontline staff.

5

Commitment to resilience:

The ability to adapt to the unexpected.

At its core, high reliability organizing sees the development of culture as the means for organizations to adaptively learn and reliably perform. This emphasis shifts attention away from setting up stable, rigid organizational structures and hierarchies and focuses leaders on attending to more ongoing, evolving processes and practices.

In this sense, high reliability organizing is less about the formal power and authority associated with a leader role, and more about the way leaders can best support and serve their teams. In support of this approach, research by Demeke et al. (2024), based on a synthesis of 55 health care-specific studies, found that servant leadership—where leaders prioritize the needs and well-being of others—plays a crucial role in building a committed workforce and achieving performance excellence, finding that, “the implementation of servant leadership in healthcare can be an essential requirement to bring positive employee and patient outcomes.”

Indeed, servant-oriented models of leadership offer a natural complement to patient-centered care and are closely aligned with the ethical orientation of health care. As Demeke et al. (2024) state, “*Servant leadership is a moral-based leadership primarily driven by the idea that serving is a natural component ('altruistic calling') or inner conviction of the servant leader.*”^{xxii}

Ethics are almost inseparable from understanding leadership in health care organizations—one which requires balancing individual care with broader system responsibilities.

The four foundational principles of biomedical ethics—autonomy, beneficence, non-maleficence, and justice—guide leaders in making decisions that are both compassionate and fair.^{xxiii}



Autonomy

respecting the decision-making capacity of autonomous persons



Beneficence

providing benefits and balancing them against risks



Non-maleficence

avoiding the causation of harm



Justice

distributing benefits, risks, and costs fairly

Justice in particular raises complex ethical questions for leaders in health care settings—for instance resource allocation decisions balancing individual needs with system-wide fairness. Leaders are routinely faced with these ethically complex trade-offs, where prioritizing efficiency or outcomes may conflict with principles of equity.

Examples

ICU bed prioritization

When intensive care capacity is limited, clinicians face a difficult choice: should beds go to the sickest patients, or to those most likely to recover quickly and free up space for others? The COVID-19 pandemic pushed this tension to extremes, with health care leaders forced to confront these decisions on a daily basis, often under extreme pressure.

Organ transplantation eligibility

Some transplant centers consider factors like age, socioeconomic status, and social support—believing candidates with stable support are more likely to recover well, adhere to treatment, and place fewer demands on the system. However, this can disadvantage individuals with mental illness, addiction histories, or limited resources, which poses questions about fairness in access to care.^{xxiv}

Elective surgery triage post-pandemic

During the COVID-19 pandemic, the suspension of elective procedures created a massive backlog of surgical cases. Health care leaders were faced with difficult decisions about fairly prioritizing patients once services resumed, and traditional triage methods were found lacking in ethical nuance. Jain et al. (2021) proposed an ethics-informed framework balancing principles like beneficence, non-maleficence, and justice with operational factors such as surgical

urgency, ICU use, and COVID-19 risk. This approach uses multicriteria decision analysis (MCDA) to help leaders weigh competing factors and develop transparent, defensible prioritization strategies—minimizing harm while maximizing benefit.^{xxv}

It is the ethical leader's role, not only to find the right balance of resources that provides justice, but to motivate their teams and patients to accept the compromises this suggests. As Bryden (2024) asserts, *“Ethical leadership is a long-term process of influencing people and involves the ability to be able to balance conflicting information and views.”* Ethical leadership is important in creating a culture of trust, respect, and a feeling of psychological safety, where collaboration, and transparency can flourish—whilst holding everyone accountable for their actions. Taking an ethical stance means acting with integrity and honesty even when it means making difficult decisions, and taking responsibility for any mistakes.^{xxvi}

Good leadership, rooted in a reliability-focused, human-centered, and ethics-informed approach, is the most effective lever health care systems can pull to enhance culture, and create adaptable, innovative, resilient organizations.^{xxvii}

Section 3: Actionable, evidence-based practices for reliable health care leadership

An emerging body of research on leadership and organizational behavior in the unique context of health care has focused on developing best practices based on the latest leadership and management thinking.

Findings from this research provide practical, actionable strategies leaders can use to make improvements.

Practice 1: Leading High-Performing Teams and Communicating to Coordinate Care

Effective team leadership in health care not only protects patients from risks and improves outcomes but also fosters a more positive, engaging, and resilient workplace. In complex and dynamic hospital settings, leaders must begin by ensuring alignment on team purpose, goals, roles, and ways of working.^{xxviii}

Communicating to Build Shared Understanding

Early moments—such as the start of shifts, procedures, or new projects—offer opportunities to "establish mutual understanding, build a team orientation, and clarify roles and interdependencies," Mayo et al. (2020).^{xxix}

One approach that supports this is the STICC framework, a structured communication tool designed to help teams convey not just what needs to be done, but why, what could go wrong, and how to adapt.

STICC prompts teams to address five key elements:

Situation – What is happening now?

Task – What needs to be done?

Intent – Why is this being done?

Concern – What are the potential risks?

Calibrate – What should we look for or adjust if conditions change?

In a study of inpatient physician teams, researchers found that more comprehensive use of STICC elements during patient discussions was associated with better outcomes, including shorter hospital stays, fewer unnecessary days in hospital, and lower complication rates. By embedding this framework into daily team communication, health care leaders can strengthen shared understanding, anticipate challenges, and improve coordination in complex care environments.^{xxx}

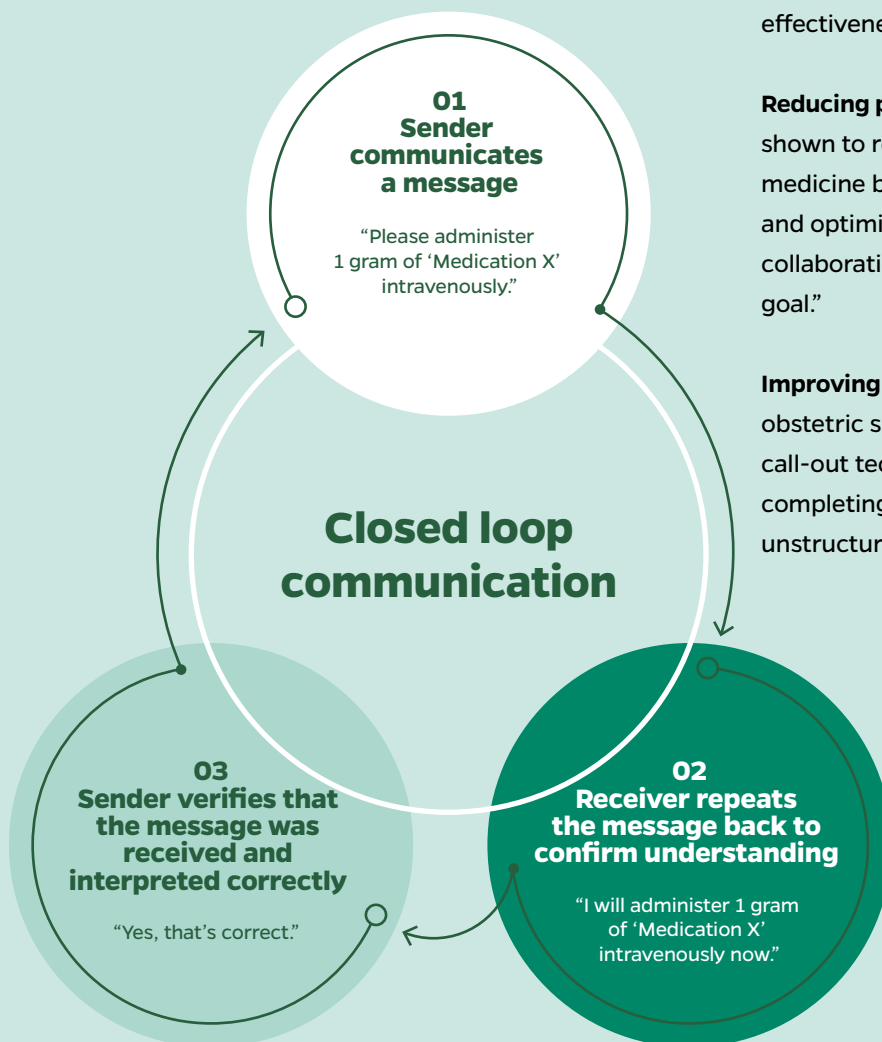
Ongoing leadership thus includes maintaining open communication, structuring regular debriefings, and encouraging constructive feedback. In high-stakes environments, structured tools like STICC can help facilitate closed-loop communication, preventing miscommunication and ensuring instructions are accurately interpreted and acted upon. Closed-loop communication is a structured three-step process designed to reduce errors and improve team coordination in high-stakes environments:

This brief exchange closes the loop, confirming that the message was heard accurately. In high-pressure situations where errors can easily occur, such as dosage mistakes or timing delays, this structured communication can prevent misunderstandings and ensure critical interventions are carried out safely.

Originally developed for military radio communication and widely adopted in aviation, this model has since been incorporated into medical simulation training, particularly in emergency medicine, obstetrics, and anaesthesia. Research into CLC's application in medical training simulation supports its effectiveness in the following ways:

Reducing preventable errors: CLC “has been shown to reduce the risk of preventable errors in medicine by maintaining clear communication and optimizing team dynamics through collaboration and orientation toward a common goal.”

Improving task completion: In emergency obstetric simulations, teams using CLC and call-out techniques were more successful in completing critical tasks, than teams using more unstructured communication styles.^{xxxi}



Being intentional about team composition

Effective clinical teams rely not only on technical expertise but also on the interpersonal dynamics that shape how people work together—especially under pressure. Giving meaningful attention to the composition of the team—including team members’ breadth of experience and expertise, the complementarity of skills and personalities, and the familiarity and shared history members have working with one another—are key leadership tools that drive more effective care.

Key team composition factors:

Clinical breadth: For example, including a pharmacist on ICU rounds has been shown to reduce prescribing errors by 66%—a clear demonstration of how interdisciplinary team structure directly improves safety. Research by Anna Mayo (2022) also highlights the value of including more peripheral team members, showing that expanding team boundaries to incorporate fewer central roles can significantly enhance care coordination and overall performance.^{xxxiii}

Personality: Conscientiousness, defined by dependability and attention to detail, is consistently associated with stronger team outcomes. Teams with higher average conscientiousness tend to execute reliably and support each other under strain.^{xxxiv} Proactivity works best when paired with conscientiousness: Recent research shows that team members who take initiative contribute more to performance when their proactivity is backed by strong conscientiousness.^{xxxv} Agreeableness, marked by trust and cooperation, supports information sharing and conflict resolution—critical to coordination and psychological safety in high-stakes clinical work.^{xxxvi}

Familiarity: Familiarity among team members has been consistently linked to better performance in clinical settings. A recent systematic review found that higher levels of team familiarity in the operating room were associated with reduced operative times, fewer errors, and improved patient outcomes.^{xxxvii}

Specific studies in cardiac surgery settings show that familiarity predicts lower failure-to-rescue rates and fewer major complications.^{xxxviii}

Similarly, a large-scale study across multiple surgical specialties found that shared experience among surgeons, anaesthesiologists, and nurses significantly improved intraoperative performance and postoperative outcomes.^{xxix}

However, a growing body of organizational research also cautions that overly familiar teams may fall into performance ruts, fail to innovate, or overlook emerging problems due to over-reliance on routine.^{xl} For health care leaders, the goal is to optimize familiarity without sacrificing vigilance or adaptability.

By intentionally shaping teams for clinical role diversity, personality balance, and moderate familiarity, leaders can create environments that are safe, resilient, and high-performing.

Navigating broader organizational cultures and structures

Beyond the traits and skills of individual team members, effective teamwork is also impacted by the organizational design in which a team sits, particularly in two key areas:

1. Culture as the foundation for safe, collaborative work

Organizational culture strongly influences how teams function. In psychologically safe environments, team members are more likely to speak up, share concerns, and collaborate effectively. In contrast, hierarchical or siloed cultures can inhibit communication and learning. As Rosen et al. (2018) argue, a psychologically safe and supportive climate enhances team processes—such as communication and coordination—that in turn drive better patient outcomes. For example, when staff feel safe and respected, they are more likely to engage meaningfully with team debriefs, hand-off protocols, and feedback processes—rather than treating these as compliance exercises.

2. Task structure as operational scaffolding

Well-designed task structure—such as clear roles, standardized hand-offs, and interdisciplinary rounds—reduces ambiguity and enables teams to function smoothly, particularly in high-pressure environments. For example:

- A National Institute for Health and Care Excellence (NICE)-backed review (2020) examined structured ICU handovers across

820 patients. It found such handovers were linked to lower mortality, shorter length of stay, and improved staff satisfaction.^{xli}

- A 2019 systematic review of nine ward-based studies reported that structured handovers significantly reduced complications, medication errors, and adverse events, by improving the completeness and clarity of information.^{xlii}

These two factors are closely linked. As noted by Rosen et al. (2018), “The structure of the task and the context in which teams function are critical to understanding and improving teamwork.”

- **Structural routines** reduce risk by eliminating guesswork during transitions like shift changes or critical unit-to-unit transfers.
- **Cultural reinforcement** makes these routines meaningful and reliable, rather than box-ticking exercises.

Together, they create a system where safe, coordinated care becomes second nature—not just good intentions.^{xliii}

Practice 2: Enabling Knowledge Sharing and Organizational Learning

In health care work environments, knowledge is constantly being generated—from emerging clinical evidence, to best practices gained through repeated care delivery. Yet despite this, valuable knowledge, insights, and practice ideas, often remain trapped in local silos. Studies show that, on average, patients receive only about 55% of recommended care, highlighting the critical need not just for better evidence, but for better knowledge sharing and organizational learning.^{xliv}

Effective leaders play a vital role in shaping the conditions under which learning occurs and knowledge is shared. Organizational learning requires more than passive information transfer, it depends on teams being willing and able to speak up, reflect, and adapt together over time. Too often though, entrenched hierarchies, professional boundaries, and fear of blame can suppress the kinds of dialogue that supports learning.

As Rosen et al. (2018) note, “hierarchy [...] can inhibit the assertive communication necessary for effective recovery from error.” When team members feel unsafe to share concerns or suggestions, the system loses access to crucial frontline knowledge—knowledge that could prevent harm or improve care delivery.^{xlv}

Psychological safety as a foundation for learning

To address this, leaders must cultivate psychological safety—defined as a shared belief that it is safe to take risks in interpersonal exchanges, such as asking questions, admitting mistakes, or challenging decisions.^{xlvi}

Psychological safety has been described as a critical factor for enabling voice, teamwork, and organizational learning, particularly in fast-changing environments.^{xlvii}

Nembhard and Edmondson (2006) found that in status-conscious clinical environments, team members—particularly nurses—often withheld observations or suggestions due to fear of reprisal from higher-status colleagues.^{xlviii} This silence can undermine safety and stymie improvement efforts. Conversely, when leaders display inclusive behaviors—such as actively inviting input, showing appreciation for contributions, and acknowledging uncertainty—psychological safety increases,

enabling greater participation in the exchanges that are so key to learning and knowledge sharing.

While psychological safety supports openness, it is often misunderstood. It is not a climate of comfort or low accountability. As Edmondson and Kerrissey (2025) explain, “*We find it helpful to think of psychological safety as a shared sense of permission for candor.*”^{xlix} The aim is not to suppress disagreement but to enable open, respectful exchange—especially when addressing difficult truths.

Leaders can model this by welcoming disagreement during debriefs and handovers, responding constructively to error reports, and reinforcing that speaking up—even when ultimately ‘proved wrong’—is a valued part of the team learning process.

Leadership practices that enable knowledge sharing

Several practical strategies can help embed knowledge-sharing behaviors in everyday clinical routines:

Debriefs and after-action reviews (AARs): When conducted regularly and framed as learning opportunities, AARs help teams reflect on what went well, what could improve, and what should change. A meta-analysis (including medical and non-medical samples) by Tannenbaum and Cerasoli (2013) found that debriefs are significantly more effective when they occur in psychologically safe climates and emphasize improvement rather than evaluation.¹

‘Stop the Line’: As part of its transformation into a learning health care organization, Virginia Mason Medical Center adopted principles from the Toyota Production System—most notably, the practice of halting workflow when safety concerns arise. The resulting Patient Safety Alert (PSA) system empowered any staff member, regardless of role, to “stop the line” by reporting a concern that would trigger immediate investigation and leadership involvement.

Reflecting on an early visit to Toyota, Cathie Furman, a senior leader at Virginia Mason, recalled: *“When she saw a worker stop the line she thought [...] in the health care environment that would mean that someone’s going to yell and scream at you [...] How could an assembly line worker stop a multimillion-dollar line? And all these people came [...] They felt that it was more important for that worker to get the resources [...] That was huge in our eyes.”*ⁱⁱ

By embedding this approach Virginia Mason redefined how frontline knowledge was treated across the organization. Rather than penalizing those who raised concerns, the system signalled that sharing critical information—even when uncomfortable, was of critical importance.

Building blocks of organizational learning

Garvin, Edmondson, and Gino (2008) identify three essential components of a learning organization which can be useful in bringing these ideas together under a strategic framework.^{lvi}

1. A supportive learning environment

Characterized by psychological safety, openness to new ideas, appreciation of diverse perspectives, and time for reflection. These conditions allow staff to speak up, question assumptions, and share observations without fear of blame or marginalization.

2. Concrete learning processes and practices

Including systems for gathering information and sharing insights across teams. These activities ensure that knowledge is not only generated but acted upon and transferred to where it is needed most.

3. Leadership that reinforces learning

Through behaviors such as asking intentional questions, active listening, encouraging dissenting views, and allocating time and attention to improvement efforts. Leaders who model curiosity and openness signal that learning is both expected and supported.

Together, these elements form a practical framework for health care leaders seeking to foster knowledge sharing and organizational learning—especially in complex, high-stakes environments where continuous adaptation is essential. This vision is closely aligned with the concept of Learning Health Systems (LHS), in which data, clinical experience, and research are continuously integrated to inform and improve practice. As defined by AHRQ, a Learning Health System is one where “science, informatics, incentives, and culture are aligned for continuous improvement and innovation.”^{lviii} Leaders play a central role in enabling these systems, by promoting a culture that values learning, supporting the infrastructure for data use and feedback, and ensuring that frontline insights inform broader system change.

Practice 3: Driving Change and Leading Adaptive Improvement

The ability to adapt, change and improve is critical to contemporary health care services. Health care is in a state of constant evolution, requiring leaders who can both respond to ongoing changes and drive intentional transformation. There is evidence from across industries that strategic change efforts often fail—some estimates suggest failure rates between 50% and 70%—not because of flawed ideas, but because leaders underestimate how people experience and respond to change.^{liv}

Managing and paying attention to the nuanced and varied reactions to change is what makes culture change so challenging. As Mayo, Myers, and Sutcliffe (2021) observe, *“Leading change requires more than implementing new processes or structures—it involves influencing how individuals interpret, emotionally respond to, and engage with change.”*^{lv} To help meet this challenge this section seeks to equip health care leaders with a range of strategies drawn from the fields of business, organizational development, and management, and show how they can be adapted to the unique contexts and demands of health care.

Key strategies for leading culture change

1. Engage through patient-centered purpose

Leaders can connect change initiatives to a compelling sense of purpose. Explaining why a change is needed helps staff align with its goals. In qualitative interviews with health care professionals, staff emphasized that understanding the need for change—and especially seeing clear benefits for patients—made them more willing to engage. They *“particularly valued and perceived as successful organizational changes with a patient focus, with clear benefits to patients.”*^{lvi}

2. Step up, then step back

Johnson (2020) describes the importance of leaders in large organizations first stepping up to clarify expectations, remove obstacles, and model commitment to change. This includes setting non-negotiables (in health care this might include patient safety standards, for example) and providing resources, training, and time to experiment. Once these structures are in

place, leaders should step back to let teams adapt processes and own improvements.^{lvii}

In one NHS mental health trust, senior leaders launched a trauma-informed care program with a clear vision and starter resources, then stepped back to let each ward tailor the model to their population. As part of this approach, “local trauma champions in each team facilitated supervision, management and implementation of the guidance,” supporting flexibility within a shared framework and fostering a sense of local ownership—a crucial element for sustaining culture change.^{lviii}

3. Build structural reinforcements

Culture change cannot rely on top-down messaging alone, it requires hard-wiring new expectations into daily routines. A well-documented example is the WHO Safe Surgery Checklist, developed by the World Health Organization’s Safe Surgery Saves Lives Programme and implemented with the backing of senior clinical and managerial leaders across diverse hospitals worldwide.

The checklist standardized a series of critical checks—including patient identity, antibiotic administration, and equipment availability—at multiple points during surgery. These structured checks create predictable moments where the surgical team comes together, reinforcing habits of communication, teamwork, and shared responsibility. By embedding these checks into routine practice, leaders supported a broader culture of safety and collaboration, making these values an everyday expectation rather than an occasional priority.^{lix}

4. Empower decision-making on the frontline

Weick and Sutcliffe (2015) emphasize deference to expertise—pushing decisions to those with the deepest situational knowledge, rather than simply the highest authority.^{lx} In culture change, this principle supports faster problem-solving, ownership, and alignment with values.

For example, in hospitals implementing nurse-led sepsis protocols, bedside nurses are empowered to identify signs of sepsis and initiate critical early interventions without waiting for physician pre-approval. These protocols enable nurses to act decisively, respecting their clinical expertise and building confidence in their role as first responders.

Embedding this kind of trust supports a culture in which frontline staff are expected—and supported—to act swiftly in patients' best interests.^{lxi}

5. Role-modelling and consistency

Ultimately, leaders must embody the culture they aim to create. Research measuring local leadership behavior across 31 hospitals found that leaders who consistently set expectations, were predictably available, and provided useful performance feedback, were strongly associated with lower burnout, stronger safety culture, and reduced staff turnover intentions.^{lxii} Leaders who model clear, supportive, and engaged behaviors on a day-to-day basis reinforce cultural norms far more effectively than policies alone.

By applying these strategies leaders can drive meaningful culture change and support adaptive improvement across their organizations.

Applying Kotter's 8-Step Change Model in Health Care

Kotter's eight steps are one of the most widely used frameworks for change management, across many different industries. Here, they are re-framed to help health care leaders apply these principles within the unique challenges and contexts of health care.

Establish a sense of urgency

Link urgency to patient safety, outcomes, or staff well-being.

Example: Sharing real cases of medication errors to highlight the need for safer handovers.

Communicate the vision

Use multiple channels and plain language to reinforce the message.

Example: Sharing change goals and objectives in huddles, meetings, and briefings.

Build a guiding coalition

Form a respected, interdisciplinary team to champion change.

Example: Senior nurses, physicians, and non-clinical managers, co-leading a safety initiative.

Remove obstacles

Identify and break down bureaucratic or training barriers.

Example: Allowing nurses to trial new triage methods without multiple layers of approval.

Form a strategic vision and initiatives

Make the vision simple, compelling, and connected to health care values.

Example: Framing a digital health record rollout as “more time for patients, less time on paperwork.”

Generate short-term wins

Celebrate visible early successes to build momentum.

Example: Sharing a story in the staff newsletter and recognizing team members publicly, after e.g. achieving measurable improvements in patient safety.

Sustain acceleration

Keep going by scaling up and reinforcing lessons learned.

Example: Expanding successful interventions to other units with local adaptations.

Anchor new approaches in culture

Integrate new practices into policies, role expectations, and training.

Example: Including teamwork behaviors in annual competency reviews.

Section 4: Building the future of health care leadership

With health care organizations across the world under considerable pressure from ageing populations, ever-increasing public expectations, and labor shortages, commentators have suggested that AI and related new technologies will provide solutions. These technologies clearly bring enormous potential, but they also bring their own challenges and risks. Couple this with the fact health care systems have not typically been fast adopters of digital technologies over the past 10 – 20 years, and it would be a mistake to view artificial intelligence as a panacea for improving organizational performance in health care. Critically, human leadership capabilities will need to be developed alongside technological advances—aligning leadership best practice and culture to ready the organization to exploit the opportunities presented by these technologies.

A better future outlook for the health care sector involves embracing the best new technologies, but over and above that, prioritizing the development of health care leaders equipped to thrive in today's challenging work environments, by incorporating leadership practices and styles that have proved successful outside the sector. Unfortunately, there is evidence indicating that the COVID-19 pandemic impeded the advancement of leadership in health care, leading to a resurgence of traditional hierarchical models. We are of the firm view that this should now be resisted and reversed.^{lxiii lxiv}

Tech-fluent leadership enables innovation and transformation

Today's health care environments are complex. Leaders must coordinate a wide range of expertise, work around shift changes, and accommodate mobile workforces. For this reason, care teams tend to be far less stable than they once were. Typically, individual clinicians will have roles on multiple evolving teams, often with no shared history of working together to fall back on. Unsurprisingly, instability and lack of continuity like this can undermine collaboration and ultimately prove detrimental to patient outcomes.

To counter suboptimal team situations like these, and the lack of coordination and communication that stems from them, health care systems have introduced various forms of technological support targeted to fill gaps—from messaging applications to electronic medical record systems. Applied well, these expensive technological solutions, can facilitate better communication. Yet, as Mayo et al. (2023) asserts, *"They often don't address the fundamental human challenges involved in fostering effective teamwork, such as managing attention and relationships."* Notation systems, messaging apps, and the occasional phone call are no substitute for in-person communication where problems, snags and fixes, can be worked through in real-time, end-to-end.



Reliance on technology can also erode opportunities for learning from others—a critical factor for improving future performance in any team. There is evidence over-reliance on technology can also tempt in-house care teams to turn inward when conducting their work, excluding outside experts who could play a critical role: out of sight becomes out of mind.^{lxv}

“Implementing effective solutions for modern health care teams requires a deep understanding of human behavior, not just more advanced technologies,” Mayo et al. (2023).^{lxvi}

This does not mean, even if it were possible, returning to the old traditional face-to-face ways is necessary or even desirable. More effective technology-based interventions, likely supported by AI, can be developed which take account of human behavior and the human-centered constraints on teamwork in health care environments—promoting opportunities for better team coordination and team learning. For instance, social media—when used well—can be an effective tool for disseminating new learning between far flung clinicians who otherwise might not have the chance to interact with, and learn from, a network of expert peers.

Neither AI-enhanced technologies nor social media will ever completely replace face-to-face interactions as a way to communicate and learn. However, in today’s fast-changing, globally connected health care settings, these scalable tools can certainly augment in-person learning and collaboration. Considering the use of social media by surgeons, Myers et al. (2017) comment that, *“Leaders of hospitals, health systems, surgical societies, and other professional organizations should embrace its potential and work to combat its current limitations.”* While these technologies can help further clinical

education and deliver higher-quality care for patients, their adoption increases, not decreases, the need for adaptive leadership approaches and attention to how communication and coordination are achieved.^{lxvii}

Human-centered applications of AI in team-based care^{lxviii}

Example #1: Real-time AI prompts to support inclusive decision-making

AI systems capable of processing conversations in real time may enhance team decision-making by helping manage information flow—for example, by prompting contributions from relevant individuals, such as nurses, specialists, or patients, who have not yet participated in the discussion.

Example #2: AI insights to optimize team composition and collaboration

AI tools which monitor patterns in successful clinician interactions can provide valuable information on the ideal team composition and teamwork practices that facilitate effective collaboration and the best patient outcomes.

As is the case when adopting artificial intelligence in any industry, organizations are discovering the need to couple mindsets and attitudes of experimentation, with checks and balances in terms of building critical thinking capacity, ethical decision making, and data security.

Developing future-ready leaders: a strategic imperative for health care

Stressing that successful AI integration in health care systems requires leadership across technological, strategic, operational and organizational domains, Sriharan et al. (2024) recommend that *“Organizations should implement a comprehensive leadership development strategy, including targeted training and cross-functional collaboration, to equip leaders with the skills needed for AI integration.”* While AI specialists may be required to bring technical expertise, health care leaders will need a clear understanding of the potential of AI. They will also need to deploy adaptive strategies, and strong interpersonal skills to navigate the complexities of implementation, and communicate and influence effectively when resistance to change is met.^{lxix}

A 2024 scoping review published in BMC Medical Education identified 39 key resources exploring future trends in roles and competencies in health care leadership. The review found that competencies such as innovation and adaptability, communication and collaboration, self-development and self-awareness, and consumer engagement and advocacy are crucial for future health care leaders, emphasizing the need for leadership development programs to equip leaders with these competencies—while noting some insight into the potential of AI to also be desirable.^{lxx}

This may require reaching out and incorporating

insights from outside disciplines—exploring distributed, transformational, transactional, servant leadership, and other approaches to leadership to identify helpful behaviors or strategies. Whether or not these templates are followed strictly, health care leaders should prioritize adaptability, continuous learning, employee well-being, interdisciplinary collaborations, and transparent communication.^{lxxi}

Conclusion: Closing the gap: leadership as a clinical and strategic priority

Introducing this Field Guide to Leading in Health Care, we stressed there was no single, simple template for success, and that no two health care settings are the same. While this remains true, evidence from practice and from academic research points to a series of strategies and new approaches that health care professionals can adopt to greatly improve leadership practice, organizational effectiveness, and patient care and safety.

A first step involves a change of mindset. Leadership is too often overlooked or dismissed by clinicians as not being an important part of the clinical mission. In an increasingly complex and changing environment, this misperception clearly needs to be addressed, so that the business side and clinical side work together in combination without oppositional behavior or friction.

Another essential step toward closing the business/clinical leadership gap must be a focus on high quality leadership development, with a view to bringing advanced management thinking to bear in health care. While there is much to learn from the corporate and academic worlds, we note that an invaluable body of research on leadership and organizational behavior in the specific context of health care is

now emerging, which can more precisely direct leadership actions—taking account of the unique demands facing health care leaders.

For instance, the importance of building and motivating teams and encouraging collective responsibility seems quite clear in health care, with mounting evidence of these structures and approaches working in practice. This points to the need for health care to move away from traditional hierarchies and top-down management, while acknowledging that hierarchy still has an important place in high-reliability organizations and emergency situations.

Similarly, the rise to prominence of patient-centered health care leadership has been an important evolution for the sector globally. Such leadership, with its emphasis on being open and communicative, is also well positioned to champion and explain ethical standpoints. Ethical decision making is a key and sometimes controversial feature of health care leadership—where patient-centered priorities must be balanced against allocation of resources on the unit or in the wider health system.

Finally, a theme of the moment is artificial intelligence. We have mentioned how AI can support clinical decision making and risk assessment. It also has a role to play in supporting better leadership practice. **AI is not a leadership strategy; it is a tool to achieve a strategy**—freeing up and enabling health care professionals to do more of what they are already great at in terms of patient-centered care. Technology can be embraced in ways that help leaders achieve their aims—be it culture change, team learning, collective knowledge sharing, etc. Integration of AI into systems and practices will increase not decrease leadership responsibility, calling for innovative and adaptive leadership approaches.^{lxiv lxxv}

There is significant evidence that good leadership makes a significant impact in health care—driving high quality patient care, reliable performance and saving and improving the lives of millions across the world. The need is to embrace leadership as a competence that can and should be developed. There are many institutional and professional barriers to achieving the improvements detailed in this Field Guide, but with determination and the right mindset, and a commitment to learning and development, the intelligent and motivated workforces characteristic of the health care sector can get there.^{lxvi}

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