NAVIGATING FAILURE: HOW LEADERS DEFINE, DETECT, AND MANAGE FAILURE IN HEALTHCARE QUALITY IMPROVEMENT

NAVIGATING FAILURE: HOW LEADERS DEFINE, DETECT, AND MANAGE FAILURE IN HEALTHCARE QUALITY IMPROVEMENT

NICOLE A. RAKOWSKI, BHSc., MSc.

A dissertation thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy, Business Administration, DeGroote School of Business.

McMaster University, DOCTOR OF PHILOSOPHY (2025), Hamilton, Ontario (Business Administration)

TITLE:	Navigating failure: how leaders define, detect, and manage failure in healthcare quality improvement
AUTHOR:	Nicole A. Rakowski, BHSc., MSc. (McMaster University)
SUPERVISOR:	Professor Jenna M. Evans, Ph.D.
NUMBER OF PAGES:	xiii, 166

Lay Abstract

Quality Improvement (QI) initiatives in healthcare aim to make care safer, more effective, and more patient centered. However, many QI initiatives do not achieve their goals, which can lead to wasted resources and potential harm to patients or staff. This dissertation explored how healthcare leaders understand and respond to QI failures. Through interviews with healthcare leaders in an Ontario hospital system, a framework was developed to help scholars and practitioners understand why QI initiatives fail, how leaders detect and manage QI failure, the individual traits and contextual features that play a role, and the effects of QI failure. The research highlighted the emotional toll QI failure can have on individuals and teams. Based on these findings, the dissertation offers future research directions as well as practical advice, such as sharing failures openly, supporting leaders with tools and mentorship, and building a workplace culture that sees failure as a chance to learn rather than blame.

Abstract

Background:

Although Quality Improvement (QI) initiatives are widely implemented in healthcare, evidence suggests that failure is common. However, the concept of 'QI failure' remains underdefined in the literature, with few studies offering explicit definitions or frameworks to understand it. While existing research emphasizes the role of leadership in QI, it seldom explores how leaders recognize and respond to failure. Without a clear understanding of how healthcare leaders navigate QI failure, it is challenging to develop conceptual insights or offer practical, systematic approaches for identifying, managing, and preventing failure in QI efforts.

Study Aim:

The aim of this dissertation was to investigate how healthcare leaders conceptualize, detect, and respond to QI failure.

Methods:

A qualitative descriptive study, grounded in a constructivist paradigm, was conducted at a hospital system in Ontario, Canada. Thirty-three formal leaders representing various hierarchical levels participated in semi-structured interviews. Participants were purposively selected based on their involvement in completed QI initiatives that were either abandoned or substantially redesigned. Data were analyzed inductively using NVivo software to identify thematic patterns and conceptual categories in leaders' accounts of QI failure.

Results:

A conceptual framework was developed of the QI failure process as experienced by healthcare leaders. The framework includes key antecedents to QI failure, strategies for detecting and managing QI failure, the outcomes of QI failure, and the individual and organizational factors that seemed to influence leaders' experiences of QI failure. The results revealed that QI failures

had a strong emotional toll on those involved, especially in the absence of psychological safety and structural institutional supports.

Conclusion:

This study reframes QI failure as a relational and institutional phenomenon, not just a technical or procedural one. Key contributions include an explicit definition and novel conceptual framework of QI failure in healthcare to guide future practice and research. In practice, healthcare organizations should implement a centralized digital repository for reporting, tracking and sharing QI failures to support transparency, accountability and collective learning. Additional recommendations include enhancing access to expert guidance and cultivating a psychologically safe, no-blame environment in which QI failure is openly discussed and used as a driver for improvement. Future research should investigate the identified leadership strategies and influencing factors across diverse settings and over time to better understand their underlying mechanisms.

Acknowledgments

Reaching this milestone in my academic journey has been a transformative experience, one that I could not have achieved without the support of many remarkable individuals.

First and foremost, I extend my deepest gratitude to Dr. Jenna Evans, my supervisor, whose guidance, wisdom, and unwavering support have been instrumental in shaping this dissertation. Your insights and dedication have inspired me to strive for excellence and have significantly enriched my academic journey. Because of Jenna's unwavering support and encouragement, I was able to regain motivation during times of discouragement and strive to new heights I never thought were possible. I also want to express my heartfelt thanks to my previous supervisor, Dr. Glen Randall, for his early encouragement and belief in my potential. I learned a tremendous amount from his foundational teaching and introduction to the program. To my supervising committee, Dr. Meena Andiappan and Dr. Sheila Boamah, thank you for your invaluable guidance and feedback. Your expertise have been crucial in refining this work.

I am profoundly grateful to the study participants who generously shared their experiences and insights. Your willingness to be open and vulnerable has provided invaluable contributions to this research.

To my parents, your lifelong support and the opportunities you provided have been the bedrock of my academic pursuits. Watching you work insanely hard throughout my childhood instilled in me the values of perseverance and dedication, which have opened countless doors for me. Your encouragement and belief in the value of education have driven me to reach for my goals. I am forever grateful for your unwavering love and support. The sacrifices you both made for me and the values you instilled in me have shaped my character and fueled my determination to succeed. I am forever grateful for your unwavering love and support.

A very special thank you to my husband, Chris, whose unwavering support and love have been my anchor throughout this journey. You have been my life-line, offering strength and encouragement during the most challenging times. You are my best friend, my soulmate, and my rock, always standing by my side. Your belief in me has been a constant source of motivation, and your sacrifices have made this achievement possible. I am forever grateful for your patience and understanding. I am especially thankful for the times you came to the gym with me and pushed me hard while I was competing as a competitive bodybuilder; those were the perfect breaks to recharge and clear my mind.

I also wish to acknowledge my colleagues, especially Gracia Mabaya, for their camaraderie and support. Your collaboration and friendship have made this journey all the more rewarding. And Matthew Meiler, one of my life-long friends, who helped me format my tables and kept me sane throughout this journey.

Finally, to everyone who has been a part of this journey, your contributions, whether big or small, have been deeply appreciated. Thank you for being a part of this incredible experience.

AI Use Disclosure

In accordance with McMaster University's Provisional Guidelines on the Use of Generative AI in Research, I disclose that ChatGPT (a generative AI tool by OpenAI) was used during the preparation of this dissertation. The tool was employed to support brainstorming, generating ideas, and deepening understanding of specific concepts and theories relevant to the study. No generative AI was used for data analysis, interview coding, or interpretation of findings. All AI-generated content was critically reviewed, revised, and integrated by the researcher, with full human oversight and editing prior to inclusion. This use aligns with McMaster's commitment to transparency, academic integrity, and responsible integration of emerging technologies in scholarly research.

Table of Contents

List of Tables, Figures and Appendices

Chapter 4 – Results

Appendices

List of Abbreviations

CFIR	Consolidated Framework for Implementation Research
IHI	Institute for Health Improvement
MUSIQ	Model for Understanding Success in Quality
PDSA	Plan-Do-Study-Act
QI	Quality Improvement
RCTs	Randomized Control Trials
REB	Research Ethics Board

Declaration of Academic Achievement

This dissertation is comprised of six chapters: an introduction, literature review, methods, results, discussion and conclusion. I, Nicole A. Rakowski, am the lead researcher and author of all six chapters. I was responsible for the conception, design, research, and writing of all studies, with exceptional support from my Ph.D. supervisor, Dr. Jenna Evans. I was also supported by Dr. Meena Andiappan and Dr. Sheila Boamah, who as members of my Ph.D. supervisory committee, provided advice throughout the research process.

Chapter 1: Introduction

Quality Improvement (QI) has long been touted as a means to improve patient outcomes and experiences in health care systems (Backhouse & Ogunlayi, 2020; Hill et al., 2020). QI in healthcare refers to "systematic, data-guided activities designed to bring about immediate improvements in health care delivery" (Lynn et al., 2007, p. 1). QI initiatives typically involve identifying areas for improvement, implementing evidence-based changes on a small scale, monitoring and interpreting their effects on healthcare quality and safety, and deciding about additional changes and wider implementation (Lynn et al., 2007). Numerous QI methodologies exist and are widely applied in healthcare, including Lean Production, Six Sigma, Total Quality Management, the Model for Improvement, and Failure Modes and Effects Analysis (Driver, 2022; Hughes, 2008). Several bibliometric analyses suggest exponential growth in scholarly papers on QI in healthcare over the last two decades (Ali et al., 2021; Valencia-Arias et al., 2018; Walshe et al., 2009).

State of the Evidence on QI

Despite substantial time and resources invested in QI in healthcare settings, reports indicate that the evidence base for QI is mixed. QI efforts often fall short of their objectives, resulting in wasted time and resources and potential harm to patients (Backhouse & Ogunlayi, 2020; Berenholtz & Pronovost, 2014; Chassin, 2013; De La Perrelle et al., 2020; Dixon-Woods, 2019; Dixon-Woods & Martin, 2016; Fulop and Robert, 2015; Langley et al., 2009; Macht & McAneny, 2017; Shojania & Grimshaw, 2009; Walshe, 2009). For example, a systematic review of 28 randomized controlled trials (RCTs) of QI revealed that less than half of RCTs showed any effect (Hill et al., 2020). In a few cases, QI has caused harm, such as when a QI intervention that

incorporated multiple evidence-based QI strategies into a single treatment bundle was associated with an increase rather than decrease in surgical site infections (Anthony et al., 2011). The overall rate of infection was 36%, representing a 2.5-fold increase compared to standard practice (Anthony et al., 2011). The authors speculated that the diligence required to implement the bundle may have diverted attention away from the technical aspects of the procedure itself (Anthony et al., 2011). This outcome calls into question the commonly held assumption that bundling interventions has a positive synergistic effect on quality. The outcome also highlights the complexity, unpredictability, and high stakes of QI in healthcare.

Defining QI failure

The evidence on QI in healthcare suggests that failure is common. However, 'QI failure' is not explicitly defined in the literature on QI. Many QI papers refer to 'failure', but do not define or explain what constitutes a QI failure (Boguslavsky e al., 2019; Vaz & Araujo 2022). Other papers, such as a multiple case study of successful and failed QI initiatives in long-term care, provide an implied definition for failure (Etheridge et al., 2014). In this multiple case study, the authors' descriptions of the cases implied that failure is a lack of integration of the new practice into routine care and/or the lack of long-term sustainability of the practice (Etheridge et al., 2014).

Organization scholars tend to define 'failure' more explicitly. For example, in the literature on organizational learning, Edmondson (2004) defines failure as a deviation from expected and desired outcomes that includes both avoidable mistakes due to human error and unavoidable negative outcomes resulting from uncertainty or experimenting (Cannon & Edmondson, 2001; 2005). Similarly, in the literature on organizational change, Schwarz et al.

(2021) define failure as “an organization’s deviation from goals and outcomes that are expected and desired from organizational change” (pg. 162). Even though organization scholars define failure, they still acknowledge the lack of consensus on what failure means in the context of organizational change (Mellahi & Wilkinson, 2004; Schwarz et al., 2021).

The implementation science literature also defines failure more explicitly than the QI literature. In implementation science, “intervention failure” occurs when an intervention did not produce the intended outcomes even when delivered as designed, while “implementation failure” occurs when an intervention was not delivered as intended (Proctor et al., 2011).

Research on QI and related topics such as organizational change and implementation, span different disciplines, have distinct theoretical foundations, and could involve diverse methods or strategies. While studies across these fields often employ interchangeable terms such as ‘failures,’ ‘mistakes,’ ‘errors,’ ‘obstacles,’ and ‘struggles’ (Simpson et al., 2020),, these terms often carry distinct connotations and discipline-specific meanings. Therefore, what constitutes failure in QI, specifically, requires further examination, especially since QI literature does not cite conceptualizations of failure in organizational change and implementation science literatures. Without a clear and shared conceptualization of failure in QI, efforts by practitioners to systematically identify, address, and prevent failure in their organizations may be ad hoc, slow, and uncooperative. Similarly, for researchers a lack of clear and shared conceptualization of failure in QI impedes the execution of research on this topic and the accumulation of relevant evidence.

For the purposes of this thesis, we define ‘QI failure’ as occurring when a QI initiative does not achieve or sustain its desired outcomes or causes unintended harm resulting in the QI initiative being abandoned or substantially redesigned. Importantly, this thesis does not focus on

quality or safety failure itself, but rather on QI failure. In other words, the concern lies not with direct failures in care delivery, but with the failure of structured efforts to enhance safety or quality.

What We Know About Organizational Change and Implementation Failure

As noted above, two bodies of literature are relevant to our interest in QI and QI failure: organizational change and implementation science. As Table 1 shows, organizational change, intervention implementation, and QI all involve intentional, structured change processes. However, organizational change is broader and may affect the whole organization, while QI and intervention implementation focus on specific processes, services, programs, practices or policies. These three bodies of literature also have distinct theoretical foundations and methods (Table 1). As such, while studies on organizational change failure, intervention failure, and implementation failure offer valuable insights, they may fall short of fully capturing the unique dynamics and contextual factors that characterize QI failure. This highlights the need for research that explicitly focuses on QI failure.

Organizational Change Failure

While failure in healthcare QI remains understudied, the concept of failure in broader organizational change has received theoretical and empirical attention. Organizational change scholars argue that failure is not a single event; rather, failure is a process that unfolds, is reacted to, and stimulates development (De Vries et al., 2021; Schwarz et al., 2021). In essence, failure is not just something disruptive and dysfunctional to avoid and correct; it can also be functional and adaptive (Amburgey et al., 1993; Schwarz et al., 2021). This view of failure aligns with a positive psychology view of failing (Seligman, 2011).

Schwarz et al. (2021) identifies three primary perspectives on studying organizational and organizational change failure: deterministic, voluntaristic, and entrepreneurial. The deterministic perspective focuses on external conditions and environmental factors, viewing failure as an inevitable outcome due to external pressures. Hannan and Freeman (1977) argue that organizations are subject to external pressures that can lead to inevitable failure, particularly when environmental conditions are unfavorable. Stinchcombe (1965) supports this view by highlighting the increased failure rates for young organizations due to these external pressures. This perspective views failure as a terminal endpoint resulting from factors beyond the organization's control, such as industry-specific and environmental conditions (Carroll, 1983; Dunne et al., 1989; Freeman et al., 1983).

The voluntaristic perspective emphasizes internal decisions and management actions, suggesting that failure can be managed or avoided through proper actions (Schwarz et., 2021). Mellahi and Wilkinson (2004) critique the deterministic view and emphasize that failure can be managed or avoided through proper internal actions and governance decisions. Sitkin (1992) introduces the concept of learning from small, intelligent failures, suggesting that organizations can adapt and improve by embracing and managing failure. This perspective views failure as something that can be mitigated through strategic choices and internal adaptations (Heine and Rindfleisch, 2013; Staw et al., 1981). For example, a growing body of work examines the role of organizational culture in change failure, highlighting the need to align change efforts with the organization’s dominant values (Burns & Jackson, 2011; Van Maanen, 1991).

Lastly, the entrepreneurial perspective centers on individual experiences and sensemaking, viewing failure as a process that can be learned from and reframed (Schwarz et al., 2021). For example, Ucbasaran et al. (2013) explore the emotional, social, and financial

consequences of failure for individuals, emphasizing the importance of sensemaking and learning from failure. Similarly, Shepherd (2003) discusses how entrepreneurs cope with failure and the process of grief recovery, highlighting the potential for failure to become a strategic asset through learning and adaptation.

Schwarz et al. (2021) propose a framework that combines both external and internal factors to provide a more comprehensive understanding of organizational change failure. They, and other scholars, argue that the literature should move away from continuing to examine the reasons for failure and how to prevent it (e.g., Jones et al., 2021) and focus more on what happens when failure occurs, differences in how individuals and organizations perceive and respond to failure, and implications for the future of these individuals and organizations (Hays et al., 2021; Schwarz et al., 2021).

A large body of work examines change recipient reactions to organizational change, including two literature reviews that each include over 75 papers (Khaw et al., 2023; Oreg et al., 2011). They categorize change recipient reactions into affective, cognitive, and behavioral components. Affective reactions refer to stress, emotions, and satisfaction. Cognitive reactions refer to how recipients assess the value of change for themselves and the organization. Behavioral reactions refer to intentions and actions recipients have in response to the change. These reviews also examine the antecedents and outcomes of these various reactions to organizational change and highlight leadership as a major influencing factor. However, these reviews do not address reactions to change *failure*, specifically. Reactions to change failure may differ markedly from those to change efforts in general.

Focusing specifically on organizational change failure, De Keyser et al. (2021) identify three processes of failure: (1) *a retentive process*, in which a change approach is stringently

adhered to even though alternatives have emerged causing tensions to build among organization's members; (2) *a reactive process*, in which tensions are externally affirmed and flare up leading to a new change approach that is the opposite of the initial approach; and (3) *a recursive process*, in which the organization's members jointly recollect the positive aspects of prior failure, which reduces tensions. These processes align with other recent conceptualizations of failure as a process and as paving the way for both failure and potential success (De Keyser et al., 2021; Schwarz et al., 2021).

Based on the state of evidence in the organizational change literature, the proposed study of QI failure acknowledges the relevance of all three perspectives on change failure – deterministic, voluntaristic, and entrepreneurial – but the research focus aligns most with the voluntaristic and entrepreneurial perspectives, which emphasize managerial sensemaking and responses to failure. The proposed study also not only focuses on how failure is responded to, but also how failure is defined and detected, which is typically not the focus of research on change recipient reactions to failure. In addition, many organizational change studies do not focus on leadership, though leadership is often emphasized as a major influencing factor (De Keyser et al., 2021; Schwarz et al., 2021). Finally, some scholars have called for "contextual specificity" in future research on failure in organizations (Schwarz et al., 2021). Hence, a study of leaders and their experience with failure in the context of healthcare QI is needed.

Implementation Failure

The field of implementation science focuses on understanding the factors that influence the uptake and integration of evidence-based practices into routine healthcare settings, aiming to bridge the gap between research and practice (Nilsen, 2015). The implementation science

literature clearly defines “intervention failure” and “implementation failure”, as shown in Table 1.

Implementation science frameworks can be organized into three types, those that focus on determinants, the process, and evaluation (Nilsen 2015). Frameworks that focus on determinants identify enablers and barriers; examples include the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2009) and Theoretical Domains Framework (Cane et al., 2012). The focus of most implementation science studies and reviews is on determinants, that is, the identification and analysis of implementation success factors and enablers and barriers (e.g., Gibson et al., 2015; Flottorp et al., 2013).

Frameworks that focus on process outline the steps involved in implementation, such as the Exploration, Preparation, Implementation, Sustainment (EPIS) model (Aarons et al., 2011) and Normalization Process Theory (NPT) (May & Finch, 2009). These frameworks provide structured approaches to understanding the social and organizational work required to make new practices routine (May & Finch, 2009; May et al., 2018). For example, NPT identifies four core constructs that describe the types of work individuals and teams must undertake for successful implementation: coherence (building shared understanding of the intervention), cognitive participation (engaging stakeholders to drive implementation forward), collective action (coordinating and executing the operational work), and reflexive monitoring (evaluating and adapting the practice post-implementation) (May et al., 2018). These constructs highlight that implementation is not a one-time event, but an ongoing, adaptive process embedded in everyday work (May et al., 2018).

Finally, frameworks that focus on evaluation define and measure implementation outcomes. For example, Proctor’s Implementation Outcomes Framework identifies outcomes

such as acceptability, adoption, appropriateness, cost, and sustainability (Proctor et al., 2011).

These implementation science frameworks implicitly help define and determine when success or failure occurs and why. Many of the identified determinants align with those identified by the organizational change and QI literatures. For example, leadership engagement and psychological safety are consistently highlighted across both implementation and QI/organizational change literatures as essential conditions for improvement efforts (Damschroder et al., 2009; Edmondson, 1999; Ginsburg et al., 2018). Similarly, both fields emphasize the importance of stakeholder engagement and staff buy-in, recognizing that the absence of participation from frontline actors often undermines sustainability (May et al., 2018; Aarons et al., 2011; Weiner, 2009; Bate et al., 2008). In addition, implementation frameworks that stress reflexive monitoring and readiness for change parallel the QI literature's focus on organizational learning and feedback loops as mechanisms for adaptation and course correction (May et al., 2018; Tucker & Edmondson, 2003; Bate et al., 2008). The absence of these conditions—leadership support, engagement, and a learning-oriented culture—is frequently implicated in the breakdown and failure of QI initiatives. Furthermore, both the organizational change and implementation science literature recognize failure as a complex process. Together, these overlaps illustrate that conceptualizations and determinants of failure are similar across the fields of implementation science, QI, and organizational change, even though they are often studied under different labels.

However, these frameworks and corresponding literature do not explicitly focus on failure itself in terms of empirical data collection and theorizing. Even process frameworks that focus on the 'work' of implementation do not typically include in their scope the 'work' of implementation failure, that is how key stakeholder respond to failure or manage the effects of

failure (May et al., 2018).

Table 1. Quality Improvement and Failure: Concept Comparison Across Fields

Body of Literature	**Construct**	**Definition**	**Theoretical Foundations**	**Methods**
1	Organizational Change	"Change in formal structure, organizational culture, and goals, program or mission" (DiMaggio & Powell, 1983 p. 149)	Organizational theory, sociology (Scott, 2004).	Reorganization, leadership change, cultural transformation (Burke, 2023).
	Organizational Change Failure	"An organization's deviation from goals and outcomes that are expected and desired from organizational change" (Schwarz et al., 2021 p. 162)		
2	Quality Improvement	"The combined and unceasing efforts of everyone…to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development (learning)" (Batalden & Davidoff, 2007 p. 2)	Systems thinking, industrial quality models (Deming, 1986).	PDSA cycles, benchmarking, audits (Langley et al., 2009).
	Quality Improvement Failure	When a quality improvement initiative does not achieve or sustain its desired outcomes or causes unintended harm resulting in the initiative being abandoned or substantially redesigned.		
3	Intervention Implementation	"Deliberate and purposive actions to implement evidence-based interventions, practices and policies" (Wilson et al., 2024 p. 2)	Implementation science; behaviour change theory (Michie et al., 2011).	Incentives, reminders, training (Naoom et al., 2005).
	Intervention Failure	Intervention did not work; it did not produce the intended health or system outcomes even when delivered as designed (Proctor et al., 2011)		
	Implementation Failure	Intervention was not delivered as intended (Proctor et al., 2011)		

Factors that Contribute to QI Failure or Success

Extensive research identifies what contributes to QI failure or success (Dixon-Woods & Martin, 2016; Coles et al., 2017; Behzadifar et al., 2019; Groene et al., 2013; Antony et al., 2007; Cowie et al., 2018; Albliwi et al., 2014; Mohammad, 2014). For example, the Model for Understanding Success in Quality (MUSIQ) identifies 25 key factors including QI leadership, a culture supportive of QI, resource availability, data infrastructure, physician involvement, and team QI skill (Kaplan et al., 2012). Leadership is identified three times in the model, at the organizational level, microsystem level, and team level, highlighting the crucial role of executive leaders, middle managers, and front-line clinical leaders in QI. Other frameworks such as the Framework for Spread, developed by the Institute for Health Improvement (IHI) and the Consolidated Framework for Implementation Research (CFIR) also highlight the role of factors such as leadership, culture and infrastructure in achieving successful QI initiatives (Damschroder et al., 2009; Massoud et al., 2006).

Frameworks such as the MUSIQ Model are often used in practice as self-assessment tools for leaders and QI implementers to identify factors that are weak in their setting (Kaplan et al., 2012). In other words, frameworks such as these can help with detecting potential for QI failure though they have not been explicitly described this way in the literature. In general, there has been limited attention to how leaders detect signs of potential or impending QI failure.

The Role of Leadership in QI

Leadership refers to the ability of individuals or groups to influence, guide, and inspire others toward achieving shared goals (Horthouse, 2004). Effective leaders exhibit qualities such as vision, communication, collaboration, and adaptability, and have the ability to influence others to

contribute towards success (Drew & Pandit, 2020). Formal leaders with management roles provide direction, allocate resources and set the tone for improvement initiatives while informal leaders play an important role in that they often bridge the gaps among executive leaders, middle managers, and staff. Both formal and informal leaders can foster collaboration, encourage innovation and promote a culture of continuous improvement (Drew & Pandit, 2020). However, formal leaders tend to have the authority to make QI decisions and have accountability for QI outcomes.

Many authors distinguish between the terms *leadership* and *management* (Algahtani, 2014; Kotter, 1990; Kotterman, 2006; Mariama-Arthur and Mariama-Arthur, 2018). Leadership is primarily about creating a vision for the future, inspiring and motivating people to achieve that vision, driving change, and fostering innovation (Mariama-Arthur & Mariama-Arthur, 2018). The concept is defined by a skillset, not by a formal role or title; the terms 'leader' and 'leadership' refer to a skillset used to influence others to contribute to a desired outcome (Byram, 2000). Leadership can also be defined as a *process* of how leaders get things done (Grint et al., 2016). Leaders focus on influencing and guiding others towards achieving common goals to support strategic success and adaptability in rapidly changing environments (Mariama-Arthur and Mariama-Arthur, 2018). Management, on the other hand, is concerned with planning, organizing, and executing tasks to achieve specific objectives (Mariama-Arthur and Mariama-Arthur, 2018). Managers focus on maintaining stability, ensuring that processes run smoothly and that resources are efficiently allocated. This involves a more transactional approach, where the emphasis is on achieving short-term goals, maintaining order, and optimizing operational efficiency.

Even though the term "leader" refers to a skillset and process, and not a formal role, for the

purposes of this thesis, the term *leader* refers to individuals in formal positions at different hierarchical levels who engage in tasks that have been traditionally associated with *managing* (e.g., planning, budgeting, developing processes) as well as tasks that have been traditionally associated with *leading* (e.g., developing the vision, aligning the organization, inspiring others) (Kotterman, 2006). Our definitions of "leader" and "leadership" are therefore more narrow than suggested in the literature in order to facilitate recruitment and participant comparability.

Many papers specifically highlight or examine the role of leadership in QI (Backhouse & Ogunlayi, 2020; Boguslavsky et al., 2019; Drew & Pandit, 2020; Mazur et al., 2012; Kaplan et al., 2012; Parker et al., 1999; Vaughn et al., 2006). For example, a systematic literature review and expert panel focused on contextual factors influencing QI success identified organizational, microsystem, and team leadership as key factors (Kaplan et al., 2012). At all three levels, leaders are needed to oversee, guide, champion, and facilitate QI if QI is to succeed (Kaplan et al., 2012). Leaders are also needed to engage and empower teams (Drew & Pandit, 2020) and to build capacity for QI by ensuring their teams have the necessary tools and skills (Backhouse & Ogunlayi, 2020; Drew & Pandit, 2020). Furthermore, there is evidence to suggest that executive leader involvement in QI influences the ability of hospitals to implement QI (Parker et al., 1999; Clavel et al., 2019) and shapes quality outcomes in hospitals, such as morbidity and mortality (Vaughn et al., 2006).

While many QI papers discuss the influence of leadership, they do not examine leaders' responses to QI failure. The broader literature on leadership provides some insights on this issue. Leaders' responses to failure can vary from acknowledging mistakes, seeking feedback, collaborating with others, and learning on one side of the spectrum to feeling paralyzed, making excuses, blaming, and giving up on the other side of the spectrum (Simpson et al., 2020). How

leaders respond to failure depends on the environment, past experiences and individual traits (Simpson et al., 2020). Individual traits, such as leadership style, vary considerably and will result in different responses to failure even within the same context and in response to the same QI or change initiative. Different leadership styles, such as transformational, transactional, democratic, autocratic, laissez-faire, and servant leadership, each bring unique approaches to driving organizational and practice change and handling associated challenges (Price-Dowd, 2020; Demirtas, 2020). There is some evidence to suggest that transformational leadership is more effective during organizational change than transactional leadership because it helps staff cope with change, bolsters their self-efficacy and empowerment, and improves their positive appraisal of the change (Faupel & Sub, 2019). Research by Edmonson (2023) suggests that leader responses to failure involving deep reflection, re-framing of failure to reduce shame, and seeking feedback from team members and mentors, are effective for learning and improvement.

Gaps in the Literature about QI Failure and Leadership

Although the QI literature discusses the reasons behind QI failures and highlights the role of leadership in QI implementation and success (Vaughn et al., 2006; Parker et al., 1999; Mazur et al., 2012; Kaplan et al., 2012), it does not clearly define what constitutes QI failure, explain how it is detected and managed by leaders, or examine leader perceptions and experiences of QI failure. Therefore, our understanding of leading QI failure remains incomplete. Failure is an inherent part of the QI process of testing change (Dahlin et al., 2018; Edmondson, 2023) but it is unclear how leaders differentiate between common or expected failures that inform the next cycle of QI testing and failures that demand project redesign or abandonment. Furthermore, it is unclear what leaders do during and after these experiences of failure. How do they make sense of

them and to what extent do they bury them versus learn from them?

Research Question

This dissertation seeks to address the overall research question, "how do healthcare leaders define, detect, and manage failure in QI?" Sub-questions include:

a) How do leaders define and conceptualize 'failure' in QI?
b) How do leaders detect failure in QI? What 'red flags' do they look for at each stage of the QI initiative?
c) What steps do leaders take to respond to and manage failure in QI?
d) How do leaders learn from past QI failures, if at all?
e) How are leaders' perceptions and experiences of QI failure similar and different? What factors may explain differences across leaders?

Expected Contributions

This study will shed light on the nuanced ways in which leaders navigate QI failure, resulting in both theoretical and practical implications. From a theoretical perspective, this study will generate a conceptual model to describe how leaders define, detect, and manage failure in QI. In doing so, this study will build on and expand existing knowledge on leadership in healthcare QI and, more broadly, on leadership and failure. From a practical perspective, this study will generate findings that healthcare leaders can use to detect and respond to QI failure in ways that minimize negative consequences and optimize learning. The results may also inform adjustments to QI policies and procedures within healthcare organizations to prevent and manage QI failures.

Chapter 2: Literature Review

Quality Improvement in Healthcare

QI in healthcare refers to "systematic, data-guided activities designed to bring about immediate improvements in health care delivery" (Lynn et al., 2007, p. 1). QI is grounded in several key components that guide its application and influence its effectiveness. One essential component is its systematic approach, which involves a structured methodology to identify and address areas needing enhancement. Widely adopted QI frameworks such as Lean, Six Sigma, and the Model for Improvement provide a foundational structure for planning and implementing QI in healthcare settings (Backhouse & Ogunlayi, 2020). These models offer systematic, replicable approaches to problem-solving and process optimization, each with its own strengths. Lean methodology, originally developed in the manufacturing industry, focuses on eliminating non-value-added steps in processes, thereby reducing waste and increasing value from the patient's perspective (Toussaint & Berry, 2013). Six Sigma emphasizes minimizing variability and defects through statistical tools and data analysis, making it especially useful in improving clinical precision and safety (Taner et al., 2007). Meanwhile, the Model for Improvement, developed by Associates in Process Improvement and widely endorsed by the IHI, integrates three core questions: *what are we trying to accomplish, how will we know a change is an improvement, and what changes can we make that will result in improvement*, along with the use of Plan-Do-Study-Act (PDSA) cycles (IHI, 2020). The PDSA cycle is a structured, four-step approach used to improve processes through iterative testing and refinement (Christoff, 2018). It begins with the *Plan* phase, where a strategy is developed, predictions are made, and responsibilities and timelines are clearly defined. In the *Do* phase, the plan is put into action. The *Study* phase involves analyzing the data and outcomes collected during implementation. Finally,

in the *Act* phase, the results are used to determine whether the plan should be adopted, modified, or discontinued. Insights from each PDSA cycle inform future improvements (Christoff, 2018). Together, these methodologies help healthcare organizations systematically identify inefficiencies, test interventions, and scale effective solutions. By leveraging these models, teams are better equipped to drive sustainable improvements in care delivery, patient safety, and organizational performance (Backhouse & Ogunlayi, 2020; Hill et al., 2020; IHI, 2020; Taner et al., 2007; Toussaint & Berry, 2013; Batalden & Davidoff, 2007).

The concept of continuous improvement underpins the philosophy of QI. Rather than being a one-time initiative, QI involves iterative cycles of testing interventions to achieve sustainable and meaningful improvements (IHI, 2020). This cyclical nature ensures that interventions are refined over time based on real-world feedback and outcomes (Langley et al., 2009; Taylor et al., 2014). The QI process typically begins with identifying areas for improvement, which may involve reviewing clinical outcomes, patient satisfaction surveys, or operational inefficiencies (Backhouse & Ogunlayi, 2020; Batalden & Davidoff, 2007). Engaging frontline staff and patients in this stage often uncovers valuable insights that guide improvement priorities (Backhouse & Ogunlayi, 2020; Batalden & Davidoff, 2007).

Once areas of concern are identified, the next step is setting clear, measurable goals (Doran, 1981). Implementation is then carried out, often beginning with small-scale tests of change (Batalden & Davidoff, 2007; IHI, 2020; Langley et al., 2009; Taylor et al., 2014). These interventions, rooted in evidence-based practices, may target clinical workflows, administrative procedures, or communication protocols (Hill et al., 2020). The emphasis is on testing in a controlled setting before broader rollout. Following implementation, teams engage in monitoring and evaluating outcomes to determine the efficacy of the changes (Berwick, 2008; Donabedian,

2005; IHI, 2020; Provost & Murray, 2011; Taylor et al., 2014). Predefined metrics and data points are used to assess whether the interventions yield the desired results (Lynn et al., 2007). Continuous data analysis helps teams refine their QI interventions and strategies and make data-driven adjustments as needed (Batalden & Davidoff, 2007; IHI, 2020; Langley et al., 2009; Taylor et al., 2014).

Despite this structured approach, QI efforts in healthcare often fall short of their intended goals. Many initiatives fail to achieve or sustain improvements, with some resulting in wasted resources or even unintended harm to patients (Dixon-Woods et al., 2014). For example, bundling multiple evidence-based practices into a single QI intervention has, in some cases, increased surgical site infections rather than reducing them (Anthony et al., 2011). Moreover, a systematic review found that fewer than half of RCTs of QI interventions demonstrated any positive effect (Hill et al., 2020). One common issue is the lack of sustainability: improvements observed during the intervention period often fade after the conclusion of a study, suggesting that change is not always embedded into practice in a lasting way (Burke et al., 2021; Cowie et al., 2020). For instance, the "Productive Ward: Releasing Time to Care" program, initially implemented in several English acute care hospitals, faced challenges in maintaining its impact over time (Robert et al., 2020). While some hospitals retained specific practices, such as protected mealtimes, others struggled to sustain the broader intervention, indicating that without continuous support and adaptation, QI efforts may not endure (Jones et al., 2020; Robert et al., 2020). Resource constraints and a managerial desire for standardization meant that, over time, there was a shift away from the original vision of empowering ward staff to take ownership of the *Productive Ward* towards a range of implementation ‘short cuts’. These findings underscore the reality that even rigorously planned QI initiatives can underperform or fail when design

flaws, poor implementation, or contextual challenges are present (Dixon-Woods et al., 2011; Bate et al., 2008).

If a QI intervention proves successful, it is usually scaled up and integrated into routine practice. Sustained monitoring ensures that improvements are maintained over time and informs future QI cycles (Backhouse & Ogunlayi, 2020; IHI, 2020; Langley et al., 2009; Provost & Murray, 2011; Taylor et al., 2014). Embedding these practices within organizational culture supports long-term change and enhances the overall quality and safety of healthcare delivery (Backhouse & Ogunlayi, 2020; IHI, 2020).

Another central element to QI in healthcare is the use of data-guided activities. Data collection and analysis allow healthcare teams to measure current performance, identify patterns, and evaluate the impact of implemented changes (Berwick, 2008; Donabedian, 2005; IHI, 2020; Parand et al., 2014; Provost & Murray, 2011). This evidence-based approach supports informed decision-making and fosters accountability by ensuring that actions are grounded in measurable outcomes (Hill et al., 2020; Provost & Murray, 2011). When used effectively, data can drive continuous learning, allowing organizations to monitor progress over time and make timely adjustments to improvement strategies (Taylor et al., 2014). Moreover, transparent sharing of performance data can enhance team engagement, cultivate a culture of shared responsibility, and support alignment around organizational goals (Dixon-Woods et al., 2012; Ivers et al., 2012). However, barriers such as data overload, poor data quality, and limited capacity for analysis frequently hinder meaningful use of data in QI (Carbonell et al., 2024; Ni et al., 2019; Tolera et al., 2024; Green et al., 2015). These issues may contribute to QI failure by obscuring early warning signs or leading to misinformed decisions. (Brown et al., 2008). Despite these barriers, when data is integrated meaningfully into QI work, it serves as a critical tool in improving

patient outcomes, optimizing workflows, and sustaining long-term improvements (Hill et al., 2020; Weston & Roberts, 2013).

Relevant Frameworks on Leadership in Healthcare and QI

Leadership is the ability to influence, guide, and inspire others toward achieving shared goals (Horthouse, 2004). Effective leaders demonstrate qualities such as vision, communication, collaboration, and adaptability, motivating others to contribute to success (Drew & Pandit, 2020). Leadership has emerged as a central component of QI in healthcare, influencing everything from strategic alignment to front-line staff engagement (Parand et al., 2014; Stantou et al., 2017; Swensen et al., 2016; West et al., 2014). In the context of healthcare, leadership takes on additional complexity due to the hierarchical, multidisciplinary, and high-stakes environment in which it operates.

Key frameworks on QI and implementation science acknowledge the important role of leadership. Three such frameworks include the Consolidated Framework for Implementation Research, the Model for Understanding Success in Quality, and the Framework for Spread. These three frameworks are described further below with a focus on the role of leadership, followed by an overview of the empirical evidence on leadership and QI in healthcare.

Consolidated Framework for Implementation Research (CFIR)

Designed to facilitate systematic planning, evaluation, and research on the implementation of complex interventions, the Consolidated Framework for Implementation Research (CFIR) provides a comprehensive structure for identifying the multilevel factors that affect the uptake of healthcare interventions (Klein & Sorra, 1996; Klein et al., 2001; Nembhard

& Edmondson, 2006). The framework is composed of five overarching domains: intervention characteristics, outer setting, inner setting, characteristics of individuals, and the implementation process (Damschroder et al., 2009). Within these domains, CFIR delineates a total of 37 constructs, including evidence strength and quality, patient needs and resources, organizational culture, leadership engagement, planning, reflection, and evaluation (Damschroder et al., 2009).

Leadership plays a particularly prominent role within the inner setting, where it is considered a key determinant of implementation success. Leadership engagement encompasses the degree of commitment, involvement, and accountability exhibited by individuals in formal leadership positions, ranging from executive leaders and middle managers to front-line supervisors and team leads, who can directly or indirectly influence implementation efforts (Klein & Sorra, 2001; Lukas et al., 2007). The framework also emphasizes that leadership influence is not uniform; rather, it varies across organizational levels and contexts, reflecting the nuanced roles that leaders occupy in supporting change (Damschroder et al., 2009).

CFIR highlights several leadership-related conditions that foster successful implementation. For instance, an organizational climate in which leaders openly acknowledge their own limitations and actively seek input from staff is thought to cultivate psychological safety and promote collaborative problem-solving (Klein & Sorra, 1996; Klein et al., 2001; Nembhard & Edmondson, 2006). Such climates allow team members to feel valued and engaged in the change process and are characterized by adequate space for reflection and continuous learning (Greenhalgh et al., 2004). Furthermore, one critical but often underappreciated leadership trait identified by CFIR is managerial patience, that is, a long-term perspective that accommodates short-term declines in productivity as new interventions are being adopted (Klein et al., 2001).

CFIR also details the influence of implementation leaders, especially when they are selected thoughtfully or emerge organically within the organization. When early adopters or champions share similar professional or cultural backgrounds with the broader workforce (i.e., homophily), the likelihood of widespread engagement increases (Edmondson et al., 2001; Pronovost et al., 2008). These individuals often serve as role models, transmitting influence through both formal and informal channels (Greenhalgh et al., 2004; Cruess et al., 2008).

Additionally, CFIR distinguishes between various leadership roles involved in implementation. Opinion leaders, whether experts or peers, shape the attitudes and beliefs of others through their authority or credibility (Greenhalgh et al, 2004; Rogers, 2003). Formally appointed internal implementation leaders are typically responsible for coordinating or managing implementation efforts within the organization, although this responsibility is often integrated into broader roles. Champions play a unique role by actively promoting and defending the intervention, often at personal risk to their informal status within the organization, due to their strong belief in its value (Greenhalgh et al., 2004; Maidique, 1980). As noted in the literature, many implementations hinge on the presence of such champions, echoing the sentiment that an intervention "either finds a champion or dies" (Schon, 1963). Finally, external change agents, such as consultants or researchers, may guide implementation from outside the organization, bringing specialized technical or organizational expertise to support change (Cruess, 2008).

CFIR not only highlights these leadership dynamics but also enables researchers and practitioners to assess how leadership engagement evolves over time. This capacity to examine the co-evolution of leadership behaviors and organizational readiness throughout implementation offers valuable insights into the sustainability of QI efforts (Kirsh et al., 2008).

Model for Understanding Success in Quality (MUSIQ)

The Model for Understanding Success in Quality (MUSIQ) outlines 25 factors that influence QI outcomes, including leadership, organizational culture, resources, and team-level skills (Kaplan et al., 2012). The model emphasizes leadership at three levels—organizational, microsystem, and team—reflecting its influence across all layers of the healthcare organizations. Executive leaders shape strategic direction and allocate resources, while microsystem and team leaders support daily operations and implementation (Kaplan et al., 2012).

MUSIQ highlights how contextual factors interact across levels, and how external forces such as policy or funding can influence leadership engagement. However, the model has notable limitations. In smaller or flatter organizations, the influence of executive leadership may be less pronounced, and distinctions between microsystem and team leadership may blur (Ghiselli & Siegel, 1972; Kaplan et al., 2012). Additionally, the original model does not fully reflect the dynamic, adaptive nature of healthcare contexts.

These issues were addressed in MUSIQ v2.0, which expands the model's treatment of context and leadership. The revised version emphasizes that leadership is both evolving and distributed, often exercised by individuals in diverse roles throughout the organization, and that contextual factors are dynamic and interdependent (Reed et al., 2018). This more flexible framing aligns with real-world healthcare settings, where leadership is frequently collaborative and shaped by both internal and external pressures.

Framework for Spread

The third relevant model addressing the relationship between leadership and QI is the Framework for Spread, developed by the IHI to accelerate the dissemination of effective

innovations within and across healthcare organizations (Massoud et al., 2006). Recognizing that a major challenge in healthcare is closing the gap between best practices and common practices, this framework was designed to guide organizations in systematically spreading successful interventions. It emphasizes the critical role leadership plays, not only in initiating spread efforts but also in sustaining them over time. For spread to be successful, several foundational elements must be in place, including strong executive sponsorship, clearly designated day-to-day leadership, and visible commitment from leadership that aligns the improvement initiative with broader organizational strategies. The framework outlines seven key components necessary for effective spread: leadership, set-up for spread, better ideas, communication, social system, measurement and feedback, and knowledge management. Among these, leadership is central, not only for endorsing the spread strategy but for actively supporting its execution, ensuring alignment of goals, facilitating communication, and maintaining momentum throughout the process. The Framework for Spread underscores that the planning for dissemination should begin early and be intentionally structured, with leadership serving as the driving force behind scaling and sustaining quality improvement initiatives across healthcare systems (Massoud et al., 2006).

Collectively, these frameworks, MUSIQ, CFIR, and the Framework for Spread highlight the pivotal role of leadership in determining the success and sustainability of QI efforts in healthcare. Effective leadership across all organizational levels, executive, middle management, and frontline, is essential, particularly when leaders articulate a clear vision, demonstrate visible commitment to improvement, and actively engage staff in the process (Vaz & Araujo, 2022). Leadership not only initiates change but also sustains momentum by shaping culture, facilitating learning, and aligning QI goals with broader strategic priorities. Moreover, scholars have increasingly emphasized the importance of specific leadership competencies, such as systems

thinking, relational leadership, and emotional intelligence, in enabling leaders to navigate the complexity of QI work (Heifetz et al., 2009; Swensen et al., 2016). However, the developmental journey of QI leaders remains underexplored, particularly in terms of how such competencies are cultivated in real-world practice. Furthermore, while leadership is widely recognized as a catalyst for improvement, its role during periods of failure, uncertainty, or organizational resistance is less well understood, despite evidence suggesting that these are the moments when leadership may be most consequential. The literature positions leadership as both a foundational and dynamic force in healthcare QI, warranting continued attention in both research and practice.

Empirical Evidence on Leadership in Healthcare and QI

The importance of leadership in healthcare QI is well-documented in the empirical literature (Backhouse & Ogunlayi, 2020; Boguslavsky et al., 2019; Drew & Pandit, 2020; Mazur et al., 2012; Kaplan et al., 2012; Parker et al., 1999; Vaughn et al., 2006; Kirsh et al., 2008; Institute of Medicin, 2001; Pettigrew et al., 2001; Grol et al., 2007; Godin et al., 2008; Framback & Schillewaert, 2001; Mendel et al., 2008; Shortell et al., 2004; Brehem & Rahn, 1997; Walston et al., 2001). Leaders play a pivotal role in engaging and empowering QI teams, building QI capacity, and ensuring that staff have the necessary QI tools and skills (Drew & Pandit, 2020; Backhouse & Ogunlayi, 2020; Shortell et al., 2004). Furthermore, executive leadership involvement is shown to directly affect a hospital's ability to implement QI and improve clinical outcomes, including morbidity and mortality rates (Parker et al., 1999; Clavel et al., 2019; Vaughn et al., 2006; Brehem & Rahn, 1997; Walston et al., 2001). Studies of high-reliability organizations and institutions with mature safety and quality programs further reinforce the importance of leadership in promoting a culture of teamwork and empowering frontline staff to

detect and resolve process failures (Kirsh et al., 2008; Institute of Medicine, 2001; Pettigrew et al., 2001; Grol et al,, 2007; Godin et al., 2008; Frambach & Schillewaert, 2001; Mendel et al., 2008).

Empirical research has consistently shown that leadership is a key determinant of success within healthcare (Parand et al., 2014; Stantou et al., 2017; Swensen et al., 2016; West et al., 2014). For instance, a meta-review by West et al. (2014) found that leadership behaviour, particularly at the executive and clinical levels, is closely linked with improvements in patient outcomes, staff engagement, and organizational performance. They argue that developing collective leadership should be locally tailored and integrated with both leadership and organizational development efforts, ideally supported by in-house expertise (West et al., 2014). They also stress that leadership experience, especially when paired with structured support, is essential for growth, and enhancing leaders' ability to learn from experience should be a priority. Complementing these findings, Wong et al. (2013) provide empirical evidence that relational leadership styles, such as transformational and supportive leadership, are positively associated with higher patient satisfaction, reduced adverse events, and greater staff well-being, reinforcing the importance of leadership behaviors that foster engagement and learning. Similarly, Sfantou et al. (2017) concluded that leadership styles significantly affect patient safety and care quality, with transformational leadership being especially impactful due to its emphasis on motivation, vision, and team empowerment. While this dissertation does not specifically examine leadership styles, it is important to acknowledge the relevance of leadership style in shaping how leaders respond to QI failure. Recognizing the influence of leadership style helps situate this study's findings within a broader conversation about how individual traits, leadership behaviours, and organizational culture, intersect in complex healthcare environments.

Leadership is widely recognized as a critical factor in shaping organizational culture. The behaviours and actions of leaders directly influence the development of a culture that prioritizes safety, learning, and continuous improvement, as leaders set the tone for the organization's approach to safety and quality (West et al., 2014; Wong et al., 2013). In fact, leadership is often considered the most "malleable and powerful" influence on the culture of organizations, emphasizing its pivotal role in shaping organizational values and behaviors (West et al., 2014). Various leadership interventions have been shown to foster a culture of safety, such as managers conducting interdisciplinary walkabout safety rounds, which have been linked to improvements in safety culture and patient outcomes (Ginsburg et al., 2005).

The role of leadership extends beyond safety culture, as leaders also play a significant role in fostering staff engagement. Studies suggest that healthcare organizations with leaders who cultivate a positive climate tend to experience higher levels of staff engagement, as employees feel more involved and emotionally supported in their roles (West et al., 2014). This is particularly significant in healthcare, where staff frequently encounter emotionally challenging situations involving fear, anxiety, and uncertainty (West et al., 2014). Creating a positive organizational climate, fostered by supportive leadership, has been identified as a key factor in balancing these challenges, with research indicating that positivity and positive reflections can reduce staff stress and improve health outcomes (West et al., 2014). For example, Bono et al. (2013) found that leadership-driven positive reflections in primary care settings helped alleviate staff stress, while an NHS staff survey demonstrated that organizations with positive climates saw better outcomes for both staff satisfaction and patient care, further reinforcing the connection between leadership, QI, and organizational culture (West et al., 2011).

The success of QI initiatives is closely tied to leadership behaviours that promote a

supportive and empowering work environment. Leaders who demonstrate openness to feedback, allocate resources for improvement, and recognize staff contributions are more likely to drive effective QI efforts (Parand et al., 2014; Øvretveit, 2011). In addition, cultivating positive psychological attributes such as optimism, hope, and resilience within teams has been shown to enhance cooperation and satisfaction, which contributes to the quality of care delivered (West et al., 2009). Leaders who help staff process negative emotional experiences, such as patient death, fear, or aggressive behaviour, also promote creativity and problem-solving in the workplace, enabling staff to maintain positive affect and engage with QI work more effectively (Bledow et al., 2013). When these leadership practices are consistently applied, they lead to sustained improvements in patient care, staff morale, and overall organizational performance, reinforcing the long-term success of QI initiatives (Parand et al., 2014).

Trust in leadership plays a critical role in fostering that culture of engagement. Leaders who exhibit positivity, fairness, and respect are more likely to earn the trust of their staff and receive higher evaluations of their leadership effectiveness (Norman et al., 2010). Some authors argue that when treating staff with compassion and honesty, leaders can build strong leader-member exchange relationships, which in turn support organizational fairness and equity (Graen & Uhl-Bien, 1995). These leadership practices contribute to sustained improvements in patient care, staff morale, and organizational performance (Parand et al., 2014). In settings like the UK's NHS, where a significant portion of the workforce is from Black and Minority Ethnic (BME) backgrounds and report experiences of discrimination, it is critical for leaders to prioritize trust-building and inclusivity to create an environment where all staff feel valued and supported (Kline, 2014).

One emerging theme in the literature is the importance of distributed or collective

leadership in healthcare (Carstensen et al., 2024; Nightingale, 2020; De Brun & McAuliffe, 2019; West et al., 2014). For instance, West et al. (2014) emphasize the importance of collective leadership, where leadership responsibilities are shared across all staff members, ensuring that everyone takes responsibility for maintaining high-quality care for patients. Rather than relying solely on top-down direction, many healthcare initiatives benefit from leadership that is shared across teams and hierarchical levels (Carstensen et al., 2024). This approach allows for more adaptive and context-sensitive responses to quality challenges, and it reflects the complex, interprofessional nature of healthcare delivery.

Despite broad agreement on the importance of leadership in healthcare, the literature also identifies persistent challenges and limitations that can significantly undermine QI efforts. High rates of leadership turnover are especially problematic, as they disrupt continuity, erode trust, and hinder long-term strategic planning (Dixon-Woods et al., 2014). When leadership is unstable, staff may become disengaged or skeptical of new initiatives, leading to resistance or passive non-compliance (Kim, 2020). Additionally, many healthcare leaders, particularly those promoted for clinical expertise rather than managerial acumen, receive limited formal training in QI or change management (Parand et al., 2014). This lack of preparedness can result in poorly designed or inconsistently executed QI strategies that fail to gain traction among front-line staff (Dixon-Woods et al., 2014).

A further complication is the inherent tension between administrative and clinical priorities. Leaders are often caught between meeting operational demands, such as financial performance or compliance metrics, and fostering a culture of learning and long-term improvement (Parand et al., 2014; Dixon-Woods et al., 2014). These competing pressures can lead to short-termism, where easily measurable outcomes are prioritized over deeper, more

systemic QI that requires time, reflection, and iteration (Dixon-Woods et al., 2014). In such environments, QI may be reduced to a series of disconnected projects rather than being embedded as a core organizational practice.

Moreover, while literature extensively discusses leadership practices that contribute to QI success (Sfantou et al., 2017; West et al., 2014; Wong et al., 2013, Carstensen et al., 2024; White et al., 2013) far fewer studies explore how leaders respond to failures in QI, an important but underexamined area. When QI efforts fall short, leaders must navigate not only technical and logistical setbacks but also significant emotional and cultural repercussions (Drew & Pandit, 2020; Pinto et al., 2025; Tate et al., 2023). Staff may experience disappointment, blame, or burnout, and leaders must decide whether to reinterpret failure as a learning opportunity or disengage from the process altogether (Parand et al., 2014). The emotional labor required to lead through failure, including acknowledging disappointment, sustaining morale, and fostering resilience, is substantial, yet often overlooked in both empirical research and leadership development programs (Greenberg et al., 2022; Haver et al.,2013).

Crucially, the gap in the literature around leadership responses to QI failure limits our understanding of how organizational learning occurs—or fails to occur—after setbacks (Edmondson, 2004; Jones et al., 2019; Ginsburg et al., 2010; Karanika-Murray et al., 2023). While positive leadership practices such as psychological safety and emotional intelligence are well documented, there is little guidance on how leaders can use failure constructively to recalibrate improvement efforts (West et al., 2014). This is especially significant given that QI in healthcare is inherently experimental and context-dependent, meaning that failure is not only likely but, in some cases, inevitable (Drew & Pandit, 2020). Without frameworks for recognizing, interpreting, and responding to failure, organizations risk repeating mistakes or

abandoning valuable initiatives prematurely (Vaz & Araujo, 2022; Carmeli & Sheaffer, 2008).

In light of these limitations, this dissertation contributes to the growing recognition that how leaders engage with failure, not just success, is critical to the success and sustainability and of QI. Understanding the barriers leaders face, the strategies they employ, and the emotional dynamics they must navigate when QI fails offers a more realistic and nuanced account of what leadership in healthcare QI truly entails.

The Role of Leaders in Managing and Responding to Organizational Change Failures

In healthcare settings, organizational change failures, including the unsuccessful implementation of QI initiatives, are often complex, emotionally charged, and consequential (Vaz & Araujo, 2022; Edmondson, 2004; Kane & Mosser, 2007; Caldwell & Hayes, 2016). Leaders play a vital role in how such failures are interpreted, addressed, and ultimately leveraged (or not) as opportunities for learning and improvement. Edmondson (2023) highlights that leaders who engage in deep reflection, actively seek feedback, and reframe failure as a constructive part of the improvement process are more likely to cultivate psychological safety and a culture of continuous learning.

However, a foundational challenge lies in the fact that the QI literature lacks a consistent or shared definition of what constitutes "failure." Terms such as "failure," "problem," "obstacle," and "struggle" are used interchangeably and inconsistently, making it difficult for leaders and teams to clearly interpret outcomes or extract lessons from unsuccessful efforts (Simpson et al., 2020). The ambiguity in the literature regarding what constitutes a QI failure complicates sense-making processes and may inhibit transparent discussion and learning. The term “error” is only clearly defined in the patient safety literature. In that body of work, a medical error is defined as “the failure of a planned action to be completed as intended or the use of a wrong plan to achieve

a goal, which may or may not result in harm to the patient" (IOM, 2000, p. 54). However, in the context of patient safety, the "error" refers to action(s) that did or did not take place during care planning and delivery. This thesis focuses instead on failures of structured efforts to improve care. Nevertheless, the literature on learning from patient safety incidents may have relevance to QI failure management and learning. For example, Ginsburg et al. (2009) propose that effective learning from patient safety events involves at least three stages: detection/reporting, analysis, and communication/dissemination. Importantly, their findings suggest that while organizations often engage in post-event analysis, they are less consistent in disseminating lessons learned, highlighting a common breakdown in the learning cycle (Ginsburg et al., 2009). Furthermore, Ginsburg et al. (2010) found that formal organizational leadership for patient safety predicted learning from safety events (i.e., identifying and analyzing events followed by change and dissemination activities). Insights such as these from the patient safety literature can inform research and practice on QI failure.

Within QI literature, there is growing recognition that emotional responses to failure play a critical role in shaping how individuals and organizations respond to setbacks. Although this emotional dimension is often overshadowed by more traditional concerns such as QI processes, outcomes, and organizational culture (Dixon-Woods & Martin, 2016), scholars are beginning to map the complex emotional terrain that leaders must navigate during QI failures. Nonetheless, empirical research into how emotions specifically influence these responses remains limited (Berta et al., 2019; Carroll & Edmondson, 2002).

Negative emotional responses, such as fear, frustration, and anxiety, commonly arise when QI initiatives do not succeed and can substantially hinder team engagement and momentum (Edmondson, 2019; Oreg, 2006; George, 2000). Studies in healthcare and organizational

research suggest that leaders who effectively acknowledge and validate these emotions, while maintaining a focus on learning and growth, foster environments in which staff feel supported rather than blamed (Avey et al., 2008; Edmondson, 1999, 2019; Kahn, 1990; Carmeli & Gittell, 2009). Although some of this literature emerges from broader organizational behavior research rather than QI-specific or healthcare-specific contexts (e.g., George, 2000; Kahn, 1990; Oreg, 2006), the underlying insights about emotional dynamics and leadership are increasingly being applied to healthcare QI efforts. This capacity for emotional attunement is considered vital for sustaining resilience and maintaining progress during recovery phases (Avey et al., 2009; George, 2000; Santos de Souza, 2024).

In addition to managing negative emotions, the literature increasingly recognizes the role of positive affective states, such as hope, pride, and optimism, in organizational recovery. Santos de Souza (2024) emphasizes that these emotions, though often overlooked, are instrumental in rebuilding confidence and sustaining engagement after failure. Moreover, Edmondson (2023) argues that when leaders reframe failure as a learning opportunity and foster a culture of continuous improvement, they promote psychological safety, an essential element in reducing the fear and anxiety that typically accompany failure.

In broader organizational change research, scholars also describe how conflicting emotional responses, such as hope coexisting with anxiety, shape reactions to change (Heim & Sardar-Drenda, 2021; Oreg et al., 2018). Leaders are seen as playing a paradoxical role in these contexts: while they can be a source of uncertainty, they are also the key agents responsible for mitigating it (Santos de Souza, 2024). Leadership that addresses both emotional resistance and amplifies positive emotions contributes to a psychologically supportive culture (Santos de Souza, 2024). Conversely, neglecting emotional dynamics, both conscious and unconscious, can

contribute to disengagement and resistance, undermining recovery (Rafferty & Griffin, 2006; Smollan, 2017).

Insights from broader organizational change literature further enhance our understanding of how leaders manage emotional dynamics during failure. Scholars such as Agote et al. (2016), Gunnarsdóttir (2016), Smollan (2013), and Thanem (2013) emphasize the importance of emotional regulation and emotional intelligence in leadership. They note that leaders who exhibit these competencies are better equipped to manage the emotional turbulence that arises in the wake of setbacks, thus facilitating smoother transitions and sustaining momentum. Emotional regulation also supports leaders in managing their own emotional responses, enabling them to model emotional resilience for their teams (Goleman, 1998). Although not exclusive to QI, these findings have strong relevance to the emotional labour required in leading healthcare improvement efforts, where the stakes are high, and the emotional impact on staff can be profound (Goleman, 2005). In healthcare, the consequences of failure are often magnified by the interpersonal dynamics and the deep sense of responsibility to patients and colleagues, making emotional intelligence even more crucial (Helo & Moulton, 2017; Bosk, 2003; Edmondson, 2004).

Furthermore, effective leaders demonstrate an awareness of the underlying psychological experiences that accompany organizational setbacks. Santos de Souza (2024) notes that emotional reactions to failure are shaped by both conscious losses, such as diminished status or increased workload, and unconscious psychological needs, including the need for belonging, esteem, and purpose. Drawing on Maslow's (1943) foundational work, it is evident that leadership responses must attend not only to operational outcomes but also to disrupted human needs. Failure to address these needs may lead to quiet resistance or disengagement that

jeopardizes future QI efforts. Additionally, leaders must recognize the latent emotional dynamics, or the emotional responses that are not immediately visible but may surface over time (Smollan, 2014). Addressing these dynamics can help prevent lingering disengagement and foster long-term commitment to improvement.

In sum, the way leaders manage and respond to organizational change failure, particularly within the context of QI, profoundly shapes a healthcare organization's capacity for resilience and renewal. Leaders who foster psychological safety, respond empathetically to both overt and latent emotional needs, and regulate affective dynamics in times of failure are central to converting breakdowns into breakthroughs. Through this emotional and strategic leadership, failure becomes not an endpoint, but a stepping stone toward sustained improvement.

While the emotional dimensions of failure in healthcare QI have gained growing attention, there remains limited understanding of how leaders practically recognize and respond to these dynamics throughout the QI process. In particular, little is known about how emotional responses evolve across different stages of an initiative, or how leaders adapt their approaches based on context. Further research is needed to explore how emotionally attuned leadership can be intentionally developed and applied to strengthen QI outcomes.

Relevant Organizational Theories

QI in healthcare, like all change initiatives in organizations, involves uncertainty, ambiguity, and politics (Langley & Denis, 2011). It is not always clear what the quality problem is and how to best address it. Different interests, values, and cultures shape how people perceive, respond to, and learn from quality problems and improvement efforts (Langley & Denis, 2011). Sometimes QI can have unexpected and even counter-intuitive outcomes (Anthony et al., 2011;

Burke et al., 2021). These conditions require leaders in QI to constantly make sense of unfolding events, with their interpretations shaped by organizational culture, particularly norms around learning and psychological safety. Four theories and bodies of literature that may collectively help explain these phenomena are: organizational culture, organizational learning, complexity leadership, and sensemaking.

Organizational culture reflects the shared values, norms, and assumptions that shape how members of an organization perceive problems, make decisions, and behave (Schein, 2010). In healthcare, a strong QI culture emphasizes continuous learning, collaboration, and transparency, creating an environment where staff feel empowered to identify problems, contribute ideas, and engage in problem-solving (Dixon-Woods et al., 2012). Psychological safety – a climate in which individuals can speak up, ask questions, and report errors without fear of blame – is a central feature of such cultures (Edmondson, 1999, 2004). Empirical studies suggest that teams with high psychological safety are more likely to report near-misses, participate in improvement initiatives, and sustain engagement during setbacks (Nembhard & Edmondson, 2006; Ginsburg et al., 2005). Conversely, punitive or hierarchical cultures inhibit open communication, suppress reporting of errors, and increase the risk that QI initiatives will stall or fail (Carmeli & Sheaffer, 2008; Dixon-Woods et al., 2012, 2014; Edmonson, 2004).

Organizational learning builds directly on these cultural foundations. It refers to the processes by which organizations generate, retain, and share knowledge to improve performance and adapt to change (Crossan et al., 1999; Argote & Miron-Spektor, 2011). In QI, learning occurs when teams analyze failures, reflect on outcomes, and disseminate lessons so that missteps become opportunities for improvement rather than repeated mistakes (Weick & Sutcliffe, 2007; Ginsburg et al., 2010). Psychological safety makes such learning possible, as it

allows individuals to engage in open dialogue and collective problem-solving (Edmondson, 1999, 2004). Organizational learning is not automatic; it requires deliberate attention to processes such as reflection, feedback, and knowledge dissemination (Ginsburg et al., 2009; Argyris & Schön, 1978). For example, after a failed QI initiative, organizations that systematically analyze what went wrong, communicate lessons learned, and adjust procedures are more likely to achieve sustainable improvements (Ginsburg et al., 2010; Weick & Sutcliffe, 2007). Conversely, organizations that fail to capture and share lessons risk repeating mistakes, perpetuating inefficiencies, and eroding staff engagement (Edmondson, 2004; Berta et al., 2015). Leaders play a pivotal role by modeling openness, allocating resources, and recognizing contributions, thereby embedding learning as a routine organizational practice (Parand et al., 2014; Ginsburg et al., 2009). When leaders cultivate a culture of trust and psychological safety, staff are more likely to engage with improvement work, adapt to challenges, and recover from setbacks (Edmondson, 1999; Nembhard & Edmondson, 2006). Organizational culture and organizational learning reinforce each other: cultures that value inquiry foster conditions for learning, and learning processes in turn reshape culture over time (Schein, 2010; Shortell et al., 1998; Weiner, 2009).

Complexity leadership theory provides an additional lens for understanding how leaders foster both culture and learning under conditions of uncertainty. Rather than emphasizing control, it highlights the interplay of adaptive leadership (informal, emergent interactions that generate novelty), administrative leadership (formal structures that ensure efficiency), and enabling leadership (which bridges the two by facilitating adaptability and softening control) (Uhl-Bien et al., 2007; Marion & Uhl-Bien, 2011). This tripartite framework is highly relevant to QI, where leaders must navigate between flexibility and control when initiatives encounter

setbacks. However, complexity leadership primarily emphasizes systemic and relational dynamics, paying less attention to the individual cognitive processes that shape how leaders interpret failure.

Sensemaking theory fills this gap by examining how individuals interpret novel, ambiguous, or confusing events (Weick et al., 2005; Maitlis & Christianson, 2014). Leaders engage in sensemaking retrospectively, continually revising their understanding as events unfold and as they are influenced by social interactions (Maitlis & Christianson, 2014; Weick et al., 2005). Sensemaking has been linked to both change processes and learning processes for individuals, teams, and organizations (Maitlis & Christianson, 2014). Empirical studies illustrate a connection between complexity leadership and sensemaking. For example, in their grounded theory study, Baran and Scott (2010) found that during firefighting near-misses, leaders relied on three processes to cope with organizational ambiguity: (1) framing (assumptions regarding what is important and what is not); (2) heedful interrelating (inter-personal communication; and (3) adjusting (awareness of the situation and acting accordingly) (Baran & Scott, 2010). These processes may be relevant to how leaders perceive and respond to QI failure. In another study on crises, three sensemaking styles of leadership were identified: (1) charismatic, in which leaders frame problems and their vision for the future using positive emotions, (2) ideological, in which leaders frame problems and their vision for the future based on tradition and previously established values, and (3) pragmatic, in which leaders frame problems and their vision for the future based on rational arguments and persuasion tactics (Crayne & Medeiros, 2021; Mumford, 2006).

Taken together, these four perspectives – organizational culture, organizational learning, complexity leadership, and sensemaking – can inform our understanding of QI success and

failure. Organizational culture and learning emphasize the social and structural conditions that enable improvement, while complexity leadership highlights the dynamic balancing act leaders perform, and sensemaking reveals the cognitive processes through which leaders interpret and act in uncertain situations. Integrating these lenses underscores that QI failure is not a linear technical process but an adaptive, socially constructed endeavor shaped by culture, learning, leadership dynamics, and the sense leaders and teams make of unfolding challenges.

However, although these four theories offer valuable insights, they do not fully address or explain how leaders interpret and respond to QI failure in the politically and emotionally charged context of healthcare. For this reason, an inductive study not bound by a priori assumptions was needed to generate new insights grounded in the lived experiences of healthcare leaders.

Summary of Literature and Gaps

In summary, the literature identifies the (a) varied functions of leaders in healthcare QI and (b) leadership practices that contribute to success in healthcare QI (and in similar forms of organizational change, implementation or spread). However, the literature does not clearly define "QI failure", describe leader experiences of QI failure, including their practical and emotional responses to QI failure, or detail the positive and negative multi-level outcomes of QI failure on leaders, teams, and organizations. This dissertation seeks to address these gaps by asking the following research question: "How do healthcare leaders define, detect, and manage failure in quality improvement?" This research question will be answered using an inductive descriptive qualitative study.

Chapter 3: Methods

Given the limited research on leadership in the context of QI failure, an inductive qualitative descriptive design was employed within a constructivist paradigm. A constructivist paradigm, which posits the existence of multiple, socially constructed realities, emphasizes the exploration of how individuals interpret and make meaning of their experiences (Denzin & Lincoln, 2011). This philosophical orientation is well aligned with the study's objective of examining leaders' interpretations and responses to failure in QI initiatives. Constructivist qualitative interviews facilitated an in-depth exploration of participants' perspectives and experiential insights. Notably, several scholars have emphasized the need for increased use of qualitative methodologies in leadership research to better capture the inherent complexity and contextual variability of leadership practices (Johns, 2024; Riggio, 2019; Tourish, 2019). The study adopted a qualitative descriptive approach, which seeks to provide a comprehensive and accurate representation of phenomena without experimental manipulation (Merriam & Tisdell, 2015). This approach was particularly well suited to the study's aims, as it enabled a nuanced understanding of real-world contexts and the multifaceted nature of leadership in QI settings.

Setting and Context

This study was conducted at a large healthcare system comprising seven hospitals and a cancer center, employing over 18,000 staff, physicians, researchers, and volunteers who serve residents of southwestern Ontario, Canada. This hospital system is unique in Ontario for providing comprehensive care across all age groups, from pre-birth to end-of-life. Given its size, complexity, and diverse range of services, specialties, and patient populations, this hospital system offers an ideal context for studying the varied leadership experiences of QI failure. The

hospital system's varied governance structures, funding models, and patient demographics further enhanced the study's capacity to capture diverse leadership perspectives on QI failures.

At this hospital system, numerous QI initiatives have been undertaken in the past, with several still in progress. For example, past QI projects include initiatives aimed at improving patient care, such as a NICU outcome improvement project and efforts to enhance surgical process efficiency. Some initiatives have been focused on staff and provider engagement, such as a leadership rounding initiative and efforts to streamline departmental processes. These projects reflect the broad scope of QI efforts, and the challenges faced, including staffing shortages, resistance to change, and complex healthcare systems issues. Since this hospital system is large and complex, the findings from this study are expected to be transferable to other large healthcare systems, networks, and organizations.

Researcher Positionality and Reflexivity

The lead researcher of this study is employed by the hospital system under study, which facilitated access to leaders for data collection purposes and ensured a nuanced understanding of the organizational context. Conducting research within one's own organization offers distinct advantages that can enhance the research process and outcomes. Insider status often provides ease of access to participants, streamlined recruitment processes, and a pre-existing familiarity with institutional culture, jargon, and context that supports a deeper and more authentic engagement with the data (Dwyer & Buckle, 2009; Mercer, 2007). As Kanuha (2000) notes, insider researchers share an identity, language, or experiential base with participants, which may foster trust and rapport more quickly than is typically possible for outsiders. This can lead to more open, honest, and detailed disclosures from participants, particularly on sensitive topics.

Talbot (1999), for example, reflected that participants often shared aspects of their experience they would not have disclosed to someone perceived as an outsider, suggesting that perceived mutual understanding can elicit richer narratives.

However, while insider research can yield these benefits, it also presents complex methodological and ethical challenges. The dual role of being both a member of the organization and a researcher can lead to role confusion, where the boundaries between professional, personal, and research identities become blurred (Asselin, 2003; Brannick & Coghlan, 2007). This "complete membership role" (Adler & Adler, 1987) may complicate the ability to maintain analytical distance and objectivity. Asselin (2003) warns that although a researcher may be part of a culture, they might not fully understand its subcultures, underscoring the need for ongoing "bracketing" of assumptions. This caveat is often interpreted as a risk; however, I argue that it can also be viewed as a potential strength. Awareness of one's limited familiarity with certain internal groups can prompt a more open, questioning stance, encouraging the researcher to approach these unfamiliar areas with fewer assumptions and greater reflexivity. In this way, insider researchers may combine the benefits of access and rapport with the critical distance more typical of outsider research. This dual perspective supports a richer and more nuanced understanding of the setting.

The danger, nonetheless, lies in taking familiar dynamics for granted (Brannick & Coghlan, 2007)—failing to interrogate the "known" aspects of organizational life that may hold unspoken significance. Familiarity also carries the risk of unacknowledged bias, as existing loyalties and embedded relationships may unconsciously influence how data are interpreted, or which data are prioritized (Brannick & Coughlan, 2007). Rose (1985) insightfully observed, "There is no neutrality. There is only greater or less awareness of one's biases," highlighting that

the real issue lies in the researcher's self-awareness and critical engagement with their own positionality (Dwyer & Buckle, 2009). Additionally, insider researchers may feel conflicting allegiances—what Brannick and Coghlan (2007) describe as "loyalty tugs"—when organizational interests clash with the goals of impartial inquiry. These pressures can subtly shape data collection and analysis, often in ways that are difficult to detect without rigorous self-monitoring.

Given these challenges, maintaining a high level of reflexivity was essential throughout the research process. Reflexivity, understood not as a methodological hurdle but as an opportunity for richer insight (Finlay, 2002), was approached as an ongoing, iterative practice. This included the maintenance of a detailed reflexivity document to record assumptions, emotions, decision-making processes, and emerging insights. The document served as a space to surface unconscious biases, examine reactions to participants' stories, and note any evolving understandings of the organizational context. Regular discussions with the researcher's academic supervisor and committee outside the organization also served as critical moments of "outsider" feedback (Dwyer & Buckle, 2009), offering fresh perspectives and helping to check interpretive bias.

Finlay (2002) emphasizes that qualitative research is inherently co-constructed: data emerge through interactions between researcher and participant, shaped by their relationship and social context. Reflexivity, therefore, acknowledges the researcher as a central figure in meaning-making, rather than an external observer. This is particularly salient in the context of insider research, where the boundaries between personal experience and analytical interpretation are at times difficult to navigate. The aim is not to eliminate subjectivity, but to be transparent and thoughtful about how the researcher's dual role shaped the inquiry. As Finlay notes, the

question is no longer whether reflexivity is necessary, but how best to practice it.

This dynamic gave rise to what Dwyer and Buckle (2009) describe as the "space between", a liminal zone where the researcher is neither fully insider nor fully outsider. This space can be both generative and challenging (Dwyer & Buckle, 2009). It requires the researcher to occupy a position of constant critical awareness, recognizing that personal proximity to the setting is both a resource and a potential liability (Dwyer & Buckle, 2009). Navigating this space required continuous self-interrogation, ethical vigilance, and an openness to critique, ultimately contributing to the trustworthiness and integrity of the research. This is precisely what I aimed to uphold throughout the study by engaging in ongoing reflexive journaling, soliciting external feedback, and actively interrogating my assumptions, positioning, and interpretations at each stage of the research process.

Sampling and Recruitment

The sample consisted of formal hospital leaders at multiple hierarchical levels within the selected hospital system; this included those in formal clinical and administrative executive, middle manager, and frontline leader roles. Executives were defined as senior leaders responsible for strategic decision-making and overall organizational direction. Middle management included directors and clinical managers who oversaw specific departments or units, implementing strategies, managing teams, and ensuring operational efficiency. Frontline managers were clinical leaders and unit leads who directly managed day-to-day operations and frontline staff.

To be eligible to participate in the study, leaders had to identify at least one example of a QI failure that they were a part of or witnessed and could tell the story of what happened. The

failed QI initiative had to be completed (not under way) and had to be abandoned or substantially redesigned to be considered a 'failure'.

An email describing the study with the Study Information Sheet (Appendix A) was sent to known QI representatives at the hospital system, including a manager in the Quality, Patient Safety and Clinical Resource Management unit and Continuous Quality Improvement Coaches. These individuals were asked to forward a recruitment email and the Study Information Sheet (Appendix A) to all leaders whom they knew were eligible to participate. Leaders who chose to participate contacted the student investigator for further information and to set up an interview. These QI representatives also provided the student investigator with an additional list of leaders who were involved in relevant QI initiatives but were not currently within their direct communication channels. Rather than contacting these individuals directly, which may have been outside the scope of their role or could have introduced organizational pressure, they shared the names with the student investigator to support a more complete and ethically sound recruitment process. This approach helped ensure that participation remained voluntary and that leaders did not feel obligated to respond due to hierarchical or collegial relationships.

Interested participants who reached out to the student investigator were assured that participation was voluntary and confidential (i.e., their managers and peers would not know who did or did not participate). Only those leaders who responded to the email by contacting the student investigator were known to the research team. Further participants were identified through snowball sampling, where participating leaders nominated other leaders who might be suitable for inclusion. To maintain confidentiality, participating leaders were not informed about whether the individuals they nominated accepted the invitation to participate.

Scholars have consistently recommended sample sizes of approximately 25 to 60

participants for grounded theory and ethnographic studies, particularly when exploring complex or multifaceted phenomena (Bernard, 2000; Guetterman, 2015; Marshall et al.,2013; Morse, 1994; Saunders, 2012; Creswell, 1998; Morse, 2000). Creswell (1998) proposed lower ranges, recommending 20 to 30 interviews for grounded theory and 5 to 25 for phenomenological studies. Guest et al. (2006) emphasized that adequacy in qualitative sampling is not only a matter of numbers but of capturing enough diversity and depth to reflect the complexity of the topic under investigation. While smaller sample sizes may be acceptable for studies with narrower foci or more homogeneous samples, other qualitative studies benefit from greater variation to support saturation (Guest et al., 2006). Kuzel (1992) offered further nuance, noting that 6 to 8 interviews may suffice for homogeneous samples, but 12 to 20 may be necessary when aiming for disconfirming cases or maximum variation. Likewise, Patton (2002) and Flick (1998) stressed that qualitative sample size decisions must be guided by the purpose of the inquiry, the heterogeneity of the sample, and the intended analytic depth.

The final sample for this study included 33 participants, which aligns with the sample size recommendations outlined above and allowed for a comprehensive exploration of leadership perspectives on QI failure across different levels of the organization. This number also reflects a balance between saturation and variation, supporting both the depth and breadth required for this inductive descriptive study. Although data saturation, defined as the point at which no new themes or insights emerge (Saunders et al., 2018), was reached after approximately 20 interviews, data collection continued beyond this point to ensure representation across hierarchical levels and clinical service areas within the organization. Guest et al. (2006) conducted an empirical study demonstrating that as few as 12 interviews may be sufficient for data saturation in studies with a narrowly defined scope and a relatively

homogeneous participant pool. However, the diversity of roles and perspectives in this study justified continued interviews, even after the initial saturation point. As Saunders et al. (2018) emphasized, saturation is a context-dependent concept, and determining when it has been reached should consider not only the repetition of themes but also the goals and complexity of the research.

In addition to these empirical and theoretical guidelines, several methodological texts offer foundational considerations for qualitative sampling strategies. These include recommendations for participant selection (Johnson, 1990; Trotter, 1991), as well as factors to consider when determining appropriate sample size in non-probabilistic designs (Miles & Huberman, 1994; Bernard, 1995; Morse, 1995; Rubin & Rubin, 1995; Schensul & LeCompte, 1999; Schensul, Schensul, & LeCompte, 1999). Although these works vary in their numerical recommendations, they collectively highlight the importance of flexibility, purposeful sampling, and theoretical adequacy. Ultimately, the sample size of 33 participants in this study was both methodologically sound and grounded in the literature, supporting the generation of a well-substantiated investigation of leadership experiences with QI failure.

Data Collection

Interviews were conducted between October and December 2024 using a semi-structured interview guide. The draft interview guide was developed collaboratively by the research team and was pre-tested with two healthcare leaders who did not participate in the study; modifications were made as needed to enhance clarity (Appendix B). The interview guide consists of questions regarding the participant's background including the nature of their current role and the extent to which it involves QI, years of involvement in QI, and any

education/training in QI. Then, there are open-ended questions about leaders' experiences with QI failure, and how they define success versus failure. Participants are then asked to identify an example of QI failure and to tell the 'story' of what happened, including what went wrong, how and when they knew it was a failure, and what they (and other leaders) did along the way.

It is worth noting that leaders may not have considered any QI work as a "failure", but rather as a work in progress given that some degree of failure is inherent in the QI process. This was explicitly mentioned to participants in the interviews. We acknowledged, in the interviews, that QI involves trial and error such as through PDSA cycles and that some failure is therefore part of the QI process (Appendix B). We then asked how they differentiate between these small, expected failures in QI and the big failures. This approach allowed participants to reflect on their experiences, distinguishing between the expected, iterative failures inherent in the QI process and the more significant failures that had a deeper impact on their work and the organization.

Furthermore, a large QI project may have small "fails" along the way but ultimately be considered a success. To mitigate these potential issues, we asked participants to reflect on completed QI initiatives (not ongoing ones) and that were ultimately abandoned or substantially redesigned. These requirements for what constitutes a "QI failure" ensured that the research question was addressed, mitigating potential outcome bias, and generating comparable data across participants.

Before participating in the study, all individuals were provided with an informed consent form outlining the purpose of the research, the voluntary nature of participation, how their confidentiality would be ensured, and how their data would be used. Participants were informed of their right to withdraw from the study at any time without facing any negative consequences

or impact on their professional relationships or standing. In order to build rapport and ensure participants felt comfortable discussing potentially sensitive topics, the student investigator took several proactive steps during the interview process. At the outset, participants were reminded that their involvement was entirely voluntary and that they could choose not to answer any questions they felt uncomfortable with. The researcher emphasized that the interview was a safe space for open and honest dialogue and reassured participants that their responses would be treated with the utmost confidentiality. To further build trust, the researcher explained the steps taken to protect participant privacy, including the removal of all identifying information from transcripts and the anonymization of any potentially identifying details. Data security protocols were also described, including secure storage of interview recordings and encryption measures to safeguard sensitive information. Given the sensitive nature of discussing QI failures, the research team was mindful of the potential emotional or psychological impact on participants. Recognizing that discussing failures, especially in a professional context, may evoke feelings of frustration, guilt, or discomfort, the research team took proactive steps to minimize distress. In the event of emotional discomfort, the student investigator was prepared to provide a list of support resources, including counseling services offered through the hospital system, and to direct participants to professional support if needed. This approach fostered a safe environment of trust for participants to share their experiences, minimizing emotional risks associated with reflecting on QI failures and encouraging candid dialogue without fear of negative repercussions.

The interviews were conducted via phone or Zoom and ranged from 25 to 70 minutes in length. Conducting interviews via phone or over Zoom allowed for greater convenience and accessibility, eliminated the need for travel, and offered flexibility in scheduling, ultimately

saving time and resources for both the interviewer and participants. With participant consent, interviews were recorded and uploaded to a secure, encrypted cloud portal for transcription. A professional transcriptionist transcribed the interviews verbatim. To protect participant confidentiality, all identifying information was removed from the transcripts and any potentially identifying details were anonymized. In cases where participants expressed distress or discomfort during the interview, they were offered the option to pause, skip questions, or end the interview at any time, and referrals to support resources were provided when appropriate. Once the transcripts were finalized and uploaded into NVivo qualitative coding software for analysis, the original audio files were immediately deleted from the portal. Transcribed data remained in the cloud for five days following upload to NVivo and were then permanently deleted to maintain data security.

Data Analysis

To analyze the rich data gathered through interviews with healthcare leaders, an inductive coding approach was used. This analytical methodology involved systematically categorizing and organizing qualitative data to identify patterns, themes, and relationships that emerged from participants' responses, without any preconceived framework (Saldana, 2009). The inductive approach is especially valuable for exploring complex and multifaceted phenomena, allowing for a more flexible and open-ended analysis (Creswell & Miller, 2000). Inductive coding ensures that the analysis remains rooted in participants' perspectives, allowing new insights to emerge from the data itself (Braun & Clarke, 2006; Guest, Bunce, & Johnson, 2006).

The coding process began with two research team members independently coding three transcripts to establish a preliminary set of first-order codes using participants' language.

Afterward, the researchers compared their codes, discussed discrepancies, and ensured consistency. A code list was generated (Appendix C), which served as a foundation for further coding. The student investigator then coded the remaining transcripts, maintaining the initial code list, which was refined throughout the process in consultation with the other researcher. This iterative process ensured that codes accurately reflected the nuances of the data and remained grounded in participants' perspectives (Charmaz, 2006; Saldana, 2016). The iterative process of coding and refining codes, as discussed by Lincoln & Guba (1985), helped increase the trustworthiness and depth of the analysis.

In addition to the inductive coding process, a scoring system was developed to categorize the nature and severity of the QI failures discussed in the interviews. Failures were classified based on whether they were patient- or provider/staff-focused and were scored on a scale from minor challenges (Level 1) to major systemic issues (Level 4). This scoring system informed the analysis by allowing the research team to better understand the levels of disruption caused by different types of failures (details of this system are provided in the results section) (Strauss & Corbin, 1998; King, 2004). Strauss & Corbin (1998) highlight the value of categorizing data to identify varying levels of complexity, which supports our use of a scoring system to differentiate types of failure. King (2004) discusses how categorical schemes can help organize qualitative data, which parallels the way our scoring system helps categorize and make sense of QI failure data.

As coding progressed, the research team maintained ongoing dialogue to ensure the accuracy and consistency of the codes. This collaborative effort, which aligns with recommendations from Kaiser (2009) and Patton (2002), allowed for the continuous refinement of the code list, ensuring that the codes remained grounded in participants' perspectives and

aligned with the research questions. Patton (2002) emphasizes the importance of collaborative coding in qualitative research, noting that ongoing discussions between team members help refine codes, resolve discrepancies, and ensure that interpretations reflect the participants' views. The final code list comprised of 59 codes, which were used to analyze the full dataset (Appendix C).

Following initial coding in NVivo, the codes were organized and refined to develop a conceptual framework capturing the overarching process of QI failure as experienced by healthcare leaders. The framework reflected key dimensions of the data, including the antecedents to QI failure, the process by which failures were detected and managed, the outcomes that followed, and the factors that influenced these experiences. Themes were identified through an iterative process of reviewing coded data both within and across NVivo node reports, allowing patterns and relationships to emerge across cases. This approach supported the construction of a grounded, data-driven understanding of the phenomena. To ensure a balanced representation of all viewpoints, the research team worked to highlight unique and divergent perspectives. This allowed the analysis to capture the complexity of leader perceptions regarding QI failure, ensuring that no single viewpoint dominated the interpretation of the data. This process of reconciliation, through collaborative discussion and iterative analysis, helped ensure that a nuanced and comprehensive perspective was achieved, providing a richer and more balanced understanding of QI failures.

Ensuring Rigor in Data Collection and Analysis

To ensure rigor in the data collection processes, several strategies were employed including: documenting in detail the data collection methods and decisions; pre-testing the

interview guide with leaders; recording notes during interviews; and reviewing transcripts for accuracy. In some situations, the transcripts were read and then re-read to ensure a thorough understanding of the data. To ensure rigor in the data analysis processes, we used three strategies that enhanced the credibility and trustworthiness of our findings. First, two research team members were involved in coding at the beginning of the analysis. These two researchers independently coded three transcripts for comparison and discussion prior to the lead researcher coding the remaining transcripts. This ensured consistency and agreement in the coding approach and allowed for debate and consensus-building around interpretations and findings. This collaborative approach helped minimize researcher bias and increased the reliability of the analysis (Morse, 2015; Church, 2019). Finally, we maintained an audit trail of decisions made during the research process, including data collection, coding, and analysis, to provide a clear record of how the findings were derived (Carcary, 2009). In addition to this, a separate document was used to record any novel insights, emerging themes, or reflections that arose during the study, further enriching the audit trail. These reflections helped to refine the interpretation of the data by allowing for a more nuanced understanding of emerging themes and patterns. They also facilitated the identification of subtle nuances in the data that might otherwise have been overlooked, ensuring a more robust and comprehensive analysis. Furthermore, these reflections contributed to the iterative process of data analysis, helping to shape the results by providing clarity and guiding the refinement of codes and categories. This along with the audit trail ensured transparency, verifiability, and accountability in the research process.

Chapter 4: Results

Thirty-three leaders participated in an interview on their perceptions and experiences of QI failure. Participant demographics are outlined in Table 2, summarizing participants' gender, roles, and QI training and experience. Most participants were middle managers (63%), with the majority having formal QI training (76%) and over 5 years of QI experience (90%). However, half of participants have only been in their current roles for 3 years or less (51%).

Table 2. Participant Demographics (n=33)

Demographic Characteristics		**Percentage (number of participants)**
Sex	Female	58% (n=19)
	Male	42% (n=14)
Role	Executive Leader	27% (n=9)
	Middle Manager	64% (n=21)
	Frontline Manager	9% (n=3)
Years in Current Role	<1 year	9% (n=3)
	1-3 years	42% (n=14)
	4-6 years	24% (n=8)
	7-9 years	12% (n=4)
	>19 years	12% (n=4)
QI Training	Formal External	76% (n=25)
	Corporate Internal	24% (n=8)
Years of QI Experience	<4 years	9% (n=3)
	5-10 years	30% (n=10)
	11-19 years	30% (n=10)
	>20 years	30% (n=10)

Conceptual Framework

We developed a conceptual framework to synthesize the qualitative interview results (Figure 1). The conceptual framework is divided into six sections: QI Failure Episode, Antecedents to QI Failure, Detecting QI Failure, Managing QI Failure, Key Influencing Factors, and Outcomes of QI Failure. Below, we describe our qualitative results by section of the conceptual framework, beginning with the QI failure episode and then moving chronologically from antecedents (left) to outcomes (right).

1. QI Failure Episode

Original Definition of QI Failure

Drawing from the literature, we defined 'QI failure' as occurring when a QI initiative does not achieve or sustain its desired outcomes or causes unintended harm due to human error, design defects, poor implementation, contextual factors, or other avoidable or unavoidable shortcomings resulting in the QI initiative being abandoned or substantially redesigned (Cannon & Edmondson, 2001; Cannon and Edmonson, 2005; Edmondson, 2004; Etheridge et al., 2014; Mellahi & Wilkinson, 2004; Schwarz et al., 2021).

Participant Definitions of QI Failure

Participants provided various perspectives on what constitutes QI failure. Most of these views validated documented definitions of QI or organizational change failure in the literature. For example, participants identified QI failure as a situation where the QI initiative did not work, did not change practice or culture, was not sustained, or caused harm. For example, one participant said, "*QI failure is we have done the cognitive work [and] procedural work that lays*

the foundation for the QI, but it hasn't been translated into behaviour, mindset, and culture. It just exists as a theory rather than as an embodied practice" (Participant-43). Another participant further explained, "*If your initiative has created a moment of risk, or has really had a negative impact on those that were impacted by the change, then I would consider that a bigger failure*" (Participant-15).

In addition to validating our proposed definition of QI failure, participants introduced a new perspective. Many participants described QI failure as occurring when a QI initiative did not result in any learning, meaning no data or information was gained, no new knowledge was created, and/or no meaningful conclusions were drawn. One participant emphasized, "*If no knowledge is gained or there's a failure to draw any meaningful conclusions, that's the only time I would use the word failure for it*" (Participant-37). These views deepened and extended existing definitions of QI and organizational change failure by arguing that if the QI initiative was abandoned or substantially redesigned, but contributed to important learning, it would not constitute a 'failure'.

Finally, some participants rejected the term 'QI failure'. For example, one participant noted, "*It's never a failure. Any part of QI is never a failure. Anything that I do is always a trial. It might work or it might not, but we won't know unless we try*" (Participant-01). Similarly, another participant explained, "*I don't like to think we failed at anything. We just have to look for a different opportunity to fix something*" (Participant-05). These participants often preferred to describe abandoned or redesigned QI initiatives using terms like "*unsuccessful*" (Participant-01), "*setback*" (Participant-50), "*stalled*" (Participant-29), "*lessons learned*" (Participant-28), and "*missed the mark*" (Participant-34, Participant-38).

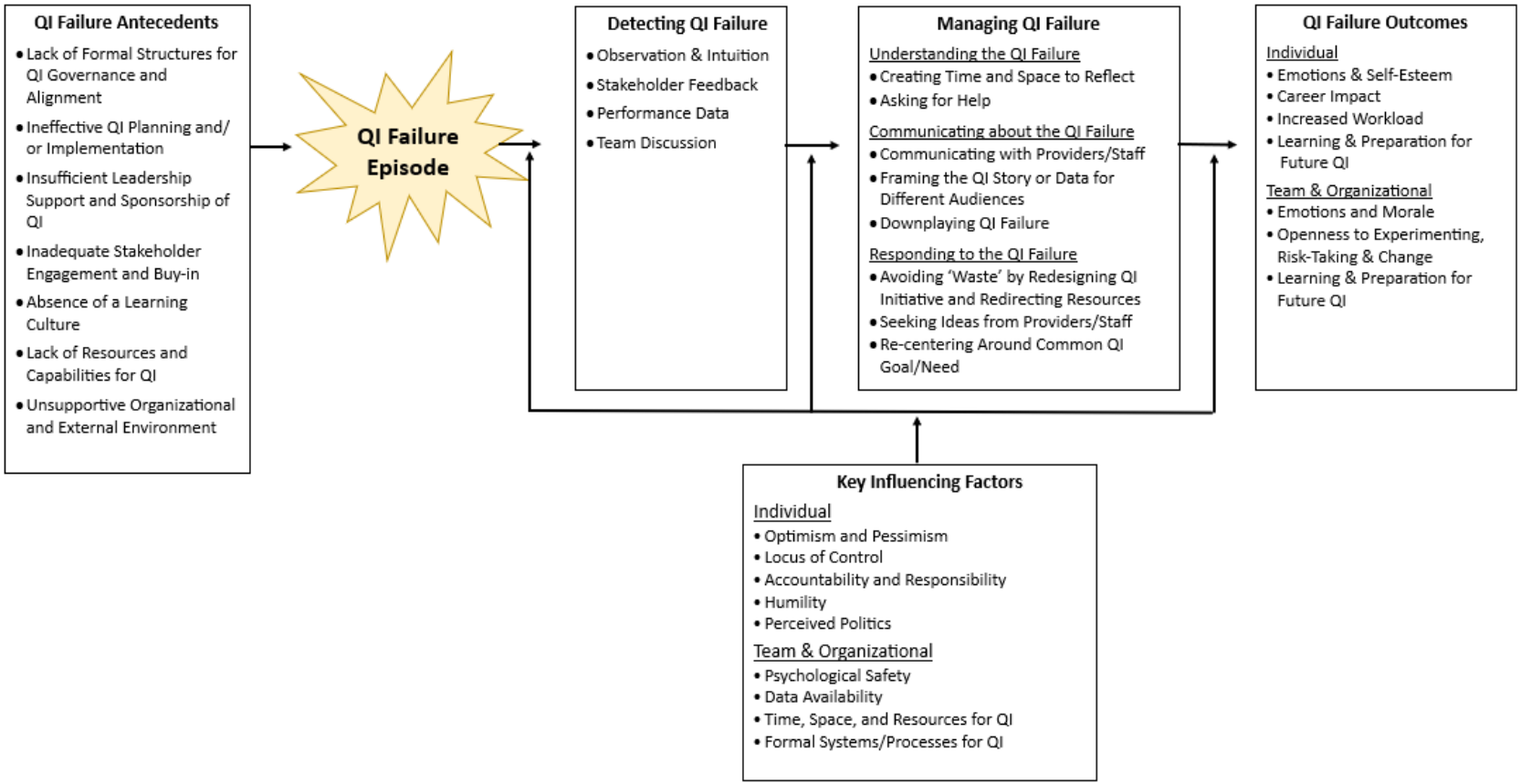

Figure 1. Quality Improvement Failure: A Conceptual Framework of Antecedents, Detection and Responses Strategies, Influencing Factors, and Outcomes

Emotional Reactions to the Term 'Failure'

Participants expressed strong emotional reactions to the term "failure." One participant shared, "*I think the word failure has a very negative connotation to it. So just being very cautious with anchoring to that word*" (Participant-05). The majority of participants shared this sentiment, describing the term 'failure' as "*very harsh and defeating*" (Participant-17), "*an ugly word*" (Participant-32), and "*really painful*" (Participant-34). Others said the word "*doesn't make me feel good*" (Participant-31), "*makes me feel a bit deflated*" (Participant-46), and "*sends a very wrong message to the team*" (Participant-04). One participant explained that the term was "*a little strong because…there would have been a lot of work, a lot hours, a lot of meetings and processes*" (Participant-12). Other participants expressed similar views, suggesting that it was "*unfair*" to call a QI initiative a failure given the investments made (Participant-49).

However, not all participants had a strong, negative reaction to the term. Out of the 33 participants interviewed, eight participants were accepting of the term and found it appropriate. One of these participants noted, "*Failure is the strongest teacher. But it takes a different mindset to accept that failure isn't a negative thing*" (Participant-15). Another participant explained, "*We're not saying the person's failed; we're saying that the intervention, the initiatives failed. So, I'm not opposed to that word because it also reflects the significance of it, right?*" (Participant-22). Some participants even found the term 'failure' motivating: "*I'm competitive by nature. So, when I hear the word failure, it motivates me to try to look at it a different way*" (Participant-38). These participants alluded to an important distinction between failure of individuals and failure of interventions, processes or systems. One participant explained, "*It's not necessarily your failure, it's a failure of the system or the process that was outlined*" (Participant-15). In making this distinction, these participants advocated for a 'no-blame'

environment that would remove the stigma and shame associated with the term ‘failure’.

In general, those with more QI experience were less sensitive to the term ‘failure’, seeing failure as a natural part of the learning and improvement process and as a means to achieve growth and development. Executives, in particular, approached QI failure with a focus on long-term organizational strategies and performance. For example, one executive said, "*Failure is an inevitable part of the innovation process…I see it as an opportunity to reassess our strategies and drive long-term success*" (Participant-50). Middle managers, while also seeing failure as a learning opportunity expressed more concerns with the negative connotations and absoluteness of the term. For example, one participant explained, "*I feel like that [term] is binary. It's like a yes or no. But in reality, it's nuanced. We work in a such a complex system, like how do you know what a failure is?*" (Participant-37). In contrast, front-line leaders had stronger, more personal reactions to the term ‘failure’. They viewed failure as a challenge that needed quick resolution and expressed concern about the direct impact on their teams and their workload. As one participant noted, "*When a failure happens, my first thought is how to fix it quickly to minimize the impact on my team*" (Participant-02).

While participants expressed a range of emotional reactions to the term "QI failure," many also shared concrete examples of what failure looked like in practice. These examples not only grounded their definitions in lived experience but also highlighted the variability in how failure manifests across settings and levels of complexity.

Participant Examples of QI Failure

QI failure examples shared by participants were categorized based on whether they were patient-focused or provider/staff-focused as well as by level of failure, ranging from failures involving minor challenges (Level 1) to those involving major systemic issues (Level 4).

Descriptions of each failure level are provided below.

- **Level 1** Failures involved minor challenges. These challenges caused moderate disruptions but could be managed with some adjustments. Examples included inconsistent implementation of new processes across different units, moderate resistance from staff leading to slower adoption of changes, and the initial failure of a new tool or technology that required redesign or retraining.
- **Level 2** Failures involved moderate challenges. These challenges significantly hindered the progress of the project and required substantial intervention. Examples of significant obstacles included major technical integration issues such as software incompatibility, significant lack of stakeholder engagement or buy-in, and breakdowns in communication across departments that led to delays or misalignment.
- **Level 3** Failures were characterized by major challenges. These challenges lead to the complete abandonment or complete redesign of the project. Examples included projects that failed to achieve their primary objectives and were discontinued, initiatives that caused unintended harm or negative outcomes for patients, projects that faced insurmountable financial or resource constraints, and those hindered by regulatory or legal hurdles that delayed or halted the project.
- **Level 4** Failures involved systemic organizational and/or environmental challenges. These included deep-rooted challenges affected multiple projects and require organizational or broader system-level policy change. Examples of systemic failures included persistent cultural resistance to change that undermined multiple QI initiatives, chronic lack of leadership support and sponsorship across

the organization, and system-wide issues with data management, communication, or coordination.

Table 3. provides a quantitative overview of the types of QI failures participants shared. Most QI failure examples were related to patient care (72% or n=24/33) and most were classified as a Level 2 or Level 3 failure (85% or n=28/33). Further details on the QI failure examples cannot be shared due to confidentiality.

TABLE 3. QUANTITATIVE OVERVIEW OF PARTICIPANT EXAMPLES OF QI FAILURES

Failure Level	# of Provider/Staff Examples	# of Patient Examples
Level 1	2	2
Level 2	3	11
Level 3	4	10
Level 4	0	1

2. QI Failure Antecedents

We identified seven key antecedents that contributed to the failure of QI initiatives: (1) a lack of formal structures for QI governance and alignment, (2) ineffective QI planning and/or implementation, (3) insufficient leadership support and sponsorship, (4) inadequate stakeholder engagement and buy-in, (5) absence of a learning culture, (6) a lack of resources and capabilities for QI, and (7) an unsupportive organizational and external environment. These antecedents often interacted and overlapped, with participants frequently describing how multiple factors interacted to undermine QI efforts. The interplay between these factors created a complex environment where QI initiatives struggled to succeed. Each antecedent factor is described further below.

A Lack of Formal Structures for QI Governance and Alignment

The first key antecedent that contributed to QI failure was a lack of formal structures for QI governance and alignment. Participants noted that without a formal, structured approach to overseeing and managing QI efforts across the organization, several issues arose that contributed to the failure of QI initiatives.

Firstly, the absence of formal and centralized organizational structures and processes for QI governance hindered the coordination of QI efforts across different units. This lack of coordination led to fragmented and inconsistent QI activities, reducing their overall effectiveness. As one participant noted, "*Each team was working in isolation. For instance, our initiatives were not aligned with the [name of department] quality improvement projects, leading to duplicated efforts and missed opportunities for collaboration*" (Participant-16).

Secondly, without formal structures for QI, it was challenging to align QI efforts with the organization's strategic goals. This misalignment means that QI initiatives did not always contribute meaningfully to the organization's mission and vision, leading to wasted resources and missed opportunities for improvement. One participant highlighted this issue, noting that "*it wasn't tied to a strategic objective in the organization. That was an early flag of failure. And that it didn't get picked up as an objective even when the proof of concept had been made*" (Participant-43).

Additionally, the integration of QI efforts into routine practice was compromised without a structured governance approach. When QI activities are not embedded into everyday operations, they are often seen as additional tasks rather than integral components of the organization's processes, leading to lower engagement and commitment from staff. One participant illustrated this point, stating, "*And it wasn't taken up as something that was built into*

the culture of the unit or built into the culture of the organization. And it just died, basically" (Participant-43). This highlights the importance of embedding QI activities into routine practice and the organizational culture to ensure their sustainability and effectiveness.

Furthermore, the lack of formal governance structures diminished accountability for QI success and failure. Without clear responsibilities and oversight, it was difficult to hold individuals or teams accountable for the outcomes of QI initiatives, which contributed to a lack of ownership and follow-through. As one participant noted, "*Because accountability will continue to drive that progress, ensuring that everyone understands their role and the importance of their contributions to the overall success*." (Participant-44). Another participant pointed out that, "*many organizations, especially academic organizations, have formal QI processes and review processes that are parallel to the research review processes. We're doing things in QI that are in some ways as risky as what people do in research, or even more risky than what people do in research, with no oversight and no review*" (Participant-43). This underscores the need for clear governance and accountability mechanisms to ensure the appropriateness and success of QI efforts.

Lastly, the absence of formal QI structures impeded learning from QI successes and failures because there was no centralized mechanism for tracking or sharing these QI experiences. As one participant explained, "*There's no learning or structure in the organization that captures the outcomes or the process. This lack of infrastructure means that if there are no criteria for failure, no mandatory reporting of failure, and no organizational learning or oversight from that failure, it opens up incredible risk within the organization*" (Participant-43).

In summary, the lack of formal structures for QI governance and alignment is a significant antecedent for QI failure, affecting coordination, alignment with strategic goals,

integration into routine practice, accountability, and learning.

Ineffective QI Planning and/or Implementation

The second key antecedent that was critical for QI failure was a lack of effective QI planning and/or implementation. Planning and implementation deficits are described, respectively, below.

QI Planning Deficits

Several planning deficits contributed to QI failures. According to participants, one major issue was limited information gathering, which includes a lack of understanding of the problem or 'current state' and its scope, as well as a lack of understanding of the work processes and culture of the targeted unit, program, or patient population. This deficit led to poorly informed decisions and ineffective QI strategies. As one participant explained, "*Sometimes you may fix a part of a problem, but not the whole thing because you didn't spend enough time understanding what it was you were trying to [do], and where you thought you needed to go with that*." (Participant-13). Another stated that, "*The methodology around problem identification is critical to QI. But it's also, in a lot of ways, undervalued or underplayed. So, people will come into it without really having a solid understanding about what the issue is*" (Participant-44).

Another significant planning deficit was the establishment of ineffective goals and targets. These goals may be unclear, overly ambitious, or not explicitly linked to measurable indicators, making it difficult to track progress and achieve desired outcomes. This challenge often required leaders to take a step back and critically assess their objectives: "*Sometimes it's about re-evaluating the targets we set as leaders. Were we too aspirational or too ambitious? It's*

important to have purposeful conversations about the targets we set" (Participant-05)**.**

Additionally, there was often a lack of engagement of the 'right people' to plan and support change. This includes QI experts, departments like Privacy, Legal, and Risk, physicians, frontline staff, and patients and families. Without their input and support, QI initiatives were less likely to be successful. As one participant emphasized, "*I believe QI fails when it is broadly implemented without involving those who are actually working on it. It's important to consider whether it resonates with them and whether the data being used to make decisions is accurate*" (Participant-19).

Poor communication of the QI initiative's rationale, approach, and expected outcomes was another critical planning deficit. When stakeholders did not understand the purpose and benefits of the QI initiative, their engagement and commitment was low, further hindering the initiative's success. This sentiment was echoed by one participant who reflected, "*I think that in the first place, I don't know that we really did a great job of communicating the 'Why'*" (Participant-02).

QI Implementation Deficits

Implementation deficits also played a significant role in QI failures. One common issue was implementing QI initiatives too quickly, without adequate thought or piloting. This rushed approach contributed to incomplete or poorly executed initiatives that failed to achieve their intended outcomes. In the words of one participant, "*it was too soon to implement because all these things had not been checked off prior*" (Participant-04).

Unclear QI implementation plans were another major deficit. When plans lacked detail and specificity, it was challenging for those involved to understand their roles and tasks, leading

to confusion and ineffective execution. As a participant described, "*We had to pull together the working group and acknowledge that our change management or implementation strategy wasn't working. We needed to go back and reassess our approach*" (Participant-03).

Finally, a lack of continuous monitoring of data regarding QI performance was a critical implementation deficit. Without ongoing data collection and analysis, it was difficult to assess the effectiveness of QI initiatives and make necessary adjustments. This lack of monitoring resulted in persistent issues and missed opportunities for improvement. One participant highlighted this issue, stating, "*We have so much data in this organization that is very old or very inaccurate, and we use it to make decisions. And I think that is also a huge failure of QI*" (Participant-19).

Insufficient Leadership Support and Sponsorship of QI

The third antecedent, a lack of sustained support and sponsorship of QI, was an important contributing factor to QI failure. Leadership support and sponsorship were crucial for several reasons. Firstly, they directed attention to QI, ensuring that it remained a priority within the unit or organization. Without this focus, QI initiatives were overlooked or deprioritized in favor of other activities. As one participant noted, "*If the director is not engaged, then the unit-based initiative is probably going to die on the vine*" (Participant-44).

Secondly, leadership support was essential for removing barriers to QI. Leaders have the authority and influence to address obstacles that may hinder the progress of QI initiatives, such as bureaucratic hurdles or resistance from staff. As one participant pointed out, "*While executive sponsors don't need to manage or lead the initiative, they are crucial for removing barriers, setting agendas, prioritizing tasks, and reallocating capacity. Their alignment and push are*

essential; without it, the initiative won't succeed" (Participant-44).

Thirdly, ensuring adequate resources for QI was another critical role of leaders. Leaders are responsible for allocating the necessary resources, including funding, staffing, and time, to support QI initiatives. Without these resources, QI efforts were likely to falter due to insufficient support. One participant described this challenge, stating, "*And as soon as the research money went out, that role was gone. So, there was no sustainable human resources plan. There was no sustainable integration culture change plan and leadership didn't push for additional resources*" (Participant-43).

Additionally, leadership support demonstrated political will for QI. As one participant remarked, "*The political will and energy to maintain focus had diminished. They had moved on to something new, shiny, and of higher priority*" (Participant-03). This quote highlights the challenge of sustaining political will and energy. When leaders visibly endorsed and championed QI initiatives, it sent a strong message to the entire organization about the importance of these efforts. This endorsement helped build momentum and encouraged broader engagement and commitment from staff.

However, a common issue was that leaders often do not have the capacity to support or sponsor QI initiatives effectively. "*Leaders often find themselves overwhelmed with their existing responsibilities, leaving little time to effectively mentor or support QI initiatives. The demands of their roles mean that even with the best intentions, they struggle to provide the necessary guidance and oversight*" (Participant-50). This lack of capacity stemmed from various factors, such as competing priorities, limited time, and insufficient knowledge and skills related to QI. When leaders were unable to provide the necessary support, QI initiatives struggled to gain traction and achieve their intended outcomes.

Inadequate Stakeholder Engagement and Buy-In

The fourth antecedent for QI failure was a lack of stakeholder engagement, buy-in, and agreement. When key stakeholder groups, including physicians, frontline staff (particularly nurses), and patients and families, did not participate in, support, or commit to the QI effort, this increased the probability of failure. Several reasons contributed to this lack of engagement and buy-in among stakeholders.

Firstly, previous negative experiences with QI initiatives led to skepticism and reluctance to participate in new efforts. Stakeholders who encountered unsuccessful or poorly managed QI projects in the past were hesitant to invest their time and energy in future initiatives. As one participant explained, "*Because of their previous experience, they're reluctant to participate or embrace something, especially with a culture change*" (Participant-17).

Secondly, stakeholders often felt disengaged when they were not involved in QI planning and decision-making. This lack of involvement led to a perception that the QI initiative was top-down and disconnected from their needs and insights. As one participant candidly shared, "*It was a huge red flag for me to bring in my preferences and make decisions without involving the team. I knew that, but I thought, 'Ah, you know what, this is going to be quick and easy, not a problem.' I was just trying to take the easy way out, I guess you could say*" (Participant-32). This sentiment was echoed by another participant who emphasized, "*I think failure occurs when you don't engage the frontline workers who do the work to help drive change. If you try to handle everything yourself, make assumptions, and ignore feedback, then that's a failure of the quality process*" (Participant-15). When stakeholders felt their input or feedback was not valued or applied, it significantly reduced their willingness to support and commit to the QI initiative.

Additionally, if the benefits or incentives for the QI initiative were unclear or

unconvincing to stakeholders, this contributed to low engagement. As one participant noted, “there wasn't enough incentive to tell the physicians, *'We want you to [description of QI initiative].' That messaging didn't resonate with them*" (Participant-22). This highlights the importance of clearly communicating the benefits and incentives to ensure stakeholder buy-in.

Stakeholders may also feel targeted by the QI initiative on a personal or professional level. When they perceived the initiative was a critique of their performance or practices, they became defensive and resistant to change. This resistance manifested in various ways. One participant shared a vivid example, “*So I tried to implement the process, but one physician in particular kept undermining it…almost as if they didn’t trust my approach and that made it hard to follow through*" (Participant-33). Such resistance can significantly hinder the progress of QI initiatives, emphasizing the need for careful communication and engagement strategies to address stakeholders' concerns and foster collaboration.

Changes to QI timelines, team composition, funding, and other aspects created uncertainty and instability, further reducing stakeholder engagement. "*When we kept changing team members and adjusting the budget, it felt like we were constantly starting over. This instability made it hard for anyone to stay engaged or committed to the project*” (Participant-50). As a result, the overall momentum of the initiative was significantly hindered, leading to delays and a lack of cohesive progress.

Furthermore, systemic barriers to participation, such as QI rounds occurring during clinical work hours, hindered stakeholder involvement. One participant highlighted this issue, stating, “*I guess the way the system is set up just doesn't lend itself to physician involvement. Many of the rounds occur in the middle of the clinical workday*" (Participant-24). Another stated, “*Many patients and their families simply can't commit the time to come into the hospital for these*

sessions, especially if they have full-time jobs or need childcare" (Participant-45). When logistical challenges prevent stakeholders from participating, their engagement and support for the QI initiative was low.

Finally, another factor was conflicting stakeholder views on various aspects of QI. Differences in opinions on what quality of care means, the QI problem, goals and priorities, the use and interpretation of performance indicators and data, and respective professional roles in QI created challenges. As one participant noted, "*We obviously all have different perspectives. And maybe that's one of the challenges as well. My perspective as a physician is different than what our technologists need. And trying to get your voice heard at the table in terms of all those competing needs can be a challenge*" (Participant-24). When stakeholders had divergent views on the critical elements of a QI initiative, it became difficult to achieve consensus and alignment, leading to misunderstandings, miscommunications, and disagreements that impeded the progress of QI initiatives.

Absence of a Learning Culture in the Unit or Organization

The fifth antecedent for QI failure was the absence of a learning culture in the unit or organization. This deficiency manifested in several ways, each contributing to the failure of QI initiatives. Firstly, a lack of psychological safety made it difficult for staff to take risks, admit failures, and have open discussions about QI failures. One participant observed, "*When we're coaching or working with teams, we tend to shy away from that because of some sort of stigma around failing*" (Participant-03). Some participants' responses suggested that failure is not normalized as an inherent part of organizational life, contributing to fear of repercussions or judgment and a culture of silence and avoidance. One participant noted, "*We don't share the*

project where the indicator didn't move" (Participant-05). This sentiment was echoed by another participant who shared, "*I can certainly say that when I was a junior leader, the idea of presenting a failure to my boss or superiors was very intimidating. I don't think this is unique to [us], but I would say that right now, it wouldn't be fair to say that everyone feels safe to fail at the organization, as difficult as that may be to hear or admit*" (Participant-49). Leaders played a crucial role in this issue; if they did not demonstrate openness to failure themselves, they did not model the behaviours required to build psychological safety. This lack of openness from leadership further entrenched a culture where mistakes were hidden rather than addressed.

Secondly, the absence of formal, structured opportunities to learn from both QI successes and failures hindered continuous improvement. Without systematic processes to capture and analyze outcomes, the organization misses valuable lessons that could inform future QI efforts. As one participant explained, "*There's no way of collectively learning what it is that we're learning from either our QI successes or failures in the organization*" (Participant-43). Another participant highlighted the cyclical nature of this issue, stating, "*So what happens is we get caught in this cyclical mess where, every two years, someone comes up with a new idea that we've already tried before, but we don't remember why it didn't stick. So, we start from scratch and try it again, only to encounter the same issues*" (Participant-38). The lack of structured learning opportunities meant that successes were not celebrated and replicated, and failures were not examined and corrected – and then shared across the organization.

Additionally, limited QI mentorship or coaching opportunities contributed to the lack of a learning culture. Many participants identified mentorship and coaching are essential for developing QI skills and fostering a culture of continuous improvement. When these learning opportunities are scarce, staff felt unsupported and ill-equipped to engage in QI activities.

In summary, the absence of a learning culture, characterized by insufficient psychological safety, inadequate formal tracking and sharing of QI successes and failures, and limited QI learning opportunities and mentorship, was a critical antecedent for QI failure. Addressing these issues by fostering an environment where failure is normalized, learning is structured and continuous, and mentorship is readily available is essential for the success and sustainability of QI initiatives.

A Lack of Resources and Capabilities for QI

The sixth antecedent for QI failure was a lack of resources and capabilities for QI. This deficiency manifested in various forms, including human, financial, material, technological, and information resources. Firstly, a lack of dedicated QI personnel was a critical issue. Without staff specifically assigned to QI activities, it was challenging to maintain focus and momentum on improvement efforts. As one participant noted, "*We don't have project managers… I have a project that I'm supposed to push out, but I guess I'm supposed to manage it myself, even though I have zero expertise in it*" (Participant-43).

Second, financial, material, and technological resources were not always available. Adequate financial support was also essential for the initiation and continuation of QI initiatives. Without sufficient funding, some QI projects were underfunded and unable to achieve their goals. Support from relevant departments, such as HR and Finance, was also crucial. These departments play a vital role in providing the necessary resources and infrastructure to support QI activities. Reflecting on this, a participant noted, "*I felt before there was significant support from HR. It's changed. Even financial support has changed. The resources aren't there like they used to be*" (Participant-42). Furthermore, technological aids were important for implementing,

supporting, and tracking QI initiatives. The absence of these tools hindered the effectiveness and efficiency of QI efforts. For example, while describing a failed QI initiative, one participant stated, "*We didn't have the electronic dashboards, so our teams had to [description of QI initiative]. It was too work-intensive and just not sustainable*" (Participant-22).

Third, a lack of time or energy for QI was a significant barrier. High workload, competing priorities, and associated stress often meant that day-to-day operational needs took precedence over QI efforts. This situation left little time or energy for staff to engage in QI activities. Additionally, the lack of protected time for QI further exacerbated this issue. Without designated time for QI, it was difficult for staff to prioritize and commit to improvement initiatives. As one participant noted, "*There's not enough designated time to work on quality projects*" (Participant-03). Another participant echoed this sentiment, stating, "*We don't have dedicated time for that. If we had the ability to do it, I think we could accomplish much more than we currently can*" (Participant-41).

Lastly, a lack of leaders, staff, and physicians with formal education and training in QI, change management, project management, and/or behavior change was a critical factor. Without the necessary knowledge, skills, and experience, it was challenging to plan, implement, and sustain effective QI initiatives. One participant underscored this point, stating, " *I feel that many leaders lack the change management experience, tool set, or skills to consistently establish a baseline, use KPIs, and apply metrics and tools to monitor the change and ensure its success*" (Participant-41).

Unsupportive Organizational and External Environment for QI

The final antecedent for QI failure was an unsupportive organizational and external

environment for QI. This deficiency manifested in several ways, each contributing to the failure of QI initiatives. Firstly, the absence of enabling policies, protocols, legislation, or regulations for QI was a critical issue in some cases. Specific regulatory barriers, such as stringent privacy laws and the lack of qualified privilege legislation, hindered healthcare professionals from engaging in open discussions about clinical practices and outcomes. For instance, in the clinical area of surgery, the absence of qualified privilege legislation can prevent open discussions about surgical outcomes due to fear of litigation, creating significant barriers for those trying to engage in QI efforts. Additionally, key external factors such as the content of unions' collective agreements, privacy laws, concerns about litigation, and political pressure from the Ministry of Health can impose constraints and create barriers that hinder the successful implementation of QI initiatives. One participant illustrated this challenge, stating, "*One of the quality improvements that I started looking at last year was [description of QI initiative]. Navigating some of the union worlds with CUPE…was challenging because 10-hour shifts are not included in the collective agreement*" (Participant-28).

Secondly, a lack of social and/or economic stability further exacerbated the challenges faced by QI efforts. Most participants specifically referenced the COVID-19 pandemic for its role in disrupting normal operations and diverting attention and resources away from QI activities. As one participant explained, "*And then COVID came, and it just did not progress after that. So, we abandoned it at that point, given everything that was happening with COVID. We have yet to revisit it, if at all*" (Participant-31). Another source of economic instability relates to provincial budgetary restrictions on healthcare organizations, which limit the availability of funds necessary to support QI initiatives. High staff turnover and a lack of available health human resources for hire also created significant obstacles, leading to a constant need for hiring,

training, and adaptation, reducing the continuity and effectiveness of QI efforts. As one participant emphasized, "*Budget cuts and constant staff turnover make it nearly impossible to maintain effective quality improvement initiatives. We're always in a cycle of hiring and training new staff, which disrupts our progress*" (Participant-50). These combined factors significantly hindered the progress and sustainability of QI initiatives

In summary, the lack of a supportive organizational and external environment for QI, characterized by insufficient enabling policies, protocols, legislations, or regulations, and a lack of social and economic stability, was a significant antecedent for QI failure.

Complex Linkages among QI Failure Antecedents

Participants made six key linkages between QI failure antecedents in their responses, demonstrating how these factors reinforce one another in ways that make failure more likely (Figure 2). It is important to note that four of the antecedent factors contributed to "inadequate stakeholder engagement and- buy-in", more than any other factor, suggesting that stakeholder engagement and buy-in, is frequently negatively impacted by common QI barriers. Furthermore, "insufficient leadership support and sponsorship" contributed to three antecedent factors, more than any other factor, highlighting the crucial role of leaders in QI success and failure. The six linkages are described further below.

A Lack of Resources and Capabilities for QI Contributed to Poor QI Planning and Implementation

When there was a lack of resources and capabilities for QI, this contributed to poor QI planning and implementation. For example, inadequate funds for thorough QI planning and

testing resulted in QI initiatives being implemented too quickly before they were ready. As one participant stated, "*We were rushed to implement the changes because there just wasn't enough funding to properly plan or test the process. It felt like we were putting things in place without fully understanding if they would work, and that led to issues down the line*" (Participant-12). Additionally, when those involved in QI did not have adequate knowledge of QI and change management, they made QI planning and implementation choices that were not based on the best available evidence and best practices.

A Lack of Resources and Capabilities for QI Contributed to Inadequate Stakeholder Engagement and Buy-In

When there were insufficient resources, such as inadequate staffing and associated workload issues, there were limited opportunities for stakeholder participation and stakeholders were less likely to engage with and support QI initiatives. A lack of resources also contributed to the perception that the QI initiative was not a priority. When capabilities for QI were limited, staff also did not feel well-equipped to participate in or drive QI.

Firstly, inadequate staffing meant that existing staff were often overburdened with their regular duties, leaving little time or energy to participate in QI activities. This led to the perception that QI initiatives were an additional burden rather than an opportunity for improvement. When staff felt overwhelmed, they were less likely to be enthusiastic or committed to new initiatives, which reduced overall buy-in. As one participant noted, "*Most individuals are having to do more with less. And so it's common for many areas that you're stretched a bit thin and not wanting to engage*" (Participant-01).

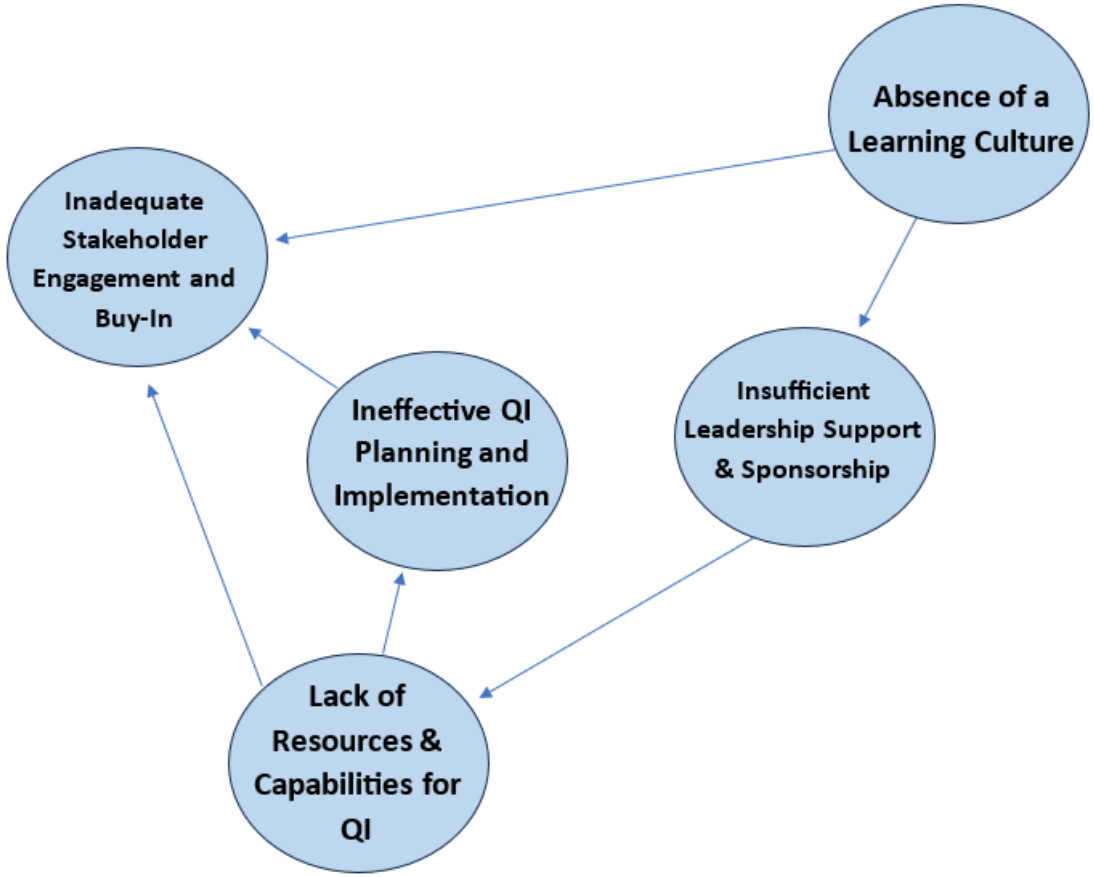

Figure 2. Complex Linkages Among QI Failure Antecedents

Secondly, when workload issues were prevalent, it created a stressful work environment. In such environments, staff prioritized immediate tasks over long-term improvement projects. This short-term focus hindered the successful implementation of QI initiatives, as staff did not see the immediate benefits of their involvement. Consequently, their engagement and agreement with the QI process diminished. As one participant stated, "*In some departments across the organization, when the workload is heavy, they focus on what's urgent. This stress makes it hard to commit to long-term improvement projects, and we don't see the immediate benefits, so our motivation drops*" (Participant-50).

Moreover, a lack of resources also meant insufficient training and development opportunities for staff. Without proper training, staff did not fully understand the QI processes or the benefits they could bring. This lack of understanding led to skepticism and resistance, further reducing engagement and buy-in. One participant highlighted this by saying, "*We don't have the resources to properly support the tool development process, which leads to skepticism and reduces overall engagement*" (Participant-15). Ultimately, this skepticism and lack of engagement severely undermined the success of QI initiatives, making it difficult to achieve meaningful improvements.

Ineffective QI Planning and Implementation Contributed to Inadequate Stakeholder Engagement and Buy-In

When front-line staff were not involved in the QI planning process, they felt less invested in the changes required, leading to reduced enthusiasm and commitment. As one participant noted, "*If you aren't engaging the people and the frontline, like the people that do the work to help you drive that change, then to me that's a failure of the quality process*" (Participant-15). Additionally, when the rationale behind the QI initiative was not well-communicated during both the planning and implementation phases, staff did not understand the importance or benefits of the changes, further

diminishing their willingness to support the initiative. This lack of involvement and communication created a disconnect between the staff and the QI goals, making it challenging to achieve the desired outcomes. Moreover, without proper engagement, staff viewed QI initiatives as top-down directives rather than collaborative efforts, which fostered resistance and skepticism. One leader highlighted this by saying, "*A big failure of a QI project is when you go into an environment where you're not welcomed and are perceived to come in with a top-down mandate, and you create that environment where you aren't welcomed*" (Participant-05). Ensuring that front-line staff are actively involved and well-informed throughout the QI process is crucial for fostering a sense of ownership and commitment to the changes being implemented.

Insufficient Leadership Support Contributed to Inadequate Stakeholder Engagement and Buy-In

When leaders do not actively support QI initiatives, it sends a clear signal to staff that these efforts are not a priority. This perceived lack of importance can lead to disengagement and a lack of enthusiasm among staff, who may feel that their efforts in QI are undervalued or unrecognized. As one participant noted, "*Without the support and attention from the VP and executive level, staff are less likely to engage with QI initiatives*" (Participant-31). Without strong leadership backing, QI initiatives may struggle to gain the necessary momentum and resources, further hindering their success. Additionally, the absence of visible and vocal support from leaders can create an environment where staff are less likely to commit to the changes required, as they may doubt the initiative's long-term viability and impact. Effective leadership is crucial in fostering a culture of continuous improvement, where staff feel motivated and supported to engage in QI activities. Leaders play a vital role in communicating the importance of QI, providing necessary resources, and recognizing the contributions of staff, all of which are essential for achieving successful outcomes. One participant emphasized this by saying, "*I'm a big believer that if you have bad leadership and*

ineffective leadership, you're going to have bad results or ineffective results" (Participant-34).

Insufficient Leadership Support Contributed to the Absence of a Learning Culture

When leaders did not actively normalize QI failures and emphasize the importance of learning from these failures, it created an environment where mistakes and problems were more likely to be hidden rather than openly discussed. This lack of transparency can prevent valuable lessons from being learned and shared, ultimately hindering the organization's ability to improve and innovate. As one participant noted, "*We're not very good at learning from failures in health care. We are generally scared to fail*" (Participant-26).

For example, when leaders do not openly acknowledge and address QI failures, staff feel discouraged from reporting issues or admitting mistakes. This can lead to a culture of fear and blame, where individuals are more concerned with avoiding repercussions than with contributing to meaningful improvements. In such an environment, opportunities for growth and development are missed, as the organization fails to capitalize on the insights gained from analyzing and understanding failures. One participant highlighted this by saying, "*We didn't obtain any meaningful information from our last improvement attempt, which ultimately classified it as a failure*" (Participant-01).

Furthermore, without strong leadership support, there may be insufficient encouragement for staff to engage in reflective practices and continuous learning. Leaders play a crucial role in fostering a culture that values experimentation, feedback, and iterative improvement. By failing to model and promote these behaviors, leaders inadvertently contribute to a stagnant culture where innovation is stifled, and progress is slow. One participant emphasized, "*When leaders don't document and learn from failures, it prevents us from improving and moving forward*" (Participant-38).

Insufficient Leadership Support Contributed to a Lack of Resources and Capabilities for QI

When leaders did not actively support or sponsor QI initiatives, there was no one to advocate for the necessary resources and ensure their proper allocation. This absence of leadership backing results in insufficient funding, inadequate staffing, and a lack of access to essential tools and training required for effective QI efforts. As one participant noted, "*We don't have support, and we don't have anyone to advocate for resources*" (Participant-43).

For example, without strong leadership support, QI initiatives may struggle to secure the financial resources needed for thorough planning, testing, and implementation. This can lead to poorly designed projects that are implemented hastily and without the necessary groundwork, ultimately compromising their success. Additionally, without leadership advocacy, there may be limited opportunities for staff to receive the training and development needed to build their QI capabilities. This lack of investment in staff development can hinder their ability to effectively contribute to QI efforts and stifle the organization's overall improvement potential.

Moreover, leaders played a crucial role in prioritizing QI within the organization. Without their support, QI initiatives were viewed as secondary to other operational demands, leading to a lack of focus and commitment. This can create a cycle where QI efforts are continually under-resourced and undervalued, making it difficult to achieve meaningful and sustained improvements. One participant emphasized, "*Lack of resources are something that we're seeing all across the board, especially when leaders do not push for it to fund QI initiatives*" (Participant-12).

3. Detecting QI Failure

An analysis of participant responses indicated that there are four methods leaders used to detect QI failure: (1) Leader observation and intuition, (2) Stakeholder feedback, (3) Performance

data, and (4) Team discussion. These methods are not mutually exclusive; participants often described how two or more of them synergistically pointed towards failure. The four methods are further described below.

The first method for QI failure detection was **leader observation and intuition**. Participants often described having a 'gut feeling' about impending failure or about the need to 'call it quits' based on their past experience and their observations of team dynamics, engagement, capacity, morale, and stress. One participant noted, "*It's more of a gut sense as to how engaged people are in the work and when to call it quits*" (Participant-17). Experienced leaders, particularly those deeply involved in QI initiatives, were confident in using their intuition and instinct alongside data to assess the performance of QI initiatives. While executives and middle managers leaned more on data, front-line leaders typically relied more on immediate, intuitive responses to detect or even predict failures.

The second method for QI failure detection was **stakeholder feedback**. Hearing from those directly impacted by the QI changes – particularly front-line staff and patients and their families – often helped leaders identify when QI was failing or likely to fail. Stakeholder feedback was heard through a combination of formal feedback mechanisms such as regular meetings and performance reviews as well as through informal conversations. One participant highlighted this by saying, "*We had scheduled regular feedback touch points where the key leaders of the initiative and the frontline staff would get together, review the cases, and assess how things are going, where are some gaps and what can we do to improve the QI initiatives*" (Participant-15).

The third method for QI failure detection was **performance data**. Data collection or audits were essential in assessing the impact of QI initiatives. When performance data showed little or no improvement, or even a decline in performance despite interventions, it signaled QI failure or the need for corrective action, such as re-designing the initiative or selecting more feasible goals and targets. One participant explained, "*You need to measure something. You need to know that there's*

been some sort of a change, whether it's a good one or not so good one" (Participant-28), while another noted, "*I knew it was a failure where there was no meaningful data that was obtained from the project*" (Participant-01). Executives and middle managers focused on long-term data trends and their strategic implications, while front-line leaders concentrated more on real-time data to address operational challenges and maintain team morale.

The fourth method for QI failure detection was **team discussion**. Detecting QI failure was rarely an individual process or decision by a leader. Rather the QI team often collectively came to that conclusion through team discussion and collectively determined how to respond. One participant emphasized, "*Discussing QI failure was a group decision. Sometimes there is a lot of frustration involved from the frontlines, and they drive the calls that are made*" (Participant-29).

4. Managing QI Failure

An analysis of participant responses indicated that there were three key strategies leaders used in combination to manage QI failure: (1) Understanding What Happened, (2) Communicating What Happened, and (3) Responding to What Happened. The three strategies and their associated actions are further described below.

Understanding What Happened

The first strategy leaders used to manage QI failure was to understand what happened. This involved: (1) Creating time and space to reflect and (2) Asking for help (e.g., from QI experts).

Creating time and space to reflect

First, participants stressed the importance of reflection and debriefing after a QI failure. Taking time to pause, reflect, and learn from the experience was seen as essential. One participant

noted, "*Reflection doesn't get enough credit or enough time. Leaders quickly move on to the next thing instead of debriefing what went wrong*" (Participant-03). Structured debriefing sessions, such as post-mortem or close-out meetings, were identified as key tools for evaluating failures and improving future efforts. As one participant explained, "*When things don't go well, we often fail to conduct a thorough post-mortem, or post-review analysis*" (Participant-15).

Creating a safe space for open dialogue and honest discussions was also highlighted, with an emphasis on psychological safety. One participant emphasized, "*The overall concept of not taking a sort of punitive lens towards any kind of quality initiative and saying this is shared learning is so important*" (Participant-46). Additionally, participants noted the need to allocate time for reassessment and re-evaluation of initiatives, as one stated, "*Make sure that you are protecting that time for assessment and re-evaluation of any initiative*" (Participant-38).

At different leadership levels, the approach to reflection and debriefing varied. Executives emphasized the need for formal, structured reflection processes. Middle managers focused on incorporating reflection into the process despite practical challenges, while front-line leaders prioritized immediate, practical debriefing.

Asking for Help (e.g., from QI Experts)

Participants also highlighted the value of involving QI experts and coaches. As one participant noted, "*One of the things that was key for us were the quality improvement coaches. So having really knowledgeable people who are really well-versed in the tools, the language, etc., are those CQI coaches because they are so well trained in those open-ended questions, and making sure that people understand the work*" (Participant-13). These experts guided teams, asked open-ended questions, and helped manage QI challenges.

Bringing in external experts or fresh perspectives was also seen as helpful, especially when

internal teams were out of ideas. One participant explained, "*I'm not bringing somebody else in because we're incompetent. I'm bringing in people who are specialized in improving quality in a particular health care setting*" (Participant-16).

Project managers and coordinators also played a key role in supporting QI initiatives. As one participant shared, "*When people have an opportunity to work with a project coordinator, they begin to learn skills that they can apply to the smaller things that they might execute on in their unit or within their teams*" (Participant-17).

Additionally, gaining support from senior leadership was important for delivering messages and creating an image of solidarity, as noted by one participant: "*Having that support from senior leadership sometimes to stand next to you to deliver that message is helpful*" (Participant-29).

Executives often sought external expertise for strategic initiatives, middle managers valued support from project managers and coordinators, while front-line leaders emphasized practical help and immediate support from colleagues and external experts.

Communicate What Happened

The second strategy leaders used to manage QI failure was to communicate what happened. This involved: (1) Communicating with providers and staff, (2) Framing the QI story or data for different stakeholder audiences, and (3) Downplaying QI failure.

Communicating with Providers and Staff

Effective communication and engagement were vital for managing QI failure. Participants highlighted the importance of keeping the team informed and involved throughout the process. As one participant noted, "*In my leadership journey, the biggest learning for me is engagement and communication when it comes to failures*" (Participant-04). Regular updates, open dialogues, and

transparency were key strategies. Another participant shared, "*We made it a priority to have regular check-ins, keep the lines of communication open, and be transparent about what was and wasn't working. This helped the team stay engaged and focused, even when things weren't going as planned*" (Participant-18).

Involving all relevant stakeholders, including front-line staff and physicians, was crucial. One participant emphasized, "*You have to bring in everybody who works on this unit, because they all have really great points. And even if it's just information sharing, the success of sustainability comes from full engagement with all people*" (Participant-29). Addressing the emotional and psychological aspects of QI failure was also key, with participants stressing the need for support and a positive atmosphere. As one participant explained, "*We need to create an environment where it's safe to say that something didn't go well or failed and discuss how to make it better*" (Participant-19).

While all levels of leadership recognized the importance of communication in managing QI failure, their focus varied. Executives prioritized strategic communication, middle managers focused on practical team communication, and front-line managers emphasized direct communication with staff. The approach to communication differed based on leadership level, with executives concentrating on high-level strategies and front-line managers focusing on immediate, hands-on dialogue.

Framing the QI Story or Data for Different Stakeholder Audiences

When failure occurs in QI initiatives, how leaders frame and communicate setbacks to different stakeholders is crucial. Participants noted that different groups of stakeholders view data and failure differently, which affects how they respond. One participant shared, "*Metrics are a very tough thing. Each stakeholder has a different opinion on what should be tracked and what the data*

tells you" (Participant-16). This underscored the importance of framing the failure in a way that resonated with each group's interests and needs, ensuring that the message about setbacks was constructive and aligned with their priorities. As another participant noted, "*Fine-tuning how you present and frame certain things for different groups can make the difference between achieving buy-in or willingness to help and change*" (Participant-16). This emphasized how crucial it was to adapt the framing to each audience to foster support and drive change. In fact, as one participant pointed out, the way data is also presented can significantly impact its effectiveness, "*Whether we are looking at patients, staff, or the broader community. The data tells a story, but without tailoring it to the proper audience, the data is useless*" (Participant-50).

Leaders used the framing of failure as an opportunity for growth to help different stakeholders understand that setbacks were part of the process. Rather than seeing failure as a negative, leaders communicated it as an essential learning experience. As one participant explained, "*When communicating setbacks, it's important to frame them as opportunities for growth. Without failure, we wouldn't progress or innovate*" (Participant-27). This helped stakeholders see the data not as a reflection of defeat but as valuable insights that would lead to improvement.

Framing QI as a trial-and-error process also played a key role in shifting the narrative. One participant shared, "*We made it clear that we're not expected to get everything right on the first try. We framed the journey as one of transformation rather than perfection*" (Participant-34). This approach encouraged stakeholders to view the failure in the data as a natural part of the learning and improvement cycle, rather than a setback that needed to be avoided at all costs.

Finally, how failure was framed varied depending on the audience. Executives needed to see how setbacks aligned with organizational goals and long-term strategies, so the failure was framed as a necessary step in achieving greater success. As one participant noted, "*We framed setbacks as key learning moments that directly tied into our broader goals, helping executives understand that*

these challenges were stepping stones to our long-term success" (Participant-50). Middle managers, who focused on operational aspects, were given practical explanations of how the setbacks would be addressed, while front-line leaders needed clear, actionable steps to keep teams motivated and engaged. By adapting the framing of the QI story to each stakeholder group, leaders ensured that failure was seen as an opportunity to refine the process and ultimately improve outcomes.

Downplaying QI Failure

Not all communication strategies emphasized transparency. Some leaders acknowledged that QI failures were sometimes minimized or reframed to maintain organizational credibility, protect staff morale, or avoid reputational damage. As one participant explained, *"…the idea of presenting a failure to my boss, superiors or otherwise, was very intimidating"* (Participant-49). Another noted, "*it doesn't feel, to me anyways in many of my experiences, where there is as open and honest conversation as there could be"* (Participant-15). A third participant described how a failure in a particular QI initiative appeared to be concealed: "*But then when it fell flat on its face, you know, there was no messaging out to the broader…team or the hospital that, 'Hey, this didn't work'"* (Participant-23). Together, these accounts highlights the political dimensions of QI failure communication, where the desire for openness and learning was often weighed against the perceived risks of admitting failure.

Respond to What Happened

The third strategy leaders used to manage QI failure was to respond to what happened. This involved: (1) Avoiding 'waste' by redesigning QI initiatives and redirecting resources, (2) Seeking ideas from providers/staff, and (3) Re-centering around a common QI goal/need.

Avoiding 'Waste' by Redesigning QI Initiatives and Redirecting Resources

When initiatives were not working as planned, participants emphasized the need to pivot or redesign strategies. One participant noted, "*There was a way to pivot and take some of that learning and see whether or not we could move it forward with a whole different group*" (Participant-02). This involved applying lessons learned from initial attempts to develop new approaches. Another participant mentioned, "*We went back to the A3 and some of the other supporting documents that we had created. We wouldn't have started off from scratch, but sort of refreshed it to see, if this isn't going to work, then what do we need to adjust or redesign so that we can make something work?*" (Participant-28).

Avoiding waste also involved making the best use of available resources. One participant highlighted, "*Knowing we had staffing resources, we had equipment, we have patients at other sites, and physicians that are taking their time to be available for this testing, we redesigned*" (Participant-16).

Seeking Ideas from Providers/Staff

Engaging a broad group of stakeholders ensured diverse perspectives and helped identify contributing factors to impending failure. One participant noted, "*You have to bring in everybody who works on this unit, because they all have really great points. And even if it's just information sharing, the success of sustainability comes from full engagement with all people*" (Participant-29). Regular meetings and continuous dialogue were crucial for maintaining transparency. Another participant mentioned, "*I set up weekly meetings. It was always just on Mondays from 8 to 9, but we always met to talk about peer learning*" (Participant-46). Another participant highlighted, "*The intent was that once we had redeveloped some of those tools and re-engaged the physician group, we would make a decision based on the feedback we got from those groups*" (Participant-15).

Reaching out to other hospitals and organizations for feedback on projects that did not work as planned was also invaluable. Some teams used open provincial forums for hospitals, where individuals shared experiences and provided input on what they did to overcome certain challenges in order to refine approaches and avoid repeating past mistakes. As one participant noted, "*And if we had any gaps or were missing any points, we would be comparing ourselves to them and would reach out*" (Participant-12). Lastly, empowering teams to speak up and share their insights when something was not working was crucial for managing QI failure. One participant shared, "*It's important to create a space where everyone feels comfortable speaking up. When there's a failure, it's the front-line staff who often have the best ideas on what went wrong and how to fix it*"" (Participant-50).

Re-centering Around Common QI Goal/Need

When QI initiatives fail, participants highlighted the importance of revisiting and realigning the team around core QI goals and objectives. One participant explained, "*When failure happens, it is crucial to take a step back and ensure everyone is on the same page with the problem statement. Revisiting the key goals and making sure everyone is moving in the same direction can help refocus the team and energize the process*," (Participant-17). Instead of moving forward without addressing the core issues, participants emphasized the value of going back to the drawing board, using methods like PDSA, to improve and adjust after failure. One participant shared that in the context of a project not working, "*If you're willing to go back and do the second cycle or the third cycle, more like a PDSA, then you're actually going to get there in the end*" (Participant-23).

Measuring progress and revisiting areas of failure also played a critical role in recentering around the common QI goal. As one participant highlighted, "*After a setback, we go back to the root cause, develop countermeasures, and measure what went wrong. Then, we observe if the*

adjustments have worked," (Participant-50). Re-centering also involved comparing current performance to benchmarks to maintain accountability, even after failure. One participant described that after a project failed to succeed, they started creating a monthly slide deck comparing their team's performance to corporate standards. This helped the team identify where they were falling short and where they needed to focus their efforts to improve (Participant-34).

During the re-centering process, different levels of leadership engage in distinct types of re-evaluation and adjustment. Executives emphasized strategic re-evaluation, ensuring alignment with core organizational goals and long-term objectives. Middle managers focused on practical re-evaluation, adapting to feedback and refining operational strategies. Front-line managers, on the other hand, prioritized immediate re-evaluation, making necessary adjustments in real-time to address issues as they arise.

5. Key Influencing Factors

We identified several factors that seemed to influence the relationship between QI failure antecedents and the process of QI failure detection, management, and outcomes. At the individual level, we identified optimism, locus of control, sense of accountability and responsibility, humility, and perceived politics as key factors. At the organizational level, we identified psychological safety; data availability; time, space, and resources for QI; and formal system procedures for QI as factors.

Individual Level

Optimism/Pessimism

The balance between optimism and pessimism played a crucial role in how leaders responded to QI failures. Participants who maintained an optimistic outlook, even in the face of setbacks, often viewed failures as part of a broader learning process. Rather than seeing failure as final, these leaders

emphasized its potential to generate insight and momentum. As one participant explained, "*Even when things don't go as planned, I try to remind the team that this is just one chapter, not the whole story. We've learned something valuable, and that puts us in a better position for the next attempt*" (Participant-50). This perspective allowed leaders to acknowledge failure without becoming discouraged, using it instead as a motivational force to pivot, reassess, and improve future efforts.

In contrast, when leaders were more pessimistic, their responses to failure were often characterized by frustration or a sense of resignation. These leaders tended to focus on what went wrong, which sometimes led to difficulties in moving forward. One participant shared that pessimism about a project's chances for success could contribute to a lack of action or abandonment of the initiative, "*We had this goal in mind…but the set of solutions were outside the sphere of influence of the improvement team*" (Participant-50). This view of failure as a more insurmountable obstacle often led to disengagement or an inability to reassess and find new pathways to success.

Thus, how managers approached failure—whether through an optimistic lens focused on learning and adaptation, or a pessimistic lens focused on limitations—shaped how they navigated setbacks and whether they could maintain momentum toward improvement.

Locus of Control

The concept of locus of control emerged as a significant influencing factor in how leaders responded to QI failures. Participants who perceived failures as within their control tended to approach setbacks with a mindset geared towards continuous improvement and learning. For instance, one participant highlighted the importance of differentiating between manageable adjustments and larger, uncontrollable failures: "*It's one thing to look at that PDSA cycle and assess whether or not you're achieving what you expected, making adjustments along the way. But when something major occurs in the environment you're working in, and you just can't proceed, that's*

when it feels like a larger failure, and you really need to step back and reassess" (Participant-02).

Conversely, when participants viewed failures as beyond their control, their responses were often characterized by a sense of resignation or acceptance. This was evident in cases where external factors, such as systemic issues or environmental changes, played a significant role. One participant noted, "*We had this goal in mind…but the set of solutions were outside the sphere of influence of the improvement team*" (Participant-05). Another participant echoed this sentiment, explaining that some projects were abandoned due to factors beyond their control: "*The reason they were abandoned weren't really around…They were factors outside of our control*" (Participant-19).

Sense of Accountability and Responsibility

A strong sense of personal accountability and responsibility was a key factor in how leaders responded to QI failures. Participants who felt a deep responsibility for the outcomes of initiatives tended to view setbacks as an opportunity to reassess and take ownership of the situation. For example, one participant explained that when assessing setbacks, "*We knew that every decision we made had a direct impact on our team's success and the organization's goals. It was our responsibility to ensure we were always acting in the best interest of everyone involved*" (Participant-50). This sense of personal and organizational duty encouraged leaders to take proactive steps to address failure, ensuring that they were transparent in their decision-making and committed to finding solutions.

In contrast, when leaders perceived a lack of accountability or responsibility, their responses to failure were often less decisive. Participants noted that when leaders failed to take ownership, it sometimes led to a diffusion of responsibility, where the failure was attributed to external factors or other teams. One participant highlighted this when discussing the challenges of leadership during failure, "*We're human, too, and we can't fix everything. It's about taking the time to explain the*

efforts you've made to try and solve this problem, even if you're unsuccessful" (Participant-29). Leaders who embraced responsibility, even in failure, were more likely to engage in open dialogue, creating a culture of trust and transparency within their teams. On the other hand, those who avoided accountability struggled to maintain team morale and engagement during setbacks.

Thus, the sense of accountability shaped how leaders approached failure—whether through a commitment to owning decisions and outcomes, or a more passive response, which could affect the team's ability to recover and continue their improvement efforts.

Humility

Leaders with humility were more likely to detect and manage QI failures because they were open about mistakes, which allowed for early recognition and constructive responses. One participant noted, "*You have to be able to say we failed. And if you can't say we failed, you're not going to learn from it*" (Participant-03). Humble leaders set aside their egos, acknowledged shortcomings, and created an environment where learning from failure was possible rather than avoiding or denying it. Another participant emphasized this point by stating, "*Model being open, kind and curious, but also humble and honest about things that aren't going so well*" (Participant-17). This mindset encouraged leaders to seek root causes, foster continuous improvement, and address failures in a proactive manner.

Humility also helped leaders manage the emotional aspects of failure, allowing them to maintain a constructive, forward-focused approach. One participant explained, "*We have to be able to have the humility with our teams to be able to say this didn't go well. We messed up here, but how do we make it better?*" (Participant-19). By framing failure as an opportunity for improvement rather than personal defeat, leaders fostered an open environment where teams felt safe discussing challenges and collaborating on solutions. This created a culture where failure was viewed as a

chance to learn, not something to be feared.

Moreover, leaders who demonstrated humility created a psychologically safe environment where team members felt comfortable discussing failures without fear of blame. One participant stated, "*We need to be very good at checking our egos at the door, and just having those open, honest conversations, and keeping the patient at the centre*" (Participant-15). This approach encouraged transparency and honest dialogue, which was essential for identifying and addressing QI failures effectively. Leaders who were open and vulnerable set a positive example, making it easier for their teams to do the same, resulting in better problem-solving and a stronger focus on continuous improvement.

Not taking things personally was also crucial for managing QI failures. Leaders who did not internalize setbacks fostered a collaborative, solution-oriented environment. One participant noted, "*One of the biggest things is when you're leading these projects, and you are not taking anything personal*" (Participant-24). This attitude was especially important when projects faced setbacks. Another participant added, "*You learn to not take things personally. You model that if a project gets deprioritized or if it gets scuttled for some reason, or resources or budgets say that they can't progress it anymore, then so be it. But we need to be confident from a QI point of view that we did everything we could have from a methodology point of view that should have been done*" (Participant-44). This approach led to a focus on learning and improving, rather than assigning blame or focusing on personal responsibility, ultimately helping teams address and learn from QI failures.

Perceived Politics

Leaders' perceptions of internal and external political dynamics seemed to influence how they detected and managed QI failures. When leaders viewed politics as an internal challenge to

navigate, they focused on managing relationships and making strategic decisions to reduce the impact of political dynamics on QI initiatives. For instance, one participant described how a senior leadership decision to exclude staff from a QI initiative made it harder to detect and address failure: "*When the [name of role] decided not to involve staff to avoid burdening them, it created difficulties in achieving meaningful change*" (Participant-02). In these cases, leaders who saw internal politics as manageable often worked to balance competing interests, such as union objections that created roadblocks: "*We have lots of union dialogue within our program... Typically, when you want to make any changes, there will be objections*" (Participant-13). Similarly, implementing QI changes in specialized units posed unique challenges, with one participant noting that a "*one-size-fits-all approach was not always effective*" (Participant-12).

In contrast, leaders who perceived politics as external or beyond their control often struggled to detect and manage QI failures, attributing them to external pressures like government mandates or legal risks. These leaders often felt powerless, leading to a sense of frustration. One participant described how the Ministry of Health's decisions caused the QI initiative to lose its focus on practical outcomes: "*The Ministry of Health initiative aimed at improving ED wait times became more political than practical*" (Participant-05). Similarly, concerns over privacy risks led to abandoning a QI initiative, as one participant noted, "*The risk of privacy breaches remained too high, leading to the abandonment of the initiative*" (Participant-04). When leaders saw these external pressures as insurmountable, failure often resulted in resignation, making it harder to adjust the initiative and address the core issues.

The lack of trust and political tension within teams also hindered leaders' ability to detect and manage QI failures. When staff felt they would face political consequences for speaking up, they were less likely to report issues. One participant explained, "*Sometimes people were afraid to speak up because they worried about the political consequences*" (Participant-50). This lack of

transparency made it harder for leaders to recognize potential failures and take corrective action.

Leaders' perceptions of physician autonomy also played a crucial role in how they managed and detected QI failures. In many healthcare settings, physicians hold considerable professional authority, and efforts to standardize or coordinate improvement initiatives can be seen as encroachments on that autonomy. When leaders viewed physicians as autonomous agents, with power to override organizational decisions, this dynamic became politically charged and their individual actions sometimes undermined collective QI goals. One participant highlighted how physicians, driven by financial incentives, disrupted the planned timeline for a QI initiative: "*Physicians unilaterally decided to book their first patients ahead of the determined go-live date because they wanted to increase the number of surgeries, which carries monetary benefits for them*" (Participant-15). In these situations, the political tension between professional autonomy and collective accountability made it difficult for leaders to detect failure early or intervene effectively. The actions of individual physicians, shaped by their own interests and protected by professional norms, often clashed with system-wide goals, creating friction that was as much political as operational. These individual-level challenges were mirrored at the team level, where disagreements over roles and responsibilities among healthcare professionals created further barriers to addressing QI failures, as one participant noted: "*There are often political issues around the role and scope of physicians and other interprofessional healthcare members in QI initiatives*" (Participant-43)." These political challenges blurred the lines of accountability, making it harder to detect and act on failures.

Political pressure from the community also shaped how leaders detected and managed QI failure. One participant described how political pressure to keep a unit open, despite concerns over care quality, made it difficult to address failures or even acknowledge them: "*There was a lot of outcry from the community, and we were mandated by the Ministry to remain open, even though we*

did not feel we were providing the best quality of care" (Participant-19). Leaders faced similar challenges when competing priorities within departments made it harder to focus on QI goals and detect failures. As one participant noted, "*We all have different perspectives, and trying to get your voice heard at the table in terms of competing needs can be a challenge. This is where some of the politics come into play*" (Participant-24). Political dynamics made it more difficult for leaders to address QI issues when different interests and priorities interfered with clear problem-solving.

Finally, cross-organizational collaboration presented additional political challenges that shaped how leaders detected and managed QI failures. Differences in organizational culture and risk tolerance between hospital sites meant that leaders had to continuously manage political dynamics, which complicated the identification of failure and the implementation of corrective actions. One participant described how varying comfort levels with risk across sites impacted their ability to focus on QI goals, "*Navigating two sites with different cultures and comfort levels with risk was challenging. It required constant refocusing on the problem statement and collaboration*" (Participant-38). These cultural and political differences made it more difficult for leaders to identify issues early on and act decisively, further complicating the management of QI failure.

Summary

The individual-level factors that shaped how leaders detected and managed QI failures included optimism and pessimism, locus of control, sense of accountability and responsibility, humility and perceived politics. Among these, four—optimism, an internal locus of control, a strong sense of accountability, and humility—were closely intertwined and appeared to reinforce one another. Leaders who approached failure with optimism were more likely to view setbacks as learning opportunities rather than dead ends, a perspective that aligned with a belief that outcomes were within their control. This internal locus of control, in turn, was often accompanied by a deep

sense of personal responsibility, motivating leaders to take ownership of challenges rather than deflect blame. Humility served as a critical underpinning of this mindset, enabling leaders to remain open to feedback, admit mistakes, and stay focused on team learning and improvement rather than personal success.

Organizational Level

Psychological Safety

Psychological safety seemed to shape how QI failures were detected, interpreted, and managed. When absent, it discouraged staff from taking risks, admitting missteps, or discussing failures openly. One participant noted, "*Organizationally, we have a culture that failure creates a certain antibody or doesn't make you feel psychologically safe*" (Participant-03). Other participants suggested that levels of psychological safety were not consistent across the organization. One participant observed, *"The difference between units was like night and day—some felt safe to speak up and learn, others operated under a cloud of fear that shut down any meaningful discussion of failure"* (Participant-13).

Whether there was a culture of openness or fear often depended on highly localized factors such as specific leadership styles, team dynamics, and accumulated experiences within individual units. In some teams, supportive leadership and established norms fostered an environment where failures could be openly discussed and addressed early, facilitating timely learning and course correction. In stark contrast, other units were described as having deeply entrenched fear and silence, where staff felt unable or unwilling to voice concerns without risking blame or reprisal. This stark variability meant that even within the same institution, staff's ability to detect, disclose, and manage QI failures was profoundly shaped by their immediate environment. Such disparities contributed to a fragmented organizational landscape, where pockets of psychological safety existed alongside zones

of disengagement and risk aversion, severely limiting organization-wide learning and improvement.

However, despite the presence of pockets of strong psychological safety, participants suggested that weak psychological safety was influenced by leadership behaviors and had the potential to spread. For example, one participant said, "*In our department, when the leader was harsh and quick to blame, it wasn't just our team that shut down. I saw how the angst spread to other units. People stopped speaking up, not just because of their own bosses, but because the silence and avoidance became contagious across the whole organization. It was like a ripple effect, where one area's worry turned into a system-wide withdrawal*" (Participant-50).

Data Availability

The availability of organizational data was a factor that seemed to explain how leaders responded to and managed QI failure. Without the necessary data to inform decision-making, it was difficult for leaders to assess the effectiveness of QI initiatives and make timely adjustments. One participant noted, "*There's no learning, no structure in the organization that captures the outcomes - whether it's the process or the outcomes themselves*" (Participant-43). This lack of data meant that successes were not identified or replicated, and failures went unexamined, preventing leaders from effectively responding to and managing QI failure.

With the necessary data, leaders were able to make informed decisions and address issues as they arose. One participant explained, "*I do find the auditing and the process observation very helpful because it's a quick way to say, Let's focus on it, and a quick way to say, Hey, this is not moving forward in the direction we had desired, how can we revamp and review it?*" (Participant-36). This highlights how, when data was available, it helped leaders make adjustments to QI initiatives, enabling them to identify when things were not progressing as planned and make the necessary corrections.

Time, Space, and Resources for QI

The availability of dedicated time, space, and resources was a crucial factor influencing how leaders responded to and managed QI failures. One participant noted, "*Resources for quality improvement are huge. If something falls off your plate, that's maybe not critical to the success of your unit or of your team, you have to think about how much time and energy you're going to have to resurrect or to chase down certain components when most leaders have more pressing things on their plates*" (Participant-01). When organizations allocated protected time for QI, leaders were better able to prioritize improvement efforts and address issues that arose during QI initiatives, rather than letting them slide due to competing demands. Adequate financial support and resources from departments such as HR and Finance were also vital in enabling leaders to confront and manage QI failures. With sufficient funding and organizational backing, leaders were more equipped to identify failures early and make necessary adjustments, increasing the likelihood of successful outcomes.

Formal System Procedures for QI

The presence or absence of formal, organization-wide procedures for planning, implementing, and reporting on QI seemed to influence how leaders detected, responded to, and managed QI failures. Several participants highlighted the importance of structured systems, noting that organizations with established QI procedures may be better equipped to identify breakdowns and adjust course effectively: "*Many organizations, especially academic organizations, have formal QI processes, review processes that are parallel to other review processes. These are essential for learnings*" (Participant-43). Yet, participants described a lack of consistent, system-wide approaches to QI in the organization. Formal governance structures were often absent or underdeveloped, which limited the organization's ability to respond proactively to failure. One participant commented, "*We were doing QI, but there wasn't a clear, structured way to report or reflect on outcomes—it was*

very ad hoc" (Participant-27). Without formal procedures, efforts were siloed, and lessons from both successes and failures were often lost.

The data indicated that formal, organization-wide procedures for planning, implementing, and reporting on QI were largely absent. While some departments had developed their own processes, there was no consistent, system-level approach in place. This lack of formal structure limited the organization's ability to systematically detect and respond to QI failures. One participant captured the potential value of these structures, noting that "*implementing structured processes and formal governance allows us to systematically learn from both our successes and failures, ensuring our efforts are strategically aligned and resources are optimally utilized*" (Participant-50). However, in the absence of such structures across the organization, efforts remained fragmented, and opportunities to detect QI failures and improvements were often missed. The findings reinforced the idea that organizations with formal procedures are likely to be better positioned to manage QI failure effectively than those without them.

6. QI Failure Outcomes

Participants described a range of consequences resulting from QI failures at the individual, team, and organizational levels. These outcomes included emotional strain, concerns about career progression for leaders, increased workloads, as well as reduced team morale, hesitancy toward future change efforts, and disruptions to organizational learning. Leaders often reported taking on additional responsibilities in response to failures, managing emotional fallout, and facing uncertainty regarding their professional reputation or advancement. At the team and organizational levels, participants noted that QI failures sometimes led to decreased engagement and motivation. Some participants also described how, despite these challenges, failure experiences contributed to learning and adaptation. For example, a few noted that recognizing failure as part of the QI process made

them more open to experimentation and better prepared to navigate future initiatives. Below, we outline key outcomes of QI failures at the individual level and the team and organizational levels.

Individual Level

Emotions and Self-Esteem

Several participants described experiencing emotional distress following QI failures, including feelings of guilt, shame, disappointment, and frustration. Some viewed admitting to failure as a personal setback that affected their self-esteem. One participant shared, "*Admitting to failure and publicizing failure is not good for anyone's self-esteem*" (Participant-01). Others expressed feelings of demoralization, particularly when they felt unsupported by senior leaders in the organization.

Moreover, the culture of continuous QI sometimes amplified these negative emotions. They described the pressure to demonstrate constant progress and the public visibility of QI efforts as factors that contributed to feeling exposed or vulnerable. Some reported concerns that acknowledging failure publicly could negatively affect how they were perceived by others in the organization, as this could undermine their credibility or authority. As one participant explained, "*Especially in our culture of continuous quality improvement, it truly sent a very wrong message to the team*" (Participant-04).

Some participants described how the emotional burden of QI failure affected their willingness to continue engaging in improvement efforts. One participant shared, "*People end up feeling like they poured their life blood into it, it didn't work. They got no support. They got no acknowledgement. Why bother?*" (Participant-43). Participants who expressed this view described feeling personally responsible for the failure, which they associated with reduced motivation and a decreased desire to persist in QI work.

Many participants also reported internalizing the failure, which they linked to a loss of confidence and diminished sense of competence. These emotional experiences were often intensified in environments lacking psychological safety, where fear of blame and punitive responses made it difficult to process setbacks constructively or seek support. One participant stated, "*And then we feel badly that we're not doing a good job. But there's no way we can do a good job*" (Participant-32). Participants who described this experience emphasized the frustration of trying to meet expectations while managing the emotional weight of unsuccessful initiatives.

Career Impact

Some participants described career-related concerns as a potential consequence of QI failure. They reported that admitting to and publicizing failures could negatively affect how they were perceived by superiors and potentially harm their career prospects. One participant explained, "*Admitting to failure and publicizing failure is not good for anyone's self-esteem, let alone possibly their career. So it's harder to tell your boss that you failed at something. You can use different words or synonyms for failure, but, again, if it's truly a failure and nothing was learned, that's probably hard to deal with*" (Participant-01). Participants who shared this perspective described difficulty in balancing honesty about setbacks with concerns about how these admissions might be received in organizational contexts where performance and success were highly visible.

Several participants described the difficulty of QI failure in relation to their desire to perform well in their professional roles. One participant explained, "*For me, everybody wants to perform highly in their job. So anytime that you can't achieve something, it's difficult*" (Participant-29). Participants who expressed this view reported that not meeting expectations, either their own or those of the organization, made QI failure particularly discouraging.

Some participants also described how fear of failure and its potential impact on career

progression influenced their willingness to take risks or pursue innovation. They reported concerns about how failure might affect their professional reputation and future opportunities for career advancement. One participant shared, "*I always think that if I fail, how will this look on me and my career. I don't think it will help me advance in the organization*" (Participant-50). These participants noted that stigma associated with failure contributed to decreased confidence, eroded credibility and increased their hesitancy in pursuing new ideas.

Increased Workload

Following a QI failure, several participants reported facing increased workloads, driven by the need to manage expectations and tensions within their teams. They described taking on responsibilities such as explaining what went wrong, managing the aftermath, maintaining ongoing operations, and requesting resources for redesigns. One leader noted, "*If it's not successful, you probably do need to spend some time explaining why you feel as the leader or why the data shows that it's not successful*" (Participant-01). Participants described the process of justifying outcomes and overseeing redesigns as time-consuming and demanding. In addition, some participants reported that job expectations shifted unexpectedly after a QI failure. These changes were described as contributing to team tension, especially when responsibilities were perceived as unevenly distributed. One participant explained, "*If you come to work expecting to do something, and your job has now changed, and you think you have more work than your buddy next to you, that creates tension*" (Participant-29).

Some participants described challenges in maintaining team morale following a QI failure. They reported spending additional time listening to team members, making them feel heard, and ensuring their suggestions were considered. This focus on team support occurred alongside the need to manage operational demands and respond to the consequences of the failed initiative. Participants

also noted the difficulty of balancing morale with the need to sustain daily operations. One participant explained, "*You have to make sure that morale stays high, and, you know, the day-to-day operations proceed*" (Participant-01). Participants who shared this view described feeling pulled between supporting their teams emotionally and meeting the organization's expectations for continuity and performance.

Individual Learning and Preparation for Future QI

Several participants reported that, following QI failures, they engaged in critical self-reflection that led them to reassess their strategies for planning, implementing, and managing initiatives. For many, this reflection fostered adaptive changes in practice. One participant explained: "*It wasn't just about fixing what went wrong, it was about turning that failure into a learning opportunity for myself. You had to reflect on what could have been done differently, recognize the signs earlier, and adapt your approach for future success*" (Participant-50). Through such reflective processes, participants described learning to identify early warning signs or "red flags" indicative of emerging problems, enabling more proactive and preventive responses in subsequent initiatives.

Another prominent theme was the reconceptualization of failure as a valuable learning experience. Several participants expressed a perspective that normalized failure, viewing it not as something to be avoided but as an essential component of growth and improvement. As one participant noted: "*Failure is the strongest teacher. But it takes a different mindset to accept that failure isn't a negative thing*" (Participant-15). These reflections were often linked to the development of personal resilience. Participants shared that confronting and learning from failure strengthened their capacity to manage future challenges. One participant remarked: "*You learn more from failures than from anything else*" (Participant-19).

In addition to individual learning, participants also described becoming more attuned to the

broader organizational and political context of QI work. Experiences with failure heightened their awareness of internal dynamics, such as stakeholder resistance and political factors that influence the progress of initiatives. As one leader shared: "*After a failure, I became more attuned to the political landscape. I understood that the ability to manage relationships and anticipate political hurdles was just as critical as any technical aspect of QI*" (Participant-13).

Changes in decision-making approaches also emerged as a consequence of failure. Participants reported reflecting on past decisions to identify contributing factors to unsuccessful outcomes, which informed more deliberate and informed decision-making in future initiatives. Some also described becoming more transparent with their teams, using open communication to navigate ongoing challenges and adjustments in QI work.

In summary, participants reported learning from QI failures across multiple domains, including strategic planning, implementation, early detection of issues, team communication, and political navigation. These reflections were central to the development of adaptive leadership practices and were seen as integral to professional growth and preparation for future QI efforts.

Team & Organizational Outcomes

Emotions and Morale

Participants described the emotional impact of QI failures on teams and organizations as significant, with many reporting lasting effects on morale and engagement. Several noted that failure in QI initiatives was discouraging and demoralizing for team members. One participant explained that when failure was discussed with the team, it felt "*very defeating*" for those involved (Participant-17). Some participants described a sense of shame surrounding QI failure. One participant noted, "*There's this cloak of shame around [QI failure]*" (Participant-43). This feeling was reported as compounding the emotional toll and making it more difficult for teams to recover

and maintain motivation. Participants also highlighted the discouragement that came from repeated attempts to address persistent challenges without success. One participant shared, "*I'm thinking about an indicator where we can't crack the nut. In other words, we try a bunch of things, and nothing seems to move it. And as a leader, that can be demoralizing for the team*" (Participant-05).

Some participants described a sense of wasted effort following a QI failure. One participant recounted that team members who had invested significant time and energy into a project felt their contributions were undervalued, particularly when their work was later replaced by automated processes. As one participant shared, "*I know some of the team members who had put some time and effort into that [QI project] and felt like their time had been wasted, given that they were now replaced by the automated printout*" (Participant-27). Participants who expressed this view noted that such experiences left individuals feeling as though their efforts were unrecognized, which negatively affected morale.

Some participants linked the emotional consequences of QI failure to broader organizational challenges. One participant described the ongoing emotional toll experienced by a team following the prolonged closure of a unit and the loss of experienced staff. They explained, "*And I think they're still coping with it now. They lost almost all of their experienced staff, including physicians and nurses, and a great deal of patients. The prolonged closure and the overall situation have been demoralizing for the team*" (Participant-19). This participant described how the combination of staff loss and the need to maintain patient care during a crisis had lasting effects on team morale, motivation, and confidence in their work.

Some participants described how the emotional toll of QI failure was compounded by widespread team fatigue and exhaustion, which they reported hindered the team's ability to recover and move forward. One participant explained, "*Staff right now are fatigued and exhausted. And I think a lot of it's coming post-COVID. So… And I won't say that they're not engaged in quality or*

improvement or safety, but it's not their forward focus right now" (Participant-42). Participants who shared similar views described how the persistent emotional weight of ongoing challenges and previous QI failures drained the team's energy and morale. While team members remained committed to QI in principle, participants reported that their capacity to sustain momentum and enthusiasm was diminished, making it harder to focus on new initiatives.

Some participants noted that these effects extended beyond isolated events, describing a broader pattern of discouragement, frustration, and fatigue. In these accounts, QI failure was associated with a longer-term decline in motivation and a sense of helplessness that persisted over time.

Openness to Experimenting, Risk-Taking, and Change

Participants described how their experiences with QI failures shaped their and their teams' openness to experimentation and risk-taking. Some leaders reported that fostering a culture that framed failure as a learning opportunity helped maintain enthusiasm for trying new approaches, even after unsuccessful attempts. One leader explained, "*We want to create an environment where it's safe to learn. If a change made does not result in an improvement, the conclusion is learning, and now what's next?*" (Participant-05). In such contexts, participants indicated that failure did not deter experimentation but instead reinforced values of learning, adaptability, and continued innovation.

In contrast, other participants described how fear of failure, especially in healthcare settings, limited their willingness to take risks following QI failures. One leader reflected, "*I think there's an inherent risk, adverse bias in organizations and in healthcare. Particularly, if you've come up through the ranks as a healthcare professional, we always had this philosophy that nothing bad's going to happen on my watch, and I'm going to make sure that I'm protecting that patient, the family member on the end of the gurney, or at the end of the IV pole, or whatever. So there's that… And*

there's that fear of failure" (Participant-34). Participants who expressed this view described how previous failures led to greater caution in future initiatives, with both leaders and teams becoming more hesitant to experiment or pursue change without substantial support and risk mitigation.

Learning and Preparation for Future QI

Participants frequently identified learning and preparation for future QI initiatives as key outcomes of failure, both at the team and organizational levels. Many described QI failures as opportunities for reflection, debriefing, and documenting lessons learned, which they viewed as essential for continuous improvement. As one participant explained, *"[Your team] experiences something once, and hopefully you take the time to learn from it so that it's not a repeat down the road. This is crucial for continuous quality improvement*" (Participant-17). Participants emphasized that learning from failure involved more than recognizing what went wrong—it also required a mindset that was open to growth. One leader stated, "*Learning takes both an opportunity to learn as well as an openness to learning. This is what helps us prepare for the future*" (Participant-01). Through these reflections, participants described how teams sought to avoid repeating the same mistakes and foster a culture of ongoing improvement within their organizations.

Chapter 5: Discussion

This study used inductive qualitative methods to explore how healthcare leaders navigated QI failures in their organization with a specific focus on how they detected and managed QI failures and what the associated influencing factors and perceived outcomes were. The results clarified the definition of QI failure and provided a conceptual framework to guide future research and practice. The conceptual framework outlines antecedents to QI failure, methods for detecting and managing QI failure, influencing factors at the individual leader and organizational levels, and outcomes of QI failure at the individual leader and organizational levels. Reflecting on the results, five key contributions stand out; this thesis: (1) defines QI failure more precisely, (2) reveals the emotional toll of QI failure on leaders and teams, (3), highlights the variation and fragility of psychological safety across microsystems, (4) links system-level QI governance with local psychological safety and learning, and (5) explains variation in the detection, management, and outcomes of QI failure. These five contributions are described in more detail below with supporting literature.

Defining QI Failure

Although the evidence shows that QI initiatives frequently fail, the QI literature itself has not clearly defined what constitutes "failure." Many papers use the term without explanation (Boguslavsky et al., 2019; Vaz & Araujo, 2022), while others imply failure through outcomes such as lack of integration or sustainability (Etheridge et al., 2014). In contrast, related literatures—including organizational learning, organizational change, and implementation science—offer more explicit definitions of failure, though with differing emphases (Cannon & Edmondson, 2001; Proctor et al., 2011; Schwarz et al., 2021). The absence of a clear and shared conceptualization of QI failure within the QI literature limits both practitioners and researchers: without a definition, it is difficult to systematically detect, address, or learn from failures.

This thesis advances the field by proposing a new, integrative definition of QI failure that combines insights from the literature with leaders' lived experiences: *"QI failure occurs when a QI initiative does not achieve or sustain its intended outcomes, causes unintended harm, or does not generate meaningful learning that can inform future improvement."* By explicitly incorporating learning as a criterion, this definition reframes failure not simply as the absence of results but as the absence of knowledge creation. This definition also broadens the scope of how QI success and failure are evaluated in practice. It encourages organizations to view learning as a meaningful outcome in its own right and positions failure as a potential source of progress rather than solely as a negative endpoint. As such, it provides a more useful benchmark for both evaluating QI efforts and for guiding future research and practice.

Revealing the Emotional Toll of QI Failure on Healthcare Leaders

Participants described the strong emotional toll and cascading emotional effects of QI failures at the individual, team, and organizational levels. Prior research highlights how healthcare delivery carries unique emotional demands, with failure often experienced as moral injury, particularly when healthcare professionals feel they have let down teams or patients (West et al., 2017; Shanafelt & Noseworthy, 2017). For example, the "second victim" literature underscores the importance of recognizing that healthcare professionals who make errors are often "second victims" who experience emotional distress and deserve support and understanding (Scott et al., 2010; Hu et al., 2012; Edrees et al., 2016; Yusof & Razali, 2024). The second victim experience can erode trust in leadership and organizational culture if it is poorly managed, with lingering effects on morale, motivation, and retention (Mathebula et al., 2022; Schiess et al., 2021; Lee et al., 2019; Scott, 2011).

Beyond the clinical domain, scholars examining organizational change failure have similarly documented that failed initiatives are not only technically challenging but also deeply emotionally

charged, often provoking disappointment, frustration, and even anxiety about the future (Edmondson, 2004, 2023; Caldwell & Hayes, 2016). These emotional dynamics are consequential because they influence whether organizations respond to setbacks defensively or use them as opportunities for reflection and growth. Leaders play a pivotal role in this process: studies suggest that when leaders acknowledge and validate negative emotions, regulate their own responses, and reframe failure as a constructive part of improvement, they are more likely to sustain team engagement, preserve momentum, and foster psychological safety (Edmondson, 1999, 2019; George, 2000; Carmeli & Gittell, 2009). Conversely, when emotional fallout is ignored or mismanaged, resistance, disengagement, and a culture of blame often take root, undermining both morale and organizational learning (Edmondson, 1999, 2019; George, 2000; Carmeli & Gittell, 2009).

This thesis aligns with these literatures describing the emotional effects of failures on leaders and healthcare professionals and highlights the importance of bridging research on failure in QI with broader organizational research on failure. Much of the existing work on failure in healthcare either describes failure generically or focuses specifically on clinical incidents, such as medical errors that occur at the point-of-care. The results from this dissertation suggest that a strong emotional toll is also experienced at the leadership level in relation to QI efforts, especially when QI failure is public, politically visible, or tied to strategic priorities. In these contexts, leaders not only shoulder their own emotional responses but also act as sensemakers and emotional regulators for others, amplifying the stakes of how failure is interpreted and managed. As such, this thesis opens up a new line of inquiry within the literature on QI and healthcare management by foregrounding the emotional experience of QI failure as both a personal burden for leaders and an organizationally consequential phenomenon. The thesis also suggests that research on QI failure should draw from theoretical and empirical research on emotions and failure in the broader fields of organizational change and learning.

Highlighting the Variation and Fragility of Psychological Safety Across Microsystems

This thesis demonstrated that psychological safety is not a uniform or stable organizational trait but instead varies across microsystems within a healthcare organization. It was shown to be fragile and reversible, shaped by leaders' responses to QI failure and the presence (or absence) of institutional supports. In high-safety microsystems, QI failures seemed to be surfaced and examined, enabling deeper forms of organizational learning (double-loop learning as per Argyris & Schön, 1997). In low-safety microsystems, QI failures seemed to be concealed or downplayed, limiting reflection and reinforcing superficial learning (single-loop learning as per Argyris & Schön, 1997).

While psychological safety is often operationalized as a relatively stable team-level construct (Edmondson, 1999, 2004), these findings highlight its variation and fragility across microsystems, reinforcing emerging scholarship that treats psychological safety as a dynamic, context-dependent condition requiring ongoing leadership attention (Edmondson & Lei, 2014; Frazier et al., 2017). Consistent with prior work, participants described psychological safety as unevenly distributed within and across the organization, shaped by localized leadership, team norms, and historical experiences (Nembhard & Edmondson, 2006; Carmeli et al., 2009). This aligns with the clinical microsystems literature, which emphasizes that small frontline teams are the critical locus for QI, as their social and technical dynamics determine whether failures are surfaced or suppressed (Nelson et al., 2002; Mohr et al., 2007; Vogus & Sutcliffe, 2007).

The results also underscored the reversibility of psychological safety: participants highlighted how inconsistent leadership or a punitive response could rapidly erode hard-won trust, producing "cascading fear" across units (cf. Speranza, 2021). Conversely, leaders who modeled vulnerability, admitted mistakes, and created protected spaces for dialogue were able to restore or reinforce psychological safety, even in high-pressure contexts (Edmondson, 1999; Carmeli & Gittell, 2009).

This aligns with recent findings by Ginsburg et al. (2025), which highlight how leadership influences QI implementation through relational and social processes such as listening, supporting, and mutual dependence. These findings also align with complexity leadership theory, which emphasizes enabling leadership to foster adaptive capacity in complex, emergent environments (Uhl-Bien et al., 2007), and sensemaking theory, which highlights leaders' role in integrating social cues and experience to shape future actions (Maitlis & Christianson, 2014).

This study reinforces existing literature on psychological safety but in a unique context – that of QI failure – and links psychological safety not only to whether leaders felt safe to speak up, but to whether teams and the organization at large were able to engage in deeper learning and systemic adaptation.

Linking System-Level QI Governance with Local Psychological Safety and Learning

This thesis shows that weak or absent governance structures for managing QI failure does more than reduce accountability or oversight: it actively erodes psychological safety and undermines organizational learning. Learning emerged as a central theme in participants' narratives, functioning as an antecedent to failure, a means for defining failure, a strategy for coping with failure, and an outcome of failure (Figure 1).

Reflection, debriefing, and documentation of lessons learned were seen as essential for avoiding repeat mistakes and fostering QI, however, these practices were inconsistently applied in the organization under study. Participants described a lack of clear structures and processes for reporting, documenting, and responding to QI failure and suggested this fostered disengagement, increased risk aversion, and reduced learning. Literature on organizational learning suggests the need for structured and systematized approaches to learning (Argyris & Schön, 1997; Senge, 1990; Uhl-Bien et al., 2007; Maitlis & Christianson, 2014), such as formal after-action reviews, protected

spaces for reflection and dialogue, and feedback loops that ensure insights are disseminated and acted upon (Edmondson, 1999; Ginsburg et al., 2009; Senge, 2006)..

This thesis also showed how gaps in governance shift the burden of QI failure onto individuals. Participants often compensated through discretionary effort, using personal initiative to fill structural voids. While these efforts temporarily maintained QI functions, they were emotionally taxing, inequitable, and unsustainable. This dynamic highlighted a hidden cost of weak governance: over-reliance on individual "heroics" that masks systemic problems while fueling burnout and fragmented learning (Maslach & Leiter, 2016). Without formal structures for QI failure coordination, reflection, and knowledge dissemination, teams struggled to translate individual insights into organizational learning, and emotional strain accumulated when failures recurred.

These dynamics highlight that effective management of QI failures is contingent on both formal governance structures and local leadership practices. In addition, participants emphasized that learning from failure is emotionally mediated: when reflection and institutional support were absent, frustration, guilt, and self-doubt intensified, contributing to burnout and reducing engagement with QI processes (Maslach & Leiter, 2016). Across organizational levels, these findings underscore that effective QI requires coordinated governance, culturally and emotionally intelligent leadership, and microsystem-level practices that embed learning into everyday operations, ensuring that failures become opportunities for improvement rather than sources of repeated error or emotional strain (Ginsburg et al., 2010; Yiu et al., 2025; Wolfson et al., 2009).

The broader literature on learning organizations reinforces this point: structural mechanisms such as feedback loops, open communication, and error-reporting systems are critical to sustaining improvement (Senge, 2006; Øvretveit, 2005; Berwick, 2008). Berwick's (1996) foundational claim that "every system is perfectly designed to get the results it gets" remains salient here, as these findings illustrate how poorly designed or absent governance structures produce not only technical

shortcomings but also emotional ambiguity, moral frustration, and disengagement.

Explaining Variation in the Detection, Management, and Outcomes of QI Failure

This thesis demonstrates that QI failure produces both negative and positive outcomes, from stress, low morale, and disengagement to learning, resilience, and preparation for future QI. Crucially, these outcomes are not inherent to the failure itself but contingent on a complex web of individual and organizational factors. Leaders' optimism, locus of control, and humility interacted with psychological safety and QI systems (or a lack thereof) to shape how failure was detected, managed, and ultimately experienced.

These findings resonate with a wide body of QI and implementation research. Scott et al. (2003) emphasize that effective QI requires alignment between individual motivation, organizational infrastructure, and culture change. Kaplan et al. (2010), reviewing more than 40 QI studies, similarly found that contextual factors such as leadership, culture, and data infrastructure determined whether initiatives endured or failed. Øvretveit et al. (2002) observed that QI collaboratives often faltered not due to technical design but because of inadequate attention to team dynamics, motivation, and cultural receptivity. Damschroder et al. (2009) highlight that successful change depends not only on the intervention itself but also on the organizational setting, climate, and readiness for implementation.

Insights from the organizational change literature further reinforce a broad array of factors that influence failure with some scholars emphasizing external constraints (Hannan & Freeman, 1977), others managerial choices and culture (Mellahi & Wilkinson, 2004; Sitkin, 1992), and still others the role of individual sensemaking and recovery (Shepherd, 2003; Ucbasaran et al., 2013). Collectively they underscore that the occurrence and outcomes of failure are contingent, not predetermined, on contextual factors and hinge on how leaders and teams interpret and respond to

breakdowns.

However, most of these bodies of literature treat individual and organizational factors as determinants of whether new QI initiatives, evidence-based practices, or organizational changes succeed in being implemented. The results of this dissertation suggest we move beyond that framing. The results demonstrate how the same factors not only predict whether QI efforts take root but also shape what happens when they falter. Specifically, it shows how leaders' dispositions, the presence or absence of psychological safety, and the design of QI systems, among other factors, influence how QI failures are detected, managed, and ultimately experienced by individuals, teams, and organizations.

Limitations

The proposed research study has limitations. First, it was conducted in only one health system, which limits generalizability. The results are transferable to other large healthcare systems and organizations in publicly funded healthcare systems, but may not be transferable to smaller healthcare organizations, such as community hospitals, which have fewer functions, staff, and resources. However, despite being situated within a single health system, the diversity of participant responses revealed substantial contextual variation across sites and roles. This heterogeneity may simulate the complexity typically observed in inter-organizational studies, thereby enhancing the transferability and relevance of the findings. Second, only formal leaders were included in the sample because they have the power, resources, and accountability to make decisions on QI. However, informal leaders also play an important role in change initiatives (Drew & Pandit, 2020). Third, there is potential for demographic bias if the sample does not fully represent the diversity of formal leaders within the health system with regard to factors such as age, gender, race/ethnicity, and clinical area. However, we did track clinical unit type during the recruitment process to ensure

diverse representation from different clinical areas. Additionally, the sample reflected a strong gender balance (58% female, 42% male) and included a wide range of leadership roles, years of experience, and QI training backgrounds, enhancing the overall diversity and richness of perspectives in the study. Fourth, there may be recall bias and social desirability bias due to the retrospective nature of data collection and the use of interviews as a data collection method. That said, this was a constructivist study in which we aimed to explore participant views and experiences; we did not seek to identify "truth" or a single reality since our paradigm acknowledges the existence of multiple realities. Fifth, this study collected data at one point in time. Finally, there is potential for researcher bias (Polit & Beck, 2014; Simundic, 2013) because the lead researcher works in healthcare and has QI and leadership experience. Her preconceived notions or expectations may have impacted the data collection, analysis, and interpretation processes. This bias could lead to selective attention to certain data that align with the researchers' beliefs, while overlooking or downplaying information that contradicts their views. To mitigate researcher bias, the student researcher actively reflected on their assumptions, beliefs, and potential biases throughout the research process. Engaging in self-reflection and seeking input from colleagues or mentors who hold diverse perspectives helped the student researcher identify and address their biases.

Practical Recommendations

The findings of this study indicate that healthcare organizations should give strategic priority to implementing the following seven key recommendations:

1. **Create a Centralized Digital Repository for Tracking and Sharing QI Failures to Support Accountability and Learning**

A centralized digital repository should be established to track and share information related to QI failures across the organization. This system would allow for documentation of

specific failures, the lessons learned, and the actions taken to address those failures. By centralizing this information, the organization can improve transparency, accountability, and promote a learning culture. Leaders can use this platform to identify patterns across different QI initiatives and develop strategies for mitigating similar issues in the future. Moreover, the repository will facilitate cross-departmental knowledge sharing, helping teams avoid reinventing the wheel and enabling faster, more efficient problem-solving.

Evidence from prior studies supports the value of centralized repositories in enhancing healthcare improvement efforts. A scoping review by Bytautas et al. (2017) identified 13 online repositories that shared QI interventions, underscoring the growing role of such systems in fostering collective learning across healthcare settings. These repositories, although variable in format, all served the purpose of documenting QI practices and disseminating lessons across organizations. In related work, Singer et al. (2015) emphasize the importance of organizational coherence, including shared goals, aligned processes, and collective sensemaking, for effective healthcare improvement. Although they do not specifically propose the use of a digital repository, the implementation of such a system directly supports the kind of coherence and collective learning they identify as essential for sustaining high-quality care (Singer et al., 2015). By ensuring that insights from QI efforts are accessible across departments and professional groups, a centralized repository contributes to a more integrated and responsive organizational learning environment.

Moreover, in their work on patient safety events, Ginsburg et al. (2009) highlight that organizational learning often stalls after the initial event analysis phase, with insufficient dissemination of lessons learned across the organization. By embedding both rigorous analysis and structured dissemination stages into a centralized repository, healthcare organizations can ensure that learning from QI failures is not siloed but effectively communicated and applied broadly.

2. Enforce Mandatory Reporting of QI Successes and Failures (via the Repository Above)

To ensure that learning from both successes and failures becomes ingrained in the organization's culture, it is essential to implement mandatory reporting of QI outcomes. Leaders should require teams to document both successful and unsuccessful initiatives in the centralized digital repository. By making this a formal requirement, organizations can create a culture where failure is normalized and viewed as an opportunity for improvement, not something to be hidden. This also allows senior leadership to stay informed of challenges at all levels of the organization, enabling them to provide timely support and resources when necessary.

Evidence from the broader field of patient safety underscores the importance of mandatory reporting systems. The Canadian Medical Protective Association (CMPA) emphasizes that reporting patient safety incidents and near misses is crucial for identifying system weaknesses and implementing safeguards to prevent future occurrences (CMPA, 2025). Their guidelines advocate for clear policies and dedicated personnel to manage these reports, highlighting the role of mandatory reporting in fostering a culture of safety and continuous improvement (CMPA, 2025). Furthermore, research on near-miss reporting in healthcare indicates that mandatory reporting systems can enhance organizational learning. A study highlighted by the Healthcare Excellence Canada discusses how reporting systems serve as tools to identify safety gaps and guide improvements, thereby advancing a patient safety culture (Feng et al., 2022).

3. Host Regular 'Learn Fast' Townhalls Where Failed QI Initiatives are Shared with a Focus on Identifying Transferable Learnings and Obtaining Feedback

Regular "Learn Fast" Townhalls should be held within the organization to openly discuss failed QI initiatives. These townhalls would allow leaders and teams to share their experiences, including the factors contributing to failure and the corrective actions taken. The primary focus

should be on identifying transferable learnings, what worked, what did not work, and how those insights can be applied to future projects. By encouraging open discussion and feedback from various stakeholders, the organization can build a collaborative environment where failure becomes a shared learning experience rather than an individual setback.

Research supports the value of town halls and open discussions of failure for driving organizational learning. Senge (1990) emphasizes that regular reflection and shared dialogue are key to developing learning organizations. In a similar vein, Edmondson (1999) argues that psychological safety is crucial for team performance, and creating spaces like townhalls where failure can be discussed openly without fear of retribution fosters a psychologically safe environment. This allows team members to provide constructive feedback, share insights, and collaborate on solutions. A town hall model, as demonstrated by Meny et al. (2021), has proven effective in engaging healthcare faculty in continuous QI by facilitating open discussions on data use, failures, and successes. The structured and collaborative nature of townhalls encouraged participants to reflect on data, share feedback, and create action plans for improvement, fostering a culture of accountability and learning (Meny et al., 2021). Additionally, a study by Etchegary et al. (2017) in Newfoundland and Labrador utilized community town halls to identify health research priorities. The study found that town halls provided a platform for the public to discuss shared concerns about their health and healthcare, allowing for the collection of rich, qualitative data that informed research planning. The authors noted that town halls facilitated discussions that might not have emerged through standard survey methods, highlighting their value in engaging diverse perspectives and fostering collaborative dialogue.

By establishing such open spaces, organizations can not only learn from past mistakes but also accelerate the continuous improvement of QI processes.

4. **Invest in Making Internal and External Experts Accessible for Mentorship, Coaching, and Advice Throughout the QI Process, Including During and After a Failure**

Leadership should prioritize access to mentorship, coaching, and advisory services from both internal and external experts in QI, change management, and behavior change. These experts can support leaders and teams throughout the entire QI process, from planning to post-implementation reflection. Having readily accessible experts during a QI failure ensures that leaders can pivot quickly, learn from mistakes, and implement corrective actions more effectively. By incorporating external perspectives and providing in-house support, leaders can better manage the complexities of QI and increase the likelihood of success in future initiatives.

Research demonstrates that expert guidance significantly improves QI outcomes, particularly in complex change management and behavioral shifts. For example, Donaldson et al. (2000) argue that expert advice helps organizations analyze failures, identify lessons, and implement corrective actions effectively. In addition, Fixsen et al. (2005) highlight that leaders benefit from external support when navigating the challenges of large-scale organizational change, helping them implement corrective actions more effectively. Furthermore, in healthcare settings, external mentors with expertise in QI and change management have been shown to enhance leadership capacity and improve team performance (Grol & Wensing, 2004). Providing access to such expertise ensures leaders can quickly pivot, learn from past mistakes, and drive sustained improvement in future initiatives. This approach also encourages a culture of continuous learning and adaptability, which is crucial for overcoming resistance and ensuring the success of QI efforts.

5. **Build a Framework or Template with Key Steps to Support Leaders with Detecting and Managing QI Failure**

Leaders would benefit from having a clear, actionable framework or template to guide them in identifying and managing QI failure. Such a framework should include steps for early

detection of potential failure points, risk mitigation strategies, and a structured approach to managing failure when it occurs, drawing from the results of this dissertation. It could also incorporate key steps identified in prior work on learning from patient safety events, including identification, analysis, communication, and dissemination (Ginsburg et al., 2009). The framework could also be customized to meet the specific needs and challenges of the organization. By having a standardized approach, leaders will be better equipped to navigate the complexities of QI initiatives, reduce the emotional and professional toll of failure, and increase the resilience of their teams.

6. Engage All Involved and Affected Stakeholders in Determining How to Respond to QI Failure and in Identifying Learnings from QI Failure

When a QI initiative fails, it is crucial to involve all relevant stakeholders, especially those who were directly impacted, in determining the response and identifying key takeaways. Engaging frontline staff, middle management, external partners, and patients and their families allows for a more holistic understanding of the failure and its impact. By involving everyone in the reflective process, the organization can gain a diverse range of insights and perspectives that might not be immediately apparent to leadership. This collaborative approach encourages shared ownership of the failure and ensures that the response is comprehensive and aligned with the needs of those affected.

There is strong evidence in the literature supporting the idea that engaging all involved and affected stakeholders in responding to QI failure and identifying learnings is essential for organizational improvement. For instance, Argyris (1999) emphasized the importance of involving all members of an organization in the reflective process to ensure that underlying issues are addressed and lessons are effectively learned. This inclusive approach not only supports shared ownership of the failure but also fosters a culture of learning and accountability. According to

Edmondson (1999), a collaborative environment where team members feel safe to share their insights without fear of blame enables a more thorough and accurate analysis of what went wrong and how to improve in the future. ISimilarly, Grol and Wensing (2004) found that engaging multiple stakeholders in QI helps to bridge the gap between management and frontline staff, ensuring that changes are practical and meaningful.

7. Creating a Culture of Psychological Safety and Learning Through QI Failures

Organizations should proactively foster a psychologically safe environment by ensuring that leaders consistently model openness to failure. This includes training and expecting leaders to transparently discuss their own experiences with QI setbacks and the lessons they gained. Leaders must demonstrate that failure is not only acceptable but a vital part of the improvement process. As emphasized by Edmondson (1999), when leaders are open about their own failures, it reduces fear among team members and encourages more honest communication. Similarly, Ginsburg et al. (2010) found that formal organizational leadership for safety is a strong predictor of whether learning from patient safety events is effectively translated into meaningful organizational change. Leadership development programs should integrate this expectation, and leaders should be held accountable for creating an environment where staff feel safe to share mistakes and raise concerns without fear of retribution. As Khatri et al. (2009) argue, blame cultures in healthcare can lead to the concealment of errors and undermine learning, while systems that support openness and reflection foster safer, more adaptive organizations. Embedding these principles into QI governance ensures that failure is not hidden or feared, but rather used as a powerful tool for growth and sustained organizational improvement.

To reinforce this cultural shift, organizations must implement structural and procedural changes that actively avoid blaming or shaming individuals or teams involved in QI failures.

Instead, processes should emphasize the learning potential of these experiences. For example, QI governance frameworks should require documentation of what was learned from failed initiatives, not just what went wrong. Policies and evaluation criteria should reward transparency and reflection over mere outcomes. As Argyris and Schön (1997) note, double-loop learning, where underlying assumptions and systems are questioned, is only possible in environments that prioritize inquiry over blame.

Implementation Considerations and Strategic Prioritization

Implementing the above recommendations represents a significant strategic undertaking that will require time, financial investment, leadership commitment, and cultural change, resources that many healthcare organizations may currently find in short supply. In resource-constrained environments, it is essential to approach this transformation with pragmatism, prioritizing actions that are both impactful and feasible in the short term while laying the groundwork for longer-term change. As an immediate step, the creation of a centralized digital repository (Recommendation 1) stands out as a foundational initiative. While it requires initial investment in digital infrastructure and governance, it serves as the linchpin for several of the other recommendations, such as mandatory reporting (Recommendation 2) and capturing learnings from failure (Recommendations 3, 5, and 6), thus amplifying its value across the system. Organizations might also achieve early wins by hosting low-cost, internally led “Learn Fast” Townhalls (Recommendation 3), which can be facilitated using existing meeting structures and provide a visible commitment to psychological safety and learning. Over time, more resource-intensive efforts, such as the integration of mentorship networks (Recommendation 4) and formal leadership development programs to embed a culture of psychological safety (Recommendation 7), can be incrementally introduced. Importantly, even small steps, like

documenting QI failures more systematically or creating informal spaces for reflection, can catalyze cultural change if modeled consistently by leadership. Tailoring the implementation strategy to the organization's current capacity, while maintaining a long-term vision for systemic learning, will be critical for translating these recommendations into sustainable improvement.

Chapter 6: Conclusion

This study set out to explore how healthcare leaders define, detect, and manage failure in QI initiatives—an area that, despite its relevance to both theory and practice, remains underexplored in the existing literature. While past research has emphasized leadership as a key driver of QI success, it has largely overlooked how leaders make sense of and respond to QI failure, particularly in complex, real-world healthcare settings. This gap is critical, as failure is not only an inevitable aspect of QI work but also a potentially valuable source of learning and adaptation. To address this, the study asked: *How do healthcare leaders define, detect, and manage failure in QI?* Sub-questions examined leaders' conceptualizations of failure, their methods for identifying it, the strategies they used to respond, and the individual and contextual factors that shaped these experiences.

Using a qualitative descriptive approach informed by a constructivist paradigm, the study drew on semi-structured interviews with 33 formal leaders at a large healthcare system, including executives, middle managers, and frontline leaders. Participants were selected based on their involvement in QI initiatives that were either abandoned or significantly redesigned. The analysis, conducted inductively using NVivo software, surfaced key themes that deepen our understanding of how QI failure is experienced, interpreted, and acted upon by leaders at various levels of the organization.

Findings revealed that QI failure was rarely clear-cut or easily defined. Leaders conceptualized failure in diverse ways, often tied to unmet expectations, stalled progress, misalignment with intended outcomes, and a lack of learning. Detection of failure was also multifaceted, involving both formal mechanisms like data metrics and informal signals such as team disengagement or stakeholder resistance. Many leaders described ambiguity around the point at which a QI effort was considered a "failure," with recognition emerging gradually rather

than at a single moment. In responding to QI failure, leaders employed a range of strategies, from reframing the narrative to fostering transparency, supporting team morale, and extracting lessons for future improvement work. Their responses were shaped by deeply personal and contextual factors, including their sense of accountability, humility, and ability to navigate organizational politics. Some participants approached failure as a catalyst for reflection and growth, whereas others described emotional distress, diminished self-esteem, and hesitancy to take future risks. Career-related concerns and increased workloads were also common, as leaders sought to justify outcomes, manage team expectations, and maintain organizational credibility.

At the team and organizational levels, QI failure often led to reduced morale, frustration, and disengagement, particularly when failure was not openly acknowledged or when lessons were not systematically captured. However, in some settings, failure was embraced as a normal part of the learning cycle, particularly when supported by psychologically safe environments and clear debriefing processes. Leaders emphasized the importance of organizational structures that enable experimentation, protect against the stigma of failure, and prioritize learning over blame.

This dissertation contributes both conceptually and practically. Conceptually, it offers an explicit definition of QI failure and a descriptive model of how leaders define, detect, and manage QI failure, as well as the influencing factors and outcomes, thereby addressing a major gap in the literature. The results illustrate that QI failure, though often hidden or stigmatized, is an integral part of QI work, and that failure is a process, not an event, shaped by evolving interpretations, personal leadership attributes, and organizational context. Practically, the findings suggest that healthcare organizations must invest in structures that support open dialogue about failure, equip leaders with tools to navigate its emotional and political dimensions, and ensure that learning is systematically captured and shared. Taken together, these insights provide a foundation for further exploration and action.

Future Research

This study opens several avenues for future research to deepen our understanding of leadership during QI failure and contribute to the ongoing development of leadership and performance improvement theories in complex organizational contexts within healthcare. Given the inherent ambiguity, political nature, and emotional burden associated with failed QI initiatives (Langley & Denis, 2011; Burke & Marang-Van De Mheen, 2021), future research should examine leadership behaviors and sensemaking processes across diverse settings and over time.

One important direction is to investigate how different modes of complexity leadership, particularly enabling and adaptive leadership, influence organizational and clinical outcomes following QI failure. These leadership modes, which emphasize facilitating emergent change and fostering adaptive capacity (Uhl-Bien et al., 2007; Marion & Uhl-Bien, 2011), may be critical in navigating the aftermath of failure. Future studies could explore whether and how these leadership behaviors mitigate the negative consequences of failure, promote psychological safety, and stimulate organizational learning. Comparative studies across healthcare systems with differing governance structures and cultures (Fulop & Robert, 2013) could help elucidate how contextual factors shape the effectiveness of these leadership responses.

In parallel, further research should focus on how leaders make sense of QI failure over time, including how their interpretations evolve, how they frame failures to others, and how these narratives influence future decision-making and risk appetite. This would advance understanding of the cognitive and emotional dimensions of leadership in dynamic healthcare environments, building on existing work in sensemaking theory (Weick et al., 2005; Maitlis & Christianson, 2014). Longitudinal, interpretive studies could illuminate how different sensemaking styles (e.g., charismatic, ideological, pragmatic; Crayne & Medeiros, 2021; Mumford, 2006) manifest in real-world QI contexts, and how they influence not only team morale but also future strategy and

innovation.

In addition to formal leadership roles, future research should also attend to the role of informal leaders, those without designated authority but who shape organizational responses through expertise, social capital, or moral authority. Informal leadership is central to complexity leadership theory, which emphasizes emergent and distributed leadership as a driver of system adaptation (Uhl-Bien et al., 2007). Studying how these actors influence the interpretation and management of QI failure, especially in high-stakes or ambiguous situations, could expand our understanding of leadership dynamics in complex systems.

Another important area for further investigation concerns demographic and identity-based dimensions of leadership, including how characteristics such as professional background, gender, ethnicity, and career stage may influence how leaders interpret and respond to failure. These variables may interact with leadership styles and risk tolerance, affecting both how failure is framed and how psychological safety is cultivated. Investigating these dimensions could inform more inclusive and equitable leadership development in healthcare improvement.

To better understand these complex dynamics, future research should prioritize prospective and longitudinal designs. For instance, prospective studies of high-risk QI initiatives could involve a combination of in-depth interviews, ethnographic observation, and document analysis to trace how leaders and teams interpret and respond to unfolding events. Such studies could generate rich insights into the micro-dynamics of leadership, decision-making, and learning during failure. Longitudinal research, in particular, is essential to capture the delayed or recursive effects of failure on subsequent improvement efforts and cultural change (Burke & Marang-Van De Mheen, 2021; De Keyser et al., 2021).

Finally, the findings from this study may contribute to theory development in several key areas. First, they offer the potential to refine complexity leadership theory by elucidating how

enabling leadership operates in failure contexts, where psychological safety and emotional resilience are especially critical. Second, they may enrich sensemaking theory by highlighting the temporal and emotional trajectories of how leaders construct meaning around failure. Third, by integrating elements of learning theory, especially concepts such as double-loop learning and adaptive learning, future research can further clarify how leaders and their teams revise their assumptions and structures in response to failed improvement efforts. Finally, understanding how leaders foster psychological safety in the wake of failure may offer new theoretical insights into the interplay between leadership, trust, and learning climates in healthcare.

In sum, future research should build on this study by employing robust, theory-informed, and context-sensitive methodologies to explore how leaders navigate the complex, often painful terrain of QI failure. Such work is vital not only for advancing theory but also for supporting leaders in creating systems that are safer, more adaptive, and more humane.

References

Aarons, G, A, Hurlburt, M., & Horwitz, S, M (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. Administration and Policy in Mental Health, 38 (1), 4–23. *Adler*, *1132*, 1141.

Agote, L., Aramburu, N., & Lines, R. (2016). Authentic leadership perception, trust in the leader, and followers' emotions in organizational change processes. *The Journal of Applied Behavioral Science*, *52*(1), 35–63.

Albliwi, S., Antony, J., Lim, S. A. H., & van der Wiele, T. (2014). Critical failure factors of Lean Six Sigma: a systematic literature review. *International Journal of Quality & Reliability Management*, *31*(9), 1012-1030.

Adler, P. A., & Adler, P. (1987). *Membership roles in field research* (Vol. 6). Sage.

Algahtani, A. (2014). Are leadership and management different? A review. *Journal of management policies and practices*, *2*(3), 71-82.

Ali, J., Jusoh, A., Abbas, A. F., & Nor, K. M. (2021). Global trends of service quality in healthcare: A bibliometric analysis of scopus database. *Journal of Contemporary Issues in Business and Government Vol*, *27*(1), 2917-2930.

Ali, S., Thomson, D., D Graham, T. A., Rickard, S. E., & Stang, A. S. (2017). High stakes and high emotions: providing safe care in Canadian emergency departments. *Open Access Emergency Medicine*, 23-26.

Anthony, T., Murray, B. W., Sum-Ping, J. T., Lenkovsky, F., Vornik, V. D., Parker, B. J., ... & Huerta, S. (2011). Evaluating an evidence-based bundle for preventing surgical site infection: a randomized trial. *Archives of Surgery*, *146*(3), 263-269.

Antony, J., Downey-Ennis, K., Antony, F., et al., (2007), "*Can six sigma be the 'cure' for our 'align' NHS?*", Leadership in Health Services, Vol. 20 No. 4, pp. 242-253, doi: 10.1108/17511870710829355.

Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization science*, *22*(5), 1123-1137.

Argyris, C., & Schön, D. A. (1997). Organizational learning: A theory of action perspective. *Reis*, (77/78), 345-348.8

Argyris, C. (1999). On organizational learning. Blackwell Publishing.

Asselin, M. E. (2003). Insider research: Issues to consider when doing qualitative research in your own setting. *Journal for Nurses in Professional Development*, *19*(2), 99-103.

Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviors. *The journal of applied behavioral science*, *44*(1), 48-70.

Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human resource management*, *48*(5), 677-693.

Backhouse, A., & Ogunlayi, F. (2020). Quality improvement into practice. *BMJ*, *368*.

Baer, M., & Frese, M. (2003). Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *24*(1), 45-68.

Baker, D. P., Day, R., & Salas, E. (2006). Teamwork as an essential component of high-reliability organizations. *Health services research*, *41*(4p2), 1576-1598.

Baran, B. E., & Scott, C. W. (2010). Organizing ambiguity: A grounded theory of leadership and sensemaking within dangerous contexts. *Military Psychology*, *22*(sup1), S42-S69.

Batalden, P. B., & Davidoff, F. (2007). What is "quality improvement" and how can it transform healthcare? *Quality and Safety in Health Care*, *16*(1), 2–3. https://doi.org/10.1136/qshc.2006.022046

Bate, P., Mendel, P., & Robert, G. (2008). Organizing for quality: The improvement journeys of leading hospitals in Europe and the United States. Radcliffe Publishing.

Behzadifar, M., Bragazzi, N. L., Arab-Zozani, M., Bakhtiari, A., Behzadifar, M., Beyranvand, T., ... & Gorji, H. A. (2019). The challenges of implementation of clinical governance in Iran: a meta-synthesis of qualitative studies. *Health research policy and systems*, *17*, 1-14.

Berenholtz, S. M., & Pronovost, P. J. (2014). Barriers to translating evidence into practice. Current opinion in critical care, 20(6), 632-638. DOI: 10.1097/MCC.0000000000000163.

Bernard, H. R. (1995). *Research methods in anthropology*. AltaMira Press.

Bernard, H. R. (2000). *Social research methods*. Sage Publications.

Berta, W., Cranley, L., Dearing, J. W., Dogherty, E. J., Squires, J. E., & Estabrooks, C. A. (2015). Why (we think) facilitation works: insights from organizational learning theory. *Implementation science*, *10*, 1-13.

Berwick, D. M. (2008). The science of improvement. *JAMA*, *299*(10), 1182–1184. https://doi.org/10.1001/jama.299.10.1182

Berwick, D. M. (1996). A primer on leading the improvement of systems. *Bmj*, *312*(7031), 619-

622.

Bledow, R., Rosing, K., & Frese, M. (2013). A dynamic perspective on affect and creativity. *Academy of Management Journal*, *56*(2), 432-450.

Boguslavsky, V., Gutierrez, R., & Holschneider, S. (2019). Effective Leadership for Quality Improvement in Health Care A Practical Guide. *Published by USAID ASSIST Project. Chevy Chase. MD: University Research CO (LLC) URS*.

Bono, J. E., Glomb, T. M., Shen, W., Kim, E., & Koch, A. J. (2013). Building positive resources: Effects of positive events and positive reflection on work stress and health. *Academy of Management Journal*, *56*(6), 1601-1627.

Bosk, C. L. (2003). *Forgive and remember: managing medical failure*. University of Chicago Press.

Brandrud, A. S., Schreiner, A., Hjortdahl, P., Helljesen, G. S., Nyen, B., & Nelson, E. C. (2011). Three success factors for continual improvement in healthcare: an analysis of the reports of improvement team members. *BMJ Quality & Safety*, *20*(3), 251-259.

Brannick, T., & Coghlan, D. (2007). In defense of being "native": The case for insider academic research. *Organizational research methods*, *10*(1), 59-74.

Brown, C., Hofer, T., Johal, A., Thomson, R., Nicholl, J., Franklin, B. D., & Lilford, R. J. (2008). An epistemology of patient safety research: a framework for study design and interpretation. Part 3. End points and measurement. *BMJ Quality & Safety*, *17*(3), 170-177.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brehm, J., & Rahn, W. (1997). Individual-level evidence for the causes and consequences of social capital. *American journal of political science*, 999-1023.

Bunderson, J. S., & Boumgarden, P. (2010). Structure and learning in self-managed teams: Why "bureaucratic" teams can be better learners. *Organization Science*, *21*(3), 609-624.

Burke, R. E., & Marang-Van De Mheen, P. J. (2021). Sustaining quality improvement efforts: emerging principles and practice. *BMJ quality & safety*, *30*(11), 848-852.

Burke, W. W. (2023). *Organization change: Theory and practice*. Sage publications.

Bytautas, J. P., Gheihman, G., & Dobrow, M. J. (2017). A scoping review of online repositories of quality improvement projects, interventions and initiatives in healthcare. *BMJ quality & safety*, *26*(4), 296-303.

Caldwell, C., & Hayes, L. A. (2016). Self-efficacy and self-awareness: moral insights to increased leader effectiveness. *Journal of Management Development*, *35*(9), 1163-1173.

Cannon, M. D., & Edmondson, A. C. (2005). Failing to learn and learning to fail (intelligently): How great organizations put failure to work to innovate and improve. *Long range planning*, *38*(3), 299-319.

Carbonell, C., Adegbulugbe, A., Cheung, W., & Ruff, P. (2024). Barriers and Challenges to Implementing a Quality Improvement Program: Political and Administrative Challenges. JCO Global Oncology, 10, e2300455.

Carcary, M. (2009). The research audit trial—enhancing trustworthiness in qualitative inquiry. *Electronic journal of business research methods*, *7*(1), pp11-24.

Carmeli, A., Tishler, A., & Edmondson, A. C. (2012). CEO relational leadership and strategic decision quality in top management teams: The role of team trust and learning from failure. *Strategic Organization*, *10*(1), 31-54.

Carmeli, A. (2007). Social capital, psychological safety and learning behaviours from failure in organisations. *Long range planning*, *40*(1), 30-44.

Carmeli, A., & Gittell, J. H. (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *30*(6), 709-729.

Carmeli, A., Brueller, D., & Dutton, J. E. (2009). Learning behaviours in the workplace: The role of high-quality interpersonal relationships and psychological safety. *Systems Research and Behavioral Science: The Official Journal of the International Federation for Systems Research*, *26*(1), 81-98.

Carmeli, A., & Sheaffer, Z. (2008). How learning leadership and organizational learning from failures enhance perceived organizational capacity to adapt to the task environment. *The Journal of Applied Behavioral Science*, *44*(4), 468-489.

Carroll, J. S., & Edmondson, A. C. (2002). Leading organisational learning in health care. *BMJ Quality & Safety*, *11*(1), 51-56.

Carstensen, K., Kjeldsen, A. M., & Nielsen, C. P. (2024). Distributed leadership in health quality improvement collaboratives. *Health care management review*, *49*(1), 46-58.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage Publications.

Chassin, M. R. (2013). Improving the quality of health care: what's taking so long?. *Health Affairs*, *32*(10), 1761-1765.

Christoff, P. (2018). Running PDSA cycles. *Current problems in pediatric and adolescent health care*, *48*(8), 198-201.

Chughtai, M. S., Syed, F., Naseer, S., & Chinchilla, N. (2023). Role of adaptive leadership in learning organizations to boost organizational innovations with change self-efficacy. *Current Psychology*, 1-20.t

Church, S. P., Dunn, M., & Prokopy, L. S. (2019). Benefits to qualitative data quality with multiple coders: Two case studies in multi-coder data analysis. *Journal of Rural Social Sciences*, *34*(1), 2.

Clavel, N., Pomey, M. P., & Ghadiri, D. P. (2019). Partnering with patients in quality improvement: towards renewed practices for healthcare organization managers?. BMC health services research, 19, 1-12.

Canadian Medical Protective Association (CMPA). (n.d.). *Reporting patient safety incidents and near misses*. Retrieved May 17, 2025, from https://www.cmpa-acpm.ca/en/advice-publications/handbooks/quality-improvement-and-accountability-reviews-learning-from-patient-safety-incidents-and-near-misses/reporting-patient-safety-incidents-and-near-misses

Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation science*, *7*(1), 37.

Coles, E., Anderson, J., Maxwell, M., Harris, F. M., Gray, N. M., Milner, G., & MacGillivray, S. (2020). The influence of contextual factors on healthcare quality improvement initiatives: a realist review. *Systematic reviews*, *9*, 1-22.

Coles, E., Wells, M., Maxwell, M., *et al.,* (2017), "*The influence of contextual factors on healthcare quality improvement initiatives: what works, for whom and in what setting? Protocol for a realist review*", Systematic Reviews, Vol. 6 No. 1, doi: 10.1186/s13643-017-0566-8.

Cowie, J., Campbell, P., Dimova, E., Nicoll, A. and Duncan, E., A., S. (2018), "*Improving the sustainability of hospital based interventions: a study protocol for a systematic review*", BMJ Open, Vol. 8 No. 9, doi: 10.1136/bmjopen-2018-025069.

Collins, C. J., & Smith, K. G. (2006). Knowledge exchange and combination: The role of human resource practices in the performance of high-technology firms. *Academy of management journal*, *49*(3), 544-560.

Cowie, J., Nicoll, A., Dimova, E. D., Campbell, P., & Duncan, E. A. (2020). The barriers and facilitators influencing the sustainability of hospital-based interventions: a systematic review. *BMC health services research*, *20*, 1-27.

Crayne, M. P., & Medeiros, K. E. (2021). Making sense of crisis: Charismatic, ideological, and pragmatic leadership in response to COVID-19. *American Psychologist*, *76*(3), 462.

Creswell, J. W., & Miller, D. L. (2000). Getting good qualitative data to improve educational practice, Theory Into Practice, 39(3), 124-130.

Creswell, J. W. (1998). Qualitative inquiry and research design: Choosing among five traditions. London: Sage Publications.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of management review*, *24*(3), 522-537.

Cruess, S. R., Cruess, R. L., & Steinert, Y. (2008). Role modelling—making the most of a powerful teaching strategy. *Bmj*, *336*(7646), 718-721.

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation science*, *4*, 1-15.

Dahlin, K. B., Chuang, Y. T., & Roulet, T. J. (2018). Opportunity, motivation, and ability to learn from failures and errors: Review, synthesis, and ways to move forward. *Academy of Management Annals*, *12*(1), 252-277.

De Brún, A., O'Donovan, R., & McAuliffe, E. (2019). Interventions to develop collectivistic leadership in healthcare settings: a systematic review. *BMC Health Services Research*, *19*, 1-22.

De Keyser, B., Guiette, A., & Vandenbempt, K. (2021). On the dynamics of failure in organizational change: A dialectical perspective. Human Relations, 74(2), 234-257.

De Smet, A., Rubenstein, K., Schrah, G., Vierow, M., & Edmondson, A. (2021). Psychological safety and the critical role of leadership development. *McKinsey and Company, February*, *11*.

de Vries, M. S., & de Vries, M. S. (2021). Repetitive reorganizations, uncertainty and change fatigue. Public Money & Management, 43(2), 126-135.

De La Perrelle, L., Radisic, G., Cations, M., Kaambwa, B., Barbery, G., & Laver, K. (2020). Costs and economic evaluations of quality improvement collaboratives in healthcare: a systematic review. *BMC health services research*, *20*, 1-10.

Deming, W. E. (1986). Principles for transformation. *Out of the Crisis*, *18*, 96.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. sage.

Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open?. *Academy of management journal*, *50*(4), 869-884.

Detert, J. R., & Edmondson, A. C. (2011). Implicit voice theories: Taken-for-granted rules of self-censorship at work. *Academy of management journal*, *54*(3), 461-488.

Devine, E. B., Van Eaton, E., Zadworny, M. E., Symons, R., Devlin, A., Yanez, D., ... & Tarczy-Hornoch, P. (2018). Automating electronic clinical data capture for quality improvement and research: the CERTAIN validation project of real world evidence. *eGEMs*, *6*(1), 8.

Dewan, M., Parsons, A., Tegtmeyer, K., Wenger, J., Niles, D., Raymond, T., ... & Wolfe, H. (2021). Contextual factors affecting implementation of in-hospital pediatric CPR quality improvement interventions in a resuscitation collaborative. *Pediatric Quality & Safety*, *6*(5), e455.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, *48*(2), 147-160.

Dixon-Woods, M. (2019). How to improve healthcare improvement—an essay by Mary Dixon-Woods. BMJ quality & safety, 20(6), 551-557. DOI: 10.1136/bmjqs.2011.006082

Dixon-Woods, M., & Martin, G. P. (2016). Does quality improvement improve quality?. *Future Hospital Journal*, *3*(3), 191.

Dixon-Woods, M., McNicol, S., & Martin, G. (2012). Ten challenges in improving quality in healthcare: lessons from the Health Foundation's programme evaluations and relevant literature. *BMJ quality & safety*, *21*(10), 876-884.

Dixon-Woods, M., McNicol, S., & Martin, G. (2012). Ten challenges in improving quality in healthcare: lessons from the Health Foundation's programme evaluations and relevant literature. *BMJ quality & safety*, *21*(10), 876-884.

Dixon-Woods, M., McNicol, S., & Martin, G. (2014). Ten challenges in improving quality in healthcare: Lessons from the Health Foundation’s programme evaluations and relevant literature. BMJ Quality & Safety, 23(10), 877–884. https://doi.org/10.1136/bmjqs-2014-003474

Dixon-Woods, M. A. R. Y., Bosk, C. L., Aveling, E. L., Goeschel, C. A., & Pronovost, P. J. (2011). Explaining Michigan: developing an ex post theory of a quality improvement program. *The Milbank quarterly*, *89*(2), 167-205.

Donabedian, A. (2005). Evaluating the quality of medical care. *The Milbank Quarterly*, *83*(4), 691–729. https://doi.org/10.1111/j.1468-0009.2005.00397.x

Donaldson, M. S., Corrigan, J. M., & Kohn, L. T. (Eds.). (2000). To err is human: building a safer health system.

Doran, G. T. (1981). There's a S.M.A.R.T. way to write management's goals and objectives. *Management Review*, *70*(11), 35–36.

Douglas, L. C., Heo, M., Azad, N., Racine, A. D., & Rinke, M. L. (2019). Contextual factors associated with quality improvement success in a multisite ambulatory setting. *The Journal for Healthcare Quality (JHQ)*, *41*(5), 317-328.

Drew, J. R., & Pandit, M. (2020). Why healthcare leadership should embrace quality improvement. *bmj*, *368*.

Driver, K. (2022). 2: implement a data-driven quality improvement process to integrate evidence into practice procedures. *Rockville, MD: Agency for Healthcare Research and Quality. Available online at: https://www. ahrq. gov/evidencenow/tools/keydrivers/implement-qi. html*.

Dückers, M. L., Wagner, C., Vos, L., & Groenewegen, P. P. (2011). Understanding organisational development, sustainability, and diffusion of innovations within hospitals participating in a multilevel quality collaborative. Implementation science, 6, 1-10.

Dückers, M. L., Spreeuwenberg, P., Wagner, C., & Groenewegen, P. P. (2009). Exploring the black box of quality improvement collaboratives: modelling relations between conditions, applied changes and outcomes. *Implementation Science*, *4*, 1-12.

Dwyer, S. C., & Buckle, J. L. (2009). The space between: On being an insider-outsider in qualitative research. *International journal of qualitative methods*, *8*(1), 54-63.

Edmondson, A. C. (2004). Learning from failure in health care: frequent opportunities, pervasive barriers. BMJ Quality & Safety, 13(suppl 2), ii3-ii9.

Edmondson, A. C. (2011). Strategies for learning from failure. *Harvard business review*, *89*(4), 48-55.

Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 23-43.

Edmondson, A. C., Bohmer, R. M., & Pisano, G. P. (2001). Disrupted routines: Team learning and new technology implementation in hospitals. *Administrative science quarterly*, *46*(4), 685-716.

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

Edmondson, A. C. (2023). *Right kind of wrong: The science of failing well*. Simon and Schuster.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative science quarterly*, *44*(2), 350-383.

Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future

of an interpersonal construct. *Annu. Rev. Organ. Psychol. Organ. Behav.*, *1*(1), 23-43.

Einarsen, S., Aasland, M. S., & Skogstad, A. (2007). Destructive leadership behaviour: A definition and conceptual model. The leadership quarterly, 18(3), 207-216.

Elizalde, J., Lumibao, J., & Lizarondo, L. (2024). Barriers and facilitators to health professionals' engagement in quality improvement initiatives: a mixed-methods systematic review. *International Journal for Quality in Health Care*, *36*(2), mzae041.

Edrees, H., Connors, C., Paine, L., Norvell, M., Taylor, H., & Wu, A. W. (2016). Implementing the RISE second victim support programme at the Johns Hopkins Hospital: a case study. *BMJ open*, *6*(9), e011708.

Etchegary, H., Bishop, L., Street, C., Aubrey-Bassler, K., Humphries, D., Vat, L. E., & Barrett, B. (2017). Engaging patients in health research: identifying research priorities through community town halls. *BMC health services research*, *17*, 1-7.

Etheridge, F., Couturier, Y., Denis, J. L., Tremblay, L., & Tannenbaum, C. (2014). Explaining the success or failure of quality improvement initiatives in long-term care organizations from a dynamic perspective. *Journal of Applied Gerontology*, *33*(6), 672-689.

Feng, T., Zhang, X., Tan, L., Su, Y., & Liu, H. (2022). Near-miss organizational learning in nursing within a tertiary hospital: a mixed methods study. *BMC nursing*, *21*(1), 315.

Finlay, L. (2002). "Outing" the researcher: the provenance, process, and practice of reflexivity. *Qualitative health research*, *12*(4), 531-545.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). Implementation Research: A Synthesis of the Literature. Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network.

Flach, J. M. (2012). Complexity: learning to muddle through. *Cognition, Technology & Work*, *14*(3), 187-197.

Flick, U. (1998). An introduction to qualitative research: Theory, method and applications. Thou-sand Oaks, CA: Sage.

Flottorp, S. A., Oxman, A. D., Krause, J., Musila, N. R., Wensing, M., Godycki-Cwirko, M., ... & Eccles, M. P. (2013). A checklist for identifying determinants of practice: a systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. *Implementation science*, *8*(1), 35.

Frambach, R. T., & Schillewaert, N. (2002). Organizational innovation adoption: A multi-level framework of determinants and opportunities for future research. *Journal of business research*, *55*(2), 163-176.

Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel psychology*, *70*(1), 113-165.

Fulop, N., & Robert, G. (2013). Context for successful quality improvement. *Health Care Manag Rev*, *38*, 325-38.

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

George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations, 53*(8), 1027-1055. https://doi.org/10.1177/0018726700538001

Ghiselli, E. E., & Siegel, J. P. (1972). Leadership and managerial success in tall and flat organization structures. Personnel Psychology, 25(4), 467–478. https://doi.org/10.1111/j.1744-6570.1972.tb02266.x

Gibson, O., Lisy, K., Davy, C., Aromataris, E., Kite, E., Lockwood, C., ... & Brown, A. (2015). Enablers and barriers to the implementation of primary health care interventions for Indigenous people with chronic diseases: a systematic review. *Implementation science*, *10*(1), 71.

Ginsburg, L., Norton, P. G., Casebeer, A., & Lewis, S. (2005). An educational intervention to enhance nurse leaders' perceptions of patient safety culture. *Health services research*, *40*(4), 997-1020.

Ginsburg, L. R., Chuang, Y. T., Blair Berta, W., Norton, P. G., Ng, P., Tregunno, D., & Richardson, J. (2010). The relationship between organizational leadership for safety and learning from patient safety events. *Health services research*, *45*(3), 607-632.

Ginsburg, L. R., Chuang, Y. T., Norton, P. G., Berta, W., Tregunno, D., Ng, P., & Richardson, J. (2009). Development of a measure of patient safety event learning responses. Health Services Research, 44(6), 2123–2147.

Ginsburg, L., Easterbrook, A., Geerts, A., Berta, W., van Dreumel, L., Estabrooks, C. A., Norton, P. G., & Wagg, A. (2025). “We listened and supported and depended on each other”: a qualitative study of how leadership influences implementation of QI interventions. BMJ Quality & Safety, 34(3), 146–156.

Ginsburg, L. R., Chuang, Y. T., Richardson, J., Norton, P. G., Berta, W., Tregunno, D., & Ng, P. (2009). Categorizing errors and adverse events for learning: a provider perspective. Healthcare Quarterly, 12 (Special Issue), 154–160.

Godin, G., Bélanger-Gravel, A., Eccles, M., & Grimshaw, J. (2008). Healthcare professionals' intentions and behaviours: a systematic review of studies based on social cognitive theories. *Implementation science*, *3*, 1-12.

Godfrey, M. M., Nelson, E. C., Wasson, J. H., Mohr, J. J., & Batalden, P. B. (2003).

Microsystems in health care: Part 3. Planning patient-centered services. *Joint Commission Journal on Quality and Safety*, 29(4), 159–170.

Goleman, D. (1998). Working with emotional intelligence. Bantam.

Goleman, D. (2005). *Emotional intelligence: Why it can matter more than IQ*. Bantam.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The leadership quarterly*, *6*(2), 219-247.

Greenberg, A. L., Sullins, V. F., Donahue, T. R., Sundaram, V. M., Saldinger, P. F., Divino, C. M., ... & Lebares, C. C. (2022). Emotional regulation in surgery: Fostering well-being, performance, and leadership. *Journal of Surgical Research, 277*, A25–A35. https://doi.org/10.1016/j.jss.2022.06.018

Green, L. A., Potworowski, G., Day, A., May-Gentile, R., Vibbert, D., Maki, B., & Kiesel, L. (2015). Sustaining "meaningful use" of health information technology in low-resource practices. *The Annals of Family Medicine*, *13*(1), 17-22.

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. *The milbank quarterly*, *82*(4), 581-629.

Grint, K., & Smolovic, O. (2016). What is leadership: Person, result, position or process, or all or none of these?. In *The Routledge companion to leadership* (pp. 25-42). Routledge.

Groene, O., Botje, D., Suñol, R., Lopez, M.A. and Wagner, C. (2013), "*A systematic review of instruments that assess the implementation of hospital quality management systems*", International Journal for Quality in Health Care, Vol. 25 No. 5, pp. 525-541, doi: 10.1093/intqhc/mzt058.

Grol, R., & Wensing, M. (2004). What drives change? Barriers to and incentives for achieving evidence-based practice. The Medical Journal of Australia, 180(6), S57-S60.

Grol, R. P., Bosch, M. C., Hulscher, M. E., Eccles, M. P., & Wensing, M. (2007). Planning and studying improvement in patient care: the use of theoretical perspectives. *The Milbank Quarterly*, *85*(1), 93-138.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 59–82. https://doi.org/10.1177/1525822X05279903

Guetterman, T. C. (2015). Descriptions of sampling practices within five approaches to qualitative research in education and the health sciences. *Psychology Papers and Publications, 263.*

Gunnarsdóttir, H. M. (2016). Autonomy and emotion management. Middle managers in welfare professions during radical organizational change. *Nordic Journal of Working Life Studies*, *6*(Specialissue1), 87–108.

Hannan, M. T., & Freeman, J. (1977). The population ecology of organizations. *American journal of sociology*, *82*(5), 929-964.

Harrison, R., Lawton, R., Perlo, J., Gardner, P., Armitage, G., & Shapiro, J. (2015). Emotion and coping in the aftermath of medical error: a cross-country exploration. *Journal of patient safety*, *11*(1), 28-35.

Harrison, R., Lawton, R., & Stewart, K. (2014). Doctors' experiences of adverse events in secondary care: the professional and personal impact. *Clinical Medicine*, *14*(6), 585-590.

Hartmann, D., Bicheno, J., Emwanu, B., & Hattingh, T. S. (2021). Understanding system failure in health care: a mental model for demand management. *South African journal of industrial engineering*, *32*(2), 17-36.

Haver, A., Akerjordet, K., & Furunes, T. (2013). Emotion regulation and its implications for leadership: An integrative review and future research agenda. *Journal of Leadership & Organizational Studies*, *20*(3), 287-303.

Hay, G., Parker, S., & Luksyte, A. (2021). Making sense of organisational change failure: An identity lens. Human Relations, 74(2), 180–207. https://doi.org/10.1177/0018726720906211 12.

Heifetz, R. A., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Harvard business press.

Heim, I., & Sardar-Drenda, N. (2021). Assessment of employees' attitudes toward ongoing organizational transformations. *Journal of Organizational Change Management*, *34*(2), 327-349.

Hill, J. E., Stephani, A. M., Sapple, P., & Clegg, A. J. (2020). The effectiveness of continuous quality improvement for developing professional practice and improving health care outcomes: a systematic review. *Implementation Science*, *15*, 1-14.

Helo, S., & Moulton, C. A. E. (2017). Complications: acknowledging, managing, and coping with human error. *Translational andrology and urology*, *6*(4), 773.

Hogan, R., Curphy, G. J., & Hogan, J. (2010). What we know about leadership. Review of General Psychology, 14(4), 355-369.Hughes, R. G. (2008). Tools and strategies for quality improvement and patient safety. *Patient safety and quality: An evidence-based handbook for nurses*.

Hu, Y. Y., Fix, M. L., Hevelone, N. D., Lipsitz, S. R., Greenberg, C. C., Weissman, J. S., & Shapiro, J. (2012). Physicians' needs in coping with emotional stressors: the case for peer

support. *Archives of surgery*, *147*(3), 212-217.

Institute for Healthcare Improvement (IHI). (2020). *Science of improvement: How to improve*. http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementHowtoImprove.aspx

Institute of Medicine: Committee on Quality of Health Care in America. (2001). *Crossing the quality chasm: a new health system for the 21st century*. National Academies Press.

Institute of Medicine. (2000). *To err is human: Building a safer health system.* National Academy Press.

Ivers, N., Antony, J., Konnyu, K., O'Connor, D. A., Presseau, J., & Grimshaw, J. M. (2012). Audit and feedback: effects on professional practice [protocol for a Cochrane review update]. *Cochrane Database of Systematic Reviews*, *13*(6), CD000259.

Johns, G. (2024). The context deficit in leadership research. *The Leadership Quarterly*, *35*(1), 101755.

Johnson, J. C. (1990). *Selecting ethnographic informants*. Sage Publications, Inc.

Jones, L., Pomeroy, L., Robert, G., Burnett, S., Anderson, J. E., Morris, S., ... & Fulop, N. J. (2019). Explaining organisational responses to a board-level quality improvement intervention: findings from an evaluation in six providers in the English National Health Service. *BMJ Quality & Safety*, *28*(3), 198-204.

Jones, L., McNally, R., & McDonald, R. (2020). Exploring the sustainability of quality improvement interventions in healthcare organisations: A multiple methods study of the 10-year impact of the 'Productive Ward: Releasing Time to Care' programme in English acute hospitals. BMJ Quality & Safety, 29(3), 1-9. https://doi.org/10.1136/bmjqs-2019-010697

Judge, T. A., Erez, A., & Bono, J. E. (2002). The Power of Being Positive: The Relationship Between Positive Self-Concept and Job Performance. *Human Performance, 15*(3), 167-183. https://doi.org/10.1207/S15327043HUP1503_1

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of management journal*, *33*(4), 692-724.

Kaiser, K. (2009). Protecting respondent confidentiality in qualitative research. *Qualitative Health Research, 19*(11), 1631–1639. https://doi.org/10.1177/1049732309350879.

Kanaris, C. (2023). Mind the power gap: how hierarchical leadership in healthcare is a risk to patient safety. *Journal of Child Health Care*, *27*(3), 319-322.

Kane, R. L., & Mosser, G. (2007). The challenge of explaining why quality improvement has not done better. International Journal for Quality in Health Care, 19(1), 8-10.

Kanuha, V. K. (2000). “Being” native versus “going native”: Conducting social work research as

an insider. *Social work*, *45*(5), 439-447.

Kaplan, H. C., Provost, L. P., Froehle, C. M., & Margolis, P. A. (2012). The Model for Understanding Success in Quality (MUSIQ): building a theory of context in healthcare quality improvement. *BMJ quality & safety*, *21*(1), 13-20.

Karanika-Murray, M., Whysall, Z., Liu-Smith, Y. L., Feltbower, C., & Challans-Rasool, E. (2023). Understanding organizational learning in a healthcare organization during sudden and disruptive change. *International Journal of Workplace Health Management*, *16*(4), 257-280.

Karuga, R., Khan, S., Kok, M., Moraa, M., Mbindyo, P., Broerse, J., & Dieleman, M. (2023). Teamwork in community health committees: a case study in two urban informal settlements. *BMC health services research*, *23*(1), 1373.

Khatri, N., Brown, G. D., & Hicks, L. L. (2009). From a blame culture to a just culture in health care. *Health care management review*, *34*(4), 312-322.

Kim, B. J. (2020). Unstable jobs harm performance: The importance of psychological safety and organizational commitment in employees. *Sage Open*, *10*(2), 2158244020920617.

King, N. (2004). Using templates in the thematic analysis of text. In C. Cassell & G. Symon (Eds.), *Essential Guide to Qualitative Methods in Organizational Research* (pp. 256–270). Sage Publications.

Kirsh, S. R., Lawrence, R. H., & Aron, D. C. (2008). Tailoring an intervention to the context and system redesign related to the intervention: A case study of implementing shared medical appointments for diabetes. *Implementation Science*, *3*, 1-15.

Klein, K. J., Conn, A. B., & Sorra, J. S. (2001). Implementing computerized technology: an organizational analysis. *Journal of applied Psychology*, *86*(5), 811.

Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *Academy of management review*, *21*(4), 1055-1080.

Kline, R. (2014). The snowy white peaks of the NHS: a survey of discrimination in governance and leadership and the potential impact on patient care in London and England.

Kotterman, J. (2006). Leadership versus management: what's the difference?. *The Journal for Quality and Participation*, *29*(2), 13.

Kotter, J. P. (2017). What leaders really do. In *Leadership perspectives* (pp. 7-15). Routledge.

Krasikova, D. V., Green, S. G., & LeBreton, J. M. (2013). Destructive leadership: A theoretical review, integration, and future research agenda. *Journal of management*, *39*(5), 1308-1338.

Kuzel, A. (1992). Sampling in qualitative inquiry. In Doing qualitative research, ed. B.

Crabtreeand W. Miller, 31–44. Newbury Park, CA: Sage

Langley, A., & Denis, J. L. (2011). Beyond evidence: the micropolitics of improvement. *BMJ Quality & Safety*, *20*(Suppl 1), i43-i46.

Langley, G. J., Moen, R. D., Nolan, K. M., Nolan, T. W., Norman, C. L., & Provost, L. P. (2009). The improvement guide: A practical approach to enhancing organizational performance. John Wiley & Sons.

Lee, W., Pyo, J., Jang, S. G., Choi, J. E., & Ock, M. (2019). Experiences and responses of second victims of patient safety incidents in Korea: a qualitative study. BMC Health Services Research, 19(1), 100.

Leonard, M., Graham, S., & Bonacum, D. (2004). The human factor: the critical importance of effective teamwork and communication in providing safe care. *BMJ Quality & Safety*, *13*(suppl 1), i85-i90.

Levine, K. J., Carmody, M., & Silk, K. J. (2020). The influence of organizational culture, climate and commitment on speaking up about medical errors. *Journal of nursing management*, *28*(1), 130-138.

Liang, J., Farh, C. I., & Farh, J. L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management journal*, *55*(1), 71-92.

Lincoln, Y. S., & Guba, E. G. (1986) But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. In New directions for program evaluation (Vol. 30, pp. 73-84). San Francisco, CA: Jossey-Bass.

Lukas, C. V., Holmes, S. K., Cohen, A. B., Restuccia, J., Cramer, I. E., Shwartz, M., & Charns, M. P. (2007). Transformational change in health care systems: an organizational model. *Health care management review*, *32*(4), 309-320.

Lyman, B., Jacobs, J. D., Hammond, E. L., & Gunn, M. M. (2019). Organizational learning in hospitals: A realist review. *Journal of Advanced Nursing*, *75*(11), 2352-2377.

Lynn, J., Baily, M. A., Bottrell, M., Jennings, B., Levine, R. J., Davidoff, F., ... & James, B. (2007). The ethics of using quality improvement methods in health care. *Annals of internal medicine*, *146*(9), 666-673.

Macht, R. D., & McAneny, D. (2017). Barriers and pitfalls in quality improvement. *Surgical Quality Improvement*, 65-74.

Maidique, M. A. (1980). Entrepreneurs, champions, and technological innovation. *Sloan management review*, *21*(2), 59-76.

Maitlis, S., & Christianson, M. (2014). Sensemaking in organizations: Taking stock and moving

forward. *Academy of management annals*, *8*(1), 57-125.

Maitlis, S., Vogus, T. J., & Lawrence, T. B. (2013). Sensemaking and emotion in organizations. *Organizational Psychology Review*, *3*(3), 222-247.

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: recent research and its implications for psychiatry. *World psychiatry*, *15*(2), 103-111.

Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, *50*(4), 370.

Mariama-Arthur, K., & Mariama-Arthur, K. (2018). Distinguish Management from Leadership. *Poised for Excellence: Fundamental Principles of Effective Leadership in the Boardroom and Beyond*, 219-224.

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research?: A review of qualitative interviews in IS research. *Journal of computer information systems*, *54*(1), 11-22.

Martinchek, M., Bird, A., & Pincavage, A. T. (2017). Building team resilience and debriefing after difficult clinical events: a resilience curriculum for team leaders. *MedEdPORTAL*, *13*, 10601.

Massoud, M. R., Nielsen, G. A., Nolan, K., Schall, M. W., & Sevin, C. (2006). A framework for spread: from local improvements to system-wide change. *Cambridge, MA: Institute for Healthcare Improvement*.

Mathebula, L. C., Filmalter, C. J., Jordaan, J., & Heyns, T. (2022). Second victim experiences of healthcare providers after adverse events: A cross-sectional study. Health SA Gesondheid, 27, 1858.

May, C., & Finch, T. (2009). Implementing, embedding, and integrating practices: An outline of normalization process theory. *Sociology, 43*(3), 535–554. https://doi.org/10.1177/00380385091032081

May, C. R., Johnson, M., & Finch, T. (2016). Implementation, context and complexity. *Implementation Science, 11*(1), 141. https://doi.org/10.1186/s13012-016-0506-3

May, C. R., Cummings, A., Girling, M., Bracher, M., Mair, F. S., May, C. M., Murray, E., Myall, M., Rapley, T., & Finch, T. (2018). Using Normalization Process Theory in feasibility studies and process evaluations of complex healthcare interventions: A systematic review. *Implementation Science, 13*(1), 80. https://doi.org/10.1186/s13012-018-0758-1

Mazur, L. M., McCreery, J. K., & Chen, S. J. G. (2012). Quality improvement in hospitals: Identifying and understanding behaviors. *Journal of Healthcare Engineering*, *3*(4), 621-648.

McKim, C. (2023). Meaningful member-checking: a structured approach to member-

checking. *American Journal of Qualitative Research*, *7*(2), 41-52.

Mellahi, K., & Wilkinson, A. (2004). Organizational failure: a critique of recent research and a proposed integrative framework. International Journal of Management Reviews, 5(1), 21-41.

Mendel, P., Meredith, L. S., Schoenbaum, M., Sherbourne, C. D., & Wells, K. B. (2008). Interventions in organizational and community context: a framework for building evidence on dissemination and implementation in health services research. *Administration and Policy in Mental Health and Mental Health Services Research*, *35*, 21-37.

Meny, L. M., Seiferlein, M. R., & Chen, A. M. (2021). Faculty perceptions of a town hall model for engagement in continuous quality improvement. *Currents in Pharmacy Teaching and Learning*, *13*(8), 968-974.

Mercer, J. (2007). The challenges of insider research in educational institutions: Wielding a double-edged sword and resolving delicate dilemmas. *Oxford review of education*, *33*(1), 1-17.

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative Research: A Guide to Design and Implementation* (4th ed.). Jossey-Bass.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. sage.

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*, *6*(1), 42.

Mohammad Mosadeghrad, A. (2014). Why TQM programmes fail? A pathology approach. *The TQM Journal*, *26*(2), 160-187.

Mohr, J., Batalden, P., & Barach, P. (2004). Integrating patient safety into the clinical microsystem. *BMJ Quality & Safety*, *13*(suppl 2), ii34-ii38.

Mohr, J. J., & Batalden, P. B. (2002). Improving safety on the front lines: The role of clinical microsystems. Quality and Safety in Health Care, 11(1), 45–50.

Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative health research*, *25*(9), 1212-1222.

Morse, J. M. (2000). Determining sample size. Qualitative health research, 10(1), 3-5.

Morse, J. (1994). Designing Funded Qualitative Research. In N. K. Denzin, & Y. S. Lincoln (Eds.), Handbook of Qualitative Research, ed. N. Thousand Oaks, 220-35, CA: Sage Publications.

Morse, J. M. (1995). The significance of saturation. *Qualitative health research*, *5*(2), 147-149.

Mumford, M. D. (2006). Pathways to outstanding leadership: A comparative analysis of charismatic, ideological, and pragmatic leaders. Mahwah, NJ: Erlbaum Publishers.

Naoom, S., Blase, K., Friedman, R., Wallace, F., & Fixsen, D. (2005). Implementation Research: A Synthesis of the Literature Dean L. *Fixsen. The National Implementation Research Network*, *97*.

Nelson, E. C., Batalden, P. B., & Godfrey, M. M. (Eds.). (2011). *Quality by design: a clinical microsystems approach*. John Wiley & Sons.

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: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 27(7), 941-966.

Ni, K., Chu, H., Zeng, L., Li, N., & Zhao, Y. (2019). Barriers and facilitators to data quality of electronic health records used for clinical research in China: a qualitative study. BMJ open, 9(7), e029314.

Nilsen, P. (2020). Making sense of implementation theories, models, and frameworks. In *Implementation Science 3.0* (pp. 53-79). Cham: Springer International Publishing.

Nightingale, A. (2020). Implementing collective leadership in healthcare organisations. *Nursing standard*, *35*(2).

Norman, S. M., Avolio, B. J., & Luthans, F. (2010). The impact of positivity and transparency on trust in leaders and their perceived effectiveness. *The leadership quarterly*, *21*(3), 350-364.

Northouse, P. G. (2021). *Leadership: Theory and practice*. Sage publications.

Nydoo, P., Pillay, B. J., Naicker, T., & Moodley, J. (2020). The second victim phenomenon in health care: a literature review. Scandinavian journal of public health, 48(6), 629-637.

O'donovan, R., & Mcauliffe, E. (2020). A systematic review of factors that enable psychological safety in healthcare teams. *International journal for quality in health care*, *32*(4), 240-250.

Olson, A., Balasubramanian, B. A., Cohen, D. J., Davis, M. M., Gunn, R., Hall, J. D., ... & Crabtree, B. F. (2021). Microsystem support of frontline care delivery teams: A missing link in quality improvement? Journal of General Internal Medicine, 36(7), 1950–1956.

Oreg, S. (2006). Personality, context, and resistance to organizational change. *European Journal of Work and Organizational Psychology, 15*(1), 73-101. https://doi.org/10.1080/13594320500451247

Oreg, S., Bartunek, J. M., Lee, G., & Do, B. (2018). An affect-based model of recipients'

responses to organizational change events. *Academy of Management Review*, *43*(1), 65-86.

Øvretveit, J. (2011). Understanding the conditions for improvement: Research to discover which context influences affect improvement success. *BMJ Quality & Safety*, *20*(Suppl 1), i18–i23. https://doi.org/10.1136/bmjqs.2010.045955

Øvretveit, J., Bate, P., Cleary, P., Cretin, S., Gustafson, D., McInnes, K., ... & Wilson, T. (2002). Quality collaboratives: lessons from research. *Quality and safety in health care*, *11*(4), 345-351.

Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Sage Publications.

Parand, A., Dopson, S., Renz, A., & Vincent, C. (2014). The role of hospital managers in quality and patient safety: a systematic review. *BMJ open*, *4*(9), e005055.

Parker, V. A., Wubbenhorst, W. H., Young, G. J., Desai, K. R., & Charns, M. P. (1999). Implementing quality improvement in hospitals: the role of leadership and culture. *American Journal of Medical Quality*, *14*(1), 64-69.

Pettigrew, A. M., Woodman, R. W., & Cameron, K. S. (2001). Studying organizational change and development: Challenges for future research. *Academy of management journal*, *44*(4), 697-713.

Phansalkar, S., Zachariah, M., Seidling, H. M., Mendes, C., Volk, L., & Bates, D. W. (2014). Evaluation of medication alerts in electronic health records for compliance with human factors principles. *Journal of the American Medical Informatics Association*, *21*(e2), e332-e340.

Pinto, C. F., Jones, R., Gutierrez-Delgado, F., Tomkins, J., & Santos Neto, M. F. (2025). Scoping review of the impact of culture on the effectiveness of quality improvement programs. *JCO Global Oncology*, *11*, e2400035.

Polit, D. F., & Beck, C. T. (2014). Essentials of nursing research: Appraising evidence for nursing practice. Philadelphia, PA: Wolters Kluwer/Lippincott/Williams & Wilkins Health.

Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., ... & Hensley, M. (2011). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Administration and policy in mental health and mental health services research*, *38*(2), 65-76.

Pronovost, P. J., Berenholtz, S. M., & Needham, D. M. (2008). Translating evidence into practice: a model for large scale knowledge translation. *Bmj*, *337*.

Provost, L. P., & Murray, S. K. (2011). *The healthcare data guide: Learning from data for improvement*. Jossey-Bass.

Proulx, S. M., Hoffer Gittell, J., & Goldmann, D. (2017). Transforming primary healthcare: Case studies from the front lines. Health Care Management Review, 42(1), 12–20.

Rafferty, A. E., & Griffin, M. A. (2006). Perceptions of organizational change: a stress and coping perspective. *Journal of applied psychology*, *91*(5), 1154.

Reason, J. (2000). Human error: models and management. *Bmj*, *320*(7237), 768-770.

Reed, J. E., Kaplan, H. C., & Ismail, S. A. (2018). A new typology for understanding context: qualitative exploration of the model for understanding success in quality (MUSIQ). *BMC health services research*, *18*, 1-14.

Riggio, R. E. (Ed.). (2018). *What's wrong with leadership?: improving leadership research and practice*. Routledge.

Robert, G., Sarre, S., Maben, J., Griffiths, P., & Chable, R. (2020). Exploring the sustainability of quality improvement interventions in healthcare organisations: a multiple methods study of the 10-year impact of the 'Productive Ward: Releasing Time to Care'programme in English acute hospitals. *BMJ Quality & Safety*, *29*(1), 31-40.

Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). Diffusion of innovations. In *An integrated approach to communication theory and research* (pp. 432-448). Routledge.

Rubin, H. J., & Rubin, I. S. (2011). *Qualitative interviewing: The art of hearing data*. sage.

Saldaña, J. (2009). *The coding manual for qualitative researchers.* Sage Publications Ltd.

Santos de Souza, F. d. O., & Chimenti, P. (2024). Emotions in organizational change: An integrative review. Journal of Change Management, 24(2), 137–176.

Saunders, M. N. (2012). Choosing research participants. *Qualitative organizational research: Core methods and current challenges*, 35-52.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., ... & Jinks, C. (2018). Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality & quantity*, *52*, 1893-1907.

Schaubroeck, J., Lam, S. S., & Peng, A. C. (2011). Cognition-based and affect-based trust as mediators of leader behavior influences on team performance. *Journal of applied psychology*, *96*(4), 863.

Schensul, S. L., Schensul, J. J., & LeCompte, M. D. (1999). *Essential ethnographic methods: Observations, interviews, and questionnaires* (Vol. 2). Rowman Altamira.

Schensul, J. J., & LeCompte, M. D. (1999). *Designing and conducting ethnographic research*. Walnut Creek, CA: AltaMira Press.

Schiess, C., Schwappach, D., Schwendimann, R., Vanhaecht, K., Burgstaller, M., & Senn, B.

(2021). A transactional "second-victim" model—experiences of affected healthcare professionals in acute-somatic inpatient settings: a qualitative metasynthesis. Journal of patient safety, 17(8), e1001-e1018.

Schon, D. A. (1963). Champions for radical new inventions. *Harvard business review*, *41*, 77-86.

Schwarz, G. M., Bouckenooghe, D., & Vakola, M. (2021). Organizational change failure: Framing the process of failing. *Human Relations*, *74*(2), 159-179.

Scott, W. R. (2004). Reflections on a half-century of organizational sociology. *Annu. Rev. Sociol.*, *30*(1), 1-21.

Scott, T. I. M., Mannion, R., Davies, H. T., & Marshall, M. N. (2003). Implementing culture change in health care: theory and practice. *International journal for quality in health care*, *15*(2), 111-118.

Scott, S. D., Hirschinger, L. E., Cox, K. R., McCoig, M., Brandt, J., & Hall, L. W. (2009). The natural history of recovery for the healthcare provider "second victim" after adverse patient events. *BMJ Quality & Safety*, *18*(5), 325-330.

Scott, S. D., Hirschinger, L. E., Cox, K. R., McCoig, M., Hahn-Cover, K., Epperly, K. M., ... & Hall, L. W. (2010). Caring for our own: deploying a systemwide second victim rapid response team. *Joint Commission journal on quality and patient safety*, *36*(5), 233-240.

Scott, S. D. (2011). The second victim phenomenon: a harsh reality of health care professions. The Second Victim Phenomenon: A Harsh Reality of Health Care Professions.

Seligman, M. E. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Simon and Schuster.

Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning organization*. Broadway Business.

Sfantou, D. F., Laliotis, A., Patelarou, A. E., Sifaki-Pistolla, D., Matalliotakis, M., & Patelarou, E. (2017). Importance of leadership style towards quality of care measures in healthcare settings: A systematic review. *Healthcare*, *5*(4), 73. https://doi.org/10.3390/healthcare5040073

Shanafelt, T. D., & Noseworthy, J. H. (2017). *Executive leadership and physician well-being: nine organizational strategies to promote engagement and reduce burnout*. Mayo Clinic Proceedings, 92(1), 129–146. https://doi.org/10.1016/j.mayocp.2016.10.004

Sharafizad, J., Redmond, J., & Morris, R. (2020). Leadership/management factors impact on employee engagement and discretionary effort. *International Journal of Organization Theory & Behavior*, *23*(1), 43-64.

Shepherd, D. A. (2003). Learning from business failure: Propositions of grief recovery for the

self-employed. *Academy of management Review*, *28*(2), 318-328.

Shortell, S. M., Bennett, C. L., & Byck, G. R. (1998). Assessing the impact of continuous quality improvement on clinical practice: what it will take to accelerate progress. *The Milbank Quarterly*, *76*(4), 593-624.

Schein, E. H. (2010). *Organizational culture and leadership* (Vol. 2). John Wiley & Sons.

Shojania, K. G., & Grimshaw, J. M. (2005). Evidence-based quality improvement: The state of the science. Health Affairs, 24(1), 138-150. DOI: 10.1377/hlthaff.24.1.138

Shortell, S. M., Marsteller, J. A., Lin, M., Pearson, M. L., Wu, S. Y., Mendel, P., ... & Rosen, M. (2004). The role of perceived team effectiveness in improving chronic illness care. *Medical care*, *42*(11), 1040-1048.

Siddiqui, I., Gupta, J., Collett, G., McIntosh, I., Komodromos, C., Godec, T., ... & Gupta, A. K. (2023). Perceived workplace support and mental health, well-being and burnout among health care professionals during the COVID-19 pandemic: a cohort analysis. Canadian Medical Association Open Access Journal, 11(1), E191-E200.

Siemsen, E., Roth, A. V., Balasubramanian, S., & Anand, G. (2009). The influence of psychological safety and confidence in knowledge on employee knowledge sharing. *Manufacturing & service operations management*, *11*(3), 429-447.

Simpson, A., Maltese, A. V., Anderson, A., & Sung, E. (2020). Failures, errors, and mistakes: A systematic review of the literature. *Mistakes, errors and failures across cultures: Navigating potentials*, 347-362.

Simundic, A. M. (2013). Bias in research. *Biochemia medica*, *23*(1), 12-15.

Singer, S. J., Benzer, J. K., & Hamdan, S. U. (2015). Improving health care quality and safety: the role of collective learning. *Journal of Healthcare Leadership*, 91-107.

Sitkin, S. B. (1992). Learning through failure: The strategy of small losses. *Research in organizational behavior*, *14*, 231-266.

Smollan, R. K. (2013). Trust in change managers: The role of affect. *Journal of Organizational Change Management*, *26*(4), 725–747.

Smollan, R. K. (2014). Control and the emotional rollercoaster of organizational change. *International Journal of Organizational Analysis*, *22*(3), 399-419.

Smollan, R. K. (2017). Supporting staff through stressful organizational change. *Human Resource Development International*, *20*(4), 282-304.

Speranza, C. (2021). Toxic Leadership: A Quick Erosion of Psychological Safety. In *When*

Leadership Fails: Individual, Group and Organizational Lessons from the Worst Workplace Experiences (pp. 103-111). Emerald Publishing Limited.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Sage Publications.

Suman, M., Gupta, V., & Chauhan, A. (2019). The Role of Self-Efficacy in Coping with Organizational Change: A Conceptual Review. *International Journal of Management, IT & Engineering, 9*(1), 221-237. Retrieved from https://www.ijmra.us

Swensen, S., Pugh, M., McMullan, C., & Kabcenell, A. (2016). *High-impact leadership: Improve care, improve the health of populations, and reduce costs.* Institute for Healthcare Improvement. http://www.ihi.org/resources/Pages/IHIWhitePapers/HighImpactLeadership.aspx

Talbot, K. (1999). Mothers now childless: Personal transformation after the death of an only child. *OMEGA-Journal of Death and Dying*, *38*(3), 167-186.

Taner, M. T., Sezen, B., & Antony, J. (2007). An overview of six sigma applications in healthcare industry. *International Journal of Health Care Quality Assurance*, *20*(4), 329–340. https://doi.org/10.1108/09526860710754398

Tate, K., Penconek, T., Dias, B. M., Cummings, G. G., & Bernardes, A. (2023). Authentic leadership, organizational culture and the effects of hospital quality management practices on quality of care and patient satisfaction. *Journal of advanced nursing*, *79*(8), 3102-3114.

Taylor, M. J., McNicholas, C., Nicolay, C., Darzi, A., Bell, D., & Reed, J. E. (2014). A systematic review of the application of the plan–do–study–act method to improve quality in healthcare. *BMJ Quality & Safety*, *23*(4), 290–298. https://doi.org/10.1136/bmjqs-2013-001862

Thanem, T. (2013). More passion than the job requires? Monstrously transgressive leadership in the promotion of health at work. *Leadership*, *9*(3), 396–415.

The Joint Commission. (2018). *Sentinel Event Alert #60: Developing a reporting culture: Learning from close calls and hazardous conditions*. Retrieved May 17, 2025, from https://www.jointcommission.org/resources/sentinel-event/sentinel-event-alert-newsletters/sentinel-event-alert-60-developing-a-reporting-culture-learning-from-close-calls-and-hazardous-condi

Tolera, A., Firdisa, D., Roba, H. S., Motuma, A., Kitesa, M., & Abaerei, A. A. (2024). Barriers to healthcare data quality and recommendations in public health facilities in Dire Dawa city administration, eastern Ethiopia: a qualitative study. Frontiers in Digital Health, 6, 1261031.

Tosey, P., Visser, M., & Saunders, M. N. (2012). The origins and conceptualizations of 'triple-loop'learning: A critical review. *Management learning*, *43*(3), 291-307.

Tourish, D. (2019). Making a difference: Doing leadership research that matters. *Journal of Management & Organization*, *25*(3), 364-369.

Toussaint, J., & Berry, L. L. (2013). The promise of Lean in health care. *Mayo Clinic Proceedings*, *88*(1), 74–82. https://doi.org/10.1016/j.mayocp.2012.07.025

Trotter, R. T., II. (1991). Ethnographic research methods for applied medical anthropology. In C. Hill (Ed.), *Training manual in applied medical anthropology* (pp. 180–212). American Anthropological Association.

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.

Tucker, A. L., Nembhard, I. M., & Edmondson, A. C. (2007). Implementing new practices: An empirical study of organizational learning in hospital intensive care units. *Management science*, *53*(6), 894-907.

Ucbasaran, D., Shepherd, D. A., Lockett, A., & Lyon, S. J. (2013). Life after business failure: The process and consequences of business failure for entrepreneurs. *Journal of management*, *39*(1), 163-202.

Valencia Arias, A., Piedrahita, L. B., Zapata, A. B., Benjumea, M., & Moya, L. P. (2018). Mapping the healthcare service quality domain: A bibliometric analysis. *Journal of Clinical and Diagnostic Research*, *12*(8), IC01-IC05.

Van Dyck, C., Frese, M., Baer, M., & Sonnentag, S. (2005). Organizational error management culture and its impact on performance: a two-study replication. *Journal of applied psychology*, *90*(6), 1228.

van Marum, S., Verhoeven, D., & de Rooy, D. (2022). The barriers and enhancers to trust in a just culture in hospital settings: a systematic review. *Journal of Patient Safety*, *18*(7), e1067-e1075.

Vaughn, T., Koepke, M., Kroch, E., Lehrman, W., Sinha, S., & Levey, S. (2006). Engagement of leadership in quality improvement initiatives: executive quality improvement survey results. *Journal of Patient Safety*, *2*(1), 2-9.

Vaz, N., & Araujo, C. (2022). Failure factors in healthcare quality improvement programmes: reviewing two decades of the scientific field. *International Journal of Quality and Service Sciences*, *14*(2), 291-310.

Vogus, T. J., & Sutcliffe, K. M. (2007). The safety organizing scale: Development and validation of a behavioral measure of safety culture in hospital nursing units. Medical Care, 45(1), 46–54.

Walshe, K. (2009). Pseudoinnovation: the development and spread of healthcare quality improvement methodologies. *International journal for quality in health care*, *21*(3), 153-159.

Walston, S. L., Kimberly, J. R., & Burns, L. R. (2001). Institutional and economic influences on the adoption and extensiveness of managerial innovation in hospitals: The case of reengineering. *Medical Care Research and Review*, *58*(2), 194-228.

Weick, K. E., & Sutcliffe, K. M. (2011). *Managing the unexpected: Resilient performance in an age of uncertainty* (Vol. 8). John Wiley & Sons.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. Organization science, 16(4), 409-421.

Weiner, B. J. (2020). A theory of organizational readiness for change. In *Handbook on implementation science* (pp. 215-232). Edward Elgar Publishing.

West, M., Eckert, R., Collins, B., & Chowla, R. (2017). Caring to change. *How compassionate leadership can stimulate innovation in health care. London, UK: The King's Fund*.

West, M. A., Armit, K., Loewenthal, L., Eckert, R., West, T., & Lee, A. (2014). *Leadership and leadership development in healthcare: The evidence base.* The King's Fund. https://www.kingsfund.org.uk/publications/leadership-and-leadership-development-health-care.

West, M. A., Lyubovnikova, J., Eckert, R., & Denis, J.-L. (2014). Collective leadership for cultures of high quality health care. *Journal of Organizational Effectiveness: People and Performance, 1*(3), 240–260. https://doi.org/10.1108/JOEPP-07-2014-0039

Weston, M., & Roberts, D. W. (2013). The Influence of Quality Improvement Efforts on Patient Outcomes And Nursing Work: A Perspective from Chief Nursing Officers at Three Large Health Systems. *Online journal of issues in nursing*, *18*(3).

West, M., Dawson, J., Admasachew, L., & Topakas, A. (2011, August). *NHS staff management and health service quality*.

White, M., Wells, J., & Butterworth, T. (2013). Leadership, a key element of quality improvement in healthcare. Results from a literature review of "lean healthcare" and the productive Ward: releasing time to care initiative. *The International Journal of Leadership in Public Services*, *9*(3/4), 90-108.

Wickerson, L., Fujioka, J. K., Kishimoto, V., Jamieson, T., Fine, B., Bhatia, R. S., & Desveaux, L. (2020). Utility and perceived value of a provincial digital diagnostic imaging repository: multimethod study. *JMIR Formative Research*, *4*(7), e17220.

Wilson, P., Aarons, G. A., Sales, A., Xu, D., Wensing, M., Hutchinson, A., ... & Geng, E. (2024). Revisiting the scope and expectations of Implementation Science and Implementation Science Communications. *Implementation Science*, *19*(1), 69.

Wolfson, D., Bernabeo, E., Leas, B., Sofaer, S., Pawlson, G., & Pillittere, D. (2009). Quality improvement in small office settings: an examination of successful practices. *BMC family*

practice, *10*, 1-12.

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.

Wu, A. W. (2000). Medical error: the second victim: the doctor who makes the mistake needs help too. *Bmj*, *320*(7237), 726-727.

Yiu, P. L. J., McDonogh, A., Gill, H., & Billings, J. (2025). Creating a culture, not just a space—A qualitative investigation into reflective practice groups in inpatient mental health settings from the perspectives of facilitators and attendees. *PloS one*, *20*(1), e0316030.

Yousefzadeh, N., Azari, S., Sajadi, H.S., Saki, M., Saran, M. and Gorji, H.A. (2019), "*The challenges of implementation of clinical governance in Iran: a meta-synthesis of qualitative studies*", Health Research Policy and Systems, Vol. 17 No. 1, doi: 10.1186/s12961-018-03995

Yusof, A. N. M., & Razali, H. Y. H. (2024). Moving Away from the Blame Culture: The Way Forward to Manage Medical Errors. *The Malaysian Journal of Medical Sciences: MJMS*, *31*(6), 126.

Zabari, M. L., & Southern, N. L. (2018). Effects of shame and guilt on error reporting among obstetric clinicians. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *47*(4), 468-478.

Appendices

Appendix A: Study Information Sheet

INFORMATION & CONSENT FORM

Study Title: Navigating Failure: How Leaders Define, Detect, and Manage Failure in Healthcare Quality Improvement

Principal Investigator (PI) and **Supervisor:**
Dr. Jenna Evans, Associate Professor
DeGroote School of Business
McMaster University
jenna.evans@mcmaster.ca

Student Investigator:
Nicole Rakowski, PhD Student
DeGroote School of Business
McMaster University
rakowsna@mcmaster.ca

WHAT IS THE STUDY ABOUT?
You are being invited to participate in a research study examining how healthcare leaders define, detect, and manage failure in quality improvement (QI) initiatives in healthcare organizations.

Although the literature discusses QI enablers and barriers and highlights the role of leadership in QI success, the literature does not clearly define what constitutes QI failure or explain how it is detected and managed by leaders. The results of this study will support healthcare leaders in more effectively responding to and learning from QI failure.

WHO CAN PARTICIPATE IN THIS STUDY?
Participants must hold a formal leadership position at Hamilton Health Sciences (HHS); this includes clinical and administrative executive, middle manager, and project leader roles at any HHS site. There will be 25-35 enrolled in this study.

WHAT DO I HAVE TO DO?
You are being asked to participate in a **virtual individual interview up to 60 minutes** in length to discuss your views and experiences navigating failure in healthcare QI. You will be asked to identify at least one example of QI failure that you were a part of or witnessed and to tell the story of what happened. The failed QI initiatives must be complete (not under way) and must have been abandoned or substantially redesigned to be considered 'failures'.

Interviews will be held via Zoom or by telephone and audio recorded. If conducted by Zoom, the Zoom app will be used to record the interview. If conducted by phone, a specialized recording device or software will be connected to the phone or used through an app on the laptop. After each interview, the audio recording will be transcribed. Transcribing means that someone listens to the audio and writes down all the words that are said. The written words will be analyzed by the research team. The transcription will be done by a professional transcriptionist. When we share the audio version with the transcriptionist, we will not share your name or any other identifying information. However, your voice will be heard and may be recognizable. The audio recording will be destroyed

after it has been transcribed and checked to make sure the written version is the same as the audio version. No identifying information will be included in the transcripts.

WHAT ARE THE RISKS TO PARTICIPATING?
Potential risks to participating in this study include experiencing distress or discomfort when you are asked to recall QI failures or shortcomings. There is also a potential risk that you may feel uncomfortable or distressed when describing 'failed' QI initiatives, as this could reflect negatively on yourself or others. This could potentially cause harm to you and the individuals you mention in your descriptions.

WHAT ARE THE BENEFITS TO PARTICIPATING?
You may or may not benefit directly from participating in this study. The results will be used to generate new knowledge to inform future research and practice in healthcare QI.

WILL MY RESPONSES BE KEPT CONFIDENTIAL?
The information collected during the interviews will be kept confidential from everyone other than the PI and supervisor. Information collected will not be attributable back to you. Transcripts and summaries will be labelled with participant ID codes and stored separately from names and other identifying information. Study findings published in academic journals and/or other reports will not use identifiable information. Direct quotes from you used in any presentations, publications, or reports will not contain information that can be linked back to you.

The data collected (digital audio recording of interview, interview transcript, notes) will be stored in a secure manner. They will be stored on a computer with a secure password and on a secure server. Only the PI and supervisor will have access to the data. The data will be conserved for 3 years after the completion of study. Links to the participant's identity (including the audio recording) will be destroyed as soon as possible. The researcher will retain the de-identified data, which may be used by the researcher in the future to address further research questions.

To ensure the safety and confidentiality of all participants, any information provided during the study will be carefully managed to minimize potential risks. All audio recordings will be promptly converted to transcripts, which will be de-identified to remove any information that could reveal the identity of participants or any individuals they mention. Once transcription and de-identification are complete, the original audio recordings will be destroyed immediately. This approach ensures that sensitive information is protected and not retained for an extended period.

WILL I BE COMPENSATED FOR PARTICIPATING?
There is no compensation for your participation.

CAN I WITHDRAW FROM THE STUDY AT ANY TIME?
Yes. Your participation in this study is voluntary. It is your choice to participate. You can decline to answer any question asked in an interview or via email or stop participating in this study at any time without having to provide a reason and without any consequence. There will be no impact on your employment or professional standing should you decline to participate or withdraw. If you choose to withdraw from the study, please contact the Student Investigator, Nicole Rakowski, at rakowsna@mcmaster.ca. You can decide whether interview data collected up to that point would be used in the study analysis. If you choose to withdraw after data have been de-identified, analyzed, and/or published, it may not be possible to remove all of your data from the study.

WHO CAN I CONTACT FOR MORE INFORMATION?

If you have questions at any time about the study or the procedures, you may contact the Student Investigator, Nicole Rakowski, PhD Candidate, DeGroote School of Business, McMaster University at rakowsna@mcmaster.ca.

This study has been reviewed by the Hamilton Integrated Research Ethics Board (HiREB). The HiREB is responsible for ensuring that participants are informed of the risks associated with the research, and that participants are free to decide if participation is right for them. If you have any questions about your rights as a research participant, please call the Office of the Chair, HiREB, at 905.521.2100 x 42013.

For the purposes of ensuring proper monitoring of the research study, it is possible that representatives of the Hamilton Integrated REB (HiREB), this institution, and affiliated sites may consult your original (identifiable) research data to check that the information collected for the study is correct and follows proper laws and guidelines. By participating in this study, you authorize such access.

Your participation is greatly appreciated and is invaluable to meeting the study's objectives.

Thank you.

CONSENT STATEMENT

The participant has read this Information and Consent Form, had an opportunity to ask questions and those questions have been answered. The participant verbally agreed to participation in the study. The participant will receive a copy of the informed consent form including this completed signature page.

_____	_____
PRINTED NAME of Participant	Date consent was provided

_____	_____	_____
Signature of Person Conducting the Consent Discussion	PRINTED NAME & ROLE	Date

Appendix B: Semi-Structured Interview Guide

'Information & Consent Form'

Everything that is said in today's interview will remain confidential. After the interview, your name – and any identifying information – will be removed from the transcriptions and any publications that result from this study.

This interview will take one hour and will be recorded. Do you have any questions before we start? Do you consent to participate in this interview?

I will now start the recording [state date, time, and participant number].

Questions

Defining QI Failure

1. How do you know when a QI initiative is successful versus a failure?
2. Do you think the words "fail" or "failure" are the right term to describe QI projects that do not work?
   a. How do the words "QI failure" make you feel?
3. QI involves trial and error such as through PDSA cycles. So, some failure is part of the QI process. How do you differentiate between these small, expected failures in QI and the big failures?

Specific Experience with QI Failure

4. Please think of an example of a QI failure you were involved with. This QI initiative must be complete, not currently underway. To qualify as a 'failure', the QI initiative must have been ultimately abandoned or substantially redesigned.
   Do you have a QI failure in mind? Tell me about what happened.
5. When did you know that the QI initiative was a failure?
6. How did you know it was a failure? What were the 'red flags'?
7. How did those involved react to the failure?
8. What steps did you take as a leader to respond to the failure?
9. What steps did others take to respond to the failure (e.g., leaders above or below you in the hierarchy, providers, other staff)?
10. What happened after the QI initiative failed? Was the initiative abandoned or re-designed and re-launched?
    a. Who made that decision?
    b. What were the reasons for that decision?
    c. Were there any challenges or politics involved in the decisions made about the QI initiative?
11. How did you break the news of the failure to those involved? (or who broke the news and how?)
12. How did that QI initiative not working out make you feel?

a. How did you cope with the aftermath of the failure?
b. Have your feelings about the failure changed over time?

13. Reflecting back on that QI initiative, what factors do you think contributed to its failure?
14. What did you learn from that QI failure?
15. Do you do anything differently now because of your experience with that QI failure? If yes, what do you differently? If not, why not?
16. To what extent did the program or organization learn from that failure?
17. Were any changes made to QI policies, procedures, or expectations as a result of that QI failure? Tell me more. Why or why not?
18. What do you think are some factors that contribute to QI success and failure?

Leading QI Failure

19. What do you think are the most significant challenges healthcare leaders face in detecting QI failure?
20. What do you think are the most significant challenges healthcare leaders face in managing QI failure?
21. What leadership qualities or actions do you think leaders need to better respond to and manage QI failure?
22. What do you think are the most significant challenges healthcare leaders face in learning from QI failure?
23. What leadership qualities or actions do you think leaders need to better learn from QI failure?

Closing

24. Are there any additional insights or recommendations you would like to share regarding QI failure?
25. Are there any other leaders you think we should speak with about this topic?

Thank you very much for your participation.

Appendix C: Code List

'Navigating Failure' Study: Coding Framework

- **QI Failure Example**
- **Defining QI Failure**
    - QI initiative not working or not changing practice (e.g., lack of behaviour change)
    - QI not sustained
    - QI did not influence culture
    - QI initiative not possible due to external factors (e.g., legislation)
    - QI initiative abandoned whole or partially (e.g., not trying again using what was learned)
    - QI initiative redesigned
    - Not learning (i.e., no data/information, no new knowledge, no meaningful conclusions, so constitutes a 'waste of time')
    - Emotional reaction to word 'failure' or to admitting failure
    - Alternative ways to frame 'failure' (e.g., as risk-taking, as experimenting, as learning, as future-proofing, as 'listening' to staff/patients)

- **Detecting Failure (i.e., how leaders identify QI failure)**
    - Managerial 'feeling' / judgment call
    - Team decision and consensus
    - Feedback from others
    - Performance data

- **Managing QI Failure (i.e., how leaders respond to and cope with QI failure)**
    - Avoiding 'waste' by redesigning QI initiative and redirecting resources
    - Asking for help (e.g., from QI experts, from more experienced leaders, from external reps for unbiased assessment)
    - Inviting or sharing feedback and performance data
    - Communicating with providers/staff (e.g., updating them, being transparent, being open)
    - Seeking ideas from providers/staff
    - Framing the QI story or data for different stakeholder audiences
    - Re-centering around common QI goal/need
    - Creating time and space to reflect and debrief on what happened
    - Being humble as a leader (i.e., willing to admit mistake or failure, willing to ask for help)

- **QI Failure Factors ('Red Flags', Predictors, Politics, and Barriers)**

- Lack of stakeholder involvement or buy-in to QI initiative or person(s) leading it
    - Lack of physician buy-in/engagement/involvement
    - Lack of patient and family involvement
- Provider/staff sensitivity to QI initiative or QI failure (feeling targeted or watched)
- Lack of knowledge/training/education in QI or behavioural/organizational change
- Lack of supporting culture (e.g., openness to risk-taking, psychological safety and willingness to identify or admit failure, organizational learning)
- Lack of QI alignment with or integration into unit or org culture
- Lack of time or energy for QI (related to workload, competing priorities, stress/mental health issues)
- Lack of effective QI planning, design, testing, or implementation (e.g., limited info-gathering, lack of understanding of the problem or 'current state', lack of understanding the targeted service or patient population, poor problem scope, implemented too quickly).
- Conflicting stakeholder views on quality, QI problem, QI goals, performance data or their professional roles in QI
- Lack of regular review of performance data
- Lack of perceived incentive, reward or benefit for doing QI
- Lack of change management process
- Lack of project management resources and tools used for QI
- Lack of sustainability planning (e.g., not aligned with org strategy, long-term resource needs not considered)
- Lack of accountability and governance for QI
- Lack of leadership support and/or leadership accountability for QI
- Lack of consideration for unintended consequences of QI
- Lack of standardization or integration of new processes or practices (e.g., use of technology to integrate new process into normal workflow)
- Lack of transparency during or about the QI process or QI outcomes (e.g., around QI funding sources, companies involved in or benefiting from QI, open and transparent communication to stakeholders about QI)
- Lack of learning from past QI (i.e., no venues to share QI failures, repeating mistakes)
- Structural barriers (e.g., lack of coordinated approach to QI, lack of centralized approach to QI)
- Policy, legislative, privacy, union, or protocol barriers (e.g., project becomes too high risk to proceed due to these factors)
- Resource barriers (human, equipment, funding) (e.g., lack of dedicated QI personnel)
    - Turnover of leaders and/or staff
- Wrong timing or context (e.g., crisis)

- **Effects of QI Failure on Leaders and Staff**
    - More work for leaders (to explain what happened, manage fall-out, ensure ongoing operations, ask for more funds for QI redesign)
    - Effects on leaders' emotions (e.g., guilt, shame) and self-esteem
    - Effects on leaders' career
    - Effects on team emotions and morale
    - Effects on team or organizational risk-taking, experimenting, openness to change, and comfort with failure
    - Effects on team or organizational learning and preparation for future QI