Speaking Up is Hard to Do:

What Can Management Do to Help When Patient Safety is on the Line?

Dissertation

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Abstract

In healthcare organizations, employees are often reluctant to speak up about errors and opportunities for improvement. This reluctance is a widely-recognized barrier to healthcare quality and a threat to patient safety. Although previous studies have identified factors that influence employees’ decisions to speak up or not, few have considered how organizations can influence this behavior.

In this dissertation, I present findings from three qualitative case study analyses that identify management practices that can be implemented to facilitate, or remove barriers to, speaking up in healthcare organizations. In the first study, I present conceptual and qualitative evidence to support the use of high-performance work practices (HPWP), a set of complementary human resource practices that align the workforce to support the achievement of organizational goals, as a strategy to facilitate speaking up in five healthcare organizations. In the second and third studies, I identify specific ways in which six case study hospitals address speaking up as part of their efforts to prevent and reduce central line-associated bloodstream infections (CLABSIs).

Collectively, these studies find that healthcare organizations can successfully facilitate speaking up by implementing organizational and management practices that 1) emphasize the importance of speaking up with respect to improving patient safety outcomes, and 2) ensure that this behavior is expected and rewarded, rather than
punished. Specific practices for accomplishing this include: clear leadership communication regarding the importance of speaking up, inclusion of speaking up as an expected behavior for employees, including physicians in initiatives designed to promote speaking up, formal and informal training to enhance employee communication skills, and robust use of error and event reporting systems to support patient safety improvement efforts.
Dedication

This is dedicated to:

My husband Jerry Friedman for his unending support and encouragement and, perhaps most importantly, for giving me a big nudge when necessary.

My mother, Carole Anderson, for being an inspiration and role model and for loving me best for the last 45 years.
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Vita

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Publications


Fields of Study

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# Table of Contents

Abstract .................................................................................................................. ii

Dedication ............................................................................................................... iv

Acknowledgments ..................................................................................................... v

Vita ........................................................................................................................... viii

List of Tables .......................................................................................................... xiii

List of Figures ......................................................................................................... xiv

Chapter 1: Introduction ........................................................................................... 1

Chapter 2: An exploration of how high-performance work practices (HPWPs) facilitate speaking up in healthcare organizations ............................................................... 4

   Background ........................................................................................................... 4

   Conceptual Framework ......................................................................................... 6

   Methods ............................................................................................................... 11

   Results ................................................................................................................. 15

   Discussion and Conclusions ............................................................................... 24

Tables ...................................................................................................................... 30

References .............................................................................................................. 41
Chapter 3: Empowering Nurses To “Stop The Line” For Infection Prevention: A “Test Case” For Speaking Up ................................................................. 45

Introduction .................................................................................................................. 45

Methods ...................................................................................................................... 48

Results ......................................................................................................................... 53

Discussion and Conclusions ...................................................................................... 64

Tables ......................................................................................................................... 70

References .................................................................................................................. 76

Chapter 4: Encouraging Employees To Speak Up To Prevent Infections: It’s About The Forest, Not The Trees ................................................................. 79

Introduction ................................................................................................................ 79

Methods ...................................................................................................................... 82

Results ......................................................................................................................... 83

Discussion and Conclusions ...................................................................................... 95

References .................................................................................................................. 103

Chapter 5: Conclusion ............................................................................................... 107

Applicability of HPWP Model to speaking up .......................................................... 108

Limitations .................................................................................................................. 111

Contribution ............................................................................................................... 112

Future Research ........................................................................................................ 116

Conclusions ............................................................................................................... 118

References .................................................................................................................. 119
Table ........................................................................................................................................ 120

Comprehensive Bibliography .................................................................................................. 121
List of Tables

Table 1: Applicability of HPWP Model to Facilitate Speaking Up, Conceptual and Case Study Evidence ........................................................................................................... 30
Table 2: High Performance Work Practice (HPWP) Case Study Sites and Associated Management Initiatives to Facilitate Speaking Up ....................................................... 32
Table 3: Barriers to and Focus Areas to Facilitate Speaking Up .............................................................................................................................. 34
Table 4: HPWP Empowering the Frontline Subsystem Practices to Facilitate Speaking Up ........................................................................................................... 36
Table 5: Other HPWP Subsystem Practices to Facilitate Speaking Up .............................................................................................................................. 38
Table 6: CLABSI-Prevention Case Study Sites .............................................................................................................................. 70
Table 7: Challenges to Speaking Up to "Stop the Line" for CLABSI-prevention ............ 72
Table 8: Practices to Address Physician Resistance to Nurses Speaking up to "Stop the Line" for CLABSI-prevention .................................................................................. 73
Table 9: Practices for Enhancing Nurses' Skills for Speaking up to "Stop the Line" ...... 75
Table 10: Quality Improvement and Interdisciplinary Care Processes, Comparison of Sites with “Good” vs. “Less Good” CLABSI Outcomes ......................................................... 100
Table 11: Management and Organizational Factors that Contribute to Creating a Non-Punitive Environment for Speaking Up .............................................................................. 101
Table 12: Overlap between HPWP Subsystems and Study Findings (Chapters 2-4) .... 120
List of Figures

Figure 1: Conceptual Model, Proposed Relationship Between HPWPs and Speaking Up

40
Chapter 1: Introduction

Employee reluctance to speak up about errors and/or improvement opportunities has been recognized as an important barrier to quality and contributor to preventable medical errors in healthcare organizations (Corrigan, Donaldson, Kohn, Maguire, & Pike, 2001; Khatri, Baveja, Boren, & Mammo, 2006; Leape, 2000; Leape, 2009). This phenomenon has been attributed, at least in part, to a culture of “blame and shame” that has historically characterized healthcare organizations (Kohn, Corrigan, & Donaldson, 2000; Corrigan et al., 2001).

Employee reluctance to speak up about organizational problems and opportunities for improvement is widespread. In one non-healthcare study, researchers found that the vast majority of employees reported that they chose to remain silent about organizational problems at least sometimes, particularly on issues related to the competency or behavior of colleagues and/or concerns about organizational processes (Milliken, Morrison, & Hewlin, 2003). In healthcare, a recent national study of physicians found that among those with knowledge of a physician incompetent to practice medicine, nearly one-third reported the colleague to the appropriate authority (Detert & Edmondson, 2011; Rao, Fromson, & Birnbaum, 2010). In a less extreme example, a survey of healthcare workers (physicians, nurses, other clinical staff, and administrators) found that fewer than 1 in 10 healthcare workers who observed colleagues breaking the rules, making mistakes,
exhibiting incompetence, or cutting corners raised a concern with the colleague or a 
supervisor (Maxfield, Grenny, McMillan, Patterson, & Switzler, 2005). Research 
consistently suggests that the most important reasons employees cite for not speaking up 
are fears about repercussions to themselves or others, e.g. unfair blame, retaliation, or on 
the opposite end of the spectrum a fear that their effort will be futile, with no action taken 
(Detert & Edmondson, 2006; Detert & Treviño, 2010; Milliken et al., 2003; Morrison & 
Milliken, 2000).

Speaking up and employee input regarding organizational problems has been 
recognized as an important factor for improving quality in healthcare organizations. For 
example, proactive employee input and feedback regarding concerns and opportunities 
for improvement is a central feature of evidence-based methods improving quality 
outcomes in healthcare, e.g. Six Sigma, Toyota Production Systems (Dahlgaard & 
Dahlgaard-Park, 2006; Coronado & Antony, 2002; Womack & Miller, 2005). Although 
research on these quality improvement approaches recognizes the importance of 
employee empowerment and speaking up, it has not specifically identified organization 
and management practices that facilitate, or remove barriers to, this behavior.

Employee speaking up is also a central feature of a strong safety culture in 
healthcare. Strong healthcare “safety cultures” are characterized by a focus on improving 
systems, rather than blaming individuals when errors occur and supporting open dialogue 
to facilitate safer practices (Hartmann et al., 2009; Khatri, Brown, & Hicks, 2009; 
Pronovost et al., 2003) and have been positively associated with quality outcomes in 
healthcare organizations (Cohen, Eustis, & Gribbins, 2003; Katz-Navon, Naveh, & Stern,
In a recent theoretical paper, Vogus et al. (2010) suggest that in order for healthcare organizations to enact a strong safety culture, leaders must create conditions in which individuals feel comfortable speaking up about errors. While the characteristics of a strong healthcare safety culture have been well-defined and include an emphasis on speaking up (Agency for Healthcare Research and Quality, 2013), there has been little research to identify organizational and management practices that facilitate safety culture implementation in general, or speaking up, specifically.

In this dissertation, I present findings from three different exploratory studies that consider whether and how organizational and management practices facilitate, or remove barriers to, speaking up in healthcare organizations. In the first study (Chapter 2), I present a conceptual model and preliminary qualitative evidence to support the applicability of a high-performance work practices (HPWP) model as an organizational strategy to facilitate, or remove barriers to, speaking up in healthcare organizations. In the second study (Chapter 3), I present findings from a study of six organizations’ efforts to implement an intervention to empower nurses to speak up and stop physicians from inserting central lines if infection control protocols are not being followed. Specifically, I identify practices that facilitate, or remove barriers to, implementation of this intervention which is a “test case” for speaking up in healthcare organizations. Finally, in the third study (Chapter 4) I identify practices that facilitate improvement-oriented speaking up in six organizations seeking to improve unit-based safety culture in order to reduce central line-associated bloodstream infections.
Chapter 2: An exploration of how high-performance work practices (HPWPs) facilitate speaking up in healthcare organizations

Background

Employees are frequently reluctant to speak up about problems that they observe in work situations, even if their observations could lead to organizational improvements. This reluctance impedes organizational learning and self-correction (Edmondson, 2003; Milliken et al., 2003) and can lead to employee turnover (Spencer, 1986). Employee reluctance to speak up about problems and/or make suggestions for improvement (hereinafter referred to as ‘speaking up’) has been recognized as an important barrier to quality improvement and a contributor to preventable medical errors in healthcare organization (Corrigan et al., 2001; Khatri et al., 2006; Leape, 2000; Leape, 2009). Organizational conditions in which employees can speak up without fear of blame or repercussions, or conditions under which they are encouraged to do so, are a defining feature of organizations with strong healthcare safety cultures (Hartmann et al., 2009; Khatri et al., 2009; Pronovost et al., 2003) which have been positively associated with quality outcomes (Cohen et al., 2003; Katz-Navon et al., 2005; Pronovost & Sexton, 2005). Further, proactive employee input and feedback regarding concerns and opportunities for improvement are central features of evidence-based methods used to improve quality outcomes in healthcare e.g., Six Sigma, Lean (Coronado & Antony, 2002; Womack & Miller, 2005).
To date, research on speaking up has taken an employee perspective, focusing largely on understanding the factors associated with employees’ decisions to speak up, or not. Although these studies have identified management factors associated with employee speaking up, e.g., employees’ perceptions of manager behavior and/or organizational policies and practices, this work has not yet been extended to provide insight into how to systematically encourage employees to speak up at a broader, organizational level. Similarly, although theoretical explorations of a “healthcare safety culture” suggest that leaders play an important role in creating conditions in which individuals feel comfortable speaking up about errors (Vogus, Sutcliffe, & Weick, 2010), the literature has not yet identified specific management practices to achieve these conditions.

Employees’ decisions to speak up about problems or opportunities for improvement are highly complex and influenced by a combination of individual and situational factors. These factors include: personality and/or individual beliefs or fears about repercussions (Detert & Edmondson, 2011; Milliken et al., 2003), management behavior that fosters trust and open communication (Premeaux & Bedeian, 2003), and organizational policies and practices that are perceived as fair and inclusive (Tangirala & Ramanujam, 2008). These findings suggest that management efforts to influence speaking up must be correspondingly comprehensive in order to influence employee perceptions and behaviors on multiple levels within the organization.

High-performance work practices (HPWPs) offer a useful framework for exploring whether and how management practice can systematically encourage and/or
support employees to speak up across an organization. HPWPs are a comprehensive set of management and human resource practices such as selective hiring, enhanced training, strategic use of incentives and rewards, and leadership alignment, that when implemented together to complementary effect, improve organizational outcomes (Huselid, 1995; MacDuffie, 1995). HPWPs have only recently received attention as a potential strategy for improving outcomes in healthcare settings (Garman, McAlearney, Harrison, Song, & McHugh, 2011), but preliminary research has been supportive (West, Guthrie, Dawson, Borrill, & Carter, 2006).

In this paper, I present conceptual and preliminary qualitative evidence to support the applicability of HPWPs as a management model for systematically facilitating, or removing barriers, to speaking up in healthcare organizations. This research contributes to the literature in three distinct ways. First, it applies an evidence-based framework for exploring speaking up from an organizational, rather than employee, perspective. Second, it provides preliminary evidence and examples of management practices that have been successfully implemented to facilitate, or remove barriers to, speaking up in healthcare organizations. And finally, this research furthers the growing body of evidence supporting the applicability of HPWP implementation as a valuable strategy for impacting quality and safety in healthcare organizations.

**Conceptual Framework**

I have selected a healthcare-specific HPWP model developed by Garman and colleagues (2011) as a framework for this analysis. This conceptual HPWP model
(hereinafter referred to as “HPWP model”) was developed based on a comprehensive review of HPWP-related literature from across industries and has been supported in the literature (McAlearney, Robbins, Kowalczyk, Chisholm, & Song, 2012). This model includes 16 management practices, organized into four “subsystems” which, when implemented together as a system, are expected to improve organizational quality and safety outcomes. The four HPWP subsystems include 1) engaging staff, 2) acquiring and developing talent, 3) empowering the frontline, and 4) aligning leaders.

Drawing on the broader management literature on speaking up, I consider the potential role of HPWPs in facilitating, or removing barriers to, speaking up in healthcare organizations. More specifically, I propose that to the extent that speaking up has been identified as an organizational priority, HPWP implementation could influence manager behavior and organizational policies and practices to consistently encourage, support and reward speaking up among employees.

The potential strength of HPWPs as a strategy for encouraging employees to speak up constructively about problems in the organization is in the model’s potential to systematically encourage this behavior through the implementation of multiple, complementary practices. The findings from this conceptual review are summarized in Table 1 which identifies the link between each subsystem and selected literature on speaking up and identified practices to encourage speaking up based on this conceptual evidence. The last column, “case study evidence” includes a summary of findings from the research presented below. These findings support the delineation of the conceptual
Engaging Staff. HPWP practices for engaging staff foster employee awareness of and personal commitment to accomplishing organizational goals and include: widespread communication about employees’ role in supporting the organization’s vision and mission, sharing information about organizational performance with employees, meaningfully involving employees in “decisions that matter,” and linking employee incentives to the accomplishment of organizational goals.

Evidence suggests that HPWP engaging staff practices may be particularly useful for encouraging employees to speak up. Studies have found that employees may be compelled to speak up if they believe that their efforts will have a meaningful impact. For instance, a study of inter-disciplinary clinical team behavior found that leaders were able to motivate behavior change, including speaking up, by communicating a rationale for the change and inviting input (Edmondson, 2003). At an organizational level, a recent study found that large information campaigns to promote process improvement which emphasized the importance of incident reporting to patient safety led to increased use of an organization’s incident reporting system (Adler-Milstein, Singer, & Toffel, 2011).

HPWP staff engagement practices to involve employees in decisions that matter have the potential to facilitate speaking up. Studies of clinical teams found that employees are more likely to feel safe speaking up when team leaders actively invite and appreciate member contributions (Edmondson, 2003; Nembhard & Edmondson, 2006).
More broadly, employees are more likely to speak up when management takes action to formally and meaningfully recognize employee input e.g. inclusion on management task forces (Spencer, 1986).

Collectively, these findings suggest that the HPWP practices that communicate the relevance of speaking up to achieving organizational mission or goals, e.g. quality, and/or practices that incentivize, encourage, or reward that input may be useful to changing employee behavior.

**Acquiring and developing talent.** The practices in this subsystem focus on building the quality of the workforce through rigorous recruiting, selective hiring, extensive training, and career development. The two practices in this subsystem that appear to have the greatest potential link to speaking up are selective hiring and extensive training. For example, some individuals are more likely than others to speak up based on individual characteristics such as personality, communication skills, and/or beliefs or fears about the risks/rewards of speaking up (Detert & Edmondson, 2006; LePine & Van Dyne, 1998). Based on this knowledge, organizations could innovate recruitment and selection processes to incorporate factors designed to increase the complement of employees that are more likely to speak up. Similarly, employee training or development initiatives could be designed to encourage and develop skills for successfully speaking up among existing employees.

**Empowering the Frontline:** The HPWP *empowering the frontline* subsystem practices include ensuring freedom from repercussion from speaking up about quality and safety, reducing status distinctions, and using teams/decentralized decision making.
Collectively, these practices are designed to motivate staff by fostering security and a sense of psychological safety among employees, thus supporting speaking up. The practices in this subsystem are central to this research.

The literature on speaking up suggests that both organizational policy and its implementation can influence employees’ speaking up. In general, employees are more likely to speak up if they “trust” management (Premeaux & Bedeian, 2003) and if they believe that policies are both fair and fairly administered (Tangirala & Ramanujam, 2008). More specifically, individuals who work in small, self-managed teams are more likely to speak up than their counterparts in more centrally administered units (LePine & Van Dyne, 1998; Venkataramani & Tangirala, 2010). In terms of status distinctions, there is evidence that, at least on a team level, leader efforts to mitigate power differences and encourage broad participation at all levels have successfully increased speaking up (Edmondson, 2003).

**Aligning Leaders.** HPWP practices for aligning leaders emphasize leader development that is linked to organizational goals, formal succession planning, and the use of performance-contingent rewards for leaders (Garman et al., 2011). Together, these practices enlist manager buy-in and support of organizational goals, incentivize and reward specific manager behaviors that support attainment of those goals, and encourage consistency in management practice across the organizations.

Practices for aligning leaders have significant promise for encouraging employees to speak up because manager/leader behavior has a considerable influence on employees’ behavior. Employees are more likely to speak up when they trust their
Managers (Premeaux & Bedeian, 2003), perceive him/her to be open to feedback (Premeaux & Bedeian, 2003; Detert & Burris, 2007), and/or have a positive relationship (Detert & Treviño, 2010; Burris, Detert, & Chiaburu, 2008). At an organizational level, managerial engagement has been positively associated with employee incident reporting (Adler-Milstein et al., 2011). While research has identified what manager behaviors are associated with employee speaking up, the HPWP aligning leaders practices offer a framework for how organizations can consistently incentivize, reward, and support these behaviors.

**Methods**

This study was conducted as a secondary analysis on an existing sample of case study organizations and qualitative data originally developed by a larger research team to explore the role of HPWPs in quality improvement efforts among healthcare organizations. For the current study, I explore whether and how healthcare organizations facilitate, or remove barriers to, speaking up in healthcare organizations as described below.

**Research Questions.** My research was guided by three overarching questions: 1) do healthcare organizations recognize, or address, speaking up as a specific focus of their broader organization-wide quality and patient safety improvement efforts? 2) if so, what management practices or interventions are implemented to support these efforts? and 3) what is the role of HPWPs in these efforts?
**Study Sample and Site Selection.** The sample for this multi-site case study includes five healthcare organizations known for having innovative management and “people” practices. These organizations were previously found to have successfully implemented HPWPs as part of their efforts to improve quality and patient safety (McAlearney et al., 2011) and therefore provide an ideal sample to explore both 1) the role of speaking up in healthcare organizations’ efforts to improve quality and safety, and 2) the role of HPWPs in facilitating, or removing barriers to, speaking up.

The goal of the site selection process was to identify health systems known for innovative management and “people” practices and would therefore be likely to have implemented HPWPs. Sites were purposively selected using a two-phase process. First, the research team identified a list of potential study organizations based on objective criteria including healthcare organizations that have won the Baldrige Award a highly competitive national award that recognizes organizations for excellence in management practice (National Institute of Standards and Technology, 2011) and winners of Fortune magazine’s “Best Places to Work,” a recognition based on an assessment of an organization’s culture, practices, and employee satisfaction (“Fortune Best Companies,” 2011) and recommendations from a project advisory council comprised of human resource and quality improvement leaders from several U.S. healthcare systems. Once the initial list of potential sites was generated, the team conducted additional research to learn more about each site, e.g. local “best places to work” awards. The final list of five sites was determined based on recommendations from the project advisory council and each site’s willingness to participate. Table 2 provides summary information about the
five study organizations, and highlights key efforts to encourage, or remove barriers to, speaking up which were identified through this research.

**Data Collection.** The primary data source for this study was interviews with 67 key informants (8-16 per site) that were conducted during 1-2 day visits to each site. The research team developed an a priori list of organizational functions/roles to be included as key informants. As part of that team, I then worked with a contact person at each site to identify the most appropriate individuals to interview based on that list; in some cases, the research team interviewed additional informants based on the contact person’s recommendations and/or information obtained through the interview process. Key informants included chief executives (n=4), human resources executives and staff (24), nursing and operations leaders (n=12), quality and service leaders and staff (n=12), and other leaders and staff, e.g. strategy, finance, communications (n=15).

Interviews were conducted using a semi-structured interview guide to ensure consistency in data collection while still allowing for flexibility in this exploratory research. At the start of each interview informants were given a two-page description of the HPWP subsystems and associated practices to use as a reference when answering questions. Informants were asked a series of general questions about the adoption and use of HPWPs in their organization, barriers and facilitators to implementation, and links to patient safety and quality of care, among other things. Informants responded to the questions based on their own experience with the practices, so not all informants spoke about all of the practices. The interview guide did not include any specific questions about speaking up. It should be noted that, if respondents described speaking up in the
context of other questions, interviewers may have explored these responses with follow-up questions. All interviews were recorded and transcribed verbatim to ensure the interview data were both accurate and reliable for analysis.

**Coding and Analysis**. I worked with a colleague, also trained in qualitative methods, to review and code the interview data to break it into meaningful segments for analysis (Miles & Huberman, 1994). To ensure consistency and reliability in the data, the research team developed a standard coding dictionary which defined a set of codes and standard definitions for applying the codes to the interview transcripts (Miles & Huberman, 1994). The initial codes were developed a priori based on the questions in the interview guide, e.g. descriptions of each of the HPWP practices, examples of the link between HPWP and quality outcomes. Additional codes were developed as themes emerged in the data, including one for “Speaking Up” which was applied to any specific references in the text to “employee comfort with ‘speaking up’ or raising issues about quality, patient safety, or opportunities for improvement within the organization” and included descriptions of management practices, references to general organizational culture and/or changes that result from HPWP implementation.

To ensure consistency and reliability in the application of codes, the two coders used a “coding check process” in which both coded three of the same interview transcripts and then met to review coded data in order to identify and resolve any discrepancies. This process was continued until the two coders reached 80-90% agreement in their application of codes. At that point, the remaining interview transcripts were divided between the two coders for completion. Throughout the process, the coders
continued to meet periodically to re-test reliability of the codes, discuss problems, and introduce new codes when necessary (Miles & Huberman, 1994). Interview transcripts were coded and data managed using Atlas.ti v.6, a qualitative analysis software package (Scientific Software Management, 2009).

This paper is based on a secondary analysis of the data originally coded as “Speaking Up.” To complete this analysis, I sorted the “speaking up” data into two categories related to each of the research questions. The first, “Speaking Up as a Factor for Quality Improvement,” included quotes describing or characterizing speaking up as a problem or challenge related to quality improvement, and/or its inclusion as a focus of quality improvement and/or patient safety initiatives. The second category, “Management Interventions,” included quotes describing management practices deployed to facilitate, or remove barriers to, speaking up. If applicable, these were also categorized based on the HPWP subsystem and practices. I used content analysis to identify themes and patterns within and across cases (Miles & Huberman, 1994; Yin, 2008) themes were considered in this paper if there was supporting evidence in at least three of the case study organizations.

Results

**Speaking Up as a Factor for Quality Improvement and Patient Safety.**

Speaking up was as an important factor and focus for quality and/or patient safety initiatives in all five study organizations, although notably, in one organization several informants suggested that HPWP-related changes to the organizational culture had
already successfully created a more egalitarian culture in which people felt comfortable speaking up. Although the challenges and approaches vary from one organization to the next, we identified some common themes in informants’ perceptions of the *barriers to speaking up* and their inclusion of *speaking up as a focus of quality improvement efforts* as described below. **Table 3** includes additional examples and evidence of the barriers and focus of initiatives among the study organizations.

**Barriers to speaking up.** The most frequently cited barrier to speaking up was a traditional hierarchical culture, with informants suggesting that employees are especially reluctant to speak up to physicians and/or senior organizational leaders. Even in the organization that was reported to be highly egalitarian, one service line administrator noted a persistent view that physicians continue to enjoy a more privileged role: “*I feel very egalitarian across employee roles. Except for docs. They are M D-eities.*” Other informants identified specific sub-groups of employees that are at particular risk of not speaking up, including newer graduates in clinical professions, people new to the organization, or individuals in ancillary roles on a clinical care team.

Another widely recognized barrier to speaking up is employee concern about potential repercussions of speaking up; this is well-illustrated in the words of one nursing director informant, “*There are some nurse managers [who] feel very free speaking up and opposing something senior leadership is presenting... And then there’s others that [think] ‘Okay, I’ve got this job and I don’t want to lose my job because I spoke up.’*”

**Speaking up as a focus of quality improvement initiatives.** In all five of the organizations, speaking up was recognized as an important consideration for improving
quality and safety. All of the organizations were seeking to either implement a “safety culture,” or a “just culture,” which emphasize the role of system, rather than human, failure as the cause of errors and encourage transparency in reporting. One Chief Medical Officer informant’s comment captures these multiple concepts including the safety risks associated with a culture in which people do not speak up, the organizational challenges of changing that behavior, and the need to do so in order to improve performance: “[How] can someone be in an operating room, know that the wrong operation is happening and not say something? Well it’s here, and there’s a lot of that in medicine. We’ve cultivated that culture and now we have to get rid of it. So I’ve been talking about that for some time…. But at the same time, always saying that unless we change the culture we will never perform at the levels we want to, which is the 99 to 100% rate.”

Management Efforts to Facilitate Speaking Up

I used the HPWP model to characterize comments describing management interventions and initiatives to facilitate, or reduce barriers to, speaking up among the study organization. I found that the study organizations implemented a range of practices facilitate, and remove barriers to, speaking up. These practices were explored in two major categories 1) practices that directly facilitate or encourage speaking up and 2) complementary practices which indirectly support or encourage speaking up; these findings are summarized below.

**Practices that directly facilitate speaking up**. There was evidence of three common practices to directly facilitate or support employees’ speaking up among the
case study organizations. These practices are consistent with the HPWP *empowering the frontline* subsystem and include: 1) widespread use of structured communication processes and tools, e.g. checklists, scripting, 2) changes in human resource policy designed to eliminate fear of repercussions, and 3) implementation and promotion of safety-related reporting systems. These practices are described below and summarized in Table 4 with representative quotes.

**Structured communication processes and tools.** All five case study organizations were implementing some form of structured communication processes and/or tools designed to either create a forum, or provide language, that would make it easier for employees to raise issues and concerns in any settings. The structured processes included routine daily meetings, rounds, or “huddles” among members from various clinical disciplines who historically have not had equal relationships or communication. These processes typically had a structured format for obtaining feedback from all participants and were perceived as valuable for fostering a more collegial relationship among clinical groups that previously never interacted, creating a forum in which all participants were comfortable speaking up. The value of this structured process is summarized by the words of one Chief Operating Officer who notes, “the fact that we have a surgical tech in [a huddle] with the anesthesiologist... speaking at the same time and saying her name... it’s practice for her speaking up, it’s getting to know each other.” The use of formal “time outs” were also cited as valuable for giving all members of the team equal opportunity to raise concerns about patient safety and to reduce status distinctions. One physician leader describes the value of the time-out
process, “[We are] very committed to the fact that in the operating room, it’s a team approach and if the surgeon [is] not doing what he or she is supposed to do, they won’t get the knife to start the procedure. [We are] willing to back up those techs who say, ‘sorry, we haven’t done the timeout yet.’”

Similarly, all of the sites used standardized communication tools that provide staff with both language and a mechanism for raising patient safety concerns in difficult situations. These tools include communication approaches that have been successful in other high risk industries such as aviation and are being adopted in healthcare settings e.g. SBAR (Situation, Background, Assessment, Recommendation) (Beckett & Kipnis, 2009; Vardaman, Cornell, Gondo, Amis, Townsend-Gervis, & Thetford, 2012), and Crew Resource Management techniques (Helmreich, 2000; West et al., 2012).

One human resource executive describes the value of a standardized tool in facilitating speaking up, “SBAR is one of the main tools... we were interested in, if you see something wrong, do you know who to tell and are you comfortable telling them.... The SBAR tool is designed to create the models of communication.” Similarly, a finance director at another site described how the adoption of a “universal statement” for raising safety concerns gives employees a standard way of voicing safety concerns and also encourages active listening among recipients, “We have adopted a universal statement. It is a stand-down phrase ... And when anyone hears that, they are supposed to stop and really give attention, because what that means is, ‘I am really concerned with what is going on,’ so if you hear that, you stop what you are doing and give your attention to the individual.”
**Human Resource Policy.** At three sites, informants described efforts to change human resource policy and practice to be less punitive and to support organizational efforts encouraging transparency around errors. These organizations were engaged in efforts to evolve their philosophy and policy in a way that errors were treated as system failures, rather than human errors. For two of these organizations, these changes were attributed to pursuit of a “just culture,” which is best described in the words of a vice president for human resources, “Just culture allows us not to fire [a person who speaks up about a co-workers error] or the person [who made the error] ... usually in HR, even though we have progressive action, [in the past] you usually get the call saying, “I need this person gone now, she’s a risk to patients.” In these organizations, there was evidence that human resource staff are involved in the development of disciplinary approaches designed to balance patient safety with personal accountability and in their application, to ensure consistency across the organization.

**Reporting Systems.** Informants at four of the sites identified anonymous reporting systems to be an important mechanism for employees to safely express safety concerns. A director of patient safety at one of the sites suggested that the reporting system was a valuable mechanism for getting input that led to improved safety, “we went to the electronic system about three and a half years ago... we have had an increase in reporting and a reduction in serious events.” Although each organization had a slightly different approach and focus, all emphasized the importance of maintaining anonymity so that employees would feel “safe” reporting concerns and promoting use of the system by emphasizing its importance and making it easy to access and use. For example, one site
offered multiple ways to report issues, e.g. phone line, email, web portal while another made up postcards that could be quickly filled out and submitted. Several informants suggested that a critical success factor for reporting systems is for leaders to visibly acknowledge and/or respond to concerns so that employees feel like it is worth their time and effort to report. Interestingly, several informants at one of the sites indicated that staff often forego anonymity because they would prefer a response from leaders regarding the disposition of the issues raised.

**Complementary practices which support speaking up.** All of the sites implemented additional practices to enhance the environment for speaking up and which provide indirect support for the practices described above. These are described below in the context of the remaining three HPWP subsystems, engaging staff, acquiring and developing talent, aligning leaders and summarized in Table 5, which includes illustrative quotes to support these findings.

**Engaging staff.** All five of the study organizations were engaged in activities to actively, and visibly, encourage staff to speak up through leader communication at all levels. Consistent with the HPWP model, this communication was designed to engage staff and enlist their support for achieving their organization’s quality objectives, including the importance of speaking up. In several organizations, leaders emphasized the notion that quality and patient safety is “everyone’s responsibility,” and that speaking up is one way that individuals can fulfill their commitment to patient safety. This approach was well summarized by one Chief Nursing Officer who noted, “[we] engage staff [to speak up about errors] by having the conversation that everybody is somebody’s
mother and you would not want your mother to have this type of error, and you need to help us.”

Another common engaging staff practice was the use of rewards and/or other recognition to acknowledge speaking up. Two of the organizations had instituted formal “good catch” programs that recognized and rewarded employees who had spoken up and, in so doing, prevented an error from occurring. To reinforce the reward, one of the organizations presented all of the “good catches” to their organization’s Board Quality Committee to select and present an award to an employee and his/her manager. In another organization, the reward for speaking up came simply from leadership recognition, as one chief operating officer informant described it, “It means stuff to people. It means that [the Chief Medical Officer] cares enough to come down and witness it and either congratulate [us], or, if somebody is not doing their part to speak up, to say ‘gee, I’m seeing your safety statement and I didn’t hear it’... Leadership shows up and reinforces that this is important. It makes a difference.”

**Acquiring and Developing Talent.** All five of the sites had implemented robust patient safety programs which included and emphasized training, both on the importance of speaking up, and in some cases, the development of communication skills. Much of this training was organization-wide, mandatory, focused on increasing awareness and fostering responsibility for patient safety among leaders, individuals, and teams; in two of the sites, physicians were also required to participate in these trainings. In terms of communication skills, the training supported successful implementation of the structured communication processes and tools adopted within the organizations. Although none of
the informants shared any hard data with respect to training outcomes, several suggested that the training had an observable impact on speaking up. According to one human resources director, “people going through the training were more likely to address a quality issue if they witnessed it. They were more likely to approach a physician if they saw a quality issue.” I did not find any evidence of a relationship between the other two practices in this subsystem – rigorous recruiting and selective hiring— and efforts to encourage speaking up.

**Leadership Alignment.** Practices in the leadership alignment subsystem emphasize leader development linked to organizational goals, succession planning, and the use of performance-contingent rewards. In all of the organizations, informants recognized the important role of leader behavior and leader action in signaling the importance of speaking up and creating a “safe” environment. Informants from all of the organizations provided examples of leaders who were effective in encouraging people to speak up because they modeled behavior that encouraged, or created a positive environment for, employees to speaking up, e.g. minimized status distinctions through the use of first names, asked employees for input, rounded on units to get direct feedback from the frontline.

Despite this widespread recognition regarding the importance of leader behaviors in creating a “safe” environment for speaking up, I found inconsistent evidence that the study organizations were actively implementing leadership alignment practices to foster these leader behaviors. Although I did not observe any consistency across sites, I did find within case evidence of these practices. Most notably, one organization described
management-specific education and training to support successful implementation of just
culture principles and policies. Similarly, informants in another organization highlighted
the importance of ensuring management consistency in terms of responding to errors and
administering discipline, suggesting the need for focused development activity. While
informants in the other three organizations described participation in general training
sessions that emphasized the importance of speaking up to patient safety, these trainings
did not appear to be focused on the specific role of leaders.

**Applicability of the HPWP Framework.** As described above, case study
evidence supports the applicability of three of the four HPWP subsystems to facilitate
speaking up across the case study sites, with evidence to suggest the applicability of the
fourth. I found that two sites had implemented practices in all four HPWP subsystems
while the remaining three had implemented practices in all but the leadership alignment
subsystem.

Although the study design does not support a direct assessment of the
complementary relationships between practices and/or any enhanced effect, the findings
presented in this paper suggest that efforts to facilitate speaking up may best be supported
by a multi-pronged approach which includes interventions of varying focus and at
multiple levels.

**Discussion and Conclusions**

This study provides preliminary support for the use of HPWPs as an
organizational-level strategy for facilitating, and/or reducing barriers to, speaking up in
healthcare among organizations that emphasize speaking up as an organizational priority. I built upon Garman and colleagues’ (2011) model and the extant literature on speaking up to delineate the mechanisms through which HPWPs could influence manager behavior, organizational policy and practice, and leader behavior to create an environment in which employees are motivated and feel comfortable speaking up. I analyzed case study data from five organizations that had successfully implemented HPWPs to present preliminary evidence supporting the role of HPWPs as a strategy to encourage speaking up in organizations.

As a first step in this research, I confirmed that speaking up was recognized as a barrier to quality and/or patient safety, and was an area of focus for improvement in these organizations. Not surprisingly, I found that the key barriers to speaking up in the study organizations were employee fear of repercussions and the traditional hierarchical culture of healthcare; these findings are consistent the broader literature which has identified employee fears about repercussions to themselves or others, e.g. unfair blame, retaliation, or a strong hierarchical culture as key barriers to speaking up (Detert & Edmondson, 2006; Detert & Treviño, 2010; Milliken et al., 2003; Morrison & Milliken, 2000). Recognizing these barriers, all of the organizations were actively working to facilitate speaking up as part of their broader quality improvement initiatives.

I also identified three common organizational strategies used by the study organizations to facilitate and remove barriers to speaking up. The first strategy was widespread implementation of standardized communication processes and tools among clinical teams. Informants suggested that these tools were useful in mitigating status
differences among team members. To date, studies regarding the use of these safety tools such as SBAR, Crew Resource Management, and others have demonstrated mixed results in their ability to improve efficiency, teamwork, and safety culture (Armour Forse, Bramble, & McQuillan, 2011; O’Leary et al., 2010), but at least one study of SBAR suggests that implementation of this tool is valuable for increasing legitimacy and social capital with physicians for both new and experienced nurses (Vardaman et al., 2012).

Notably, the study organizations implemented practices such as robust, and often mandatory, training and strong leadership messages to reinforce the value of these tools and speaking up to improving patient safety.

Second, the study organizations implemented human resource policies designed to mitigate employee fears about repercussions from speaking up. Several of these organizations were seeking to change their organizational culture to be less punitive and to re-frame organizational discussion of errors to focus on systems, not individuals. While this change in focus was widely described by leaders as important, making the shift real for employees requires human resource support, both in terms of policy and process regarding use of disciplinary action for errors or reporting. Employees are more likely to speak up if they believe that their organizations and teams have strong levels of procedural justice (Tangirala & Ramanujam, 2008) and/or when they trust their managers/supervisors (Premeaux & Bedeian, 2003; Detert & Burris, 2007). In the case of organizations seeking to change long-standing culture that is perceived as punitive, management rhetoric regarding the importance of speaking up will need to be backed by consistent policy and practice in order to have the desired effect among employees.
Emerging literature on high reliability in healthcare emphasizes the importance of creating a safety culture in which employees feel comfortable identifying system problems and/or unsafe conditions (Chassin & Loeb, 2011), however the impact of these efforts to evolve safety cultures has not been specifically evaluated. This study provides some insight into management practices that may support successful safety culture implementation.

Finally, the study organizations had implemented robust error reporting systems that informants commonly described as important facilitators of speaking within the study organizations. While early research on speaking up found that people were more likely to speak up if they had access to safe “voice mechanisms” such as anonymous reporting (Spencer, 1986), evidence of underreporting, particularly for the most serious safety events (Nuckols, Bell, Liu, Paddock, & Hilborne, 2007), suggests that these systems may be underutilized (Farley et al., 2012).

A key difference that may explain why these reporting systems were perceived as valuable, and described as widely used, among our study organizations is that their implementation was supported by practices designed to support their use. First, informants suggested that these systems were highly visible and their use encouraged by leaders. Second, considerable effort had been made to make reporting mechanisms user-friendly. Finally, in the organizations that had implemented “good catch” initiatives, staff were incentivized and rewarded for reporting. The focus on the positive “good catch,” vs. the negative connotation of a “near-miss,” was recognized as an important distinction in one “good catch” program that significantly increased reporting after its
implementation; the success of that program was largely attributed to leadership engagement, follow-through and use of rewards and recognition (Mick, Wood, & Massey, 2007), a finding that is supportive of a comprehensive HPWP approach.

One factor that has been identified as important to successful HPWP implementation is strong leadership commitment and support (McAlearney et al., 2011), a finding that held true in this study of speaking up. Within our study organizations, the importance of leader behavior, both in word and deed, was frequently cited by informants as an important factor for emphasizing and validating the organization’s commitment to safety and the importance of speaking up. For instance, informants frequently described the importance of having top level leaders present on the units to speak directly to employees and reinforce messages about safety and speaking up; this finding is consistent with a recent study that found that employees are more likely to speak with top leaders in informal situations (Detert & Treviño, 2010) and with an emerging literature on the potential value of “management by walking around” which can increase employee awareness of the organizational vision (Rubin & Stone, 2010) and facilitate frontline-leader communication (Frankel et al., 2008).

**Limitations.** This study was conducted as a secondary analysis within a larger study of the role of HPWPs in healthcare organizations; speaking up was explored as a subset of the larger data set and was not a direct focus of inquiry, thus was not specifically addressed in data collection. However, the fact that speaking up emerged as a theme during our inductive analytic process suggests that this issue was both valid and important among key informants. Another limitation to this study is that because this
A sample was selected based on each organization’s reputation for being on the leading edge in terms of innovation in management and successful HPWP implementation, they may not be representative of organizations that have less advanced practices, thus limiting the potential generalizability of the results presented in this paper. Nonetheless, the experience of these highly successful “exemplar” organizations provides insight as to the potential benefit of HPWPs when implemented successfully, findings that can be applied to other organizations seeking to innovate their management practices. Similarly, the qualitative nature of the study and the small sample size also limit the generalizability of the findings, but provide important preliminary insight into management practices that could be successfully implemented to facilitate speaking up in healthcare organizations and further evidence regarding the applicability of an HPWP model for healthcare. Finally, this study did not consider whether the management practices that were implemented to facilitate speaking up actually impacted behavior in the organization. Future opportunities for exploration include a more focused exploration of the role and/or impact of HPWPs on speaking up, including a consideration of outcome.

**Conclusions.** Drawing on an evidence-based model and case study evidence, this study confirms the importance of speaking up as a focus for quality improvement and provides insight into the potential of HPWPs as a strategy for managers to facilitate, or remove barriers to speaking up in healthcare organizations. The results of this study provide a conceptual framework, supported by preliminary evidence, that can be used to guide future research related to speaking up in healthcare organizations and/or the role of HPWPs as a strategy for quality improvement.
Tables

Table 1: Applicability of HPWP model to Facilitate Speaking Up, Conceptual and Case Study Evidence

<table>
<thead>
<tr>
<th>HPWP Subsystems</th>
<th>Link to Literature</th>
<th>Conceptual Support</th>
<th>Case Study Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGAGING STAFF</td>
<td>• Employees more likely to speak up when they feel included (Nembhard &amp; Edmondson, 2006; Edmondson, 2003) and/or have a strong identification with their profession and/or workgroup (Tangirala &amp; Ramanujam, 2008) • Information campaigns regarding the importance of speaking up linked to increased error reporting (Adler-Milstein et al., 2011).</td>
<td>• Communication efforts that characterize speaking up as important to achieving organizational mission or goals • Incentives and rewards for staff that speak up • Organizational processes designed to solicit meaningful employee input, including feedback loops regarding how information was used.</td>
<td>• Extensive leader communication regarding the importance of speaking up • Leadership recognition for reporting errors, e.g. “Good Catch”</td>
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<tr>
<td>STAFF ACQUISITION &amp; DEVELOPMENT</td>
<td>• Individual characteristics associated with employee willingness to speak up (Detert &amp; Edmondson, 2011; LePine &amp; VanDyne, 1998) • Inadequate communication skills may impede speaking up (Detert &amp; Edmondson, 2006)</td>
<td>• Use rigorous selection processes to hire people more likely to speak up • Provide training to enhance communication skills</td>
<td>• Training regarding quality and patient safety, including focus on successful use of communication tools and processes</td>
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Table 1 Continued

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<thead>
<tr>
<th>HPWP Subsystems</th>
<th>Link to Literature</th>
<th>Conceptual Support</th>
<th>Case Study Evidence</th>
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<tbody>
<tr>
<td><strong>FRONTLINE</strong></td>
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<td><strong>EMPOWERMENT</strong></td>
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<tr>
<td>• Employment security</td>
<td>• Employee decisions to speak out influenced by: fear of repercussions or futility (Detert &amp; Trevino, 2010; Milliken et al., 2003) and lower organizational status (Tucker, 2003; Singer 2008, 2009)</td>
<td>• Practices to de-emphasize hierarchy</td>
<td>• Standardized communication processes, e.g. huddles</td>
</tr>
<tr>
<td>• Employment safety</td>
<td></td>
<td>• Meaningful use of teams</td>
<td>• Standardized communication tools and scripts</td>
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<tr>
<td>• Reduced status distinctions</td>
<td></td>
<td></td>
<td>• Implementation and promotion of reporting systems</td>
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<tr>
<td>• Teams/decentralized decision-making</td>
<td></td>
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</tr>
<tr>
<td><strong>ALIGNING</strong></td>
<td></td>
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<tr>
<td><strong>LEADERS</strong></td>
<td></td>
<td></td>
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<tr>
<td>• Leadership training linked to organizational goals</td>
<td>• Manager behaviors that foster trust (Premeaux &amp; Bedeian, 2003); indicate openness to feedback (Detert &amp; Burris, 2007; Premeaux &amp; Bedian, 2003), foster positive relationship with employees (Burris et al., 2008), downplay status differences, and encourage input associated with speaking up among employees (Edmondson 2003)</td>
<td>• Consistently incentivize and reward manager behaviors associated with employee speaking up; support with focused training and development</td>
<td>• N/A</td>
</tr>
<tr>
<td>• Succession planning</td>
<td></td>
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<tr>
<td>• Performance-contingent rewards</td>
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Table 2: High Performance Work Practice (HPWP) Case Study Sites and Associated Management Initiatives to Facilitate Speaking Up

<table>
<thead>
<tr>
<th>Site</th>
<th>Description</th>
<th>Management Initiatives to Facilitate Speaking Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Large, urban multisite academic medical center • ~8,000 FTEs • Informants: 16</td>
<td>• Inclusion of ‘speaking up’ as part of work culture improvement initiative • Standardized communication, e.g. cross-disciplinary team huddles, SBAR, supported with extensive training • Leadership behavior to encourage and support speaking up</td>
</tr>
<tr>
<td>2</td>
<td>Large, urban, multi-site non-profit health system • ~15,000 FTEs • Informants: 16</td>
<td>• Focus on “just culture” implementation – includes leadership communication, revised human resource policy and practice • Standardized communication for safety • Extensive training for employees, physicians, and leaders regarding just culture, importance of speaking up, and use of standardized communication tools • Electronic anonymous error reporting</td>
</tr>
<tr>
<td>3</td>
<td>Large, urban, multi-site non-profit health system • ~15,000 FTEs • Informants: 10</td>
<td>• Focus on “just culture” implementation – includes leadership communication, revised human resource policy and practice • Standardized communication, including use of huddles, standard communications, e.g. TeamStepps, Crucial conversations; supported by extensive individual and team training • Electronic anonymous error reporting</td>
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<thead>
<tr>
<th>Site</th>
<th>Description</th>
<th>Management Initiatives That Encourage Speaking Up</th>
</tr>
</thead>
</table>
| 4    | Urban “safety net” hospital  
  ~5,500 FTEs  
  Informants: 12 |  
  • Strong executive communication regarding the importance of speaking up about errors  
  • Policies and practice focus on creating egalitarian environment  
  • Electronic anonymous error reporting |
| 5    | Rural multisite health system  
  3,500 FTEs  
  Informants: 13 |  
  • Focus on “just culture”  
  • Visible rewards for speaking up, e.g. “good catch” program  
  • Electronic anonymous error reporting |
Table 3: Barriers to and Focus Areas to Facilitate Speaking Up

<table>
<thead>
<tr>
<th>Theme</th>
<th>Illustrative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers to Speaking Up</td>
<td>• “The area that concerns me most about safety is reluctance about confronting on safe practices and the fear of how that’s going to be taken, retaliation and all of those things” ~ Chief Executive Officer</td>
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<tr>
<td></td>
<td>• Some of it is quite frankly that a lot of the [staff], and not so much not the nursing staff, it is more ancillary staff are not comfortable speaking up. They are not comfortable saying to the Chief Medical Officer, I didn’t see you wash your hands when you walked into that room. Whereas, a nurse would be inclined to say it but a housekeeper may not be as inclined.” ~ Chief Nursing Officer</td>
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<td></td>
<td>• “People don’t speak up when they see something that’s wrong if they’re feeling intimidated or they feel stupid or they got their head chewed off last time, they’re less likely-even in the face of thinking this might be wrong-to not say anything. And that’s kind of a frightening thought but that happens.” ~ Nursing Director</td>
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<td></td>
<td>• “Will this new surg-tech speak up? And people generally say, “Well maybe in my unit it would. Maybe I’m not too sure. It depends on who it is.” And the reality is, if you don’t know for sure... ...And if you can’t say 100% for sure like if your life or your child’s life depended on it, then you’ve got a problem that can be related to people aren’t comfortable speaking up.” ~ Nursing Director</td>
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<table>
<thead>
<tr>
<th>Theme</th>
<th>Illustrative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking up as a Focus of Quality</td>
<td>“We really have to get the [fear] out of our culture... I think people know that we have committed to that and we expect that safety is everybody’s responsibility and if you see somebody not washing their hands, or if you think physicians order the wrong thing or whatever then you need to speak up... And we’re really trying to do a lot of work in increasing the understanding and the comfort level with that and think we have some work to do” ~ Chief Executive Officer</td>
</tr>
<tr>
<td>Improvement Efforts</td>
<td>“So it’s ok to watch someone not do hand hygiene and not talk to them and report it? Or a physician to go in a room and not use barrier precautions? Why is that okay? And I say to staff, ‘I understand there’s fear, there’s all these things, but help me figure out how we as leadership can help you have the courage to get past the fear. What do you need from us? What aren’t we doing yet or what haven’t we demonstrated to you that that’s our expectation?’” ~ Chief Medical Officer</td>
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<td></td>
<td>“It’s extremely important for somebody to be able to say, “Really, you don’t want to put that drug in that patient now because it’s going to harm them.” And if we have not set this stage to be transparent -...then we have not done our due diligence organizationally.” ~ Vice President, Quality</td>
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</table>
### Table 4: HPWP Empowering the Frontline Subsystem Practices to Facilitate Speaking Up

<table>
<thead>
<tr>
<th>Practice</th>
<th>Illustrative Quotes</th>
</tr>
</thead>
</table>
| **Structured communication processes and tools (5 Sites)** | • “We started the interprofessional report – historically nurses do their own report, docs do their report and they try to find each other – here it creates a structure of support for that relationship.” ~ Chief Nursing Officer  
• “I still think status distinction is an issue. It’s better than it has been, but I feel that’s why they want [standardized communication tools] so they can continue to reduce that and work better with physicians.” ~ Director, Human Resources  
• “SBAR is one of the main tools... we really got into that... we were interested in, if you see something wrong, do you know who to tell and are you comfortable telling them.... The SBAR tool is designed to create the models of communication.” ~ Executive, Human Resources  
• “It’s always been hard for a nurse to go to the doctor and say ‘I don’t think that’s the right thing to do. [SBAR] gives them a format to do that in.” ~ Director, Human Resources |
| **Human Resource Policy (5 Sites)** | • “This is not about human error, this is about system failure. ...we subscribe to a just culture and we don’t discipline people [for errors]. The only time I would discipline a nurse is for willful and negligent disregard.” ~ Chief Nursing Officer  
• “It is not the blame and shame type of game. We don’t want people fearful. If [someone reports a colleague’s error], they will be evaluated. The event will be evaluated to really determine the culpability and we want it to be handled consistently across the hospital. We don’t want nurse manager Jones on 6S coming down on every error where somebody on 7s is just ignoring.” ~ Director, Finance  
• “We do have a couple of “Practices and Principles” that talk about whistle blowing, grievance and corrective action type of things. ... if an employee has a concern they can go and talk with the employee relations people and they kind of act as an advocate for the employee, if the employee is right.” ~ Director, Human Resources |

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### Table 4 Continued

<table>
<thead>
<tr>
<th>Practice</th>
<th>Illustrative Quotes</th>
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<tbody>
<tr>
<td>Reporting Systems (3 Sites)</td>
<td>“We’re consistently working [to drive] down the number of errors that occur by doing things like increasing reporting, so we can figure out what’s going on with the process and fix it to prevent future errors” ~ Vice President, Communications</td>
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<td></td>
<td>“We’ve got an electronic quality event reporting system and anyone in the healthcare system has the ability to file a report by that method. You don’t have to put your name on it... [it’s] a pretty visible way that we engage our work force, you know and talk to them about our patient safety plan and that everybody plays a role in it.” ~ Director, Quality</td>
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<td></td>
<td>“If someone has an issue that they are worried about, there is a confidential hotline that they can call and voice their concerns, ‘this person is doing this, or I don’t feel comfortable talking to a manager about it.’” ~ Chief Financial Officer</td>
</tr>
</tbody>
</table>
### Table 5: Other HPWP Subsystem Practices to Facilitate Speaking Up

<table>
<thead>
<tr>
<th>HPWP Subsystem</th>
<th>Illustrative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engaging Staff</strong></td>
<td>• “[The Chief Medical Officer] has been going around to the nursing units, meeting with the staff nurses to communicate ‘if there’s a safety issue that needs to be confronted, e.g. nurses confronting physicians on not washing your hands’” ~ Human Resources Executive</td>
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<tr>
<td></td>
<td>• “The area that concerns me most about safety is reluctance about confronting on safe practices and the fear of … retaliation. So we really have to get that out of our culture. I think people know that we have committed to supporting that and expect that safety is everybody’s responsibility and that if you see somebody not washing their hands, or if you think physicians order the wrong thing then you need to speak up” ~ Chief Executive Officer</td>
</tr>
<tr>
<td></td>
<td>• “We feel that these ‘good catches’ are so important that we take those to the board. We really want good catches reported. We bring them to the [meeting], read their good catch, give them a reward, have their manager there, then on a quarterly basis, we select the best of the best” ~ Director, Finance</td>
</tr>
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| **Acquiring and Developing Talent**   | • “There’s training for all, including physicians about being able to speak up and just stop a procedure when somebody feels that something is wrong. That has really been embraced and pretty much given everybody permission to act on that” ~ Director, Human Resources |
|                                       | • “We have extensive team training here at the organization to make sure that no matter who you are, if you are a housekeeper and you see something going wrong that you need to talk. You need to raise your voice. And that you will be supported at every level of the organization, you don’t need to be fearful of that” ~ Chief Operating Officer |
|                                       | • “It’s been talked about in physician training that they know if a nurse or whoever calls you and uses [SBAR] you should listen instead of yelling” ~ Director, Human Resources |

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Table 5 Continued

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<th>HPWP Subsystem</th>
<th>Illustrative Quotes</th>
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<td>Aligning Leaders</td>
<td>• “One of the most important concepts that comes up here is the idea about doing team problem solving where everybody gets involved; how to help the leader do things like ‘if I’m the leader and I want your opinion starting with the least senior person in the group and saying ‘so what do you think,’ and then going around and holding my opinion until I’m last” ~ Director, Human Resources</td>
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<td>• “We want to get this just culture across the organization... we educate managers around this. We have teams on each campus. It is part of the overall safety culture that we are trying to embed to really enforce the notion of please report errors and the associates being comfortable that, ‘if I report an error, then I am not going to be immediately disciplined or my associate is not going to be.’” ~ Director, Finance</td>
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Figure 1: Conceptual Model, Proposed Relationship Between HPWPs and Speaking Up
References


Chapter 3: Empowering Nurses To “Stop The Line” For Infection Prevention: A “Test Case” For Speaking Up

Introduction

Central line-associated infections (CLABSI) are a leading cause of healthcare-acquired infection, preventable death, and healthcare costs in hospitals (Berenholtz et al., 2004; Pronovost et al., 2006a). CLABSI has a significant financial and human cost, with each infection accounting for nearly $17,000 in excess healthcare cost and having a mortality rate of approximately 12-15% (Centers for Disease Control and Prevention, 2011). In the past decade CLABSI infections that occur in intensive care units (ICUs) have been reduced significantly due to widespread adoption of evidence-based practices that have been disseminated in the clinical literature, through coordinated quality improvement efforts (Centers for Disease Control and Prevention, 2011; Berenholtz et al., 2004) and via multi-hospital quality improvement collaboratives (Pronovost et al., 2006a; Welsh, Flanagan, Hoke, Doebbeling, & Herwaldt, 2012). However, despite this overall success, and widespread availability of prevention-guidelines many hospitals continue to struggle with CLABSI in their ICU (Agency for Healthcare Research and Quality, 2011b).

Successful CLABSI prevention includes implementation of a “bundle” of
evidence-based practices including provider education, standardization of processes, use of checklists, and empowering nurses to speak up and stop procedures if guidelines are not being followed (Agency for Healthcare Research and Quality, 2011a; Berenholtz et al., 2004; Pronovost, Wu, Dorman, & Morlock, 2002; Pronovost, et al., 2006). Although the link to CLABSI outcomes is well-established, e.g. Pronovost, 2006, there has been little investigation of the management and organizational factors that support successful implementation of these evidence-based practices.

One aspect of the CLABSI-prevention “bundle” that is particularly important is the component to empower nurses to speak up and stop procedures if guidelines are not being followed. Employee reluctance to speak up about errors or opportunities for improvement has been widely recognized as a persistent challenge to improving quality and patient safety in healthcare organizations (Corrigan, Donaldson, Kohn, Maguire, & Pike, 2001; Khatri, Baveja, Boren, & Mammo, 2006; Leape, 2000; Leape, 2009).

Research from both within and outside healthcare settings has found that employee willingness to speak up is influenced by a complex mix of factors such as personality and personal beliefs about repercussions (Detert & Edmondson, 2011; LePine & Van Dyne, 1998; Milliken et al., 2003), employee perception that their managers are open and trustworthy (Premeaux & Bedeian, 2003), and organizational policies and practices that employees perceive to be fair, e.g. consistent and unbiased (Tangirala & Ramanujam, 2008). However, to date, research on speaking up has focused largely on the employee perspective, e.g. what factors influence employee perceptions or behavior, and has not yet considered how management can prospectively and deliberately influence this behavior. Hospitals’ widespread success at implementing the CLABSI-prevention “bundle”
suggests that these organizations have been able to successfully facilitate, or remove barriers to speaking up.

In this paper, I present findings from an in-depth study of the component of the CLABSI-prevention bundle focused on empowering nurses to speak up and stop physicians if they are not following infection control protocol. This study is based on qualitative data from six U.S. hospitals selected based on their participation in a nationally-sponsored initiative designed to support broad-based implementation of the CLABSI-prevention bundle. This study provides a unique opportunity for an in-depth exploration of the management factors and practices that support successful implementation of the component of the bundle that empowers nurses to speak up to “stop the line.”

This study contributes to the literature in several ways. Most directly, this study provides specific insight into how hospitals can successfully empower nurses to speak up to stop physicians when they are not adhering to established safety protocols. More broadly, the findings from this study provide preliminary insight into the broader challenges for organizations seeking to facilitate, or remove barriers to, speaking up in organizations. Because of its focus on a single, narrowly-focused intervention, this study isolates the phenomenon of speaking up as implemented across multiple, similar settings and allows for an in-depth analysis of the phenomenon while minimizing potential confounding from variations in context.
Methods

In this study, I use a qualitative case study methodology to explore implementation of an evidence-based practice to empower nurses to stop procedures if infection prevention protocols are not being implemented in six hospitals. This research was conducted as part of a larger project exploring the broader role of management and organizational practices in facilitating successful CLABSI-prevention.

Case Study Site Selection. The sample for this multi-case study analysis includes six hospitals that voluntarily participated in the Agency for Healthcare Research and Quality (AHRQ) On the CUSP: Stop BSI (hereinafter referred to as “CUSP initiative”) initiative for CLABSI-prevention. The national CUSP initiative was designed to support the widespread adoption of evidence-based CLABSI-prevention clinical interventions and unit-based safety culture practices through state-administered quality improvement collaboratives. This approach was modeled after Michigan’s Keystone Project in which hospitals that participated in the statewide collaborative successfully adopted evidence-based practices to prevent CLABSI in their ICUs (Pronovost et al., 2006a). The CUSP Initiative was implemented through state hospital associations which 1) invited hospitals in their state to participate in the CLABSI-prevention collaborative, 2) in collaboration with national experts in CLABSI-prevention disseminated information, tools and resources for to participating hospitals, and 3) provided on-going support for hospitals’ CLABSI-prevention efforts by facilitating access to expert resources, providing education, e.g. conferences, and supporting collective learning through monthly meetings and phone calls with national experts, state coordinators and hospital representatives. Each participating hospital provided ICU CLABSI data for a
one-year baseline period (May, 2008 - April, 2009) and at quarterly intervals during the 18-month project period (May 2009 – October 2010).

This study was designed using a “contrasting cases” selection methodology to select three pairs of hospitals that had contrasting CLABSI outcome, but were matched based on geography, size, and teaching status; this method which maximizes variability in outcome enables a robust analysis of the factors which may contribute to differential outcomes, while at the same time “controlling” for variation that may be attributable to differences in geography, size, or teaching status (Yin, 2008). The research team purposively selected the sites using an iterative process which included 1) a review of the CUSP Initiative data to identify potential pairs of hospitals in three states based on contrasting CLABSI outcome and similar organizational characteristics, and 2) insight from state-level CUSP Initiative coordinators regarding the pairs outcomes, comparability, and likelihood to participate in the study. These state-level liaisons then identified a contact at each of the identified hospitals and facilitated an initial introduction for the research team. On behalf of the research team, I corresponded with hospital liaisons to confirm hospitals’ participation in the study and coordinate two-day site visits for the research team. All of the hospitals that were approached by the research team agreed to participate in the study.

The final sample was comprised of three hospital pairs, each comprised of one organization categorized as having “good” and the other with “less good” CLABSI outcomes. During the data collection process the research team learned that one of the sites that had initially been categorized as “less good” based on their reported CLABSI data had actually made a successful turnaround following the conclusion of the CUSP
Initiative and by the time of the research team’s site visit, presented for this study as a “good” site. Therefore, for purposes of this analysis, that site is classified as having “good” CLABSI-outcomes; the final sample for this study includes a total of six sites with four classified as “good” and two classified as “less good.” Table 6 includes a listing of the case study sites, their categorization as either good or less good, an organizational overview, and summary of key informants.

Data Collection. The primary data source for this study was interviews with key informants. Interviews were conducted by the research team during two-day site visits to each of the study organizations. Key informants at each site included top leaders, professional staff, clinicians, and frontline staff. The research team used a two-step process to identify key informants. First, the research team developed a generic list of potential key informants based on job title and organizational role. Once the list was developed, the team worked with a hospital-based liaison to identify site-specific key informants associated with each position on the list and also asked for recommendations for other informants with insight into the organization’s CLABSI-prevention efforts. The research team interviewed a total of 158 informants across the 6 sites, including 28 executives, 52 managers, and 78 frontline staff; informants at each level included a mix of clinical, e.g. nurses, physicians and non-clinical, e.g. administrative and professional, personnel. A site-specific breakout of key informants by organizational level is included in Table 6.

Interviews were conducted using a semi-structured interview guide to ensure consistency in data collection across sites while providing flexibility for research to explore and probe based on informants’ response. Broadly, the interview questions were
designed to obtain informants perspectives on their hospital’s CLABSI-prevention efforts and associated facilitators and challenges. More specific to this study, the interview guide included questions for “speaking up” which sought informants’ perceptions of 1) their own or others willingness and/or comfort speaking up about errors or opportunities for improvement, and 2) management or organizational efforts implemented to facilitate, or remove barriers to, this behavior. The principal investigator led and conducted the interviews, however I was present during these interviews and, in nearly all cases, conducted the inquiry related to speaking up. To ensure accuracy, interviews were recorded with informants’ permission and transcribed verbatim for analysis.

**Analysis.** I conducted the analysis for this study using an iterative process. First, after each of the site visits I worked with the research team for the larger study to compile “Site Visit Summary” that included summary impressions of each hospitals’ CLABSI-prevention efforts, including perceptions and efforts to facilitate “speaking up.” This initial analysis was helpful for conceptualizing findings and themes and provided insight into more focused inquiry (Miles & Huberman, 1994).

In the second step of the analysis, interview transcripts were coded to break this qualitative data into smaller, meaningful segments for analysis (Miles & Huberman, 1994). An initial set of codes was developed based on the interview guide and emergent themes from the site visit summaries; these codes were summarized in a coding dictionary which included detailed definitions to ensure consistent application of codes (Miles & Huberman, 1994); the coding dictionary was further refined as themes and patterns emerged in the data. As the primary “coder” for this project, I completed an initial review of the interview transcripts and applied the appropriate codes from the data.
dictionary (Miles & Huberman, 1994). To ensure consistency in the coding process and reliability of the data, I worked with another member of the research team to conduct cross-checks of the coded data to ensure that codes were consistently applied (Corbin & Strauss, 2007). Data were coded and managed using Atlas.ti, a qualitative software program (Scientific Software Development, 2009).

In the third step of my analysis, I focused on a subset of data initially coded as “speaking up.” The code for “speaking up” was broadly defined in the data dictionary to include informants’ descriptions of 1) the importance or relevance of speaking up to CLABSI-prevention and/or related quality improvement or patient safety efforts, 2) identification of speaking up as a problem or challenge in the organization, 3) any organizational efforts to facilitate, or remove barriers to, speaking up, and/or 4) the outcome of these efforts. In some cases these quotes coded as “speaking up” were direct responses to the specific questions about speaking up, in other cases informants made unprompted comments about speaking up in describing their organizations’ CLABSI-prevention efforts. I used inductive approaches to identify themes and patterns in the data, first focusing on patterns within cases and then evaluating whether these were replicated across cases, paying particular analysis to any differences in the contrasting cases, e.g. “good” vs. “less good” (Yin, 2008). At each stage of the process, I challenged the analysis by seeking and considering disconfirming evidence (Corbin & Strauss, 2007; Miles & Huberman, 1994; Yin, 2008).

After the initial analysis of the “speaking up” subset of data, I found informants characterized two distinct “types” of speaking up related to their organizations CLABSI-prevention efforts: 1) implementation of a specific intervention in which ICU nurses
were empowered to speak up and “stop the line” if physicians did not adhere to established protocols during central line insertions (speaking up to stop the line), and 2) more generally observed instances in which members of the care team or other staff spoke up with information or ideas to prevent future CLABSIs (speaking up to improve patient safety).

For this study I completed an in-depth analysis of a subset theme of the “speaking up” data referring specifically to the study organization’s efforts to implement practices in which nurses were empowered to speak up and “stop the line” if physicians were violating protocol during central line insertions; an in-depth analysis of speaking up to improve patient safety is presented in Chapter 4. I considered the following questions to frame this final analysis: Were nurses at all of the sites consistently and successfully speaking up to “stop the line?” Were these efforts considered an important aspect of CLABSI-prevention efforts? Were there any differences between the hospitals with “good” vs. “less good” CLABSI outcomes? Were any barriers to speaking up identified? What management practices were implemented to facilitate, or remove barriers to, speaking up? I analyzed these data using a similar process of content analysis described above. Unless otherwise noted, a finding or theme was reported if I observed it in at least four of the case study sites.

Results

The findings from my analysis are summarized below and organized around my research questions.

53
Were nurses at all of the sites consistently speaking up to “stop the line?” All six of the sites’ CLABSI-prevention efforts included a focus on empowering nurses to speak up and “stop the line” if physicians were not adhering to established protocols. This practice was similar in focus across all of the sites and is well-described by an ICU nurse at one of the sites:

“Everyone’s just been on the ball about physicians inserting a central line. To make sure you have the drape. Make sure they have sterile dressing. Making sure they have all the proper equipment and doing the right thing. If they don’t…nurses call them out and say, ‘You need the drape. You need to do this. You need to do that.’” ~ ICU Nurse

Although there was evidence that all of the sites were implementing this practice, there was some variation in terms of consistency of focus and importance of this practice relative to broader CLABSI-prevention efforts. For instance, at two of the sites, having nurses speak up to stop the line was the most consistently mentioned aspect of CLABSI prevention and was widely credited as being key to successful outcomes. In the other sites, this practice was recognized as important and was a key area of focus, but varied in its importance relative to CLABSI-prevention efforts.

Were there any differences between hospitals with “good” vs. “less good” outcomes? There were no observed systematic differences between the “good” and “less good” sites in terms of nurses’ speaking up to “stop the line.” As noted above, this practice was being successfully implemented in five of the case study organizations which included all of the “good” and one of the “less good” sites. Informants at the
second “less good” site described their efforts to empower nurses to speak up and stop the line, but had varied perceptions regarding their success. While there were a few informants who suggested that nurses were quite comfortable speaking up to “stop the line,” I found much stronger evidence that, on the whole, nurses were not comfortable speaking up and, if they did speak up, their voice was not consistently respected by recipient physicians. As one ICU nurse describes this challenge:

“It’s hard to speak with the doctor. I mean, the only thing we can do is call downstairs [infection control] and [say], “the doctor is doing this,” and they can speak with the doctors... but we as nurses, we’re not in that state that we can say, ‘hey, you have to wear gloves and gowns.’” I mean, yeah, you can say it to them politely, but then it’s up to them whether they’re going to do it or not...I’ve seen [physician violating sterile protocol] a lot of times. We [say something] but then they don’t care.” ~ ICU Nurse

There was a consistent perception among informants at this site that speaking up was futile. Many informants made comments suggesting that it was not worth it to speak up because leaders were unwilling to take action to follow-through with physicians for violating protocol or negatively reacting to the nurses’ feedback.

**Were practices to empower nurses to speak up and stop the line considered an important part of CLABSI-prevention efforts?** Although informants were not specifically asked about the link between nurses speaking up to stop the line and infection rates, multiple informants at two of the sites with “good” CLABSI outcomes made this attribution. At both of these sites, informants suggested that the practice of having nurses
speak up to stop the line was the most important component of their success. In the words of a quality improvement coordinator:

“The biggest singular thing that makes [CLABSI-prevention] successful here is the autonomy and the authority of the nurses to stop a procedure when anything has been violated in terms of technique”

Although informants at the other sites did not necessarily make a direct link between speaking up to stop the line and CLABSI outcomes, they generally referenced this practice as a key component of their CLABSI-prevention efforts and success.

**What are the barriers to speaking up to stop the line?** One very interesting finding that emerged in this study was a widely held perception that nurses that work in intensive care units (ICU) are generally more “assertive,” and “confident” and therefore, “respected” by physicians, and therefore more likely to speak up, than their non-ICU counterparts. Although this study was not designed to assess this distinction, informants’ comments provide some insight and explanation as to why speaking up might be less of a challenge for ICU nurses than for other nurses. The first explanation is that there may be a self-selection of the type of individual that chooses to work in the ICU which is a high-pressure, fast-paced environment in which nurses have considerable autonomy and responsibility; informants suggest that a nurse must be highly confident and assertive to be successful in that environment. The second potential explanation as to why ICU nurses may be “different,” in terms of their confidence and willingness to speak up is their intense relationship with patients. Patients that are in the ICU have acute, often life-threatening needs and thus require intensive nursing care. As a result, ICU nurses typically care for only one or two patients at a time. Many of the ICU nurses that I spoke
with suggested that this relationship fosters a strong sense of “ownership” for the patient and a commitment to advocate on their behalf, e.g. through speaking up. Comments from physicians in this study suggest that, at least in some ICU settings, this behavior is reinforced by physicians who recognize the value of nurses’ insight.

Notwithstanding informants’ general characterization of ICU nurses as being more likely to speak up, they also identified some barriers to this behavior. Most notably was a common view that speaking up can be particularly difficult for younger, or newer, nurses in ICUs. Informants suggested that these newer nurses may not yet know whether something is “worth speaking up about or not” particularly to someone “who’s supposed to know better than you.” Informants also suggested that, even for more seasoned nurses, professional organizational hierarchy is a barrier to speaking up, e.g. nurses are not comfortable speaking up to physicians, although it can be nuanced. For example, nurses might feel comfortable speaking up to stop a resident during a procedure but not as comfortable with a more senior physician. Along the same lines, they might be afraid to speak up to a physician that is known to be volatile and/or not receptive to nurses’ input and feedback. Illustrative quotes supporting these findings are summarized in Table 7.

What management practices facilitate, or remove barriers to, speaking up? I identified several management practices that both facilitated, and removed barriers to, speaking up, thus successfully empowering nurses to “stop the line” as part of CLABSI-prevention efforts. In this analysis, I did not observe any systematic difference between the “good” vs. “less good” study sites, therefore the results below reflect common themes across all six sites. These management practices fell into three major categories: 1)
motivating nurses, 2) addressing physician resistance, and 3) enhancing nurses’ skills for speaking up. These practices and their important role in both facilitating and removing barriers for nurses to speak up to physicians about violations in infection control protocol are described below.

**Motivating nurses.** Leaders at all levels of the study organizations recognized that asking the nurses to speak up to “stop the line” for CLABSI-prevention challenged typical norms of behavior between nurses and physicians. Therefore, I identified two distinct approaches to motivating nurses’ behavior. First, leaders set clear expectations that speaking up to “stop the line” was part of the job of being a successful nurse and second, they tapped into nurses desire to “do the right thing” for patient safety.

**Communicating expectations.** Top-level executive leaders recognized that they had an important role in setting the tone and expectation for nurses to speak up and “stop the line.” These leaders sought to change these norms and motivate nurses to overcome these obstacles and consistently speak up. They were deliberate in communicating their expectations that nurses speak up to “call a physician on the carpet,” and suggested that doing so is “acceptable, promotable behavior.” The two quotes below illustrate both a leaders description and a frontline nurses’ perception of this communication:

“*There has been a bit of reluctance to [speak up and stop the line] until you demonstrate that it’s only ok. Not only permission, but an expectation. I think that is important.*” ~ Physician, Chief, Critical Care Division

*I was told that we have to do [stop the line]. They [trainers] said, ‘that’s one of the big things— people are not following basic precautions like washing their*
hands and that kind of thing. They have to do it. It’s part of your job [to support that] — ICU Nurse

Unit-based leaders also played an important role in setting expectations for nurses. These leaders, many physicians, actually described how they would confront nurses for not speaking up when warranted, thus reinforcing that this was an expected behavior. This practice is well-summarized by a frontline nurse:

“Even some of the doctors are now saying, ‘yes you are supposed to stop’ I had one doctor walk into an isolation room without a gown… [and then he sees] that I am wearing a gown and says, “you’ve got to say something!” — ICU Nurse

**Linking speaking up to patient safety.** Nurses’ willingness to speak up was strongly influenced by a belief that doing so was the “right thing” for their patients and for patient safety. Nurses described how their understanding that speaking up to stop physicians from violating protocol was “best for the patient” was a strong motivator to do so. More broadly, many nurses suggested that they believed speaking up and being an advocate for one’s patients is an important part of being a good nurse. Nurse managers and more senior unit-based nurses tapped into their nursing colleagues’ commitment to patient care and incorporated and reinforced the link between speaking up and patient safety in their role as educators and mentors to other nurses.

*I always tell nurses I’m precepting, ‘look, if you had another nurse who was doing something you knew was not right for the patient, you certainly would say something. For you not to say something [when physicians don’t follow protocol] is not right, it’s not the best thing for the patient.’” — ICU Nurse Manager
**Addressing physician resistance.** One factor that influenced nurses willingness to “speak up” and stop the line was that leaders in the study organizations actively responded to and addressed physician resistance. This occurred in two ways which are described below with additional evidence presented in Table 8.

**Consistent support and follow-through.** Equally important to leaders’ words setting expectations for speaking up was their visible support and follow-through when this occurred, particularly in the face of physician resistance. Nurses described how knowing that leaders’ would “back them up” gave them the confidence to speak up to stop the line. As one ICU nurse describes it:

> “I find that senior administration is supportive anytime you want to stop the line. And knowing you have that support as a frontline staff, knowing that someone has my back, I’m going to be able to speak out.” ~ ICU Nurse

Along these lines, frontline staff reported that actually seeing leaders follow-through with visible action, e.g. speaking with physicians who resist, was particularly empowering. In the quote below, an ICU Nurse manager describes how knowing that her director would follow through and deal with a resistant physician gives her the confidence to speak up:

> “I tell the physician, ‘I can call our clinical director, our administrative director or our chief nursing officer if you don’t dress appropriately.’ We are no longer intimidated and just letting them get by. We’re reporting it. It’s being escalated. I know that they are being talked to.” ~ Nurse Manager

In contrast, at the one site which had not consistently implemented the practice to stop the line, several informants were somewhat cynical in their observations that
“nothing happens” when nurses stop the line and/or escalate concerns about physicians and that many of the least compliant physicians are “still working here.” This negative finding further supports the importance of consistent leadership words and action.

**Address physicians’ role and behavior.** Beyond encouraging nurses to speak up, informants consistently described the importance of addressing the other half of the equation, the physician “listener.” Although the specific approaches varied considerably from one site to the next—ranging from having medical directors coach or reprimand resistant physicians, including physicians in CLABSI-related trainings, and at one site, developing and implementing a scripted response for violators who had been confronted—informants at all of the sites acknowledged that addressing the “listener” was important to creating an environment in which nurses are more comfortable speaking up.

For instance a nurse executive at one of the sites describes her efforts to remove barriers to speaking up that may be caused by a long history of physician behavior:

> If there’s a physician who people are uncomfortable calling on the carpet because of history or past interactions, many times I will have to step in personally to make sure that the message is sent to the physician about his/her behavior and its impact on patient care. That’s really what I care about at the end of the day.” ~ Chief Nursing Officer

At another site, a physician executive describes how his organization sought to minimize the hierarchy between physicians and other staff by “scripting” physicians’ response so that they acknowledge their violation in protocol, if there has been one, or the other staff person’s diligence in raising the concern:
People see things as a hierarchy, and sometimes they are afraid... we said... this is the response we expect if someone says to you, ‘I’m not seeing you wash your hands, or I didn’t see you scrub that hub for the appropriate amount of time.’ – the response is, ‘thank you for reminding me.’ ‘If you do not get that response, it is to be reported up the chain of command, and it is. People do it.” ~ Physician, Chief of Staff

Enhancing nurses skills. One way that the study organizations supported nurses to speak up and “stop the line” was to enhance their communication skills. Although few of the sites described formal training programs, there was clear evidence that these organizations sought to enhance nurses ability to successfully speak up by providing scripted language and through a focus on new nurse orientation. These efforts are described below with supporting evidence presented in Table 9.

Scripting. Many nurse informants emphasized that saying things the “right way” made it easier to speak up. They recognized that they could more successfully “stop” a physician without a confrontation during a procedure if they were deliberate in their approach and choice of words. I observed many examples of the following sentiment:

“When I first go in a room and see the residents weren’t wearing gowns, I would say ‘Oh, let me show you here you can get your gowns.’ I wouldn’t say, “You’re supposed to be wearing your gowns. Let me show you. You didn’t know.” If they were standing there, I would just go get the stuff, hand it to them and say, ‘this is what you have to wear now.’ ... People reacted better to that instead of the pointing finger, ‘you didn’t do your job right.’” ~ ICU Nurse
Recognizing that their staff may not know how to speak up in a non-confrontational way, unit-level leaders provided their staff with sample language, or “scripts,” and then supported their use through mentoring, coaching and even formal training. These scripts were designed to give nurses the confidence, and the language, to raise concerns in way that was strong, yet respectful. Scripting was used to help nurses convey their concerns about physicians’ behavior in a way that was respectful, but not accusatory. One informant described how she used role-playing to support adoption of a script comprised of:

“Sample language that you can use to not aggravate somebody, which is helpful. We call it the ‘lightest touch possible’ and that’s something that we have people practice what feels better to feel. So if you’re asking someone to stop and wash their hands, how would you do that in a way that wouldn’t make somebody feel offended.” ~ Chief Nursing Officer

**New nurse education.** The unit-based orientation in which newer nurses are paired with a more seasoned preceptor was identified as important for facilitating speaking up among newer nurses, one of the groups identified as being least likely to feel comfortable speaking up. Managers used the orientation process to communicate policies and expectations for speaking up. Beyond the formal learning process, informants described how the senior preceptors served as role models for the newer nurses. As one ICU nurse describes it:

“The preceptor is your first teacher telling you to do it. I’ve really learned from the more experienced nurses. I watched them. They [spoke up and stopped the line]. It’s really taught from day one.” ~ ICU Nurse
Discussion and Conclusions

This exploratory study of six organizations’ efforts to empower nurses to speak up and “stop the line” to prevent CLABSI provides preliminary insight into management practices that can successfully facilitate, or remove barriers to, speaking up in healthcare settings. This paper focused on the implementation of a very specific, evidence-based intervention in multiple settings; this focus on a specific intervention implemented for a similar purpose in multiple organizations provided the opportunity for in-depth analysis of one distinct type of “speaking up.”

This study found that nurses in all but one of the study organizations were successfully speaking up to “stop the line” when they observed physicians violating central line protocols. Even with this success, newer nurses were less likely to speak up than their more experienced counterparts and, even among the more seasoned nurses, some physicians were perceived as more difficult to confront than others, e.g. if they were more senior. These challenges are consistent with the literature which recognizes that new nurses develop stronger independent clinical judgment only after they have learned the technical aspects of the job (Ferguson & Day, 2007) and that organizational hierarchy and/or power differentials are a common barrier to speaking up in organizations (Edmondson, 2003; Thomas, Sexton, & Helmreich, 2003). This study also identified three key ways—motivating nurses, addressing physician resistance, and enhancing nurses’ skills—in which the study organizations facilitated, or removed barriers to, nurses’ speaking up to stop the line for CLABSI prevention.
In terms of motivating nurses, the study organizations set clear expectations that this behavior was an expected part of the job and also tapped into nurses’ desire to do the “right thing” for their patients. Across the study organizations, leaders at all levels of the organizations were clear and deliberate in communicating to nurses that speaking up for CLABSI prevention was an expected part of the nurses’ job. This characterization tapped into nurses’ performance-related motivations, but also minimized potential ambiguity in their role; rather than having to weigh whether they should speak up or not in a given situation, nurses understood expectations and were willing to speak up, even if it was difficult, because it was “part of the job.” Both formal and informal leaders such as nurse managers, preceptors, and more seasoned nurses consistently emphasized the link between speaking up to “stop the line” and preventing CLABSI. In turn, many nurses, particularly newer and younger nurses described how knowing that this practice was important to patient safety was a strong motivator and made it easier for them to speak up, even in difficult situations. Previous studies have found that healthcare employees are more likely to raise concerns or report problems in quality if they believe that doing so will make a difference in patient safety (Edmondson, 2003; Adler-Milstein et al., 2011). Further, employees are motivated in their jobs when they can see a clear connection between their work and the broader mission and goals of the organization (Boswell, 2006; McAlearney et al., 2011). Delineating speaking up as a requirement for job performance and clearly defining the link to important patient outcomes eliminates a “motivation asymmetry” in which the perceived personal risks of speaking up outweigh the potential benefits which are often unclear or unknown (Detert & Edmondson, 2011).
Another important factor in encouraging nurses to speak up was management action to visibly support nurses in the face of physician resistance and also address physician behavior. Frontline nurses reported that knowing that their leaders were readily available, “had their back,” and would follow-through with resistant physicians bolstered their confidence and willingness to speak up. This leadership support effectively mitigated concerns that speaking up is futile or could get them, or their colleagues, in trouble, both well-documented barriers to speaking up in organizations (Detert & Treviño, 2010; Milliken et al., 2003), and a factor in the one organization which was not as successful in its efforts to empower nurses to speak up. The study organizations also addressed physician resistance more broadly by letting the physicians know that nurses would be “calling them out” for violating protocol, thereby creating a more receptive environment for nurses to raise concerns.” Although preliminary, this study’s finding that a two-pronged strategy to encourage speaking up by focusing on both speaker and listener is a new contribution to the literature that suggests opportunities for further research.

Finally, the study organizations sought to enhance nurses’ ability to effectively speak up to “stop the line” for CLABSI prevention. First, the organizations provided nurses with “scripts,” or suggested language, and guidance for raising concerns in a direct, but non-confrontational manner. Although previous outcomes have been mixed, structured or scripted communication has been identified as a potential way to improve communication on healthcare teams (Frankel et al., 2008) and to give nurses legitimacy in communicating with physicians (Vardaman et al., 2012). If, as this study suggests, how something is said is important to conveying what is being said then future research
should continue to explore the value of training, scripting, and informal role modeling to enhance nurses’ communication skills and ability to successfully speak up to prevent errors. Recognizing that newer nurses are particularly challenged, nurse managers and senior leaders in the study organizations were deliberate in their efforts to help newer nurses develop confidence and skills through education and role modeling, particularly during the orientation period which is critical to new nurse adjustment and education (Ferguson & Day, 2007).

This study reinforces the importance of leadership at all levels in facilitating, or removing barriers to, speaking up (Detert & Treviño, 2010) and identifies specific leader behaviors that are influential. For example, clinical executives and/or unit-level physician leaders were deliberate in their efforts to set expectations for nurses to speak up and “stop the line” for CLABSI prevention and then visibly supported this behavior. These leader behaviors fostered trust among nurses who indicated that they were confident that leaders “had their back” and demonstrated a congruence between leader word and deed, both factors that have been linked to employees’ willingness to speak (Premeaux & Bedeian, 2003; Leroy et al., 2012). In addition, leaders’ characterization of speaking up to “stop the line” as a behavior that was important to being a “good nurse” or to providing safe patient care was also identified by nurses as an important motivator; this finding is similar to a study of clinical teams that found that team members were more likely to speak up if physician leaders had successfully enlisted their support in broader shared goals of patient safety (Edmondson, 2003).

This study contributes directly to the CLABSI-prevention literature by identifying specific practices that support successful implementation of an intervention to empower
nurses to speak up and “stop the line,” a practice that has been linked with successful CLABSI prevention. This study also adds to the literature by providing preliminary insight into management factors that facilitate, or remove barriers to, speaking up more broadly in healthcare organizations. This study’s focus on a single intervention allowed for consistent comparison across sites and an ability to isolate the phenomenon of “speaking up” for in-depth analysis; the findings presented in this paper are directly applicable to speaking up for CLABSI prevention, but may also provide insight as to how organizations might implement other similar interventions, or encourage speaking up at a broader organizational level. Second, the size and scope of the study sample which was comprised of interview data from 160 executive, management and staff-level informants across six different organizations supports the validity of the preliminary findings presented in this paper.

This study has several limitations. As with all qualitative research, findings from this case study analysis are not widely generalizable to other similar organizations. Similarly, while the findings from this study provide valuable insight into how management can successfully implement a specific intervention to empower nurses to “stop the line” to prevent CLABSI, they may not be broadly applicable to speaking up more broadly for patient safety in healthcare organizations. Finally, although informants described their own behavior and that of their colleagues related to speaking up to “stop the line” and suggested that this behavior was an important factor for CLABSI-prevention outcomes, this study was not designed to directly assess employee behavior and/or its impact on outcomes.
Notwithstanding these limitations, this research provides a valuable foundation for future inquiry into how management can facilitate, or remove barriers to, speaking up. For instance, future studies might be designed to quantitatively measure and assess the link between speaking up and outcomes or to directly test the impact of various management interventions, e.g. leader behavior, on speaking up. In addition, this work could be extended to consider the applicability of these findings to encouraging nurses to speak up in other settings, e.g. non-ICU, and/or for other quality improvement purposes.


### Table 6: CLABSI-Prevention Case Study Sites

<table>
<thead>
<tr>
<th>Site (Pair #)</th>
<th>CLABSI Outcomes</th>
<th>Key Characteristics</th>
<th>Key Informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1 (1)</td>
<td>Good</td>
<td>• Catholic safety net hospital in large metro area&lt;br&gt;• 496 Beds&lt;br&gt;• 22 ICU Beds</td>
<td>• Executive (6)&lt;br&gt;• Management (8)&lt;br&gt;• Staff (14)</td>
</tr>
<tr>
<td>Site 2 (1)</td>
<td>Less Good</td>
<td>• Community hospital in working class suburb of large metro area&lt;br&gt;• 441 Beds&lt;br&gt;• 43 ICU Beds</td>
<td>• Executive (4)&lt;br&gt;• Management (12)&lt;br&gt;• Staff (14)</td>
</tr>
<tr>
<td>Site 3 (2)</td>
<td>Good</td>
<td>• Regional multi-site health system, includes University-affiliated teaching hospital in mid-size city&lt;br&gt;• 1,192 Beds&lt;br&gt;• 259 ICU Beds (9 units)</td>
<td>• Executive (7)&lt;br&gt;• Management (7)&lt;br&gt;• Staff (11)</td>
</tr>
<tr>
<td>Site 4 (2)</td>
<td>Good*</td>
<td>• Large, tertiary academic medical center in mid-size city&lt;br&gt;• 815 Beds&lt;br&gt;• 147 ICU Beds (4 units)</td>
<td>• Executive (5)&lt;br&gt;• Management (16)&lt;br&gt;• Staff (17)</td>
</tr>
</tbody>
</table>

*Site 4 was initially selected as “Less Good” based on CUSP Initiative project data and input from the project liaison. However, as this hospital had made a successful “turnaround” since the conclusion of the CUSP project, it is more appropriately categorized as “good” for the purposes of this analysis.

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<tr>
<th>Site (Pair #)</th>
<th>CLABSI Outcomes</th>
<th>Key Characteristics</th>
<th>Key Informants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 5 (3)</td>
<td>Less Good</td>
<td>• Community hospital, affiliated with large academic center in a small urban area</td>
<td>• Executive (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 373 Beds</td>
<td>• Management (5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 53 ICU Beds (2 units)</td>
<td>• Staff (12)</td>
</tr>
<tr>
<td>Site 6 (3)</td>
<td>Good</td>
<td>• Community hospital, part of large Catholic system in a small urban area</td>
<td>• Executive (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 376 Beds</td>
<td>• Management (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 52 ICU Beds</td>
<td>• Staff (10)</td>
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</table>
Table 7: Challenges to Speaking Up to "Stop the Line" for CLABSI-prevention

<table>
<thead>
<tr>
<th>Focus</th>
<th>Illustrative Quotes</th>
</tr>
</thead>
</table>
| Younger/Newer Nurses       | • “And I can say it’s difficult having to walk through with some of the newer nurses and then they do come back with questions later and you know, in the back of their mind they’re thinking, “I’m going to stop this physician from doing this procedure?” ~ ICU Nurse Manager  

  • “I think for the newer nurses in particular, it’s a real struggle to speak up and say something to someone. You’re a brand new nurse; you’re new in your practice. It’s hard to say something to the guys in the white coat or to your preceptor who’s supposed to know better than you.” ~ ICU Nurse  

  • “I think [speaking up] comes with experience. I think your more seasoned nurses are much more apt to speak up and say stop. The newer nurses are much more afraid to speak up.” ~ ICU Nurse Manager |
| Certain Physicians         | • “I realize now that there is probably more of a resistance to stop the senior physician than there is an intern. I think the resistance ramps up with persons of authority or seniority.” ~ Physician Chief, Critical Care  

  • “ICU nurses are not cowed by residents. But we have some surgeons, like most places, who think that their feet don’t touch the ground and they, it was not something they were used to, for nurses to talk back to them, or to say ‘Dr So and So, this procedure is not going forward until you put that mask on. And put on the sterile gloves, and do things properly.’ So you know, the nurses have become empowered.” ~ Medical Director  

  • “It’s scary though. Especially if it’s not a resident that is inserting the line. It’s a surgeon and you kind of have to tell on somebody else, a higher power)” ~ ICU Nurse |
Table 8: Practices to Address Physician Resistance to Nurses Speaking up to "Stop the Line" for CLABSI-prevention.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Illustrative Quotes</th>
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<tbody>
<tr>
<td>Consistently support nurses</td>
<td>“There is support from administration. There was support from the director. I’m sure that if there was not support from the higher up to stop the physician, then probably they wouldn’t have done it. (Site 1)” ~ Director, Performance Improvement</td>
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<td></td>
<td>“‘If you see that somebody contaminated during procedure or is not following protocol, you stop that procedure. And if the doctor continues, you let the intensivist know.’ And then he speaks to them. And we’ve seen improvement with that.” ~ Clinical Nurse Specialist</td>
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<td></td>
<td>“Staff have the confidence level that if they elevate a concern and it’s not received appropriately, then they can then go to their leadership team and have that side conversation, and that individual can then be counseled on “Hey, you know the nurse reminded you to wash your hands. And you kind of snapped at her. That behavior is not tolerated in this unit.” ~ Nurse Manager</td>
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<td>“We told [the nurses] repeatedly that they have to be forceful. They can’t take ‘no’ for an answer. I do back them up that way. We’ll write letters to doctors and call doctors… there’s a few muddle heads around here that just don’t get it, but sooner or later they will die off.” ~ Hospital Medical Director</td>
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<td>“Our nurses felt like, ‘They are the doctors. If they don’t gown, who can we tell?’ We empowered them to say to the doctor, ‘it is our policy that you fully gown to do this line insertion. If not, I’ve got somebody that I know I can call to come down.’ Our chief nursing officer was greatly involved in this. She [told staff], ‘Here’s my number, call me.’ Once we enacted that, everybody pretty much started to conform to the point that we got our line infection rate down. Rarely now do I get a doctor that doesn’t gown up. It just doesn’t happen.” ~ Nurse Manager</td>
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Table 8 Continued

<table>
<thead>
<tr>
<th>Practice</th>
<th>Illustrative Quotes</th>
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<tbody>
<tr>
<td>Address physicians’ role and behavior</td>
<td>• “We tried to sensitize some of the docs.... I go to the physician orientation and one of the things that I always tell the docs is that .. the nursing staff and the other employees ...[will] ask you if you’ve washed your hands, so don’t feel challenged when somebody says that, they’re only doing their job and they’re doing what they’re supposed to do.” ~ Director, Quality and Risk Management</td>
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<td></td>
<td>• “But nobody ever yelled at anybody except the doctors. There was that little last slice of docs being a real pain in the rear. They were the ones that really needed some coaching about their appropriateness of behavior. ... And you have to go through a few of these small easy conversations and let the word get out that we really are paying attention, and we really will not tolerate bad behavior.” ~ Hospital Chief of Staff</td>
</tr>
<tr>
<td>Practice</td>
<td>Illustrative Quotes</td>
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| **Scripting**               | • “We’ve done some work with scripting and teaching people how to speak and I think some people are better at it than others and people are still very leery.” ~Director, Quality and Risk Management  
• “To establish that common language among healthcare workers so that we understand that as a respectful way of informing you as opposed to saying that you did something wrong. I just think that’s key to being successful.” ~ Chief Nursing Officer  
• “It’s a hard thing [for nurses to speak up and stop procedures] because they need to know the difference between holding somebody accountable and disciplining them. If you come in and your patient had a central line but [the checklist has not been completed] and you say to them, “Did you do the checklist?” That’s different than, “You didn’t do the checklist.” So [nurses] need to understand that they can say that to people” ~ ICU Nurse Educator |
| **New nurse education**     | • “But I think in the end like because of the emphasis on the education and because of what they hear from the preceptors and from the managers, [newer nurses] know that that [speaking up to stop the line] is an expectation.” ~ ICU Nurse Manager  
• “[For newer nurses], encouragement of seeing other nurses do it or being encouraged to speak up for themselves and realizing that it’s a safe environment, it takes seeing somebody else do that successfully or them doing it and testing the water themselves and not getting burned for them to realize that that’s an ok thing to do.” ~ ICU Nurse  
• “The challenge probably lies with the newest nurse because they do not know if this is normal. Is this something worth speaking up about or not? We talk through some of that during orientation. We talk about chain of command.” ~ Chief Nursing Officer |
References


76


Chapter 4: Encouraging Employees To Speak Up To Prevent Infections: It’s About The Forest, Not The Trees

Introduction

Healthcare-acquired infections (HAIs), or infections that people get while receiving treatment for a medical or surgical condition, are a leading cause of morbidity and mortality in the United States (U.S. Department of Health and Human Services, 2013). Central line-associated bloodstream infections (CLABSI) are among the most common HAIs and are the results of infections that develop in a patient’s “central line,” an invasive intravenous catheter used for the delivery of certain nutrition and medication that cannot be delivered through other mechanisms such as peripheral intravenous lines. Each year, CLABSI s account for an estimated 85,000 preventable infections, 10,000 preventable deaths, and $1.7B in avoidable medical costs (On the CUSP: Stop HAI Website, 2013)

Over the last decade, CLABSI prevention has been a top priority for patient safety in the United States, with infection rates decreasing by nearly 60% (Centers for Disease Control and Prevention, 2011; Berenholtz et al., 2004). Key to this success has been both the development of clear clinical guidelines for CLABSI prevention in intensive care units (ICU) a leading source of these infections, e.g. standards for line insertion and maintenance, process standardization, use of checklists (Bernholtz et al., 2004), and
coordinated, state, local, and regional efforts to disseminate and support adoption of these evidence-based standards (Centers for Disease Control and Prevention, 2011; Berenholtz et al., 2004; Pronovost et al., 2006a; Welsh et al., 2012). Beyond the clinical standards, CLABSI-prevention efforts have also included a focus on improving safety culture within ICUs, although the link between these organizational changes and CLABSI outcomes has not been specifically evaluated (Pronovost et al., 2005; Pronovost et al., 2006a).

The concept of a healthcare safety culture has emerged from findings in other high-risk industries, such as aviation, in which a preoccupation with failure and focus on improving systems, rather than blaming individuals, have led to high degrees of safety (Pronovost et al., 2006b; Reason, 2000). Strong healthcare safety cultures have been positively associated with quality outcomes in healthcare organizations (Cohen et al., 2003; Katz-Navon et al., 2005; Pronovost & Sexton, 2005) and are characterized by focus on improving systems and supporting open dialogue to facilitate safer practices (Hartmann et al., 2009; Khatri et al., 2009; Pronovost et al., 2003; Singer et al., 2009). Successful CLABSI-prevention efforts have included a strong focus on improving safety culture by engaging and empowering staff to identify potential errors and take action to address them (Pronovost et al., 2005). While the characteristics of a strong healthcare safety culture have been well-defined (Agency for Healthcare Research and Quality, 2013), there has been little research into the factors that support successful safety culture implementation.

One defining characteristic of a strong healthcare safety culture is that individuals are willing to speak up about errors or opportunities for improvement without fear of blame or repercussion (Agency for Healthcare Research and Quality, 2013); this
represents a shift from the traditional culture of healthcare organizations in which
employee reluctance to speak up has been widely recognized as a barrier to quality (Kohn
et al., 2000; Leape, 2009). Research on speaking up has found that this behavior is
influenced by a complex mix of individual and situational characteristics, e.g.
personality, supervisor relationships (LePine & Van Dyne, 1998; Premeaux & Bedeian,
2003) as well as employee fears about repercussions to themselves and others (Detert &
Edmondson, 2006; Detert & Treviño, 2010; Milliken et al., 2003; Morrison & Milliken,
2000). Although there is evidence that leaders behaviors, e.g. being inclusive, seeking
feedback, can contribute to employees perceptions that the environment is “safe” for
speaking up (Nembhard & Edmondson, 2006), research has not yet identified specific
management and organizational practices that can facilitate this behavior.

In this paper, I present findings from a qualitative case study analysis in which I
consider whether and how speaking up is addressed as part of six hospitals’ CLABSI-
prevention efforts. The sample for this study includes six U.S. hospitals that participated
in state-level CLABSI-prevention initiative designed to disseminate and support adoption
of evidence-based clinical guidelines for CLABSI-prevention and unit-based safety
culture improvement. This sample provides a unique opportunity to explore the broader
phenomenon of speaking up in a unique clinical and organizational context. This study
contributes to the literature on HAI and CLABSI-prevention by providing insight into
ways in which management can facilitate and/or remove barriers to, speaking up to
support these efforts. More broadly, these findings provide preliminary insight into the
factors that may support speaking up related to organizations’ efforts to implement safety
culture at the unit and/or organizational levels. And finally, this study contributes to the
broader literature on the phenomenon of speaking up which has not yet identified specific management interventions that can be systematically implemented to facilitate, or remove barriers to, this behavior.

**Methods**

The research presented in this chapter was conducted as part of a larger study of six U.S. hospitals’ CLABSI-prevention efforts. This research uses the same methods, sample, and qualitative data set as the previous study on “speaking up to stop the line” presented in Chapter 3. In short, the study sample is comprised of six hospitals selected on the basis of their participation in a national CLABSI-prevention initiative; using a design of contrasting cases, the sample included three pairs of hospitals matched on organizational characteristics, but with differing CLABSI outcomes, e.g. one hospital in each pair with “good” vs. one with “less good” CLABSI outcomes. The primary data source for this study was interviews with a wide range of key informants from each of the study sites, including organizational leaders, professional staff, clinicians, and frontline employees. The specific methods for site selection and data collection are detailed in Chapter 3, and a summary of case study sites and key informants is presented in Table 6.

The analysis for this third study was conducted using the same iterative process and methods described in Chapter 3. As the first step in the process, interview transcripts were coded using standard definitions from a coding dictionary to break the data into smaller, meaningful segments for analysis. This inquiry used a method of constant comparison to identify themes and patterns in the data initially coded as “speaking up.” Through this process, which is described in detail in Chapter 3, I identified two distinct
types of “speaking up.” The first, speaking up to stop the line, relates to the implementation of a specific intervention in which nurses were empowered to speak up and “stop the line” if physicians were violating infection control protocol and is the focus of the research presented in Chapter 3. The second type of speaking up, speaking up to improve patient safety, included more generally observed instances of speaking up in which members of the care team or other staff spoke up with information or ideas about how to learn from CLABSI s or prevent future, CLABSI s.

For the research presented in this chapter, I analyzed the subset of “speaking up” data related to speaking up to improve patient safety (hereinafter referred to as improvement-oriented speaking up). Using the analytic methods detailed in Chapter 3, I developing codes for “improvement-oriented speaking up,” related “facilitators,” and “challenges” and then coded and analyzed the data to identify themes. The focus of this final step of the analytic process was to 1) assess whether and how improvement-oriented speaking up was implemented to support CLABSI-prevention efforts in the study hospitals, 2) identify management and organizational practices that facilitate, or remove barriers to, improvement-oriented speaking up and 3) assess differences between sites with “good” vs. “less good” CLABSI outcomes.

Results

Below is a summary of findings from my analysis in which I sought to determine whether and how hospitals implementing evidence-based practices for CLABSI-prevention facilitated, or removed barriers, to employees improvement-oriented speaking up. These findings are organized into two sections: 1) mechanisms for improvement-
oriented speaking up, and 2) management practices that support improvement-oriented speaking up. Relevant differences between organizations with “good” vs. “less good” CLABSI outcomes are considered within each section.

**Mechanisms for improvement-oriented speaking up.** Among the hospitals with “good” CLABSI outcomes, informants characterized two organizational processes – retrospective learning processes and inter-disciplinary rounds – as the primary mechanisms for improvement-oriented speaking up. These processes not only provided a forum for employees to speak up about opportunities for improvement, but were also implemented such that the processes themselves facilitated and reinforced speaking up. These processes and their role in facilitating speaking up are described in the sections below and summarized in Table 10.

**Retrospective learning processes.** Informants from the study organizations with “good” CLABSI outcomes described retrospective learning processes in which key stakeholders, e.g. care team members, infection control practitioners, convened to investigate the causes of a CLABSI “event” and identify opportunities to prevent future CLABSI, as an important mechanism through which employees spoke up about errors and opportunities for improvement. Although the specific structure of these retrospective learning approaches varied among the sites with “good” CLABSI outcomes—ranging from structured root cause analyses to more informal bedside “huddles” to investigate and learn from CLABSI— informants described a similarity in purpose and role related to speaking up. Across the sites with “good” CLABSI outcomes, informants consistently described speaking up in the context of these retrospective learning processes. In contrast, not only was there little evidence of improvement-oriented speaking up at the
hospitals with “less good” CLABSI outcomes, but at one of these sites, the retrospective learning process was described as a barrier to speaking up.

Informants identified two common features of the retrospective learning processes that served to encourage and reinforce employees’ speaking up. First, these processes were implemented in such a way that they were perceived as non-punitive in nature. Organizational and process leaders were deliberate in their communication to emphasize that these learning processes were designed to be non-punitive and learning focused. Although some informants described that employees were initially skeptical of the process and hesitant to speak up, they were encouraged as they realized leaders followed through on their communication with consistent action. This widely-observed characterization is well-summarized in the words of a key informant describing how the root cause analysis process within his/her organization has successfully encouraged employees to be more vocal for quality improvement:

“We make sure that [our root cause analysis process] is not judgmental. Every time we start ... we make a statement that this is a system evaluation, not an individual evaluation. There may be individual issues that occur but that happens outside of this meeting. But within the meeting, we’re just looking at systems... And [staff] are getting more comfortable with it. Initially when we would [hold] a root cause analysis and they would shake their heads “yes” or “no.” Now they’re more vocal.” ~ Nurse, Quality Improvement Coordinator

Second, informants described the learning processes in their organization as being highly inclusive, suggesting that these processes provided a forum for employees who
may not have previously had a voice, to speak up. Informants provided many examples and stories of how efforts to include a broad representation of clinicians and staff in improvement processes facilitated input from individuals who may never been encouraged, or had a forum, to contribute in the past. These stories were often concluded with some recognition that these contributions enhance quality and patient safety improvement efforts. In a particularly compelling example, an informant described how during the course of a unit “huddle” to try to investigate the possible causes of several infections on the unit, the housekeeper provided very useful insight that, without the huddle, would not have been raised:

“Another thing we notice in our huddles is that all staff members have valuable input, not just the bedside nurse, not just the manager. In one of the huddles we went in, it was the environmental care service person that helped us figure out a flaw in the system. And she had been quiet the whole time. She was our housekeeper, and we were all trying to figure out why we have this organism spreading throughout the unit. What’s going on? How can we stop it? And we were just about ready to finish the huddle because really we couldn’t figure out what was the system problem, and she said, “I’ve got a question. We use the same toilet bowl cleaner, which is called a Johnny Mop, in every patient’s room. Could that be a problem?” We’re like, “Absolutely.” We were so thankful that she spoke up. We were so thankful that she was there. We invite everyone to our huddles because of situations like that. That can help us figure out an area of improvement that we can fix. And then we just distribute that knowledge.” ~ Infection Preventionist
In contrast, informants from the two sites that had “less good” CLABSI outcomes did not recognize quality improvement processes as a forum in which they felt comfortable speaking up. In fact, several informants described the general organizational culture was generally perceived as “punitive” and had been characterized as such in a recent organizational survey. Although not specific to CLABSI-prevention, one informant’s description of the organizations’ sentinel event review process provides insight into how quality improvement processes can be administered such that they inadvertently work as a barrier to speaking up.

“[Staff] think that that [reviewing mistakes at the Sentinel event committee] is punitive, which it may be because it may be that we behave that way and not even realize it... [the meeting] is in the board room [which is intimidating] ... and they sit across the table from the COO and the Medical Affairs Vice President and the Chief Nurse Executive saying, “but how is it that this [error occurred]” ... I don’t think that anybody intentionally is trying to make them feel uncomfortable but I think that they just do and [the staff] think that they’re at a tribunal.” ~ Director, Quality & Risk Management

Inter-disciplinary Care Processes. A key distinguishing feature between the hospitals that had achieved “good” CLABSI outcomes was widespread evidence of collaborative inter-disciplinary care processes, e.g. patient rounding, as an identified mechanism for improvement-oriented speaking up. Many informants from these sites described how these processes fostered open communication and created a forum in which members of the care team felt comfortable speaking up about issues related to patient care, quality, and safety. One physician informant describes how daily
collaborative rounding between physicians and nurses increased cohesiveness between professionals on the care team and, as a result, facilitated nurses’ speaking up about patient care:

“I know within the Medical and Surgical ICU, our intensivist rounding has really brought the physicians and the nurses together. We round every day. [The nurses] just feel more open and willing to ask questions. That has greatly increased cohesiveness. Before, I would say, it wasn’t a bad relationship. It was more just like he’s the doctor and I’m the nurse. [Now], you see more teaching and learning going on [between the disciplines]. I think before all of this, they wouldn’t have done that. [The nurses] just wouldn’t have felt comfortable.” ~ ICU Nurse Manager

One factor that clearly contributed to the role of these interdisciplinary care processes in facilitating staff, particularly nurses, improvement-oriented speaking up was that physicians, as the defacto care team leaders, clearly valued and encouraged this input. At one site, several informants described how physicians recognized nurses as the “drivers of the bus” for patient care because they had a more intimate knowledge of patients’ needs and conditions due to their hands-on role in patient care. This was particularly true in the ICU-setting in which nurses typically care for only 1-2 patients at a time and therefore have a unique insight to the patients condition and needs that is valuable to the physicians who are responsible for managing the overall course of treatment for a larger slate of patients. At one of the other sites, the value of the nurses perspective and, correspondingly the rounds process in creating a forum in which the
nurses could comfortably share this perspective, is illustrated in the quote from a physician informant below:

“We truly value the nurses’ input. Some of us have even been on our way to break because our rounds go long sometimes, and we’ll postpone their break, so they can come and be a part of rounds. We very much value their input, and we know that physicians see a baby in a very snapshot point in time. The nurses are there 24 hours a day. Most of us appreciate that, and if the nurse says, “You know, this kid is on the base line today, and I’m really worried something’s going on.” We take that in deciding what we’re going to do for the day. I hope that the nurses would say that what I’m saying is true. I think for most attendings it is.” Nurse, Neonatal ICU

Findings regarding both the presence and value of interdisciplinary clinical care processes as a mechanism for facilitating speaking up at the two sites that had “less good” CLABSI outcomes was mixed. At one of the sites, nurses and other members of the care team actually did participate on rounds with physicians, however the process was described as “every role for itself” with the conversations focusing largely on discharging patients, rather than improving quality and safety. At the other site with “less good” CLABSI outcomes, nurses were not systematically included in physicians’ care processes, an exclusion that was identified as a barrier to open communication between professionals and nurses’ general willingness to speak up on the clinical units. As one nurse describes it, “I think that becomes the culture, I mean it just becomes the acceptable way. …If your not rounding, and you’re not seeking them out, it is just the way.”
Management Practices. Informants identified three common practices that both encouraged employees to speak up about errors and opportunities for improvement and signaled that the organizational environment was safe for speaking up. These practices directly supported successful implementation of the organizational CLABSI-prevention processes described above and also reflect the study organizations’ broader commitment to empowering employees to speak up for patient safety. These practices include: 1) top leaders actively seek frontline input and feedback, 2) training to emphasize employee role in quality and patient safety, and 3) availability and use of reporting systems for quality improvement. All three practices were consistently observed at the sites with “good” CLABSI outcomes and were less/not at those sites with “less good” outcomes. The practices and their role in encouraging employees to speak up are described below; unless otherwise noted, the findings below are based on observations from the study sites with “good” CLABSI outcomes. Table 11 includes additional qualitative evidence to support these findings.

Leaders actively seek frontline feedback. Informants described top clinical and administrative leaders efforts to actively seek feedback from frontline employees about errors and opportunities to improve as an important factor in facilitating improvement-oriented speaking up. There was evidence that top-level leaders recognized their role in setting the tone for speaking up in the organization and were therefore deliberate in their communication with staff, emphasizing that employees’ input is important for the organization to be able to learn from mistakes and/or fix systems.

More specifically, top-level executives at three of the four sites with “good” CLABSI outcomes dedicated time on their calendar to actively seek frontline employee
feedback through weekly “leadership” or “patient safety” rounds that they conducted on rotating units. Informants indicated that the primary goal of these rounds was to give leaders a forum to directly ask staff about the work on the unit and identify any problems that the leaders could resolve. A less direct goal of these rounds was to lead “by example” and in doing so, signal the importance of patient safety to the organization and the value of learning from mistakes, and, as a result, to encourage open dialogue and feedback. As one hospital Chief Executive Officer describes it:

“The whole concept of [creating a fair and just culture] is the concept of shadow of the leader, in that people really watch the behavior of leadership and that shapes the culture as strongly as almost anything. We have initiated patient safety rounds, where all of us go to various parts of the organization, have a questionnaire, sit down with front-line staff, and talk to them about how important it is to always be improving, always recognizing that we make mistakes. But that the majority of the mistakes are caused by needs to improve systems that are not necessarily people motivated to do the wrong things, we’re trying to do the right things.”

There was widespread evidence that these top leadership efforts were powerful in letting frontline staff know that their input and perspective was important. In the words of one informant:

“They round. They have little focus groups with staff. Even [CEO] has town hall meetings with staff so they can bring their concerns right to her. Which is powerful.” ~ Nurse, Infection Prevention

Notably, although leaders in both of the “less good” sites had also initiated a
process of leadership rounding, these were not as consistently described or widely observed as in the sites with “good” outcomes and were not perceived as particularly impactful in terms of employee willingness to speak up. At one of the “less good” sites, the CEO had recently joined the organization, replacing an executive who had been there for more than 20 years and had initiated both “safety rounds” and town hall meetings; comments from informants suggested that these were positively received, but they had not yet influenced general perceptions of the organizational culture. At the “less good” site, only one informant (an executive) even mentioned the patient safety rounds, indicating that they were conducted only a couple of times per year.

**Employee training.** Although varied in approach, three of the four organizations with “good” CLABSI outcomes used new employee orientations or widely implemented “patient safety” employee training sessions as a forum for building a positive, non-punitive culture for speaking up. Although each organization had a different approach, the general focus of these sessions, typically delivered by top organizational leaders, was to describe the organizations’ commitment to patient safety, emphasize the role of each individual employee in ensuring patient safety, and reiterate that an important way for employees to contribute to patient safety is to speak up to identify errors or system problems so that the organization can learn and improve.

The most comprehensive approach to creating a strong culture for patient safety was found at one of the sites that was two-years into the process of implementing organization-wide effort for achieving “high reliability;” this initiative included coordinated implementation of a variety of activities, including daily management “safety huddles,” recognition of “good catches,” and mandatory patient safety training for all
physicians and employees. One informant describes the value of the training in:

“Letting the staff know that you shouldn’t be afraid to do this because we’re trying to make it clear it’s not punitive but also we want everybody to be 100% accountable and everybody have to go to what’s called a high reliability class. It was a four-hour session and scenarios were introduced to identify what could be done better, etc. and [employees were given] tools on how to report [errors or opportunities for improvement] whether it was anonymously, or whether [they] gave their name…. It’s for every employee [not] just clinical ... And I think that’s kind of nice. I think the message out there is that it’s safe to report.” ~ Coordinator, Staff Education

An informant from the same organization described how the content of her new employee orientation training used “real stories” to emphasize the importance of each individuals’ role in patient safety and the value of speaking up:

And then I went to the training and you learn all the different techniques. At those meetings stories are shared. Real stories. Stories that happened here. And I remember my orientation day here the president of the hospital ... started her introduction [with] a safety story that had happened like a month prior .... Talk about transparency. This is what happened, this is what we have to talk about, I want you to know you’re working in a place where safety is a top priority. We discuss, we talk, we want you to. You’re coming in with new eyes and ears and we want you to contribute and feel like you’re a part of that team. So that was the first day. That’s how we were introduced.” ~ Nurse, Infection Prevention

Although considerably less comprehensive in focus, informants at the other
“good” sites described how both employee training and orientation included strong messages about the importance of patient safety and speaking up and were important to establishing a “non-punitive culture” in which employees could speak up about errors, without fear of repercussions.

**Error and event reporting.** Informants from all of the sites with “good” CLABSI outcomes talked about the role of error and event reporting systems as both a mechanism for speaking up and for fostering transparency about errors. Informants identified the availability and widespread use of these reporting systems as important to creating a positive culture for speaking up and, more broadly, for systematically addressing identified concerns. Several informants also noted that although these reporting systems were technically anonymous, many informants actually chose to use their names in reporting, largely so that they could learn the disposition of any reported issues.

“I would say our reporting, if we did a graph of reporting, I would say it’s probably increased over the last five years. I think the other piece of that culture is the amount of phone calls we get. Our office is quality and patient safety. Somebody who doesn’t know if a [report] has been entered will call, so we’ll get, sometimes, five notifications of the same event because everyone feels like it was such a big deal. “We want to make sure that you knew about this,” so we get an occurrence report. We get a call from risk. We get a call from the physician, the nurse. And then the nurse manager will come to our office” ~ Quality Consultant

Although there was evidence that the sites with “less good” CLABSI outcomes also had error reporting systems, they had not been fully realized as a mechanism for employee voice and/or valuable tool for fostering transparency and open dialogue about
errors and opportunities for improvement.

**Discussion and Conclusions**

In this exploratory study, I considered whether and how improvement-oriented speaking up was addressed in the context of CLABSI-prevention efforts in six U.S. hospitals. The study sample included four hospitals that were considered to have “good” CLABSI outcomes as they had virtually eliminated ICU-based CLABSI during an 18-month period and two that, although they had declined their rates, had inconsistent results and were therefore considered to have achieved “less good” outcomes. Notably, improvement-oriented speaking up was observed only at the sites with “good” CLABSI outcomes.

Although this study was not designed to directly assess the link between improvement-oriented speaking up and CLABSI-outcomes, this study’s findings suggest a possible relationship, be it direct, e.g. between behavior and outcomes, or indirect, e.g. between conditions that enable behavior and outcome. For example, the two identified mechanisms for improvement-oriented speaking up – retrospective quality improvement and inter-disciplinary clinical care processes—were characterized as being both non-punitive and highly inclusive. These factors are known to contribute to employee perceptions of “psychological safety,” or belief that the environment is safe for interpersonal risk taking such as speaking up (Edmondson, 1999; Tucker, Nembhard, & Edmondson, 2007). The non-punitive and inclusive nature of these processes was identified as an important factor for improvement-oriented speaking up, but may also have contributed to their impact on CLABSI outcomes as psychological safety has been
linked to organizational learning (Edmondson, 2003) and successful process improvement (Baer & Frese, 2002).

This study also identified three management practices—leaders seek feedback from employees, employee training, and use of event and error reporting systems—that were identified for collectively creating an organizational environment that encouraged and rewarded employees for improvement-oriented speaking up. Although described in the context of CLABSI-prevention, these practices were generally related to the study organizations’ broader commitment to, and organizational initiatives to support, patient safety improvement.

First, top-level leaders were deliberate in their efforts to encourage improvement-oriented speaking up, often through a process of systematically “rounding” on patient care units to seek frontline employee input. This study is consistent with research that has found that employees are more likely to speak up when they perceive their managers or team leaders to be open to feedback (Milliken et al., 2003) or when leaders directly seek employee input (Nembhard & Edmondson, 2006) and provides evidence to support propositions that top-level leaders’ behavior can indirectly influence employee perceptions of the environment for speaking up (Detert & Treviño, 2010). Previous research supports a link between leader rounding and enhanced “safety climate” in healthcare organizations (Frankel et al., 2008); the findings from the present study are consistent with this previous research and by providing specific insight into how this leader behavior influences speaking up, an important, but yet unexplored, component of safety climate.
Second, informants identified “patient safety” training as an important mechanism through which organizational leaders conveyed the organizations’ commitment to patient safety and emphasized the importance of improvement-oriented speaking up. As with the top leader rounding, this practice reinforced management openness to employee feedback. These training sessions also provided a forum for leaders to communicate shared goals, enlist employee support for supporting those goals, and articulate a compelling rationale for speaking up, factors which have been identified as influential to employees’ decisions to speak up in clinical teams (Edmondson, 2003; Nembhard & Edmondson, 2006). The present study extends the previous research by providing preliminary evidence to suggest that leadership practices at the team level may also be applicable at a broader organizational level.

Finally, informants identified widespread implementation and use of error and event reporting systems as an important factor in encouraging improvement-oriented speaking up among employees. These reporting systems were recognized as valuable in contributing to “transparent” dialogue about patient safety. The fact that employees were described as willing to identify themselves when submitting a report reflects the degree to which these employees felt comfortable and/or safe speaking up through this mechanism. Further, informants suggested that employees were motivated to use these reporting systems because they saw it as a way to contribute to improved patient safety. There is widespread evidence that reporting systems are under-utilized in healthcare due to under-reporting among employees (Farley et al., 2012). This findings from this study suggest that management efforts to link reporting behavior to the broader patient safety may engage and motivate employees by providing them with a clear “line of sight” between
speaking up via reporting and accomplishment of these goals (Boswell, 2006; McAlearney et al., 2011).

This study contributes to the literature in several ways. Most directly, this study enhances the CLABSI-prevention literature by providing specific insight into management practices that support improvement-oriented speaking up. From a healthcare quality improvement and patient safety perspective, this study found that it was broader organizational practices to improve patient safety, not CLABSI-specific practices, that were most salient for facilitating improvement-oriented speaking up; this finding suggests that organizations seeking to encourage employees to speak up for CLABSI-prevention, or other types of quality improvements, may be most successful with an organization, rather than initiative-specific, focus. More broadly, the findings from this study of improvement-oriented speaking up provides preliminary insight to the literature which has defined the components of a healthcare safety culture, but has not yet provided insight into specific practices that support its implementation. Finally, this study contributes to the literature on speaking up, by providing organizational-level insight into specific management practices that can influence this behavior.

This study has several strengths and limitations. First, like all case study research, the findings from this study may not be broadly generalizable. However, the robust case study design, rigorous qualitative methods, robust sample of six case study organizations, and rich qualitative data from over 160 key informants enhance the validity of the findings presented in this paper. In addition, this study’s discrete focus on CLABSI-prevention provided an opportunity to examine improvement-oriented speaking up, a highly complex behavior, in a specific, limited context. Finally, all characterizations of
speaking up and the factors that influence that behavior were based on informants’ perceptions of the behavior, not on researchers’ observations of the behavior.

The findings from this study suggest several areas for future research. First would be to consider the applicability of the findings from this study in other contexts, e.g. other healthcare-acquired infections, non-hospital settings. More broadly, future research might consider the role of leadership alignment and development as a factor for speaking up. For example, this study identified specific leader behaviors, organizational processes and management practices that all work together to facilitate improvement-oriented speaking up, and, although informants were asked about leadership development and training, their responses did not provide specific insight into whether and how these organizations sought to influence and reward leader behaviors.
Table 10: Quality Improvement and Interdisciplinary Care Processes, Comparison of Sites with “Good” vs. “Less Good” CLABSI Outcomes

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>CLABSI Outcomes</th>
<th>Description</th>
<th>Characteristics</th>
</tr>
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<tbody>
<tr>
<td>Quality Improvement</td>
<td>Good</td>
<td>• Post-event learning processes, e.g. debrief, root cause analyses, bedside “huddles”&lt;br&gt;• Error and/or event reporting</td>
<td>• Processes non-punitive&lt;br&gt;• Focus on identifying system errors and learning from mistakes&lt;br&gt;• Employee participation encouraged, recognized and rewarded</td>
</tr>
<tr>
<td>Improvement Processes</td>
<td>Less Good</td>
<td>• Few observations</td>
<td>• A few examples suggest these processes perceived as intimidating or punitive</td>
</tr>
<tr>
<td>Interdisciplinary Care</td>
<td>Good</td>
<td>• Inter-disciplinary rounds focused on collaboration</td>
<td>• Physicians seek and value nurse and other staff input&lt;br&gt;• Structured processes/tools facilitate open communication</td>
</tr>
<tr>
<td>Processes</td>
<td>Less Good</td>
<td>• Limited nurse involvement in rounds&lt;br&gt;• When nurses involved in rounds, focus on information sharing, not collaboration</td>
<td>• Nurse participation in rounds not identified as a priority&lt;br&gt;• Structure/timing of rounds prohibits nurse involvement</td>
</tr>
</tbody>
</table>
Table 11: Management and Organizational Factors that Contribute to Creating a Non-Punitive Environment for Speaking Up

<table>
<thead>
<tr>
<th>Factor</th>
<th>Illustrative Quotes</th>
</tr>
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</table>
| Leaders’ Seek Feedback from Frontline      | • “We’ve come so far now that we can literally dig down into every case and we’ve established these rounds that we call GAP rounds, great advocates for patients. We try to tell people it’s not punitive that you’re being called on the carpet, but we try to call those people who touch the patient. Tell us what happened? How could we have done something better? We assume as an organization that it’s about the system that we put in place. It’s not about that individual.” ~ Infection Preventionist  
• “We have our CLABSI meetings that we’ll have with the ICU staff and [our CNO] to go over our CLABSI and our blood stream infections and what could be done different and where improvement could be made. She’ll invite the bedside staff that had been taking care of the patients to come in. She’s very open to hear what they have to say.” ~ Nurse Manager, Critical Care  
• “It’s ok to speak up. The silence of the workforce is troubling. When I come on service with new people, I say, “I’m going to rely on you guys to keep me out of trouble. I’m going to make a lot of decisions today and some of them are going to be bad. If you can see that, you got to speak up.” We’re trying to take care of sick people here. It’s not about me. This is about our team doing the right thing.” ~ MD, Chief, Critical Care |
| Employee training                          | • “It’s kind of a culture thing. Nobody’s going to get fired over it. We’re encouraged to bring up process errors in the hospital...Leadership encourages it. If this error’s occurring more than once, then it’s probably not a person it’s a system wide issue that we need to address. It is a huge component of orientation.” ~ ICU Nurse  
• “The educators have an open door for somebody to just come in and say, “I know what to do with this, but it doesn’t feel good.” Or for them to use the [incident] reporting system, our incident reporting system where somebody can anonymously report that there was a situation that they were uncomfortable with, and know that we’re going to follow up and share some follow up scenarios, case things that happen, but not give specifics which calls somebody out.” ~ Nurse, Neonatal Intensive Care  

Continued
### Table 11 Continued

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>Illustrative Quotes</th>
</tr>
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<tbody>
<tr>
<td><strong>Employee training (con’t)</strong></td>
<td>“It is very core in nursing training. It is the nursing role. We don’t diagnose disease, we don’t do that kind of thing, we don’t treat disease really, we carry out the orders, but our job is to be an advocate for the patient. And to make sure the patient gets the care that they need. That is our role on the healthcare team. I think that is the key role. I think the majority of nurses would agree with that... [advocating for the patient] is our job.” ~ Nurse, ICU</td>
</tr>
</tbody>
</table>
| **Reporting and Communication Tools** | “It’s pretty transparent. ... We were just talking about yesterday how much time we spend in our occurrence reports and following up on even near misses, which really speaks to the culture...I really think people feel pretty comfortable about a not anonymous report, whether that’s through the online system or pick up the phone and make a phone call.” ~ Quality Consultant  
• “More and more I have seen, people are reporting things... And based on that information [risk management]... will send out a [patient incident report]... And she’ll say based on the feedback of a nurse who gave it to us as a learning experience, you tend to appreciate that more when you know it’s coming from one of your peers. And I think it’s great how it’s done.... And I would say sometimes quite a few people tend to put their name. Because then this way [risk management] will follow up with them.” ~ Nursing Education Coordinator  
• “Being in this institute is all about the patient and it’s very transparent that way. All conversations are about the patient and talking about things that go wrong. We talk about it. As you walk down the hallway if you look at our safety bulletin board there may be a [patient safety incident report] that says this happened and potential harm could reach the patient so this is what we’re going to do. Our internet website you look up [these reports] and it will say that this happened. It’s not always pretty. They try to take away all the identifying factors but it’s not always pretty”. ~ ICU Nurse Educator |
References


Chapter 5: Conclusion

In Chapters 2-4, I presented three studies that explore whether and how management practices can be implemented to successfully facilitate, and remove barriers to, speaking up in healthcare organizations. The first study (Chapter 2) is a conceptual analysis and case study investigation designed to assess the applicability of a high-performance work practices (HPWP) model as a strategy to facilitate speaking up; the study presents conceptual and preliminary case study evidence from five health systems, selected as “exemplars” for HPWP implementation. This study identified specific facilitators of speaking up, e.g. structured communication processes, non-punitive human resource policies, and robust use of error reporting systems, that were supported by HPWPs and enhanced the environment for speaking up, e.g. speaking up rewarded and recognized, robust training emphasized importance of speaking up. Overall, this first study provides preliminary evidence to support the applicability of an HPWP model for facilitating speaking up in healthcare organizations.

The second two studies (Chapters 3 and 4) were based on an exploration of whether and how six hospitals facilitated speaking up as part of their CLABSI-prevention efforts. An early finding in my qualitative analysis of the data from this sample identified two distinct “types” of speaking up. The first “type” of speaking up was explored in Chapter 3 and is related to a specific practice in which study hospitals empowered nurses
to speak up and “stop the line” if physicians did not adhere to infection control protocols during central line insertions; in this study, I found that all of the hospitals in the study had successfully implemented this practice and identified specific barriers and facilitators of these efforts. The second “type” of speaking up was employees’ willingness to speak up for quality improvement and was the focus of Chapter 4. Specifically, I considered whether and how the study hospitals facilitated, and/or removed barriers to, improvement-oriented speaking up. Interestingly, improvement-oriented speaking up was observed only in those hospitals with “good” CLABSI outcomes. In contrast to the practices to facilitate speaking up to “stop the line” which were largely unit-focused and very specific to that initiative, the practices that facilitated improvement-oriented speaking up were facilitated by organizational practices associated with the study organizations’ broader commitments to patient safety improvement.

**Applicability of HPWP Model to speaking up**

Combined, the findings of these three studies offer preliminary support for the applicability of HPWPs as a strategy for facilitating, or removing barriers to, speaking up in healthcare organizations. In all three studies, speaking up was facilitated through successful implementation of multiple complementary practices designed to align the workforce with organizational goals, a hallmark of an HPWP strategy. In Chapters 2 and 4, these practices reinforced the study organizations’ broad commitments to improving patient safety, and in Chapter 3 these practices were specific to CLABSI-prevention efforts. In the paragraphs below, I summarize the overlap between the facilitators of speaking up identified in the three studies and the four HPWP subsystems; I found strong
overlap between these facilitators and three of the four HPWP subsystems—*engaging staff, acquiring and developing talent, and empowering the frontline*. These findings are also summarized in *Table 12*.

First, the HPWP *engaging staff* subsystem practices focus on motivating employees in support of organizational mission, vision and goals, e.g. through clear communication of goals, aligning expectations and rewards with goals. In this dissertation, I found strong overlap between the facilitators of speaking up and the *engaging staff* practices. Across all three studies, there was strong evidence of leadership and management practices designed to draw a link between speaking up and the accomplishment of the organization’s patient safety goals, thus seeking to motivate staff to speak up. For instance, in Chapters 2 and 4, leader messages emphasized the organizations’ commitments to patient safety, individuals’ roles in supporting patient safety goals and the importance of speaking up to those efforts, with specific practices implemented to motivate and reinforce this behavior, e.g. “good catch.” Of particular importance in Chapter 2 is that these messages targeted not only the role and responsibilities for the speaker, but also targeted the response of the physician listener, thus addressing both sides of the speaking up equation. In Chapter 3, the *employee engagement* practices were more explicit, designed not only to link “speaking up to stop the line” to patient safety goals, but also to establish this behavior as a clear accountability for physicians and nurses.

The focus of the HPWP *acquiring and developing talent* subsystem practices is to build the quality of the workforce through rigorous recruiting, selective hiring, and extensive training. In my studies, there was widespread evidence of employee training as
a facilitator of speaking up. Identified training initiatives ranged from broad-based training about patient safety, e.g. each organization’s patient safety goals, the role of the individual employee and/or caregiver in support of patient safety goals, or more specific training designed to develop and enhance employees’ communication skills. Although I did not observe targeted recruitment or selection initiatives specific to speaking up, the finding in Chapter 3 that ICU nurses are “different,” or “more likely to speak up,” suggest that selection, be it self- or employer-driven, may influence the complement and skill set of employees at the unit level.

There was widespread evidence in all three studies of HPWP frontline empowerment practices designed, and successfully implemented, to create an environment in which employees felt safe speaking up. Key to the success of these practices was visible leadership commitment to creating a non-punitive environment that emphasized the importance of learning from, rather than punishing individuals for, mistakes. This was accomplished in several ways. For instance, in the study presented in Chapter 2, human resource policies, e.g. disciplinary action, were designed to support, rather than punish, employees for reporting errors. In Chapter 3, leaders were clear in setting their expectations that nurses speak up to “stop the line,” and were consistent with their support, even in the face of physician resistance. In Chapter 4, quality improvement and interdisciplinary care processes were implemented in such a way that employees felt comfortable speaking up and actively participating to support patient safety improvements. Other specific practices that successfully empowered employees included use of structured communication tools, training, and scripting to enhance communication skills (Chapters 2 and 3), and implementation of formal and informal mechanisms to seek
employee feedback, e.g. error and event reporting systems (Chapters 2 and 4) or leader inquiry (Chapter 4).

Finally, while the role of leader behavior as a factor in facilitating, and removing barriers to, speaking up in the three studies presented in this paper cannot be understated, I did not observe any HPWP leader alignment practices, e.g. performance-based compensation, or leader training and development relating specifically to speaking up. Although I was unable to identify specific practices that motivated or influenced behavior, the observed consistency of leader practices within the study organizations, particularly those with HPWPs (Chapter 2), a clear commitment to CLABSI-prevention efforts (Chapter 3) and a commitment to “good” CLABSI outcomes (Chapter 4) suggest that these organizations may have had some leader alignment practices in place, e.g. for patient safety; however, informants may not have recognized them as being directly related to speaking up.

Limitations

The specific limitations of each study are presented in the relevant chapters, but there are also some overarching limitations to the research presented in this dissertation. First, the case study design and qualitative methods used for all three studies limits the generalizability of these results to similar organizations; at the same time, the studies were rigorously designed and implemented to ensure the consistency and reliability of the data and validity of the results. As a result, these studies provide rich insight into an important phenomenon in healthcare and are a foundation for future empirical study.
Next, in all three studies, my assessment of “speaking up” was based on informants’ characterizations of the behavior and not on any direct or objective assessment, thus this may introduce some bias and/or inaccuracy. Third, while all of the studies identified management factors and practices that were perceived by informants as important to facilitating, or removing barriers to, speaking up, the research design and focus does not support any assessment of the causal relationship between implementation of these practices and outcomes associated with speaking up.

**Contribution**

Overarching findings from the studies presented in this dissertation contribute to the health services and management literature in several important ways. First, this research adds nuanced support to the applicability of a healthcare-specific HPWP framework as a potential strategy for facilitating speaking up. This healthcare-specific model for HPWPs was first presented conceptually, based on relevant theory and research in both healthcare and other industries (Garman, McAlearney, Harrison, Song, & McHugh, 2011). Case study evidence provided preliminary support for the model (McAlearney et al., 2011); the current research offers further support, suggesting that HPWPs can be implemented to facilitate, or remove barriers to, employees’ speaking up, an important facet of quality in healthcare organizations.

Second, all of the studies identified leader behavior, particularly consistency in word and deed, as an important factor in employee willingness to speak up about errors or opportunities for improvement. This dissertation extends previous research which has found that employees are more likely to speak up when their leaders are both open to, and
seek feedback (Milliken, Morrison, & Hewlin, 2003; Nembhard & Edmondson, 2006), and that leaders at all levels can influence this behavior (Detert & Treviño, 2010) by identifying specific leader practices, e.g. clear communication about the important role employees play in patient safety (all chapters), setting clear expectations that speaking up is part of the job (Chapter 3), and making deliberate efforts to obtain employee input (Chapter 4).

A third overarching finding is that management practices that successfully make a link between speaking up and patient safety outcomes may be the most successful. These findings support and extend studies which have found that healthcare employees are more likely to raise concerns or report problems in quality if they believe that doing so will make a difference in patient safety (Edmondson, 2003; Adler-Milstein, Singer, & Toffel, 2011) by identifying specific practices that are particularly effective in doing so; these practices include clear leadership communication regarding individual employees’ roles in patient safety, articulation of expectations about speaking up for patient safety, reinforced by consistent action, and training and education practices which emphasize and reinforce the importance of learning from errors.

Fourth, the findings from the second two studies which focused on speaking up in the context of CLABSI-prevention distinguished two “types” of speaking up – reporting errors vs. identifying opportunities for improvement— each with their own challenges and influences. For instance, the study presented in Chapter 3 found that all of the organizations in the study sample were able to successfully empower nurses to speak up to “stop the line” for CLABSI prevention. In contrast, the research presented in Chapter 4 found that among those same study organizations, only those organizations that had
achieved “good” CLABSI outcomes had evidence of improvement-oriented speaking up. While the management practices associated with speaking up to “stop the line” were very initiative-specific, e.g. setting behavior as a job expectation for both physicians and nurses, addressing physician resistance, enhancing nurses’ communication skills, while the practices associated with improvement-oriented speaking up were implemented as part of the study organization’s broader focus on patient safety improvement, e.g. use of error and reporting systems, patient safety training. From a practical perspective, these findings suggest that motivating employees to speak up in a specific, highly definable situation, e.g. “to stop the line,” may be achieved through targeted efforts at the local, e.g. unit or team, level; but that motivating improvement-oriented speaking up, which is less clearly defined or prescribed, is more likely to be achieved in a wider organizational context.

More broadly, these studies both support and extend emerging theory and conceptualizations of employee speaking up. First, my finding which identifies two distinct “types” of speaking up supports recent work which proposes that individual decisions to speak up, or not, occur in unique “episodes,” that are influenced by context-specific individual and/or situational factors, e.g. topic, skills of the individual, participants in a situation or setting (Detert & Edmondson, 2006). This conceptualization is a shift away from previous characterizations which have considered speaking up as a function of more static individual and situational factors, e.g. personality, disposition, work team environment. Speaking up to “stop the line” (Chapter 2) may represent an identifiable “episode” that can be prospectively defined and targeted for management action. This finding supports the episodic view of speaking up and suggests that in some
cases, it may be possible to categorize certain types of recurring “episodes.” In contrast, improvement-oriented speaking up cannot be easily categorized as a discrete episode “type,” and is therefore more complex to address.

In another area of theory, Detert & Edmondson proposed that employee decisions to speak up are informed by “implicit voice theories” which are employees’ own pre-existing beliefs about the benefits and risks of speaking up; most salient to my study are commonly held beliefs that it is risky to challenge authority and lack of clarity as to when speaking up is appropriate (Detert & Edmondson, 2011). In the case of speaking up to “stop the line” (Chapter 2), leader behavior that clearly established speaking up as a job expectation potentially mitigated concerns about challenging authority, and the clearly defined circumstances for speaking up minimized any ambiguity about the appropriateness of speaking up. Detert & Edmondson (2011) also suggest that employees’ decisions to speak up or not are influenced by “motivation asymmetry” in which the perceived personal risks of speaking up outweigh the potential benefits which are often unclear or unknown. The findings presented in this dissertation are consistent with this theory and suggest that successful management practices that facilitate speaking up will both emphasize the benefits of the behavior and minimize the potential risks to employees to effectively reduce this asymmetry. Finally, the findings from this research provide practical insight that is relevant to CLABSI-prevention literature, e.g. how to implement evidence-based practices, and the literature on healthcare safety culture, e.g. how to facilitate speaking up, an important facet of a strong healthcare safety culture.
Future Research

This study provides a foundation for future research on speaking up in healthcare organizations. Most specifically, CLABSI-specific research (Chapters 2 and 3) could be extended beyond the ICU to consider unit-level factors that influence speaking up, e.g. nurse staffing ratios, or physician staffing models. For instance, in an ICU setting, nurses are responsible for a very small number of patients and have considerable autonomy to take care of very sick patients; this may give them both a sense of “ownership” of their patients and the confidence and credibility with physicians that may not be present in other clinical settings. On the physician side, the ICUs in our study were largely staffed by hospital-based intensivists who were employed by the hospital; these physicians created a consistent presence on the unit and worked closely with the nurses. In other units nurses typically have more patients to take care of and the physician staffing may not be as consistent, both factors which could influence employee willingness to speak up as well as the success of management efforts to facilitate this behavior. Similar differences might be observed in outpatient settings, e.g. dialysis units, where the organizational, clinical and staffing dynamics are likely different than those of an inpatient hospital ICU. Future research might also consider the applicability of these findings to speaking up for other specific types of healthcare-associated infections and/or serious safety events.

Another important way to extend the current research would be to design a study to empirically test the findings presented in this dissertation by assessing the relationship between specific management practices and speaking up. This could be achieved through the development and implementation of an organizational survey instrument that
quantifies the presence of specific management practices within an organization and/or unit and then use existing measures to assess speaking up, e.g. employee voice, psychological safety, healthcare safety. Although possibly quite resource-intensive, future studies might also be designed to consider observed, rather than reported, measures of speaking up behavior.

More broadly, future research should explore specific themes, or partially supported findings in these three studies. For instance, the emergent finding in this study that speaking up to prevent errors (Chapter 3) and improvement-oriented speaking up (Chapter 4) are distinct is of sufficient theoretical and practical importance to merit further, more focused exploration to elaborate these differences. Another opportunity would be to build on findings presented in Chapter 2 and Chapter 3 that indicate that successful efforts to facilitate, or remove barriers to, speaking up focus both on the “speaker,” e.g. setting expectations, enhancing skills, and the “listener,” setting expectations, training, securing buy-in. To date, the literature on speaking up has focused primarily on the speaker; the findings from my studies suggest that a perspective which considers practices that can influence both sides of the equation may yield insight.

From an HPWP perspective, given the strength of my findings regarding the importance of leader behavior and practices and the lack of evidence as to whether and how the study organizations motivated and/or rewarded that behavior among leaders, future research might specifically seek to identify leader alignment practices that can be implemented to ensure that leader behavior consistently supports organizational goals related to speaking up e.g. expectations, rewards, leader development.
Conclusions

The three studies in this dissertation find that organizations can successfully facilitate, and remove barriers to, speaking up by implementing multiple complementary organizational and management practices. These practices both emphasize the importance of speaking up to improve patient safety and ensure that this behavior is rewarded, rather than punished. Specific practices include: clear leadership communication regarding the importance of speaking up, inclusion of speaking up as an expected behavior for employees, including physicians in efforts to encourage speaking up, formal and informal training to enhance communication skills, and using robust error and event reporting systems for patient safety improvement.
References


Table 12: Overlap between HPWP Subsystems and Study Findings (Chapters 2-4)

<table>
<thead>
<tr>
<th>HPWP Subsystem</th>
<th>Chapter 2 HPWPs and Speaking Up</th>
<th>Chapter 3 Speaking up to “Stop the Line”</th>
<th>Chapter 4 Improvement-oriented Speaking Up</th>
</tr>
</thead>
</table>
| Engaging Staff | • Leadership messages regarding importance of speaking up and link to patient safety  
• Rewards for “good catches” | • Leaders set clear expectations for nurses to speak up to “stop the line” and appropriate physician response  
• Widespread efforts to draw link speaking up to “stop the line” and patient safety outcomes | • Leadership messages regarding importance of speaking up and link to patient safety |
| Acquiring and Developing Talent | • Widespread individual and team training  
• Physician training | • Training and mentoring to enhance nurses’ communication skills, emphasis on new nurses | • Speaking up emphasized in organizational-level patient safety/safety culture training |
| Empowering the Frontline | • Structured communication processes and tools  
• Human resource policy  
• Reporting systems | • Visible leader support for nurses in the face of resistance  
• Use of “scripting” as a tool and resource for nurses | • Non-punitive and inclusive quality improvement and interdisciplinary care processes  
• Leaders seek feedback from frontline employees  
• Widespread use of incident and error reporting tools |
Comprehensive Bibliography


124


