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### **Emerald Book Chapter: Current Medical Staff Governance and Physician Sensemaking: A Formula for Resistance to High Reliability**

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# CURRENT MEDICAL STAFF GOVERNANCE AND PHYSICIAN SENSEMAKING: A FORMULA FOR RESISTANCE TO HIGH RELIABILITY

Marc A. Flitter, Kelly Rouse Riesenmy and  
Daved van Stralen

## ABSTRACT

*Purpose – To offer a theoretical explanation for observed physician resistance and rejection of high reliability patient safety initiatives.*

*Design/methodology/approach – A grounded theoretical qualitative approach, utilizing the organizational theory of sensemaking, provided the foundation for inductive and deductive reasoning employed to analyze medical staff rejection of two successfully performing high reliability programs at separate hospitals.*

*Findings – Physician behaviors resistant to patient-centric high reliability processes were traced to provider-centric physician sensemaking.*

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*Research limitations/implications – Research, conducted with the advantage that prospective studies have over the limitations of this retrospective investigation, is needed to evaluate the potential for overcoming physician resistance to innovation implementation, employing strategies based upon these findings and sensemaking theory in general.*

*Practical implications – If hospitals are to emulate high reliability industries that do successfully manage environments of extreme hazard, physicians must be fully integrated into the complex teams required to accomplish this goal.*

*Social implications – Reforming health care, through high reliability organizing, with its attendant continuous focus on patient-centric processes, offers a distinct alternative to efforts directed primarily at reforming health care insurance. It is by changing how health care is provided that true cost efficiencies can be achieved. Technology and the insights of organizational science present the opportunity of replacing the current emphasis on privileged information with collective tools capable of providing quality and safety in health care.*

*Originality/value – The fictions that have sustained a provider-centric health care system have been challenged. The benefits of patient-centric care should be obtainable.*

**Keywords:** High reliability; sensemaking; dissonance reduction

## INTRODUCTION

This study examines the unusual occurrence of the elimination of two apparently successfully performing hospital programs, one clinical, and the second, a medical staff committee, by the medical staff of their respective institutions. What linked these two programs, and inspired our interest in determining what may have prompted the observed medical staff behavior was that both programs qualified as high reliability (HR) patient safety initiatives. The Joint Commission has identified HR as the next stop on the ongoing journey toward quality and patient safety (Chassin & Loeb, 2011). To date, the commission has not identified any hospital that has successfully implemented all three components it has identified as integral to the achievement of HR, including robust processes of improvement, a

culture of safety, and the refined discriminatory and responsive workforce abilities referred to as “collective mindfulness” (CM) (Chassin, 2012).

This failure of HR implementation in health care lead us to question whether elements of HR may elicit physician resistance and rejection.

The problem of physician resistance to innovation implementation is well recognized. Nembhard, Alexander, Hoff, and Ramanujam (2009) reported the joint effort of scholars from the field of management research and from the Institute of Medicine to examine specific examples of innovation implementation failure in health care. The physician workforce played a prominent role in both the specific and general causes of the identified failures of innovation implementation. If elements of HR do elicit physician resistance and rejection, then a theoretical description of this phenomenon, utilizing the organizational theory of sensemaking, might prove applicable to other failures of innovation implementation in health care.

## RESEARCH QUESTIONS

What were the distinguishing identifiable elements of each eliminated HR program (EHRP), and what role might these elements have played in a physician sensemaking process leading to the observed rejections of both programs?

Additionally, what contextual mediating influences (CMIs) on physician sensemaking may have contributed to the observed result?

Do the results of the analysis suggest possible opportunities for overcoming the phenomenon of physician resistance to innovation implementation?

## CONCEPTUAL MODEL

Utilizing a mediation hypothesis as employed by Seshadri (2007), we conjectured that physician sensemaking contributed to the transformational process between the stimuli of physician perceived elements of HR as discrepant to the traditional hierarchical, provider-centric model of physician workflow and the observed physician behaviors of resistance and rejection of the EHRPs. We considered CMIs to be the cultural and regulatory conditions experienced by the physicians that together with physician sensemaking constituted Seshadri’s “iterative dyad” of the transformational process as seen in Fig. 1.

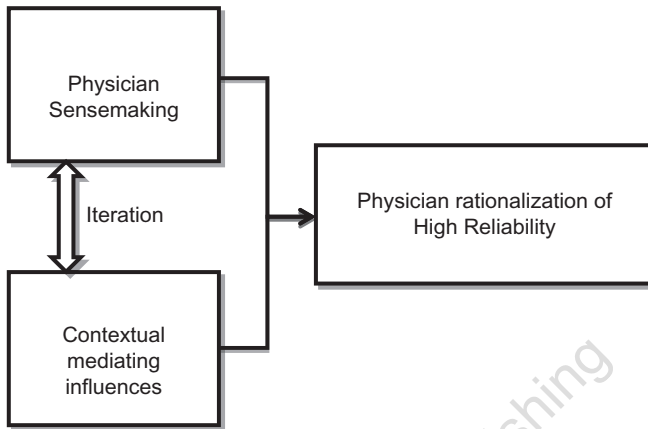


Fig. 1. Conceptual Model of Physician Sensemaking. Adapted from Seshadri (2007).

## EMPIRICAL SETTINGS AND METHODS

### *Data Collection*

Our data included the observations of two of the authors (Flitter, van Stralen) with personal involvement in the conceptualization and implementation of their respective HR programs, and their accounts of the demise of the programs. Publications and presentations specific to each program as cited in this work provided additional material for analysis. Minutes of one of the programs, the cause analysis peer review committee (CAPRC), were reviewed along with relevant sections of the medical staff bylaws of the regional medical center in which the CAPRC functioned. Specific literature regarding sensemaking and high reliability as well as individual discussions by Weick (personal communications, HRO Conference Calls 2011–2012) and Sutcliffe (2012) provided an invaluable additional resource available to us.

### *Researcher's Role*

The grounded theory qualitative approach to the study of these two cases allowed the researchers to make inductive and deductive comparisons between and within the EHRPs. As part of this analysis, interplay between

the researcher and the data is permitted even though methods were employed to provide standardization and rigor to the exploratory process (Patton, 2002). The seven properties of sensemaking (Weick, 2001) provided a framework from which the data in this study were scrutinized. Even so, personal bias is recognized as a factor in this analysis.

The principal investigator (PI) (Flitter) played an active role in the CAPRC case. As both participant and observer, the PI was engaged in CAPRC meetings. As Chairman of the committee and author of the cause analysis initiative, he saw his role as constant defender and definer of the program. Unaware at the time of the committee's functioning that there had been another cause analysis peer review initiative (Graber, 1999), he interpreted the ongoing resistance to the program from both committee and noncommittee medical staff as an indication of inadequate leadership skills. That impression appeared confirmed with the appointment of an ad hoc committee charged with determining the future course of peer review within the hospital as a response to the apparent impasse between the credentials committee and the CAPRC as well as newly promulgated Joint Commission (2007) regulations regarding requirements for ongoing peer review. In that committee the PI's defense of cause analysis had reportedly resulted in another committee member emotionally reporting to the ad hoc committee's chairman that she would prefer not to remain on the committee.

This involvement clearly demonstrates a bias on the part of the PI in favor of cause analysis peer review implementation. We believe that mitigating this bias is the application of sensemaking theory, the use of data constructs and categories, and the interpretations of fellow authors as well as outside reviewers.

## ANALYSIS

### *The Eliminated HR Programs Compared and Contrasted*

The EHRPs consisted of a pediatric intensive care unit (PICU) of a 250-bed tertiary Children's Hospital that functioned from 1989 to 2000 providing care derived from problem-solving methodology rather than protocol (Roberts, Madsen, Desai, & van Stralen, 2005) and a medical staff CAPRC at a 254-bed nonprofit regional medical center that from 2007 to 2009 focused on cause analysis rather than physician standard of care determinations. Detailed descriptions of the operating procedures of both programs are provided in the appendix.

Each HR program was in part conceived and implemented by one of the authors of this paper (Flitter – CAPRC; van Stralen – PICU). Implicit in the origins of the HR programs was the notion that the existing procedures in the PICU and the peer review committee (PRC) could be improved. The PICU had, under the directorship of physicians from the hospital's department of anesthesia, provided care through a provider-centric, hierarchical model in which patients' diagnoses and treatments were the sole purview of the attending physicians. Alteration to treatment plans or changes in the diagnostic impression were subject to the attending physicians' rounding schedules or their availability when informed of a change in the condition of one of their patients.

The PRC had functioned, as most PRCs continue to do (Edwards, 2010), through periodic meetings during which appointed members of the medical staff opined as to whether or not one of their colleagues did or did not meet an ill-defined "standard of care," in his or her treatment of a patient whose medical records had been referred to the committee for review. Committee decisions followed a case presentation by a committee member who had reviewed the records sufficiently to reach his or her own opinion.

The opportunity to change the status quo arose in both programs when van Stralen was appointed assistant medical director of the PICU and Flitter was appointed chairman of the PRC. From these newly designated positions of authority arose the opportunity for change.

Before enrolling in medical school and specializing in pediatrics, van Stralen had been an emergency medical services technician in the Los Angeles Fire Department. Van Stralen's colleague, the newly appointed medical director to the PICU, was a Naval Aviator who had piloted F4 fighter jets in the Vietnam War. The amalgam of their diverse experiences inspired a focus on the physiology of their patients that would shift the daily routines of the PICU physicians and ancillary staff to a patient-centric sensitivity to change and more rapid response to perceived patient clinical deterioration. As a member of the PRC for several years, Flitter had reflected on the specific name of the committee, "Quality Improvement Executive Committee," and questioned to what degree had the deliberations and decisions of the committee contributed to improving the quality of patient care or in preventing future patients from suffering similar harm. Aware of the hospital's administrative quality improvement committee, which functioned separately from the medical staff, and its government-mandated root cause analyses of what were identified as *sentinel events* (identified extraordinary hospital occurrences such as wrong site surgery), Flitter recommended to the full committee that they shift their analysis of

referred cases from provider-centric standard of care determinations to patient-centric cause analysis investigations, with the intent of identifying potential system solutions that could prevent future patients from suffering similar harm. A more detailed discussion of the introduction of the cause analysis operating procedures to the CAPRC and problem-solving methodology to the PICU are presented in the [appendix](#).

Early resistance to both programs by members of the medical staff was encountered. In the case of the PICU, complaints to the chairman of the department of pediatrics centered on issues of ancillary staff privileges and credentialing as nurses and respiratory therapists, as they had been encouraged to do, responded as necessary to clinical worsening of their patients. Concerns voiced within the CAPRC and to the president of the medical staff were raised regarding deliberations that involved apparent conflicts of interest. These concerns would have been valid in standard of care determinations if committee members contributed to the discussion of a physician with similar credentials, be it partner or competitor, whose case was being reviewed. However, in cause analysis, similar professional qualifications served as an additional source of expert opinion.

The improved outcomes of both programs are listed in [Table 1](#). The recognition of these accomplishments within the two hospitals was evident. Nurses and respiratory therapists pursued assignments in the PICU and the PICU became a mandatory rotation for emergency medicine residents. Several physicians on the CAPRC as well as noncommittee members of the

**Table 1.** Positive Outcomes in CAPRC and PICU Programs.

CAPRC	PICU
Multiple educational programs structured for individuals and departments	Decreased mortality and morbidity statistics, despite an increase in the number of patients on ventilators
Policy revisions in emergency and radiology departments	Improved patient outcomes
Successful remedial peer performance evaluations initiated for two members of the medical staff	Decrease in refused transfers
	Reduction in errors
	Decrease in return to ICU following discharge
	Decrease in length of stay
	Decrease in staff attrition

medical staff expressed their support for cause analysis peer review and also voiced their concerns regarding the effectiveness of the former standard of care approach relative to improving patient care. Members of the administration aware of the committee's change of focus expressed similar sentiments.

We propose that both the PICU and the CAPRC programs qualified as high reliability patient safety initiatives. In the case of the PICU the two founding physicians were approached by scholars studying HR and requested to submit the details of their program for review. The implemented innovations were found to correspond with theoretical tenets of HR as articulated by C.B. Libuser in connection with her organizational research of financial institutions (Roberts et al., 2005). Table 2 lists Libuser's HR theoretical tenets, the corresponding PICU processes by which these tenets were deemed actualized, and the provider-centric processes they replaced.

The CAPRC was determined to have functioned as a nidus for a culture of safety. The processes the committee had adopted are considered integral to a culture of safety as defined by Vogus, Sutcliffe, and Weick (2010). These authors suggest that a culture of safety includes "actions that single out and focus on safety-relevant premises and cultural practices that together reduce harm" (p. 60). These "enactment, enabling and elaborating" actions result in an environment of "psychological safety" where higher levels of engagement in patient safety projects can be achieved (pp. 64-65). The CAPRC attempted to *enable* such an environment of psychological safety by abandoning the traditional shame and blame standard of care determinations in favor of *enacting* through cause analysis "open and constructive problem solving in the face of errors" (p. 67). CAPRC evaluations of adverse events *elaborated* a safety culture by conducting "after event reviews" (AERs) defined by Vogus et al. as "collective guided investigations of past experience that direct learners to understand the specific causes of their failures and successes and derive performance enhancing lessons from them" (p. 68). Table 3 lists the HR *culture of safety* theoretical tenets derived by Vogus et al., their actualization in the processes of the CAPRC, and the corresponding processes of standard of care peer review they had replaced.

Despite these attributes and the approbations noted, both programs were eliminated through the actions of members of their respective medical staff with sufficient tacit support of their colleagues. The PICU reverted to the traditional hierarchical model of provider-centric care when the two founding physician members of the program resigned their positions within 12 months of one another. In the absence of continued support and

Table 2. HR Processes in PICU.

Actualization of HR Tenets in PICU	High Reliability Theoretical Tenets	Corresponding Provider-Centric Standard of Care Procedures
Care derived from problem-solving methodology rather than protocol	Collective mindfulness and enabling routines of increased discrimination	Protocol derived care
Preferential attention afforded to team members independent of their formal training	Appropriate reward system	No established reward system
Prompt review of adverse events	Avoidance of quality degradation	Adverse events not collectively discussed
Continuous updating of mortality and morbidity statistics	Avoidance of quality degradation	No dissemination of mortality and morbidity statistics specific to unit or, if available, sporadic
Ready availability of attending physicians to other members of the care team	Avoidance of quality degradation	Attending physicians primarily available at their rounding times
Identification and adoption of national performance benchmarks	Avoidance of quality degradation	Benchmarks not typically publicized or pursued
Multidisciplinary in-service presentations specific to individual patients	Risk perception	In-service presentations usually generic rather than specific to individual patients
Focus on the potential for symptomatic relapse	Risk perception	Potential for symptomatic relapse ignored in favor of more optimistic outlook
Active encouragement of all members of the care team to question the current working diagnosis of the patient and therapeutic plan	Process auditing	Hierarchical disincentives to speak up if questioning diagnosis or treatment
Initiation of stabilizing interventions in critical circumstances by the most qualified team member present	Decision migration deference to expertise	Care not initiated without a specific physician order
Periodic reevaluation of the patient's clinical status and treatment plan	Redundancy	Limited to attending rounds
Multiple monitoring methodologies for a specific physiologic parameter	Redundancy	Physiologic monitoring usually by single methodology
Development of protocols available to respiratory	Rules and procedures, enabling routines of	Not generally employed

Table 2. (Continued)

Actualization of HR Tenets in PICU	High Reliability Theoretical Tenets	Corresponding Provider-Centric Standard of Care Procedures
therapy permitting the titration of therapy based upon the patient's previous therapeutic response	increased responsiveness	
Commitment to continuing education using multidisciplinary teaching	Knowledge-oriented approach	May occur
Requirements of staff to monitor and complete their program commitments	Managers with the big picture	Not emphasized
Constant state of alertness by staff that they had missed something	Preoccupation with failure	Not emphasized
Staff encouraged to interpret and question data that appear relevant to their working hypotheses	Reluctance to simplify	Not encouraged in hierarchical model
Collaborative rounding which "creates an up-to-date picture of potential threats to safety for each patient"	Sensitivity to operations	May occur
"Post-event debriefings" which enlarge the repertoire of possible actions caregivers could take in the future to recover more quickly from unexpected events	Commitment to resilience	Not encouraged in hierarchical model
Migration of patient-care decisions to bedside caregivers with more experience with a specific patient	Deference to expertise	Not encouraged in hierarchical model

Source: Libuser (1994).

leadership for the HR initiatives that had been implemented, physicians and staff reverted to the procedures of the provider-centric model of care. Elimination of the CAPRC program was more formalized and included continuing unheeded requests from the chairman of the credentials committee for assignment of standard of care determinations by the

Table 3. HR Processes in CAPRC.

Actualization of Theoretical Tenets	High-Reliability Theoretical Tenets	Corresponding Provider-Centric Standard of Care Procedures
After event reviews	Preoccupation with failure	Investigations limited to determining degree of physician fault
Psychological safety	Psychological safety	Procedures engender defensiveness in a climate of shame and blame
Apparent disregard for conflicts of interest	Deference to expertise	Reinforcement of the hierarchical model that presumes physician error-free performance
Consideration of nonphysician interviews regarding contributory nonphysician errors that contributed to the patient outcome	Deference to expertise	Hierarchical model presumes allied staff errors to be the concern of the hospital
Continuation of investigation beyond identified physician errors	Commitment to resilience	Hierarchical model presumes physician as captain of the ship responsible for all subordinate events
Discussion of system adaptations and proactive policies to prevent episodes of future patient harm	Commitment to resilience	No equivalent process in standard of care beyond the assumption that the sanctioned physician can be solely responsible for preventing a similar future episode
Rewarding physicians for participating in the process	Deference to expertise	Physicians may be acquitted by the committee of any wrongdoing
Discussing with physicians adverse cases, seeking not a defense, or justification of their interaction with the patient, but insights and their perspectives of the entire case	Preoccupation with failure	Focus on selected cases, providing the physician with an opportunity to defend his actions
Seeking opinions from the involved physicians as to what they might have done differently, rather than continue to defend what they had done	Reluctance to simplify	Focus on what may appear to be a salient error solely responsible for the patient event
		No equivalent process

Table 3. (Continued)

Actualization of Theoretical Tenets	High-Reliability Theoretical Tenets	Corresponding Provider-Centric Standard of Care Procedures
Request for referrals of near misses	Preoccupation with failure	
No assignment of grade or standard of care	Reluctance to simplify	Assignment of standard of care or equivalent grade
Advocating for self-reporting	Preoccupation with failure	No equivalent process

Source: [Vogus et al. \(2010\)](#).

CAPRC. These requests were in response to recredentialing requirements contained within the medical staff bylaws. Two members of the CAPRC resigned for reasons they attributed to the departure of the committee from its traditional origins in standard of care case reviews and their dissatisfaction with the pursuit of cause analysis. Of interest, both acknowledged and displayed an emotional component to their decisions. As noted earlier an ad hoc committee had been convened to resolve this apparent impasse between the peer review and credentials committee as well as consider newly mandated conditions for medical staff reappointment issued by the [Joint Commission \(2007\)](#). Members of the CAPRC appointed to that committee, with the exception of the chairman, as well as representatives from nursing and administration who had participated in the CAPRC as nonvoting members, failed to express support for continuing cause analysis peer review. The medical executive committee replaced the chairman of the CAPRC whereupon standard of care determinations were once again the focus of the committee’s efforts.

These observed instances of medical staff rejection of hospital programs with proven benefits to patient care invited speculation as to how the physicians of these two groups of medical staff were able to justify their actions and what led them to view the EHRPs as expendable. It is sensemaking theory that enables us to address this dilemma.

*Sensemaking*

Sensemaking theory is about “how individuals generate what they interpret” ([Weick, 1995](#)). Sensemaking gives the lie to objectivity and offers

a theoretical model that explains how individuals within an organization attempt to achieve plausible explanations for what they encounter that are consistent with the environment they wish to enact (Weick, 1995). Physicians may be extraordinarily adept at sensemaking as a result of the powerful tools of language and social structure associated with the hierarchical model of health care.

The literature is replete with additional definitions of sensemaking. It is as if sensemaking is the great chameleon of organizational theory, having the ability to be defined to suit the purpose at hand. In a paper, *Nurse/Physician Communication through a Sensemaking Lens: Shifting the Paradigm to Improve Patient Safety*, Manojlovich (2010) defined sensemaking as “an iterative process arising from dialogue when two or more people share their unique perspectives” (p. 942). In a paper entitled, *Sensemaking in Military Planning: A Methodological Study of Command Teams*, Jensen (2009) defined sensemaking as what people do in order to decide how to act in the situations they encounter. This variety of definitions of sensemaking implies a general applicability in understanding how individuals in an organization process and respond to specific stimuli. An additional factor contributing to the accessibility of applying sensemaking theory is the encyclopedic background Weick (1979, 1995, 2001, 2009) has provided in books and papers in which multiple theories that form the foundation for each of the seven properties of sensemaking are discussed. This provides an opportunity to customize the application of the properties of sensemaking to reflect the particular focus new researchers bring to the field. We do not profess that our application of the properties of sensemaking is any less representative of this adaptability of sensemaking theory than the examples cited above. What we do wish to acknowledge are those hypotheses that Weick applies to sensemaking theory in general and the specific characteristics of the properties of sensemaking that we employed in this study.

### *General Hypotheses*

1. Sensemaking is triggered when things can no longer be taken for granted Weick (1995). It is this hypothesis of sensemaking theory that focused our attention on the processes representing the actualized tenets of HR listed in Tables 2 and 3. Many of these processes appear sufficiently discrepant from normal physician workflow to result in a triggering of physician sensemaking.

2. Sensemaking in general is rooted in identity and the need to preserve self-esteem [Weick \(1995\)](#). We propose that physician sensemaking occurs in the service of an autonomous hierarchical identity in which self-esteem is re-accomplished through the social and technological model of provider-centric care.
3. Sensemaking is shaped by both overt directives of organizational governance and a powerful latent force of organizational culture ([Weick, 2009](#)). We attempted to identify the specific aspects of hospital and medical staff governance as well as the cultural traditions of physician workflow that contributed to the CMIs that iteratively affected sensemaking to the detriment of the HR programs.

### *The Seven Properties of the Process of Sensemaking*

The seven properties of sensemaking as listed by [Weick \(1995, p. 17\)](#) are:

1. Grounded in identity construction
2. Retrospective
3. Enactive of sensible environments
4. Social
5. Ongoing
6. Focused on and by extracted cues
7. Driven by plausibility rather than accuracy

The contribution of each of these properties to the process of sensemaking is represented when individuals concerned with identity in the context of others engage cues extracted from an ongoing flow of events to which they assign plausible explanations retrospectively ([Weick, 1995](#)). Specific to physician sensemaking, each of these properties can be postulated as reflecting characteristics of the current provider-centric hierarchical model of health care. The property of an *ongoing flow of events* describes the normal moment to moment workflow of physicians not only as they care for patients but as they deal with administrative and collegial interactions. The property of “*cues*” acknowledges what individual physicians extract from a cacophony of stimuli at any one moment, or in a given situation, the salient features they bracket for specific consideration.

The consideration given to these extracted *cues* encompasses three additional properties of sensemaking, *plausibility*, *retrospective*, and *enactment*. *Enactment* and *retrospective* both contribute to temporal features of sensemaking. The cues that physicians extract from their ongoing flow of

events assume meaning not only from retrospective associations with remotely past experiences, but from retrospective observations of the immediate past. This immediate past retrospective includes the initial responses to the cues in question. These initial responses, or *enactments*, serve the function as described by Weick (1995) of how individuals begin to “know what they think by seeing what they have said” (p. 12). We would paraphrase the process of enactment, as taking a stand to understand. *Enactments*, according to Weick (2001), most commonly reveal attempts to overcome challenges to identity and seek as their final result the attainment of self-fulfilled prophecies.

Frequently what physicians communicate constitute their enactments. The reaction of a physician encountering a disruption to his normal flow of events sufficient to trigger sensemaking is discussed in detail below.

Iteration among the properties described above ultimately confers *plausibility* to extracted cues. What begins as discrepant is made coherent, consistent and reinforcing. The effort is not simply academic. In generating what they wish to interpret the physicians obtain what sensemaking confers beyond plausibility, a measure of dissonance reduction Weick (1995).

The final two properties of sensemaking, *identity* and *social*, have reciprocal relationships with each of the preceding five properties. *Identity* is continuously reinforced by participation in the *ongoing flow of events* that constitute a physician’s workflow and predisposes that physician to extract a specific universe of *cues*. The ultimate assignment of *plausibility* emerges from a background of associations richly endowed by professional and cultural influences and a repertoire of behavioral responses, whose *enactment* is most commonly met with approbation. Similar to *identity*, the *social* network of physicians, both practiced and influential, reinforces in a reciprocal fashion the properties of sensemaking that come into play when physicians are forced to come to attention and consider an apparent disruption to their normal workflow.

### *Sensemaking and high reliability*

Of specific interest to our enquiries are the common features shared by high reliability and sensemaking. Both are continuous processes. Sutcliffe (2012) suggests that we replace the term high reliability organizations with high reliability organizing to emphasize the necessity for ongoing processes to sustain high reliability. Weick (1995) states “to talk about sensemaking is to talk about reliability as an ongoing accomplishment” (p. 15) in which

individuals continually strive to “make retrospective sense of the situations in which they find themselves” (p. 15).

Both HR and sensemaking appear prone to intuitive oversimplification. It is more likely for an individual to assume reliability than to acknowledge fallibility. Similarly making sense of one’s environment seems second nature. Breaching the intuitive reveals a theoretical complexity that includes the five distinct processes of HR collective mindfulness (CM) that Weick, Sutcliffe, and Obstfeld (1999) described as important because they “mobilize resources for sensemaking” (p. 7) as well as the seven distinct properties of sensemaking we presented earlier. Further supporting this refutation of intuitive simplicity is Sutcliffe’s (2012) characterization of HR organizing as “the application of complex strategies to complex technologies.” As for the *second nature* of making sense of one’s environment, sensemaking is revealed to be more a process that seeks the realization of a self-fulfilled prophecy than an objective attempt at accuracy (Weick, 1995).

To further explore this relationship of HR to sensemaking, it is useful to consider a specific example of a physician confronted with the unexpected and a need to make sense of an extracted cue, an event Weick (personal communication, HRO Conference Calls, 2012) acknowledged as a perfect example of physician sensemaking.

The incident involved the PI who had been contacted by a hospitalist from his institution who had initiated the conversation with the phrase, “I thought we were friends, why would you countermand my orders?” The ensuing discussion concerned a patient whom the hospitalist had ordered to be transferred out of the intensive care unit (ICU), an order the PI, as a consultant, had requested be placed on hold until additional tests specific to his concerns could be obtained. This snapshot of the reaction of the hospitalist to a disruption of his intended patient plan can be analyzed to reveal the presence of the seven properties of sensemaking as well as to highlight how CM might have resulted in an entirely different sensemaking experience.

The hospitalist’s sensemaking was triggered when events failed to confirm his sense of self. The countermanded order was sufficiently discrepant in his normal provider-centric workflow to constitute an assault on his sense of *identity*, resulting in sensemaking that occurred “in the service of maintaining a consistent positive self-conception” (Weick, 1995, p. 24). In an environment of CM, a countermanded order might have more likely elicited an enquiry by the hospitalist regarding why a colleague felt the patient should remain in the ICU. This HR alternative could be representative of either *deference to expertise or reluctance to simplify*, both

CM processes. Reluctance to simplify encourages multiple perspectives in HR organizing that increase the probability of early detection of possible risks. Deference to expertise overrides concerns about identity and self-esteem in the service of patient welfare (Vogus et al., 2010).

The specific properties of sensemaking that were operant when the countermanded order triggered the hospitalist's sensemaking can be identified returning to Weick's (1995) narrative description of the seven properties of sensemaking, "people concerned with identity in the context of others engage extracted cues from an ongoing flow of events, to which they assign plausible explanations, retrospectively" (p. 18). Both *extraction of cues* and an *ongoing flow of events* operant in the hospitalist's sensemaking.

When the hospitalist bracketed the countermanded order, he extracted that specific concern from the totality of the environment in which he was immersed. The fact of the patient remaining in the ICU might just as well have been the object of his focused attention. The CM process of *preoccupation with failure* could have led to the extraction of that alternative cue, one inspired by a concern for a possible deterioration of the patient.

His perception of his *ongoing flow of events* could be reasonably ascribed to a *provider-centric* awareness of his normal hierarchical workflow. The hospitalist's defensiveness regarding his *identity* and self-esteem may very well have been overcome by the CM process of *reluctance to simplify*. At the organizational level this HR organizing attribute invites multiple perspectives, which are more likely to detect small errors before they escalate to catastrophes (Vogus et al., 2010). On a microlevel, this HR CM might have inspired the hospitalist to consider from multiple points of view what might have delayed the transfer.

The phrase, "I thought you were my friend" was, for the hospitalist, his *enacted* response to a perceived slight. As discussed above this manifestation of taking a stand to understand assisted the hospitalist to discover what this break in his routine represented. The countermanded order, bolstered by his expression of hurt, seemed even more of an affront, when appreciated *retrospectively*, in relation to its conceptual meaning as an extracted cue. The *plausible* explanation for the hospitalist appears to have led him to the conclusion that it was a violation of trust by a mistaken friend who interrupted his workflow.

There were alternative explanations, other phrases to be uttered, a less vulnerable identity to be serviced, had the hospitalist been immersed in an environment structured by the CM process of *commitment to resilience*, accomplished in an organization when the repertoire of responses of frontline workers to change is expanded. More likely to notice what one can affect,

an ICU nurse, empowered to hold transfers if patients are deteriorating, and aware of the changing circumstances of this patient, might have shared with the hospitalist the reasoning behind the patient's continued presence in the unit. The CM process of *deference to expertise* might have dispelled the hospitalist's sense of affront as the decision to keep the patient in the ICU, for neurosurgical reasons, migrated to the neurosurgeon.

But the *social* deck was stacked against the hospitalist. Deprived of a modicum of psychological safety by virtue of medical staff bylaws that encourage a sense of infallibility, that codify the fiction that all is well when the hierarchical status of provider-centric care rules, and that righteous indignation is a fitting response to a countermanded order, the hospitalist was left with only his sensemaking as a soothing balm.

## RESULTS

Our analysis suggests that sensemaking may contribute to physician resistance and rejection of HR organizing through both direct and indirect means. The direct pathway begins when an HR-actualized process triggers physician sensemaking. Enactments of resistance in response to extracted HR cues occur in the service of maintaining physician provider-centric autonomous identities. Two examples of physician articulated resistance enactments were: "I don't like it, it sounds communist" and "When Marshal Dillon's in town there's no crime in Dodge City."

Both of these statements were made by physicians confronted with the prospect of cause analysis peer review at separate institutions. We believe that both statements are representative of sensemaking enactment. Neither statement contributed to a rational discourse on the relative merits of cause analysis or standard of care determinations. Supporting our contention that these statements constituted sensemaking enactments is the way in which both served to reinforce the identity of the speaker.

In the first example, heard directly by the PI, the speaker seemed to be championing his role as defender of democracy, punctuated by, "I don't like it." In the second example, reported to the PI by the chief medical officer of a hospital exploring the possibility of adopting cause analysis at his institution, the chairman of the PRC suggested that he, as "Marshal Dillon," could keep the hospital safe by continuing to dispense standard of care justice.

We propose that there is also an indirect pathway through which physician sensemaking contributes to the resistance and rejection of HR

initiatives. This pathway comes in to play when impaired or conflicted sensemaking proves inadequate for dissonance reduction. Unlike the hospitalist whose tension was dissipated by the transformation of the perceived countermanded order to a likely explanation of collegial betrayal, physicians manifesting impaired sensemaking experienced no such release. We attribute the two emotionally charged resignations from the CAPRC as a reflection of the partial failure of sensemaking in this regard.

One of the physicians cited “dissension” within the committee as the deciding factor in his resignation. We would suggest that in the absence of other committee members concurring with this observation, he had projected onto the committee a growing cognitive dissonance stemming from the committee’s approximation of CM and his hierarchical, provider-centric inspired identity. The second physician manifested, just prior to his emotional resignation, a continuing frustration over the committee’s apparent non-chalance regarding potential conflicts of interest. We would suggest that the true conflict that led to his emotional release was internal, as processes of CM challenged his autonomous identity with no release in sight.

## DISCUSSION

We used the term *conflicted sensemaking* to describe how sensemaking may indirectly lead to resistance and rejection of HR patient safety initiatives. Alterations of sensemaking, including its collapse at Mann Gulch, and its perverse enhancement in the Bristol Royal Infirmary, have been previously discussed by Weick (1993, 1995). Weick (2009) has also outlined the way in which CM shifts the focus of the seven properties of sensemaking away from preservation of identity to making “sense of the unexpected” (p. 7).

Influenced by CM, *identity* is reestablished not by self-fulfilled prophecies but by the attainment of “clearer frames of reference” (p. 7). *Cues* are extracted because of a concern for the consequences of “neglected details in the current environment” (p. 7), instead of receiving attention as identity-challenging interruptions of workflow. Routines are transformed from an unfolding of the anticipated to an *ongoing* “updating of impressions that have changed” (p. 7). *Plausible* explanations become more concerned with “what could be happening” (p. 7), than what is desired, and *enactments* tend to “clarify thinking” (p. 7) rather than to distort it. All of this mindfulness is reinforced not by *social* conventions but by “interaction and conversation” (p. 7) more likely to evoke a *retrospect* of “relevant past experience” (p.7), than associations of convenience. We believe that any one of these

mutations to the DNA of sensemaking could explain a failure of dissonance reduction.

We join this “conversation” of sensemaking as suggested by [Weick \(1995\)](#) in the hope of contributing to the accumulating knowledge on this subject. Our primary focus of this study has been to analyze the behavior of physicians, dedicated and ethical colleagues, whose direct actions or acquiescence resulted in what we believe was a setback for patient quality and safety in their institutions. The challenge we faced in applying sensemaking theory to better understand their behavior was the risk of being misled by circuitous reasoning. We knew the programs had been rejected; we simply had to fill in the blanks. Since sensemaking is not, at least to date, a traceable physiologic process that can be demonstrated on a functional magnetic resonance imaging scan, filling in the blanks might have been the best that we could do.

We believe our findings provide opportunities for additional research in reforming health systems that focuses on how reforms that are specifically based upon targeted characteristics of the properties of sensemaking may inform effective reengineering processes.

Another opportunity for the utilization of sensemaking theory in reforming health systems is the need, expressed by [Foy et al. \(2011\)](#) for a “shared theoretical taxonomy for the investigation of a wide array of patient safety initiatives” (p. 5). The seven properties of sensemaking may provide such a taxonomic framework capable of encompassing the contextual and interventional characteristics of an array of patient safety initiatives.

We would also stress the degree to which we believe cause analysis peer review is essential in enacting a culture of safety within hospitals as well as contributing to patient-centric physician sensemaking.

There are dissenting opinions, those who would vigorously defend standard of care determinations for peer review and the long-practiced hierarchical application of medical expertise. Our response is that the status quo is no longer tenable. It has been over 10 years since the [Institute of Medicine \(1999\)](#) has made public the extent to which patients are harmed and needlessly die in our hospitals. The growing body of information regarding high reliability suggests alternative processes that may mitigate these failures ([Weick, 2002](#)).

In defense of our medical colleagues, we have attempted to illuminate the CMIs, beyond the control of physicians, which reinforce the current model of health care delivery. Current medical staff governance codifies provider-centric care. As seen in our study, a tenacious credentials committee that thrives on the fiction that the maintenance of medical staff membership hinges on its deliberations (the actual number of physicians nationwide who

are not re-credentialed and subsequently lose their hospital privileges is miniscule (Edwards, personal communications, May 21, 2012)), paradoxically constitutes a major barrier in the establishment of a hospital's culture of safety. Without physicians being afforded the psychological safety that is integral to a culture of safety, incentives for reporting anomalies are unlikely to be effective.

If the [Joint Commission \(2007\)](#) suggests that high reliability is the goal to which hospitals should aspire, it must recognize its role in the perpetuation of the provider-centric model of health care, including requirements for hospital recertification that reinforce standard of care peer review and focus the process of physician re-credentialing on provider-centric rather than patient-centric metrics.

In addition, as stated by [Sutcliffe \(2012\)](#), safety cannot be achieved solely *ex ante*. Robust processes of improvement, currently stressed by the Joint Commission as the primary path to HR ([Chassin, 2012](#)), do not instill within frontline workers the ability to “catch and correct” small errors and respond quickly to patient changes. The processes of CM accomplish this equally important component of HR.

Finally, we believe that applications of sensemaking theory are required to overcome the current dichotomous organizational identities that segregate, through sensemaking, physicians from the hospitals in which they practice. As processes of CM transform physician sensemaking from provider-centric to a patient-centric, it should be possible, as predicted by Weick (personal communication, June 12, 2012), to introduce a different, equally powerful identity, “an identity that manifests a “deep, authentic autonomous expertise to guide higher reliability.”

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## APPENDIX

### *High Reliability Pediatric Intensive Care Unit at a 250-Bed Tertiary Children's Hospital from 1989 to 2000 (Roberts et al., 2005)*

#### *Description of Program*

Developed to provide care “derived from a problem-solving methodology rather than protocol,” the high reliability pediatric ICU structured its processes on high reliability theoretical elements derived from Naval Aviation practices and Fire Service Emergency Medical Service response experience subsequently articulated by Libuser in connection with her research in financial institutions (Roberts & Bea, 2011).

These elements included: (1) *An appropriate reward system*, in which preferential attention was afforded by team members to the contributions of those caregivers who had successfully demonstrated knowledge, insight, and discrimination in patient care; (2) *Avoidance of quality degradation*, which included the prompt review of adverse events, a continuous updating of mortality and morbidity statistics, ready availability of attending physicians to other members of the care team, and the identification and adoption of national performance benchmarks; (3) *Risk perception*, as evidenced in a thorough program of multidisciplinary in-service presentations specific to individual patients and their clinical conditions, which focused on the potential for symptomatic relapse in patients manifesting apparent clinical improvement; (4) *Process auditing*, manifested by active encouragement of all members of the care team to question the current working diagnosis of the patient and the therapeutic plan; and (5) Five elements constituting what the authors referred to as “*command and control*.”

Command and control elements were identified as *decision migration*; *redundancy*; *rules and procedures*; *training*; and *senior managers with the “big picture.”* *Decision migration* encouraged in critical circumstances the most qualified team member present to initiate stabilizing interventions. *Redundancy* included periodic reevaluation of the patient’s clinical status and treatment plan, utilizing multiple methodologies for monitoring a specific physiologic parameter, and assignment of bedside staff to monitor vital signs during resuscitation efforts. *Rules and procedures* included the development of protocols available to respiratory therapists permitting the titration of therapy based upon a patient’s previous therapeutic response. *Training* emphasized the commitment to continuing education including encouragement of interdisciplinary teaching as a way of fostering mutual assistance. *Senior managers with the “big picture”* required physician,

nursing, and administrative leadership to monitor and follow through with all they had committed to regarding the proceeding's theoretical tenets.

Reported benefits of the HR PICU included decreased mortality and morbidity statistics, despite an increase in the number of patients on ventilators; improved patient outcomes; a decrease in refused transfers; a reduction in errors; decrease in return to ICU admissions following discharge; decreased length of stay; and decreased staff attrition.

*Cause Analysis Peer Review at a 254-Bed Nonprofit Regional  
Medical Center 2007–2009 (Flitter, 2010)*

*Description of Program*

In 2007, the leadership of the medical staff PRC charged with evaluating physician performance in cases of adverse events concluded that its efforts at determining an individual physician's standard of care was not advancing the cause of the committee's nominal title which was Quality Improvement Executive Committee (QIEC).

Accepting that human error is ubiquitous, and that relatively few physicians nationwide are ever denied privileges at times of re-credentialing as a result of medical staff peer review determinations, the committee agreed, with the approval of the medical executive committee, to focus its deliberations directly on patient safety and quality improvement. Instead of focusing on whether or not a physician had deviated from accepted medical practice, the committee set as its goal to arrive at an understanding regarding all the circumstances that might have contributed to an event of patient harm. To accomplish this, the committee realized that it was necessary to recast its interactions with physicians who had participated in the care of patients who had suffered adverse events. Instead of soliciting from a physician an explanation attempting to justify his or her care, the committee attempted to create a punitive-free environment by soliciting input from all involved providers in cases under review, casting those interviewed as experts, providing insight into the events under investigation.

Cases referred to the committee were initially evaluated with the sole purpose of determining which members of the hospital staff, including physicians, nurses, and allied health professionals, might reasonably be identified as potential sources of insight into what actually transpired concerning the adverse event. Interviews were then peer-conducted with physician members of the committee interviewing physicians and nurses and allied health professionals interviewed by their peers on the committee. The

context and purpose of these interviews were detailed in letters sent to the interviewees prior to the interviews, emphasizing that the committee was seeking what it believed to be their expert opinion on what had transpired. The letters also emphasized that the primary focus of the committee was to prevent future patient harm rather than to assign blame.

In lieu of confronting physicians with why they didn't proceed in a particular fashion, interviewers focused on trying to learn as much as they could about the circumstances contributing to what had actually transpired. The results of the separate interviews were then presented to the entire committee with the purpose of reconstructing a scenario similar to that arrived at by the National Transportation Safety Board in aviation disasters.

At this stage of the committee's evaluation of an individual case, additional interviews may have been requested. Once completed, the committee's deliberations focused on developing recommendations for policy or procedural modifications for the purpose of preventing future patients from suffering similar harm. The committee also considered which providers who by their own admission or in the opinion of the committee had admitted errors contributing to the event. The committee attempted to categorize the identified errors utilizing the Agency for Health care Research and Quality (AHRQ) patient safety net glossary ([www.psnet.ahrq.gov/glossary.aspx](http://www.psnet.ahrq.gov/glossary.aspx)) to place the error within the context of the current knowledge of the science of understanding human error. The committee transmitted this information, along with letters of appreciation for their participation to the physicians, nurses, and allied health professionals who had contributed through their interviews to the cause analysis investigations. If a physician was determined by the committee to have committed a similar error following participation in the cause analysis process, a remedial focused professional peer evaluation audit was instituted.

The committee's 2008 report summarized hospital-wide interventions initiated as a result of the committee's case reviews. The report detailed multiple educational programs and policy revisions resulting from the committee's work directed at individuals as well as departments. Remedial focused peer performance evaluations were initiated for two members of the medical staff as a result of the committee's determination of repetitive errors.