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Organizational Learning in a Cardiac Intensive Care Unit
A Learning History

Bret Lyman, PhD, RN; Kalene M. Ethington, BS, RN; Carly King; Jonathan D. Jacobs; Hayley Lundeen, BSN, RN, CCRN, CSC, CMC

Introduction: Providing high-quality care to every patient is challenging, particularly in critical care units (CCUs). However, this standard can be achieved through organizational learning. Unfortunately, the process of organizational learning in CCUs is not well understood.

Objective: The objective of this study is to describe the developmental progression of a cardiac intensive care unit (CICU) to reach its current state of reliably excellent clinical performance.

Methods: The method selected for this study was a learning history. A total of 43 individuals with experience working on the CICU participated in small group interviews. Participants included nurses, surgeons, unit clerks, administrators, nursing assistants, a pharmacist, a respiratory therapist, and an administrative assistant. Relevant artifacts, including unit performance data, were also gathered to complement interview data.

Results: The CICU progressed through 4 distinct developmental stages to reach its current state. The CICU’s early development involved establishing psychological safety on the unit, which prepared the unit for increased accountability, improved performance, and the pursuit of reliability.

Discussion/Conclusion: The findings validate the relationship between psychological safety and organizational learning, offer insight into how CCUs become high-reliability organizations, and provide clinical leaders with guidance for achieving high reliability in their organizations. The findings also help validate the American Association of Critical-Care Nurses position that a healthy work environment is
Critical care units (CCUs) strive to provide high-quality care to every patient. Meeting this standard is especially challenging in the complex, dynamic, critical care environment. However, achieving this goal may be possible by through continuous efforts to learn from experiences, adopt better practices, and adapt to changing circumstances, achieving this goal is possible. The science of how organizations, such as CCUs, learn to achieve and sustain excellent clinical performance is called organizational learning. The important role of organizational learning in healthcare has been well documented. However, very little is known about the process of organizational learning in CCUs. Understanding how improvement occurs at the unit level is a critical step toward facilitating organizational learning in CCUs and ultimately achieving the goal of high-quality care for every patient.

Learning Histories
The learning history is a research method that can enhance understanding of organizational learning in CCUs. Conducting a learning history involves gathering historical information regarding how an organization has learned to achieve its desired outcomes. Exploring how an organization has improved to achieve its desired outcomes illuminates the organizational learning process and the context in which it occurred. Learning histories are a relatively new research method, with the first learning history being published in 1997. Although learning histories have been used to study various types of organizations, they have not yet been used to study hospital units or CCUs in particular. The reason learning histories have not previously been used in healthcare is not clear, but they offer promise as a way to generate rich descriptions of a unit’s improvement over time. Thus, learning histories may reveal new insights about how organizational learning happens in hospital units and how it may be fostered. The purpose of this study was to conduct a learning history to document and describe a CCU’s developmental progression toward its current state of reliably excellent clinical performance.

Background
In this article, findings from this learning history are examined in the context of published literature on high-reliability organizations (HROs), psychological safety, and the American Association of Critical-Care Nurses’ (AACN) Standards for Establishing and Sustaining Healthy Work Environments.

HIGH-RELIABILITY ORGANIZATIONS
In HROs, performance is consistently excellent, even when complexity makes such reliability difficult to achieve. Team members are constantly mindful of the possibility of failure, resist oversimplifying the complexity of their work, maintain awareness of their immediate environment and the organization, use failure (both actual and anticipated) as an opportunity to improve the system, and (when the situation demands) bypass hierarchical social structures.

PSYCHOLOGICAL SAFETY
Psychological safety refers to having confidence that speaking up will not result in embarrassment, rejection, or punishment. Psychological safety is more than just group cohesion, which may lead to group members supporting one another but may also reduce the likelihood that they will correct or report hazardous situations. Rather, in psychologically safe units, staff members engage in self-correcting behaviors because they are not worried about being ridiculed or punished for mistakes.

AACN’S STANDARDS FOR HEALTHY WORK ENVIRONMENTS
Recognizing the value of healthy work environments in achieving clinical excellence, the AACN published its Standards for Establishing and Sustaining Healthy Work Environments (AACN Standards). These standards include (1) skilled communication, (2) true collaboration, (3) effective decision making, (4) appropriate staffing, (5) meaningful recognition, and (6) authentic leadership. The
Organizational Learning in a Cardiac Intensive Care Unit

AACN considers each of these standards essential to achieving sustainably excellent clinical care.

**METHODOLOGY**

**Design and Method**

A participatory action research design was chosen for this study. The research team included 1 individual from the CCU studied, as well as individuals from outside the hospital. The research method used was a learning history. Learning histories involve studying an organization’s history of improvement related to outcomes that key organizational stakeholders identify as notable. The primary purposes of a learning history are to build the organization’s capacity for collective reflection (leading to additional learning) and to discover principles of organizational learning that have applicability beyond the organization studied.

**Setting**

The setting for this study was a cardiovascular intensive care unit (CICU) with a reputation for sustained excellence in clinical outcomes, as well as patient and staff satisfaction. The CICU was established 15 years ago, when a general intensive care unit was divided into specialized ICUs. The CICU originally had 16 beds (it now has 12 beds) and cares for patients admitted after open-heart surgery, cardiac catheterization, myocardial infarction, and others. The CICU is situated in a 395-bed regional medical center that is part of a large, not-for-profit health system.

**Participants**

Participants in this study included nurses, surgeons, unit clerks, administrators, nursing assistants, a pharmacist, a respiratory therapist, and an administrative assistant. All of the participants had current or recent experience working on the CICU.

**Data Collection**

The researchers invited 15 key stakeholders (current staff selected by the CICU nurse manager) to identify notable areas of performance that were a source of pride for the unit. The stakeholders identified 5 notable outcomes, which were (1) patient experience, (2) staff engagement, (3) patient safety, (4) unit-specific core measures, and (5) surgical outcomes. These outcomes were used to guide semistructured small group interviews about the unit’s learning history. Participants were asked, “Which notable outcome(s) would you like to talk about?” and “How do you think your unit has been able to achieve that notable outcome?” Follow-up questions were asked to elicit additional details about how, when, and why changes were initiated; what the change process entailed; who was involved; what made the change successful; and how the change has been sustained.

Recruitment for the small group interviews occurred in partnership with a coresearcher (a staff member on the CICU). The unit manager encouraged staff participation but was not present for any staff interviews or involved in the consent process. Staff members also invited their coworkers to participate. A total of 43 individuals participated in small group interviews, with 2 to 5 participants in each interview. Relevant artifacts (including historical unit performance data, staff and council meeting records, training and orientation materials, and clinical protocols) were also gathered to complement interview data. Data collection and analysis continued concurrently until saturation was reached.

**Data Analysis**

Data were analyzed using a process called “distillation,” which is similar to the thematic analysis process used in grounded theory. Specifically, throughout data collection, the researchers individually reviewed the data, engaged in open coding, and identified major concepts. The researchers then collectively shared concepts with each other, grouping similar concepts, refining labels for the concepts, and identifying new concepts. The researchers collaboratively grouped the concepts into themes. Themes were then reviewed to ensure that they accurately reflected the data collected. Participants were given an opportunity to engage in a validation process, which involved reviewing, discussing, and commenting on a completed draft of the learning history. This validation process helped establish trustworthiness for the researchers’ interpretations of the data.

**RESULTS**

Data analysis revealed 4 paired themes that describe developmental eras the CICU progressed through to achieve their notable outcomes. The paired themes also describe qualities that characterize the unit today. These themes are (1) identity and ownership, (2) team and respect, (3) accountability and support, and (4) reliability and sustainability. The CICU’s current state is described below, followed by the unit’s learning history.

**Current State**

The CICU has a strong sense of identity and ownership. Unit members consistently described their unit as providing excellent patient care, as having high expectations for themselves and for each other, and as being a very positive place to work. Ownership of the unit is evident in the nurse-led councils that monitor and manage many aspects...
of the unit’s performance, with nearly all nurses serving as active council members. This sense of ownership is also felt by the interdisciplinary team, with various ways for all team members to collaborate on improvement initiatives. Members of the interdisciplinary team have healthy respect for one another and work well as a team. The manager shows personal interest in each of the nurses and their needs, frequently offering praise and conveying respect. Individual and collective accountability are clearly present on the unit. Team members are acutely aware of the unit’s excellence on various indicators of clinical performance and feel personally responsible for making sure those indicators remain positive. For example, many staff members know the exact number of days since a patient fall last occurred on the unit. Team members speak to each other directly when potential conflicts arise and are comfortable offering and receiving support. Paired with the high accountability, personal and organizational support is readily available to help team members meet the higher standards. In the most recent 2 to 3 years, the unit has started developing improved systems (eg, protocols, processes, and routines) for reliability and sustainability.

Learning History

IDENTITY AND OWNERSHIP

The CICU’s positive identity and sense of ownership originally developed in parallel to one another, but they now build upon each other. Creating a sense of ownership has been the CICU manager’s priority since the unit was formed, and that sense of ownership truly flourished as the unit’s identity became clearer.

Identity. When the CICU was first established, it lacked a clear identity and there were some negative perceptions of what the unit would be like. Many staff were reluctant to move to the new unit because the patients being admitted there were not perceived to be “critical care” patients. Staff were concerned about leaving established, collegial relationships behind and were also anxious that interdisciplinary collaboration on the new unit would not be as strong.

A catalyst toward clearer identity occurred when the CICU began admitting patients recovering from open-heart surgery. Before the CICU was established and through the first few years of its existence, these patients were still being admitted to a general intensive care unit. The CICU manager wanted these patients to receive care in her unit and began working on a proposal for the change. Through a professional nursing organization, she learned that the length of stay for patients recovering from open-heart surgery was significantly reduced when they received specialized care in a CICU. She presented this information to stakeholders in the organization and, after years of discussion, the CICU began caring for patients recovering from open-heart surgery. She said this change “added, I’m going to call it glamour…to the unit that attracted more staff…They were exciting patients to take care of.”

Caring for these higher acuity patients and improving nurse-surgeon relationships further clarified the CICU’s identity. The challenge of caring for patients with more complex needs offered a sense of pride and accomplishment for the nurses and motivated them to develop higher levels of clinical proficiency. During this time, a new group of cardiac surgeons joined the unit, which led to improved nurse-surgeon relationships. Collegial relationships and a positive unit identity served as a strong foundation for achieving the clinical excellence that now constitutes the team’s identity.

Ownership. When the CICU was first established, the manager wanted the nurses to “own” the unit and used councils to help establish that ownership. Initially, the councils planned meaningful events to recognize and celebrate accomplishments on the unit. Over time, the roles and responsibilities of the councils became more substantial, including coordinating work schedules and improving nursing practice on the unit. As the number of councils increased, more staff had opportunities to function in leadership roles. The positive identity that was developing on the unit provided motivation for staff to take ownership of the unit, and the councils provided a means for them to do so. In their councils, the staff developed a greater awareness of how well the unit was performing on various clinical outcomes. They took pride in the unit’s excellent performance and felt strong ownership for maintaining that standard. A nurse who recently joined the unit said, “I don’t know who started the greatness…We just come and don’t want to break that link.”

TEAM AND RESPECT

Having a positive unit identity and ownership helped the staff become a strong team, with sincere respect for each other. Passionate leadership, respect and recognition, and shared experiences all played important roles in developing a respectful team.

Passionate leadership. The manager and experienced staff who transitioned to the new unit played a significant role in establishing a respectful, effective team. The manager expressed substantia passion and vision for the unit, which facilitated cohesion within the team. One participant said the unit’s original manager would “get choked up talking about [the unit].” When she tells people about what she does and how proud she is of the work that we do here, it’s emotional for her and you can see that and feel that and buy into it.” Several of the experienced nurses who transferred to the CICU were also deeply committed to the success of the unit and made a concerted
effort to contribute positivity and stability to the team. These nurses became role models that newer nurses have since tried to emulate. One participant said, “You see these great nurses and so then you just fall in line behind them. They’re awesome. They’re good at what they do, but then they also really care about the patient.”

Respect and recognition. Respect and recognition became defining attributes for the CICU as staff members exerted a conscious effort to support one another. The nurse manager showed respect to staff through her “open-door policy,” easy accessibility, flexible scheduling, and frequent praise of individuals. As the nurses proved their clinical capabilities to the new group of surgeons, the surgeons conveyed increased respect for the nurses. This respect enhanced communication and trust. Nurses and physicians saw each other’s input as credible and worked collaboratively to manage complex clinical situations, which led to an even greater sense of team on the unit.

In addition to respect from their manager and the surgeons, the nurses showed respect for each other. Nurses started to praise each other in front of patients, physicians, and other staff. Giving recognition in this way helped patients and physicians view the nurses as credible and competent. Administrators began encouraging this form of open praise, as well as other forms of recognition, which further enhanced trust on the unit. Increasing trust and respect allowed for more direct communication and open feedback among team members. One participant expressed that, “We can be honest with each other without someone’s feelings getting hurt because we know we have each other’s best interest at heart, as well as the patient’s.”

Shared experiences. Team members bonded through staff recognition parties and other shared experiences. The unit manager asked several team members to organize fun, meaningful events where team and individual accomplishments could be recognized. Team members look forward to these events every year and enjoy spending time with each other outside of the clinical setting. The surgeons contribute as well, using their personal accounts to help cover the expenses. The informal nature of the parties allows team members to strengthen their relationships and blur traditional hierarchical lines. One participant said, “If you’re in street clothes sitting next to each other, it’s almost like you’re equals.” These experiences translate to the clinical setting, making it easier for team members to adapt their roles based on situational needs.

Other shared experiences also helped team members form collegial relationships. These experiences included coming together after a staff member’s death, preparing newer staff members to be effective contributors on the unit, working to improve care through unit-based councils, and collaborating to take care of complex patients.

One participant said “…you come in with a sick patient and it’s like, I haven’t seen this, or what can we do? You have to collaborate with the doctors and you have to collaborate with everyone to put the pieces together.” These shared experiences provide common memories for the team to reflect upon, opportunities to build trust with one another, and a foundation for strong, collegial bonds.

ACCOUNTABILITY AND SUPPORT
The team’s strength and their respect for one another prepared them to thrive in an era of increasing accountability at the individual, unit, and organizational level. Accountability at each of these levels has progressively risen over the years. Increasing levels of accountability have been accompanied by greater levels of support, making it possible to meet the higher expectations.

One example of increasing accountability, paired with increasing support, pertains to the Centers for Medicare and Medicaid Services Value-Based Purchasing Program. This program made hospital performance more transparent and linked hospital reimbursement rates to quality of care. As a result, the CICU became more accountable for its performance in several clinical outcomes. This accountability was paired with support from the hospital unit’s parent corporation, including better access to performance data, which allowed the team to review and respond to trends in their performance.

Another example of increasing accountability and support is a time staff refer to as the “Year of Accountability.” During this time, the CICU’s parent corporation created stricter, written performance standards that were linked to staff members’ pay and position. Concurrently, the staff received increased support to ensure their success. For example, unit staff leaders became accountable for chairing unit-based councils, playing a more supportive role in leading unit changes, and providing support and accountability for the nurses working each shift. In turn, the manager supported unit leaders to meet these standards by holding retreats and trainings. The orientation process for new employees also became more rigorous. The unit’s nurse educator helped new staff members meet the performance standards through individual, weekly coaching sessions.

Team members have also developed a sense of shared accountability and support. They strive for excellence as a team, holding themselves and each other accountable to that standard. For example, team members are expected to provide direct feedback and coaching when a fellow team member is not meeting expectations. This process, called “teaching in the moment,” is used to improve individual and unit performance and is seen as an expression of support and respect. One team member captured this sense of support, saying, “everybody wants [me] to be successful, because if I’m successful then everybody is.”
RELIABILITY AND SUSTAINABILITY
The CICU’s performance improved during this era of increasing accountability and support, motivating team members to develop and adopt policies, protocols, and routines to sustain their improvements and more reliably achieve excellent outcomes. Some of these standards of care were developed by the unit itself, some were discovered through professional networks and conferences, and others originated from the hospital or system level. For example, to reduce catheter-associated urinary tract infections, the electronic medical record system was programmed to prompt nurses to perform evidence-based catheter care. Policies and protocols have also been used to reduce unnecessary blood transfusions, shorten intubation times, improve outcomes of patients with cardiac arrest, and so on. Reliability in applying standards of care has been achieved through ongoing trainings, audits, and computer-based reminders.

Team members also enhance reliability and sustainability by seeking systems-based solutions when opportunities for improvement are identified. For example, team members recognized the importance of starting the shift with a “pep talk,” knowing who would be on the team that shift and who might need extra assistance, as well as any unit initiatives requiring their focused attention. As a result, they adopted a beginning-of-shift huddle as a systems-based solution to meet these needs every shift. Other such solutions include huddles after falls and code blue events, bedside reporting, whiteboards in patient rooms, manager rounding, and processes to encourage staff input and support staff recognition. They establish feedback loops to continually evaluate and improve the effectiveness of these solutions.

The hiring process has also been adapted to help maintain reliability and sustainability. Individuals are hired, in part, based on their fit with the unit’s culture. Current staff participate in interviewing applicants, with the thought that if staff “see who the candidate is and they’ve given their input, they’re going to be more in line to make that person succeed.” Being involved in the hiring process also helps new staff start integrating with the team before they begin working. The patient engagement committee also assigns “buddies” to new team members, ensuring that each of them becomes socially integrated into the CICU and understands unit expectations. This process helps sustain the unit’s core values, which are foundational to the unit’s ongoing success.

DISCUSSION
The results suggest that the performance and characteristics of this CICU reflect those of an HRO. They provide insight into how this particular unit became an HRO, especially the importance of establishing psychological safety, ensuring that increasing accountability is paired with increasing support, and developing systems-based solutions to achieve reliably excellent performance. The unit’s work environment also exemplifies the AACN Standards, giving additional validation to the relationship between establishing a healthy work environment and excellent clinical performance.

The Path to High Reliability
DEVELOPING PSYCHOLOGICAL SAFETY
This unit’s pathway to becoming an HRO progressed through a series of developmental stages. In the unit’s early developmental stages (identity and ownership, team and respect), the team’s emerging positive identity was a source of pride, motivating members to elevate their clinical expertise to meet the needs of their patients. Expanding opportunities for shared governance gave team members a greater sense of ownership for their unit, helping them feel empowered to enact change. Their team orientation and culture of respect served as an environment conducive to improvement.

Within this environment, team members exchanged feedback and had conversations about performance that were difficult, but necessary, to improve care on the unit. Although participants sometimes described giving and receiving feedback as challenging, they also saw it as a collegial act of respect and support. Sharing feedback was easier among peers with stronger personal relationships, and giving feedback became easier with experience. Participants did not express fear about the personal implications of reporting errors. Instead, they saw reporting errors as part of a positive process to improve patient care on the unit. The phenomenon of freely engaging in peer feedback and discussions requires a sense of psychological safety.16 Staff members on this unit correct each other because they want to keep patients safe and avoid letting the team down.

As the team developed more psychological safety, they were increasingly engaged in performance improvement activities, which validates the link between psychological safety and organizational learning.5,19-21 It also suggests that establishing identity and ownership, as well as a sense of team and respect, are integral to developing psychological safety in a CCU.

EXERCISING PSYCHOLOGICAL SAFETY: PROVIDING ACCOUNTABILITY AND SUPPORT
Psychological safety in the CICU helped ensure that team members had the support necessary to successfully progress through an era of increased accountability at the interpersonal, unit, and system levels. As described above, increasing levels of accountability were accompanied by substantial increases in support. Team members were well prepared to support each other through this process.
challenging time because a foundation of psychological safety had already been established with the manager and with each other. Outcomes data and benchmarking data became readily available during this era, allowing team members to see the unit’s improvement and its performance compared to other units across the health system. This information fueled their motivation to improve their performance and their ranking in relation to other units.

BUILDING SYSTEMS FOR HIGH RELIABILITY

With psychological safety, accountability, and extensive support in place, the CICU was ready to move into an era of reliability and sustainability. At this point in the unit’s history, the unit began working to sustain its improved performance and more reliably achieve those outcomes. Although many characteristics of HROs were already present, CICU team members established routines and protocols to formally embed these characteristics into the unit’s daily operations. For example, the unit adopted postevent huddles as a formal, nonpunitive process for reviewing, discussing, and learning from experiences. Specific individuals and councils have formal accountability to refine or develop systems-based solutions to improve performance in similar situations. Once an event has been reviewed and pertinent lessons have been distilled, formal processes (ie, staff meetings, shift huddles, etc) are used to ensure all team members have an opportunity to learn from the experience.

The CICU’s apparent progression through several developmental stages over time to reach its current state, validates that high reliability is accomplished over many years. Chassin and Loeb outlined stages of maturity hospitals progress through toward becoming HROs. The present study builds on their work by offering new insight into the stages of organizational maturity that occur at the hospital unit level. The importance of developing psychological safety during these early developmental stages also validates the foundational importance of socio-relational factors in achieving high reliability.

AACN Standards

Similar to the AACN’s position that a healthy work environment is essential to achieving consistently excellent patient care, results from this study suggest that it was necessary for the CICU to progress through 3 developmental stages (identity and ownership, team and respect, and accountability and support) to fully pursue reliability and sustainability. Efforts to meet the AACN Standards would be well aligned with the work necessary to progress through these 3 developmental stages. For example, striving to achieve the AACN Standards related to appropriate staffing, meaningful recognition, and authentic leadership would help with establishing healthy levels of accountability and support. The alignment between the findings from this study and the AACN Standards underscores the importance of a healthy work environment for achieving excellence in critical care.

### IMPLICATIONS

These findings have practical value for hospital leaders, quality improvement specialists, and others involved in organizational change and development. It is recommend that CCU teams use the developmental eras identified in this study as a framework to collectively evaluate the current state of their own organization, reflect on the historical development that has led them to that point and thoughtfully plan a pathway toward achieving their desired future state. Initiatives and planned changes are most likely to be successful when they are appropriate to each unit’s unique historical, developmental, and socio-cultural context. Specific activities associated with each of the identified developmental eras are listed in the Table. Other CCUs may consider implementing these activities

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<thead>
<tr>
<th>TABLE</th>
<th>Activities Associated With Each Developmental Era</th>
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<tbody>
<tr>
<td>Identity and ownership</td>
<td>Build a shared team/unit identity staff can be proud of</td>
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<td></td>
<td>Form shared governance councils</td>
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<td></td>
<td>Recognize individual and team accomplishments</td>
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<td>Establish traditions that are both meaningful and enjoyable</td>
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<tr>
<td>Team and respect</td>
<td>Plan events where team members can develop personal relationships</td>
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<td></td>
<td>Establish and uphold norms for respectful interactions among interdisciplinary team members</td>
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<td></td>
<td>Make it safe to discuss errors, patient safety, and solutions</td>
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<tr>
<td>Accountability and support</td>
<td>Clearly communicate expectations for performance, continuing education, and leadership</td>
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<td></td>
<td>Provide the training, coaching, feedback, and encouragement necessary for staff to meet expectations</td>
</tr>
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<td></td>
<td>Engage all team members in providing accountability and support to one another</td>
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<tr>
<td>Reliability and sustainability</td>
<td>Build systems for hiring, orienting, and developing staff to sustain quality care</td>
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<tr>
<td></td>
<td>Empower shared governance councils to improve quality within their respective areas of responsibility</td>
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<td></td>
<td>Establish feedback loops to monitor performance and the effectiveness of changes</td>
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<td></td>
<td>Develop systems-based solutions to improve quality and safety</td>
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as part of a plan to advance their unit's development toward high reliability.

Limitations and Future Research

This study is limited by its focus on only 1 CCU, yet the developmental eras identified are well aligned with those outlined by Chassin and Loeb. Further research is needed to validate the broader applicability of these developmental eras to other hospital units that have become HROs. Replication studies in CCUs and other types of hospital units could be used to create a theoretical model of organizational learning in hospital units. It is recommended that relationships be explored between unit-level developmental readiness and successful adoption of quality improvement strategies, tools, and initiatives (such as those advocated by the Institute for Healthcare Improvement). Prospective, longitudinal studies could also reveal more about the adaptive processes hospital units use to sustain reliably excellent performance in the context of continuous change (eg, new evidence, new technology, and individual patient needs). As the evidence base expands, it will be possible to conduct intervention studies that test strategies for facilitating organizational learning in hospital units.

CONCLUSION

Over a number of years, the unit studied progressed through 4 developmental eras to become an HRO. Its early developmental eras involved establishing psychological safety, which prepared team members to support each other through an era of increased accountability. As their performance improved, they progressed to their current developmental era, in which they develop systems-based strategies to achieve greater reliability and sustainability. These findings validate the relationship between psychological safety and organizational learning, as well as the concept that healthcare organizations progress through developmental stages to become HROs. These findings also add new insight into how CCUs progress to become HROs. In addition, these findings help validate the AACN's position that establishing a healthy work environment is foundational to achieving clinical excellence. Further research is needed to test the broader applicability of these findings and continue building the evidence base for organizational learning in hospital units. It is recommended that CCUs collectively reflect on their current state and historical learning pathway, then collaboratively plan a path toward their desired future.

References


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