



The Innovation Road Map: A Guide for Nurse Leaders

Rosina Cianelli, PhD, RN, MPH, IBCLC, FAAN

Bonnie Clipper, DNP, RN, MA, MBA, CENP, FACHE

Rebecca Freeman, PhD, RN, PMP

Jill Goldstein, MS, RN, MA

Tami H. Wyatt, PhD, RN, CNE, CHSE, ANEF, FAAN

June 2016

ACKNOWLEDGMENTS

This project was supported by the Robert Wood Johnson Foundation Executive Nurse Fellows Program. The contents are the sole responsibility of the authors and do not represent the official views of the Robert Wood Johnson Foundation.

The authors would like to acknowledge the contributions of the following individuals and organizations to this project:

Dr. Roy L. Simpson, Vice President, Nursing Informatics, Cerner Corp
Sarah Lowe, Associate Professor, University of Tennessee, Knoxville
Ellen Loring, Center for Creative Leadership
Robert Wood Johnson Executive Nurse Fellow Cohort 2014

©2016 Innovation Works. The authors are listed alphabetically; each contributed equally to this project

CONTENTS

02 Acknowledgments

04 Introduction

06 The Characteristics of Innovation

- 06 Divergent Thinking*
- 07 Risk Taking*
- 08 Failure Tolerance*
- 09 Agility and Flexibility*
- 10 Autonomy and Freedom*

13 The Components of Innovation

- 13 Employee Feedback*
- 14 Role Filling*
- 17 Role Modeling*
- 17 Employee Engagement*
- 19 Education*
- 20 Protected Time*
- 21 Technological Support*
- 21 Rewards*
- 22 IDEO Methodology*
- 22 Budgeting*
- 23 Leadership*

24 Team Collaboration: Innovation in Action

- 26 Unlikely and Diverse Team Members*
- 26 Productive Interaction*
- 27 Play*
- 28 Pauses and Breaks*
- 28 Skillset Development*

30 Conclusion

32 References

Introduction

Innovation is “the design, invention, development, and/or implementation of new or altered products, services, systems, organizational structures, or business models for the purpose of creating new value for customers and financial returns for the firm”

(The Advisory Committee on Measuring Innovation in the 21st Century Economy, 2008, pg. i).

In the current U.S. healthcare system, organizations can no longer thrive by meeting needs, providing adequate quality, offering acceptable customer service, and avoiding mistakes. Healthcare leaders, including nursing school faculty, need to consider what the industry will look like in the 22nd century. Dramatic changes that will be required to improve the quality of patient outcomes, increase care access, and reduce costs in light of new technologies including telemedicine, genome therapy, and online healthy lifestyles resources. According to the International Council of Nurses (ICN) (2009), innovation is central to improving healthcare quality. Innovation can be defined as putting new ideas into practice or incorporating existing ideas into practice in a new way (Melnik & Davidson, 2009; Fagerberg, 2004). While innovation often is thought of in terms of high-cost, high-tech solutions, the need for innovation—even the lower-tech variety—is evident worldwide (ICN, 2009). Global workforce shortages also increase the need for innovation, as fewer healthcare workers are required to complete even more tasks.

Traditional approaches to advancing businesses employ incremental, formulaic strategies that use

a slow, steady approach to achieve a pre-conceived outcome by avoiding errors and completing tasks at prescribed intervals. Such approaches cannot produce the innovation needed to transform healthcare. Even job titles for healthcare industry executives—administrators or supervisors—suggest a role more like an overseer or steward rather than a leader and active manager (Zuckerman, 2012). To produce innovative solutions, healthcare organizations need to function innovatively. Unlike traditional organizations that tend to be more comfortable with the status quo and even stifle creativity, innovative organizations not only permit, but also foster creative functioning among staff members (Siegel & Kaemmerer, 1978).

The first obligation of healthcare providers, to do no harm, explains the risk-averse nature of the healthcare industry, where too much risk can result in patient injury or death. While such high stakes require hospitals and healthcare centers to deliver clinical care within a tight structure of quality and risk management, the leaders of these organizations must begin to think innovatively in order to grow, expand, and solve problems amid delivery system reforms. Innovative organizations have several unique



“This idea book can serve as a jumping off point for nurse leaders who wish to introduce the spirit and practice of innovation to their organization.”

characteristics, such as welcoming constant change, supporting continual learning, promoting ongoing experimentation with alternative problem-solving approaches, and encouraging thinking that is different from the norm (Siegel & Kaemmerer, 1978). While healthcare leaders might recognize the need to foster such characteristics in their organizations, they often do not know how to create the considerable and sustainable change required to achieve them. This idea book can serve as a jumping off point for nurse leaders who wish to introduce the spirit and practice of innovation to their organization. The following sections discuss innovation characteristics

of innovation (to exhibit, promote, foster, and reward); the components of innovation (to try, test, adopt, and adapt); and team collaboration, which is both a catalyst for and a microcosm of the larger innovation process.

The Characteristics of Innovation

To promote a culture of innovation, healthcare leaders must exhibit foster, promote, and reward five key characteristics: divergent thinking, risk taking, failure tolerance, agility/flexibility, and autonomy/freedom.

Divergent Thinking

Because divergent thinking is the cornerstone and arguably the source of all innovation, it is important to define the term and its opposite, convergent thinking. Convergent or linear thinking works towards a discrete answer or solution (Blakeney, Carleton, McCarthy, & Coakley, 2009). In contrast, divergent thinking consists of thought processes that do not necessarily move toward a single solution (Guilford, 1967). Guilford (1967) recognized divergent thinking as a vital underlying element of creativity and innovation, which allows for the connection or consideration of unrelated matters while contemplating a specific problem (Guilford, 1957; Blakeney et al., 2009).

Healthcare organizations, including nursing schools, tend to value convergent thinking over divergent thinking, which can serve as a barrier to innovation. For example, while nurses often are natural problem-solvers, they may not necessarily be naturally convergent thinkers. More likely, they have been trained to suppress their divergent thinking tendencies

in the healthcare setting, as they spend most of their time on discrete or linear tasks. Encouraging and valuing divergent thinking among nurses, as well as other healthcare employees and nursing students, will build a foundation that promotes creativity and enables innovation (Blakeney et al., 2009).

Thinking proactively instead of reactively can be considered an aspect of divergent thinking. In healthcare, leaders generally identify weaknesses or system risk points only after catastrophic events or near misses occur. For example, in nursing education, leaders generally focus on graduates' NCLEX pass rate. When a school achieves a 95% or greater pass rate, business continues as usual. Rather than resting on the laurels of a high passing rate, the innovative faculty leader would determine how to prepare for or refine efforts for the next semester. In bedside healthcare, humans, equipment, and protocols all are subject to failure. The innovative thinker is able to anticipate a variety of failures and address them prior to a disaster or near miss. Innovative employees consider changes before adverse events require them. Similarly, healthcare leaders and nursing faculty need

to shift their management paradigm from addressing problems to anticipating them.

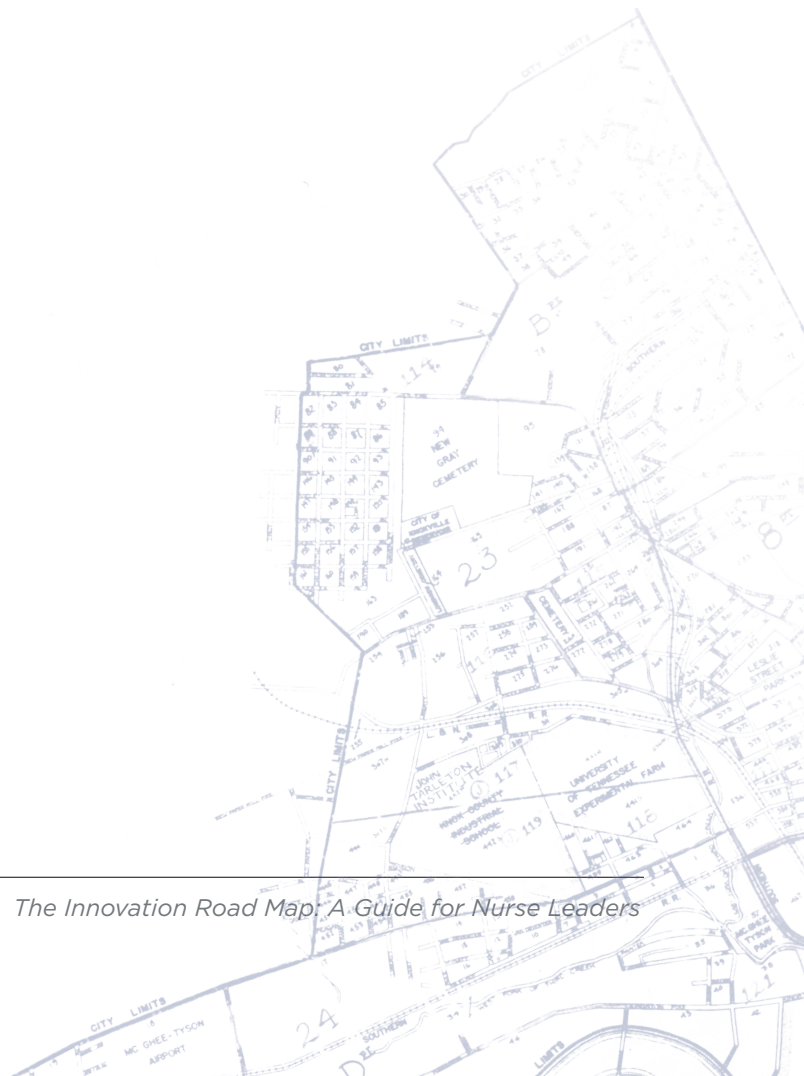
As with any major change, making a safe environment for divergent thinking requires training and practice. Employees must receive initial and ongoing training to think differently and learn to ask new and different types of questions when faced with a problem (Blakeney et al., 2009). This emphasis on training is important regardless of the innovation topic. The responsibility for creating education and training components can fall to many different groups such as unit/clinical educators, process improvement experts, or change management professionals. Nursing schools also should consider the importance of incorporating innovation training into their curricula.

Another option for leaders is to engage external consultants to help plan and initiate effective educational programs. The initial project scope should include innovation-focused educational activities that encourage divergent thinking at all organizational levels.

Risk Taking

Divergent thinking can produce ideas that seem risky to implement. Put simply, risk-taking is engaging in a behavior that involves risk in order to achieve a goal. In this context, the behavior consists of trying something completely new and different from current practices. In the healthcare industry, risk often is viewed as a negative term and risk-taking behavior is strongly discouraged and avoided. For example, very few nurses voluntarily visit the risk management office. In fact, when called to speak to a risk management specialist, nurses usually wonder what they have done wrong. Additionally, safety checklists, a ubiquitous risk-mitigation strategy,

serve as a sign of the risk-averse nature of modern healthcare. An example of standard versus innovative approaches could be seen in the problem of surgery mistakes (wrong-site, wrong-patient, and wrong-side surgeries). While there has been some success using the pre-surgery Universal Protocol Checklists that are advocated by regulatory agencies, mistakes still occur. An innovative leader might consider taking the risk of converting a direct care line position to an Operating Room Safety Officer position that has the responsibility of reviewing and managing risky operating room behaviors. Leaders need to show that risk-taking behavior is supported by the organization. They can do this by developing a pattern of exhibiting tangible risk-taking behaviors, engaging in ongoing learning, and acknowledging innovative risk-taking behavior among employees.



Opportunities for Encouraging Risk-Taking Behavior

- ≥ Moving from hospital-based clinical experiences to simulation-only laboratories
- ≥ Making all home healthcare visits through telemedicine
- ≥ Using virtual ICUs for all critical areas

Action Ideas for Encouraging Risk-Taking Behavior

- **Establish** a risk-taking framework for direct-report employees
- **Introduce** a policy that prohibits concealing information about taking risks on the job
- **Refrain** from blaming employees when their attempted innovations fail
- **Educate** employees across the organization on the organization's risk-taking stance
- **Make** risk taking a standing meeting agenda item (potential, current, future, and follow-up)
- **Create** an award for those who proactively identify and address risk
- **Complete** a cost analysis for risk-taking versus not taking a risk

Opportunities and Action Ideas for Encouraging Risk-Taking Behavior

Failure Tolerance

What is a person risking while engaging in risk-taking behavior? Failure. Failure tolerance is accepting the path to success is paved with many failures. Without failure tolerance, there can be no risk-taking behavior. There are many examples of individuals whose serial risk taking and failure tolerance led to enormous success. J. K. Rowling's Harry Potter book series was rejected more than a dozen times by publishers. Michael Jordan, arguably the greatest basketball player of all time, missed more than 9,000

shots, 26 of them potentially game winning. Inventor Thomas Edison first found 10,000 ways his light bulb did not work before finally discovering how it did work. These pioneering risk takers chose to focus on what they learned instead of the failure that inevitably accompanies taking risks.

Being willing to tolerate and learn from failure is a foundation of the innovative organization. This characteristic is crucial because failure is the result of "... learning, iteration, adaptation, and the building of new conceptual and physical models

“Being willing to tolerate and learn from failure is a foundation of the innovative organization.”

through an iterative learning process... [and] almost all innovations are the result of prior learning from failures” (Hess, 2012). Kelley (2001) said the possibility of innovation is born when people transcend the beliefs that limit their thinking, but they can progress into that creative space only when the fear of making mistakes is removed (Bonfante, 2012).

Because embracing the freedom to fail may be counterintuitive in the risk-averse world of healthcare—where employees often feel pressured not to make mistakes—explicit attention must be given to the development of failure tolerance. While organizations transition to a structure that supports exploration and innovation, it is incumbent on them to maintain a strong program of safety and quality oversight to ensure that innovative ideas are well tested before being implemented in the clinical setting. For leaders, inspiring coworkers to adopt a new problem-solving approach based on creativity, boundary spanning, and failure tolerance depends on their ability to model the innovative approaches they are promoting. Leaders also must condition themselves, and their team members, to accept failures as part of the pathway to innovation and be willing to reward learning that happens via trial and error.

Agility and Flexibility

Two important attributes that describe an individual’s or an organization’s innovation readiness are agility

and flexibility. These characteristics refer to the ability to adapt quickly to rapidly developing trends, treatments, regulations, and changing market conditions. Agility is defined as the capability to adjust swiftly in response to global market changes. Flexibility describes the ability to provide different outcomes with the same resources by expanding, contracting, and shifting them to meet emerging needs.

U.S. healthcare organizations exhibited agility and flexibility in the way they responded to the Ebola Virus. Organizations invested in infection control measures, supplies, education, and employee training to address patient, staff, and public safety needs. To be innovative, organizational procedures must acknowledge the impact global travel can have on the spread of viruses. However, in the face of such a threat, an innovative leader would consider if all hospitals and healthcare centers needed to focus that level of attention on education, supplies, and healthcare volunteers to deal with this now global illness.

Changes in the healthcare environment often are motivated by rapid developments in technology, pharmacology, treatments, or disease migration. Innovative organizations need to be agile and flexible enough to evaluate these changes and design appropriate responses to address them in a timely manner.

Opportunities for Improving Agility and Flexibility

- ≥ Having a contagious disease (e.g., the Ebola virus) threaten the workplace
- ≥ Malfunctioning of electronic medical record or electronic education system
- ≥ Having the bar code administration system fail to recognize medication packets
- ≥ Being affected by unexpected blizzard or other adverse weather event
- ≥ Having job sharing and flexible scheduling practices challenge care continuity

Action Ideas for Improving Agility and Flexibility

- **Develop** an organizational design and strategies that reward agility and flexibility
- **Hire** employees who are able to quickly adapt to change
- **Develop** employee rules and procedures that support agility and flexibility
- **Anticipate** changes by performing a preemptive review of literature and work environment
- **Create** employee teams that are readily available to provide input for emergent crises
- **Encourage** shared governance, experiences, and storytelling
- **Avoid** developing habits of inertia or overconfidence

Opportunities and Action Ideas for Improving Agility and Flexibility

Autonomy and Freedom

Giving employees freedom to complete tasks as they see fit produces the autonomy they need to become more confident about their abilities and decisions.

Litwin and Stringer (1968) defined employee responsibility as the degree of autonomy extended to employees, the perception of being their own bosses, and not having their decisions double-checked by higher-level employees. In nursing care, autonomy is defined as the ability to act based on one's knowledge

and judgment, within the full scope of practice as defined by existing professional, regulatory, and organizational rules (Weston, 2008). When employees perceive inconsistencies in management expectations and a lack of clarity about their job responsibilities, they report feeling emotionally exhausted (Jaramillo et al., 2006). Conversely, “giving people latitude increases the chance that they will bring additional initiative, ideas, and energy to their jobs” (Economy, 2014).

The values of employee autonomy and freedom should be at the core of every organization. Many healthcare organizations continue to use traditional hierarchical, top-down management approaches, which should be considered outdated for organizations that value innovation. Fortunately, many organizations are slowly shifting towards giving more autonomy in nursing practice. For example, collaborative practice agreements for Nurse Practitioners have been eliminated in several states, enabling these nurses to practice to the highest level of their professional licenses. Additionally, the push towards achieving Magnet status and nursing excellence has brought many bedside nurses into leadership roles through structured governance, committee placement, and encouragement in the quality and research arenas. Employees with autonomy and freedom are more likely to engage in divergent thinking and risk taking; accept failure as a necessary part of success; and exhibit agility/flexibility in performing tasks and designing solutions with an innovative perspective.

Once healthcare leaders understand the importance of the key characteristics of innovation, they are ready to examine the organizational components of innovation in light of their organization’s needs.

Opportunities for Promoting Autonomy and Freedom

- ≥ Discussing the role of nurse practitioners in the organization
- ≥ Creating practices that acknowledge the scope of nursing practice
- ≥ Developing courses or syllabi that reflect innovative working environments

Action Ideas for Promoting Autonomy and Freedom

- **Communicate** clearly to nurses to ensure they know they have the freedom to act on nursing decisions using sound clinical judgment
- **Enable** employees to exercise individual judgment without always being double-checked by higher-ups
- **Encourage** employees to participate in decision making, regardless of job scopes
- **Do not** 'direct' all the time, but instead encourage employees to think for themselves
- **Participate** in political action committees at state and national levels
- **Encourage** employees to participate in agenda items at State Boards of Nursing

Opportunities and Action Ideas for Promoting Autonomy and Freedom



The Components of Innovation

Transforming an organization from one that resists innovation to one that embraces it requires a variety of organizational components. This section discusses the following eleven components: employee feedback, role filling, role modeling, employee engagement, education, protected time, technological support, rewards, IDEO methodology, budgeting, and leadership.

Employee Feedback

Any effort to promote innovation should begin with gathering and reviewing employee feedback to assess current organizational characteristics. Asking employees at all organizational levels to complete frequent confidential surveys is a simple way to gather invaluable information that can be used in many productive ways. First, employee feedback can gauge employee connectedness, measure employee satisfaction, and motivate staff engagement. Such feedback also can indicate the quality of an organization's creativity, innovation, interpersonal

relations, benefits, strategic planning, leadership, teamwork, and staff development (Adelman, 2012). Finally, feedback can indicate organizational strengths, highlight employee concerns, and serve as a confidential forum for employees to provide honest positive or negative comments.

Opportunities Revealed by Employee Feedback

- ≥ Having low satisfaction scores on employee surveys
- ≥ Having a unit known as the worst on which to work
- ≥ Declining nursing program enrollment rates
- ≥ Having poor enrollment in a particular class section
- ≥ Having negative feedback from exit interviews/applicants who have declined enrollment

Action Ideas for Addressing Negative Feedback

- Deal** in documentable facts, not innuendo or rumor
- Review** the hiring process
- Review** the orientation process
- Perform** cost analysis of employee turnover/low enrollment
- Review** outcome metrics
- Seek** input from units with low new RN turnover rates
- Convene** a multi-disciplinary group of experts from unit to discuss concerns

Employee Feedback Opportunities and Action Ideas

Role Filling

Innovative organizations recognize their most valuable asset is human capital (employees). Leaders should strive to hire and retain employees whose characteristics align with and complement an organization's goals and vision. While every organization seeks employees that fit its culture, many make the mistake of continuing to hire the same

type of person for a role that could be considered outdated in an innovative work environment. The notion of filling a position with a body, so the organization does not lose the line is an antiqued way of managing human resource capital. To achieve employee-organization compatibility, innovative organizations should focus on hiring the right candidates, providing appropriate orientation and training, and continually reevaluating employees' roles and responsibilities.

In nursing, there is a tendency to view turnover as a metric describing a negative indicator. However, in an innovative organization, turnover is viewed as an opportunity to find employees with new ideas, skills, and approaches who contribute more effectively. Before filling a vacant position, organizations should ask and answer several questions.

Is this role required by regulations?

Is this line needed in the current department or would moving it to another department make more sense?

Should this vacancy serve as an opportunity to change the position's objectives and responsibilities?

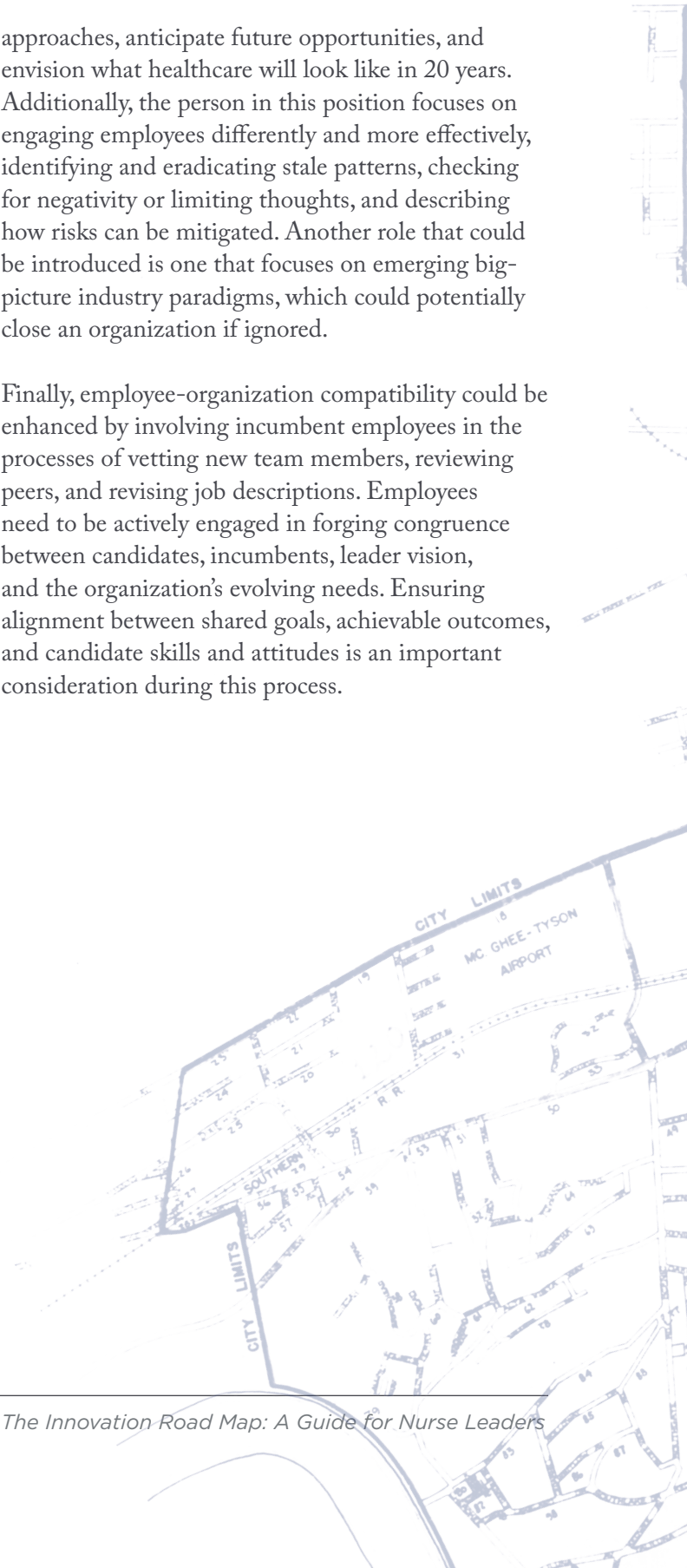
Should this position's responsibilities be kept intact or divided among other positions?

Should an incumbent's level be raised with funds from this line?

Job descriptions should reflect the organization's drive to innovate. For example, the clinical nurse job description in an innovative organization is dramatically different from one in stagnant organization. Traditional job descriptions often box employees into a restrictive set of job parameters, which can lead to the unhelpful employee response, "That's not my job." Conversely, innovative job descriptions seek candidates familiar with discovery, creativity, engagement, competency, active research, collective knowledge, and technology use. While innovative organizations have introduced new departments and roles, such as the Innovation Officer, healthcare organizations need to go farther. One such title is Chief Imagination Officer. This person examines the world outside the organization in an effort to translate abstract concepts into concrete

approaches, anticipate future opportunities, and envision what healthcare will look like in 20 years. Additionally, the person in this position focuses on engaging employees differently and more effectively, identifying and eradicating stale patterns, checking for negativity or limiting thoughts, and describing how risks can be mitigated. Another role that could be introduced is one that focuses on emerging big-picture industry paradigms, which could potentially close an organization if ignored.

Finally, employee-organization compatibility could be enhanced by involving incumbent employees in the processes of vetting new team members, reviewing peers, and revising job descriptions. Employees need to be actively engaged in forging congruence between candidates, incumbents, leader vision, and the organization's evolving needs. Ensuring alignment between shared goals, achievable outcomes, and candidate skills and attitudes is an important consideration during this process.





Opportunities for Role Filling

- ≥ Increasing turnover of new graduate RNs in last six months
- ≥ Having a position vacant of an employee who has worked in the same job for many years
- ≥ Recognizing that a new set of skills and expertise is required to complete a project
- ≥ Reviewing program goals and roles to meet the 2020 strategic plan

Action Ideas for Role Filling

- **Develop** an organizational design and strategies that reward agility and flexibility
- **Hire** employees who are able to quickly adapt to change
- **Develop** employee rules and procedures that support agility and flexibility
- **Anticipate** changes by performing a preemptive review of literature and work environment
- **Create** employee teams that are readily available to provide input for emergent crises
- **Encourage** shared governance, experiences, and storytelling
- **Avoid** developing habits of inertia or overconfidence

Opportunities and Action Ideas for Role Filling

Role Modeling

Creating an innovative organization requires leaders who can serve as mentors who teach, role model, and sustain the desired behaviors as well as provide recognition for innovative (disruptive) thinking. Because nurse leaders have the ability to foster new thinking styles, their behavior can play a critical role in their organization's transformation (Blakeney et al., 2009). Bear in mind that support for innovation tends to create even more innovation (Eisenbeiss, Boerner, & van Knippenberg, 2008); therefore, effective leaders who openly support innovation can inspire creative ideas among employees. Morris (2015) suggested that leaders should be "... consistently sharing [their] views on the importance of innovation, by constantly promoting the value of innovation, and especially by making business choices that favor innovation, even when those choices are difficult ones" (Morris 2015). Well-respected leaders who have experience promoting innovation should be able to disseminate information and celebrate successes in a way that resonates throughout the organization. Because finding leaders with the necessary knowledge and skills to promote innovation can be challenging, existing leaders may have to be educated. Organizations lacking internal experts who can provide innovation education may need to secure external consultants to do so.

Employee Engagement

Engaged employees drive innovation (Kelleher, 2016). Therefore, achieving employee engagement at every organizational level is vital to maintaining an innovative organizational culture. Similarly, French-Bravo and Crow (2015) stressed that employee buy-in to innovation and change is more important than ever in the success of any healthcare organization. Just as

engagement is vital to many nursing initiatives, such as Magnet or shared governance, it also can act as a lever for shifting an organization's focus away from stale methods and towards innovation, creative thinking, and collaboration. A Gallup poll found that, compared to only 9% of disengaged employees, 61% of engaged employees feed off the creativity of their colleagues (Krueger & Killham, 2006). Further, 50% of engaged employees believe their job brings out their most creative ideas, compared to only 3% of disengaged employees (Krueger & Killham, 2006). Leaders who already have an engaged staff are ahead of the game. For those who do not, their efforts to establish a culture of innovation should help improve employee engagement.

Another staff engagement concern is considering who will be the key players in the organization's innovation efforts. Just as super users are needed in healthcare IT and unit champions are needed for shared governance, early adopters and innovation champions are needed to lead the charge of adopting a culture of innovation. Leaders are encouraged to use their creative human resources by recruiting their most engaged units and superstar employees before designing an innovation program, as such early engagement will allow the staff members to hone their leadership skills as they gain experience in this arena (Voilleque, 2012). Superstar employees often fill multiple early adopter/super user roles. Leaders should use innovative thinking when choosing innovation champions. Keep in mind that the goal is not brainwashing employees into the new culture. Instead, leaders should focus on finding the natural talents of staff and allowing them to exercise their individual strengths (Bonfante, 2012). Additionally, leaders should consider recruiting the naturally divergent thinkers who, while struggling with the linear world of day-to-day nursing, are likely to excel as a creative-thinking innovation champions. Finally, new hires and new graduates should be enlisted

in innovation efforts. With little background or few preconceived notions about their environment, they are outstanding candidates for identifying areas of opportunity.

Research on shared governance indicates that encouraging discourse requires supporting direct care nurses' participation in engagement activities. Such support should ensure that the nurses work as a team, they are paid for their participation, and the activities do not disrupt patient care (Wilson, Speroni, Jones, & Daniel, 2014). Leaders should consider using similar ground rules when designing engagement activities to foster organizational creativity and innovation. While the content of the discourse may vary between innovation and shared governance activities, the concerns over collegiality, staffing, and reimbursement are similar. Keep in mind that employee engagement practices also can serve as innovation exercises that encourage the leadership team to listen to employees' thoughts on how to deliver patient care more effectively (Levy, 2015).

When considering engagement through message distribution, recognize that many outdated suggestion systems and communication models are no longer effective and do not facilitate collaboration (Kai Nexus, 2016). There are many new and creative ways to engage

staff, and hundreds of ideas are available through a simple internet search. At the very least, consider providing spaces inside and outside the building to host creative, brainstorming sessions that promote employee engagement. Use creative tools such as pads, markers, and toys, which can stimulate imagination (Wright, 2016).

Leaders could enlist staff's help to solve problems. They can do this by scheduling meetings where they reveal issues with complete transparency and give employees a chance to be part of the solution (Shour, 2015). Finally, leaders should consider creating an innovation think tank: a team of employees tasked with engaging in creative, innovative thinking that will transcend the usual way of doing business (Voilleque, 2012). The think tank approach can help reveal and develop superstar employees, build a "bench" of leadership talent, and foster a culture of innovation (Voilleque, 2012).

“There are many new and creative ways to engage staff, and hundreds of ideas are available through a simple internet search.”

Education

To promote innovation, organizations—including hospitals, healthcare centers, and universities—must develop and foster creative thinking and a high level of functioning among employees. To achieve this goal, staff often must be educated about concepts that may be new to them, such as innovation processes; brainstorming; Lean techniques (creating more customer value with fewer resources); design thinking; intellectual property, patents, and trademarks; testing and validating concepts or devices; and the attributes of a sustainable organizational culture.

Educating employees on intellectual property, patents, and trademarks is important to organizations that need to produce and protect their innovations. This type of education can be provided in short sessions, even via online learning modules. Repeating such education several times a year for several years can help an organization plant the seeds of innovation and encourage them to flourish.

As front-line caregivers, nurses are natural problem solvers who are always looking for better ways to care for patients. For example, nurses may find that the devices they are required to use were not designed with the end users in mind, and prove more effective with a simple tweak or “off-label” use. Knowing they may face disciplinary action for such workarounds, nurses may choose to keep them clandestine. When building a culture of innovation, it is important to ask staff to disclose any known workarounds and offer amnesty to those who created them. Once the device modifications or policy adjustments are known, they can be safely reviewed while mitigating risks to patients. The root cause analysis process, a systematic approach for identifying and responding to the root causes of problems or events (Washington State

Department of Enterprise Services, n.d.), is a good method to consider when evaluating potential device failures and off-label uses by staff.

Several companies help organizations involved in device or product innovation by offering learning labs where devices can be developed, prototyped, and tested. MakerNurse (n.d.) provides a variety of services: education about the basics of device innovation for front-line clinical staff, guidance for staff innovators who have concepts and ideas to test, and help for development of patient-care related products. The MakerNurse website states, “Nurses are fabricating solutions to challenges on the front lines of care every day” (MakerNurse, n.d.). Reserving innovation education for strong performers who demonstrate interest in this area, rather than offering it as mandatory instruction for all employees, could help limit the financial commitment while maximizing the potential for success in this area.



Protected Time

Time is one of an organization's most precious and costly resources. The largest anticipated financial impact for organizations promoting innovation is providing protected time for employees to engage in the innovation process. Giving staff time to collaborate on innovations does not have to be done in a costly manner, but rather can be built into current committee structures. Many organizations already have an infrastructure in place as part of shared governance/leadership initiatives, which encourages staff nurses to engage in meaningful committee work.

While creating a culture of innovation may not require creating a dedicated committee, it does require having processes in place to determine rules for piloting/testing, funding, disseminating, and celebrating innovations. This task could be addressed at a stand-alone committee, at existing committees, or as an ongoing agenda for several committees. Assigning innovation-related tasks to existing committees could help limit the financial impact of creating a culture of innovation.

Typically, time spent working on innovation projects during committee meetings will be considered “non-productive” time. Instead of increasing non-productive time within already tight budgets and schedules, leaders might consider small-scale pilot projects to test the effectiveness of adding innovation discussions to existing committees. To make the best

use of a precious resource (innovation time), leaders first should consider developing rules about who can participate in innovation development, rules that may be similar to how participation in shared governance or other organizational committees is determined. Participation in the innovation process could be seen as a reward for those interested in contributing to or advancing the organization.

“Participation in the innovation process could be seen as a reward for those interested in contributing to or advancing the organization.”

Technological Support

Some healthcare employees may not have computers or internet access at home. Providing such resources to these employees would allow them to research concepts, models, and ideas (through EBSCO, CINAHL, and other evidence-based online resources) that could spur their innovative thinking processes. Some organizations have computer labs that can serve this purpose. A computer lab need not be large: even one or two computers are helpful for staff who otherwise lack access to these resources. Leaders also might consider ensuring that staff have access to computers with online journal databases both before and after their shifts, whether they work days or nights. Access to a hands-on learning lab that offers the technology needed to develop their ideas into concepts also can be an invaluable resource for staff who want to contribute to workplace innovations.

Rewards

To create excellence in nursing innovation, an organization's leadership teams must assume the responsibility for producing effective support and reward systems that motivate nurses to become innovators (McSherry & Douglas, 2011; Eisenbeiss, 2008). Such rewards are common in other industries. For instance, pull mechanisms are results-based, monetary incentives rewarding successful development and implementation of innovations (The World Bank, 2012). These mechanisms are designed to surmount market failures, and persuade private and public sector innovators to develop products and services that they would not otherwise bring to the market (The World Bank, 2012). Innovation prizes also are used to promote result-based financial incentives that reward successful

commercial and social innovations, which address health and other humanitarian problems in a way that is financially sustainable and supports economic development (Dubé, 2014). Conversely, having inadequate innovation spending and weak reward programs will reduce innovation stimulus and shrink innovative capacity.

When designing reward programs, it is important to be flexible as rewards that are valued and motivate innovative behavior vary by individual and may not be financial in nature (Everett & Sitterding, 2013). In addition, organizational leaders should keep in mind that individual motivation is not static. What motivates people in one environment at one point in time will not be identical to what motivates them in another environment at another time (Glor, 2001). An example of a disruptive thought processes used to craft an innovative reward-based program is the Malawi's Ministry of Health's (MOH) work to support and retain nurse tutors (Buchan and McCaffery, 2007). Because the other incentives did not improve nurse tutor retention, the MOH instituted a salary supplement scheme with funding from the Interchurch Organization for Development Cooperation. While this unique incentive program has its strengths and weaknesses, it ultimately has been deemed successful in attracting and retaining nurse tutors (Buchan & McCaffery, 2007).

IDEO Methodology

One innovation method that has been used successfully in the healthcare arena, generally in medical device or process development, is credited to IDEO, a design and development consulting firm (Kelley, 2001; Blakeney et al., 2009). While the IDEO methodology has six phases (observation, ideation, rapid prototyping, user feedback, iteration, and implementation), its main tenet is empathy for a product's end users. Consequently, the IDEO method finds solutions mainly by observing user behavior, putting oneself in the user's situation, and trying to feel what the user feels (Lanoue, 2015). The IDEO methodology requires a very high level of engagement from everyone involved in the process. Kaiser Permanente used the IDEO method to create a process that strengthened communication during nursing shift changes. In less than an hour, an interdisciplinary team of more than 70 individuals (nurses, physicians, unit clerks, nurse assistants, environmental services, transporters, and managers) were able to generate 400 ideas on how to innovate shift change procedures (Blakeney, 2009). Within two hours, they were simulating a design for a new handheld device for nurses working in a procedural area. The manufacturer originally envisioned a tablet device. However, after observing that nursing staff members frequently calmed patients by holding their hands at the start of the procedure, they decided to use a single-handed, thumb-driven device (Lanoue, 2015). Most leaders would not include 70 interdisciplinary team members in a massive brainstorming exercise to address a practice problem. In addition, before establishing project specifications, most leaders would not first insist on considering how the specifications will affect nurses at the bedside. However, such strategies are the kind needed to boost innovation and staff engagement.

Budgeting

Creating an innovation-conducive environment requires an investment in education as well as time dedicated to brainstorming and creative problem solving. While these investments require financial resources, they need not strain an organization's budget. In fact, limiting innovation-promoting expenses is crucial to building a sustainable model that can be adjusted as organizations grow and their innovation successes increase. Controlling innovation expenses is particularly important due to the difficulty of demonstrating a return on investment (ROI) for creating a culture of innovation. It is more likely that creating a culture of innovation will not have a true ROI, but rather a cultural impact that is welcomed as a positive change in the work environment. Building such a culture may take years and has many non-financial advantages including increasing staff participation, encouraging staff feedback, boosting staff engagement, and promoting staff feelings of being personally invested in the success of their unit and organization. It also may be ineffective to use ROI to measure the value of an innovation that is not related directly to cost avoidance or reduction, such as those focused on improving care delivery or patient outcomes.

Leadership

Whether it is from a chief executive officer, chief nursing officer, chief clinical officer, chief operating officer, or research dean, support for an innovative culture starts at the top level and filters down through all levels of an organization. In fact, support for all the strategies already discussed begins with innovation-focused leadership. In a 2009 study of academic institutions, the organizational culture often was described as a barrier to innovation (Melnik & Davidson, 2009). It is likely the organizational culture also serves as an innovation barrier in non-academic organizations. One antidote to this barrier is effective leadership. Effective leaders can affect organizational culture in several ways. They can be visible and vocal in discussing, actively soliciting, and supporting creative (divergent) thinking and new ideas. They can role model innovative thinking through active participation on shared governance or other interdisciplinary committees. Publicly recognizing employees who develop and test new concepts or solutions allows leaders to encourage a spirit of innovation among the staff. Leaders also can foster a culture of innovation by providing financial and infrastructure support for staff to disseminate their work via articles in industry periodicals or presentations at industry conferences. This practice not only celebrates staff accomplishments, but also demonstrates an organization's commitment to innovation. Finally, leaders must be willing to direct their staff in taking calculated risks and trialing innovations at an acceptable pace.

Leaders provide vital support allowing employees to become flexible and agile in responding to the constantly changing global healthcare market. Because resisting change is a natural human inclination, the leader must set an example for employees by embracing it instead. Unfortunately, employees facing change often worry about what is ahead and begin to lose confidence

in their skills. For example, consider the varying levels of comfort with technology among the different generations of healthcare workers. Committed leaders know that employees who are confident in their abilities are more likely to embrace new systems or processes than those with lower confidence levels. In viewing the organization as a dynamic ecosystem, leaders must work to embrace the diversity, contextual differences, and personalities of its components (employees) in order to discern how they contribute to it. In other words, leaders must commit to embracing and celebrating the complexity of a dynamic organization, and providing employees with the knowledge, tools, and techniques they needed for the organization to evolve.

Many organizational leaders require training and coaching to enable them to model and support innovative thinking among their staff. Once trained, visibly sustaining this behavior over time will demonstrate to employees the value of innovative thinking and continue to help build a sustainable culture of innovation (Melnik & Davidson, 2009). Providing organizational recognition for leaders who demonstrate innovating thinking will expose team members to the process, show it being valued by the organization, and encourage them to engage in it to improve their segment of the organization and possibly receive recognition, as well. By repeating the innovative thinking process, leaders can build "muscle memory" for the practice, help it become a prominent organizational theme, and continue to inspire more innovative thinking.

While it may take some time for nurse leaders to examine the role these organizational components can play in promoting innovation in their organizations, they can dive right into the innovation process by learning about the benefits and strategies of team collaboration.

Team Collaboration: Innovation in Action

Producing innovations is not a solitary sport, but rather a team endeavor. The value of a team approach to innovation has become so pervasive that literature on the topic refers to an open innovation concept in which the greatest innovations are produced by teams of individuals from across markets and disciplines. In addition, the productive interactions of a diverse, committed, innovation-focused team serve as a microcosm for the larger innovation process that takes place in an organization. Put simply, the collaborations of such a team can be viewed as innovation in action.

Regardless of their backgrounds, all innovation team members should be enthusiastic risk takers who are courageous enough to follow the collaborative process through to the project's conclusion (Llopis, 2014). Researchers Anderson and West (1998) examined the attributes of teams that innovate and determined in their team innovation theory that team members must interact, have a common goal, and have tasks that are interdependent among the team members. An innovative leader curates a team much like an art collector builds an exhibit. A well-functioning team should be a cohesive unit moving in one direction

toward innovation. The parts of the team are not intended to run smoothly in one direction but challenge one another, build up one another, evolve, and see ideas through to delivery.

This section discusses five strategies that promote innovative team collaboration: forming teams with unlikely and diverse members; promoting productive interaction despite varying communication styles; using play to stimulate creativity; incorporating pauses and breaks; and developing skillsets to make the collaborative process more productive.

Opportunities to Promote Innovative Leadership

- ≥ Promoting a new team or group of employees
- ≥ Implementing new regulatory requirements
- ≥ Finding ways to make unpopular innovative ideas more palatable

Action Ideas to Promote Innovative Leadership

- Define** and demonstrate leaders' commitment to their teams and the organization
- Mobilize** supports or resources to help achieve innovation goals
- Share** failures and mistakes and what was learned from them with the team
- Challenge** all perspectives, especially ones that are particularly ingrained
- Keep** listening to employees as they usually have the answer
- Refrain** from participating in gossip, but still listen for the message

Opportunities and Action Ideas to Promote Innovative Leadership

Unlikely and Diverse Team Members

To create something new and innovative requires thinking and acting in new ways, which is most easily accomplished by working with unlikely partners, a practice that results in a team made up of diverse members. Kelley and Littman (2005) asserted that collaboration to promote innovation occurs by combining likely and unlikely team members. Therefore, it is important to consider including individuals from different disciplines on innovation teams.

One might expect a healthcare innovation team to include healthcare professionals such as pharmacists, physicians, nurses, dietitians, and respiratory therapists. In contrast, consider how a team of healthcare collaborators that included statisticians, engineers, software developers, and business leaders might function differently. While the former team may produce a solution, it likely is not outside the norm or has already been tried. The latter team could develop a solution that brings together the assets and lessons of industries unfamiliar to most healthcare staff. Additionally, team members from different disciplines accomplish more and move beyond the key solution through integrated data, multiple perspectives, and concepts from multiple disciplines (Trehwella, 2009).

Having diverse team members leads to the conflict that must occur for the group to progress. DeGraff (2014) describes this phenomenon as constructive conflict and positive tension. In essence, including team members who do not think alike creates the friction that produces innovative solutions. Although the makeup of the team can be as unpredictable as the solutions it devises, every innovative team focuses on the future and how the solution will navigate the

emerging technologies that influence every aspect of business and industry (Hemmer, 2015). The innovative team leader must manage the creative conflict. Several techniques can be used to create an environment in which opposing ideas lead to creative innovation. Team members who share the experience from beginning to end are fully engaged in the process and therefore are more apt to work through conflicts. Only a team who excels in communication can engage in creative conflict resolution.

Productive Interaction

Just as each team member is unique, so is each member's communication style. Some individuals may lead discussions by sharing their ideas while others who are less expressive may first observe the interactions and then refine their ideas before revealing them. A member not sharing ideas does not indicate that he or she does not have them. Leaders can promote productive interaction and cohesiveness among team members by having them engage in team activities. For example, allowing team members to begin a meeting by chatting about activities and hobbies unrelated to work can help them learn about each other and set the stage for open dialogue. Teams that share about themselves—allowing others to learn about their personality similarities, differences, nuances, and communication style—will bond rather than breakdown. Once the team is cohesive, let the debates begin! Successful ideas are born only through open discourse where bouncing around ideas that build on one another is not only allowed, but also encouraged. Innovative teams must be encouraged to hash out ideas and analyze outcomes until consensus is accomplished (West, 2012).

Play

One of the most effective yet overlooked strategies for building innovative collaborative teams is playtime. “Necessity may be the mother of invention, but play is certainly the father” (von Oech, 2008, pg. 108). While creativity and innovation cannot be forced (Springub, 2012), play promotes an easygoing atmosphere where ideas can flow in a non-rushed, lighthearted environment. Playing and being creative ignores rules, practicality, and the idea of being wrong. It is through play and creativity that innovative ideas are born. In fact, enthusiasm about play begets inspiration. Those inspired to solve a problem, whether the problem is known or yet unrealized, are apt to tap into their creative minds and energize others to do the same (von Oech, 2008). Play in a collaborative team may take many forms. It could include icebreakers, jokes, and brainteasers. It also could involve adopting rules that prohibit negative words or naysaying, which limit the creative process. Such rules could prevent team members from reporting all the reasons an idea or solution would not work, which is neither helpful nor collaborative. Alternatively, valid and realistic constraints can serve as boundaries that help direct solutions. For example, because time and funding are common problem-solving constraints, creating realistic boundaries—such as a project timeframe and budget—can help refine the team’s task while still allowing creativity.



Pauses and Breaks

One of the most common errors in thinking is approaching a problem by repeating the same steps while expecting different results each time. This error also happens when team members work together. To isolate this phenomenon, often it is necessary to pause and take a break. While humans naturally do this after becoming frustrated with a task, the practice does not carry over to teams. Like individuals, teams also need pauses and breaks to interrupt faulty thinking and logic. The benefit of pauses and breaks in a team environment is twofold: the team has more opportunity to grow relationships by engaging on personal levels, and members can disrupt the default thinking process (logical sequencing) that prevents the team from exploring alternative solutions through imagination. Promoting imagination and creativity through play, breaks, and pauses can transform knowledge (or what is known) into new ideas (Seelig, 2012).

Skillset Development

All members of a team must have a purposeful role. This is not to say that those without a distinct role should be dismissed. Rather, each member should be assigned a unique role, research it, and become the resident expert on that topic for the team. This requires innovative team leaders to commit the resources necessary to help develop team members. The team must allow persons to develop their skillsets instead of filling in for other members. In essence, the innovation team leader must allow each member to develop within his or her role, while providing feedback and kudos during this process. Learning skillsets may come from colleagues, formal programs, researching the role, or leaders. Without role delineation and purposeful integration, team

members become disengaged, feel devalued, and lose interest and enthusiasm in the innovation.

By viewing every interaction—whether with a higher-up, a peer, or a direct report—as potential team collaboration, nurse leaders can use these strategies and serve as a catalyst for innovation wherever they go.

“Like individuals, teams also need pauses and breaks to interrupt faulty thinking and logic.”

Opportunities

Initiate a playful, engaging environment with icebreakers, jokes, and short mind games

<https://www.wrike.com/blog/ultimate-guide-team-building-activities/>

<http://wheniwork.com/blog/team-building-games/>

<https://www.mindtools.com/pages/article/virtual-ice-breakers.htm>

<http://icebreakerideas.com/icebreakers-for-team-staff-meetings/>

<http://www.drawtoast.com/>

Provide hand fidgets (small hand toys to reduce nervous, impatient movements)

<http://www.officeplayground.com/fidget-toys-c102.html>

https://www.fatbraintoy.com/toys/toy_categories/office_desk_toys/poseable_desk_toys_fidget_toys/

<https://www.therapyshoppe.com/category/1690-desktop-desk-office-toys-gadgets-fidgets-sensory-stress-balls>

http://sensoryuniversity.com/FIDGET-CITY_c48.htm

Spend time as a team engaging in non-work related activities

Participate in run/walk events for non-profit organizations

Perform volunteer work for local organizations

Enjoy lunches together without talk of work

Hold competitions and tournaments unrelated to the project

Host a corn hole tournament

Hold an office door decoration competition

Present an Egg Drop or LegoMan competition (<http://vorkspace.com/blog/index.php/13-top-team-building-activities>)

Introduce balloon pop games

Host informal team sports tournaments (kickball, tennis, soccer, flag football, basketball, etc.)

Table 5. Opportunities and Action Ideas for Role Filling

CONCLUSION

The Institute for Healthcare Improvement (IHI) established the Triple Aim Framework based on the belief that new designs must pursue three dimensions simultaneously: improving the patient care experience (including quality and satisfaction); improving the health of populations; and reducing per capita healthcare costs (IHI, n.d.). In the current U.S. healthcare system, dramatic changes—driven by innovation—are required to produce innovations that address the Triple Aim Framework. Building a culture of innovation is an intentional process that involves providing “practical support of the attempts to introduce new and improved ways of doing things” (West, 1990, p. 315). Healthcare leaders in general and nurse leaders and faculty in particular must be willing to do this by engaging in novel thinking that will disrupt current philosophies and rules governing healthcare reimbursement, access, delivery systems, and nursing education.

The writers of this guide designed it to help leaders become familiar with the characteristics and components of innovation. It is hoped this knowledge will equip them change their own behavior, introduce the concepts in their organization, and serve as

a leader to help map out the complex task of instituting a culture of innovation. These leaders can take the first step by adopting the innovation characteristics of divergent thinking, risk taking, failure tolerance, agility/flexibility, and autonomy/freedom in themselves, and then fostering them in others. Next, they can examine the organizational components of innovation (employee feedback, role filling, role modeling, employee engagement, education, protected time, technological support, rewards, IDEO methodology, budgeting, and leadership) to determine how each can be tailored to their organization’s unique needs. Finally, by using innovative team collaboration techniques (unlikely and diverse team members, productive interaction, play, pauses and breaks, and skillset development) nurse leaders can start participating in and promoting the innovation process at the next meeting they attend.



CONCLUSION

The Innovation Road Map: A Guide for Nurse Leaders

References

- Adelman, K. (2012). Promoting employee voice and upward communication in healthcare: The CEO's influence. *Journal of Healthcare Management*, 57(2), 133.
- Anderson, N. R., & West, M. A. (1998). Measuring climate for work group innovation: Development and validation of the team climate inventory. *Journal of Organizational Behavior*, 19(3), 235–258. doi:10.1002/(SICI)1099-1379(199805)19:3<235::AID-JOB837>3.0.CO;2-C
- Blakeney, B., Carleton, B. F., McCarthy, C., & Coakley, E. (2009). Unlocking the power of innovation. *Online Journal of Issues in Nursing*, 14(2), manuscript 1. Retrieved from <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol142009/No2May09/Innovation.html>
- Bonfante, L. (2012). Innovation and Engagement: It's all about culture. Retrieved from <http://www.cioinsight.com/it-management/expert-voices/innovation-and-engagement-its-all-about-culture>
- Buchan, J., & McCaffery, J. (2007). Health workforce innovations: A synthesis of four promising practices. Capacity Project knowledge sharing. Washington, D.C.: USAID.
- DeGraff, J. (2014). How to lead innovation like superheroes: Knowing when your strength becomes a weakness. Retrieved from <http://www.inc.com/jeff-degraff/how-to-lead-innovation-like-superheroes-knowing-when-your-strength-becomes-a-wea.html>
- Dubé, L., Jha, S., Faber, A., Struben, J., London, T., Mohapatra, A.,... McDermott, J. (2014). Convergent innovation for sustainable economic growth and affordable universal health care: Innovating the way we innovate. *Annals of the New York Academy of Sciences*, 1331(1), 119–141. doi:10.1111/nyas.12548
- Economy, P. (2014). The 5 things you must give employees. Retrieved from <http://www.inc.com/peter-economy/the-5-things-you-must-give-employees.html>
- Eisenbeiss, S. A., van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Integrating Team Climate Principles*, 93(6), 1438–1446. doi:10.1037/a0012716

- Everett, L. Q., & Sitterding, M. C. (2013). Building a culture of innovation by maximizing the role of the RN. *Nursing Administration Quarterly*, 37(3), 194–202. doi:10.1097/NAQ.0b013e318295ed7f
- Fagerberg, J. (2004). Innovation: A guide to the Literature. In J. Fagerberg, D. Mowery, & R. Nelson (Eds.), *The Oxford Handbook of Innovation* (pp. 1–26). Oxford: Oxford University Press.
- French-Bravo, M., & Crow, G. (2015). Shared governance: The role of buy-in in bringing about change. *Online Journal of Issues in Nursing*, 20(2), 8.
- Glor, E. D. (2001). Innovation patterns. Retrieved from <http://www.innovation.cc/peer-reviewed/innovation-patterns.htm>
- Guilford, J. P. (1957). Creative abilities in the arts. *Psychological Review*, 64(2), 110–118. doi:10.1037/h0048280
- Guilford, J. (1967). *The nature of human intelligence*. McGraw-Hill Education.
- Hemmer, M. (2015). Want to lead your industry? Partner with an innovation agency. Retrieved from <http://blog.onefire.com/want-to-lead-your-industry-partner-with-an-innovation-agency>
- Hess, E. (2012). Creating an innovation culture: Accepting failure is necessary. Retrieved from <http://www.forbes.com/sites/darden/2012/06/20/creating-an-innovation-culture-accepting-failure-is-necessary/#5c707374e19f>
- International Council of Nurses (ICN). (2009). *Delivering quality, serving communities: Nurses leading care innovations*. Retrieved from <http://www.icn.ch/images/stories/documents/publications/ind/indkit2009.pdf>
- Jaramillo, F., Mulki, J. P., & Solomon, P. (2006). The role of ethical climate on salesperson's role stress, job attitudes, turnover intention, and job performance. *Journal of Personal Selling & Sales Management*, 26(3), 271–282.
- Kai Nexus. (2016). Employee engagement in a culture of innovation and improvement. Retrieved from <http://www.kainexus.com/employee-engagement>
- Kelleher, B. (2016). Employee engagement and innovation. Retrieved from <http://www.dummies.com/how-to/content/employee-engagement-and-innovation.html>
- Kelley, T. (2001). *The art of innovation*. New York, NY: Doubleday.
- Kelley, T., & Littman, J. (2005). *The collaborator*. In *Ten faces of innovation*. New York, NY: Doubleday.

Krueger, J., & Killham, E. (2006). Who's driving innovation at your company? Retrieved from <http://www.gallup.com/businessjournal/24472/whos-driving-innovation-your-company.aspx>

Lanoue, S. (2015). IDEO's 6 step human-centered design process: How to make things people want. Retrieved from <https://www.usertesting.com/blog/2015/07/09/how-ideo-uses-customer-insights-to-design-innovative-products-users-love/>

Levy, S. (2015). Want to create a culture of innovation? Start with employee engagement. Retrieved from <https://www.linkedin.com/pulse/want-create-culture-innovation-start-employee-engagement-suzy-levy>

Litwin, G. H., & Stringer, R. A. (1968). Motivation and organizational climate. Harvard Business School.

Llopis, G. (2014). Five ways leaders enable innovation in their teams. Retrieved from <http://www.forbes.com/sites/glennllopis/2014/04/07/5-ways-leaders-enable-innovation-in-their-teams/2/#7ce9f7cf658a>

MakerNurse. (n.d.) Retrieved from <http://makernurse.com/>

McSherry, R., & Douglas, M. (2011). Innovation in nursing practice: A means to tackling the global challenges facing nurses, midwives and nurse leaders and managers in the future. *Journal of Nursing Management*, 19(2), 165–169. doi:10.1111/j.1365-2834.2011.01241.x

Melnyk, B. M., & Davidson, S. (2009). Creating a culture of innovation in nursing education through shared vision, leadership, interdisciplinary partnerships, and positive deviance. *Nursing Administration Quarterly*, 33(4), 288–295. doi:10.1097/NAQ.0b013e3181b9dcf8

Morris, L. (2015). Full team engagement in the innovation culture. Retrieved from <http://www.innovationmanagement.se/2015/05/21/full-team-engagement-in-the-innovation-culture/>

Seelig, T. (2012). *Ingenius: A crash course on creativity*. New York, NY: HarperCollins

Shour, E. (2015). 59 employee engagement ideas you need to know about. Retrieved from <http://www.snacknation.com/blog/employee-engagement-ideas/>

Siegel, S. M., & Kaemmerer, W. F. (1978). Measuring the perceived support for innovation in organizations.

The Journal of Applied Psychology, 63(5), 553–562. doi:10.1037/0021-9010.63.5.553

Springub, C. (2012). Six ideas to promote innovation in your workplace. Retrieved from <http://www.forbes.com/sites/theyec/2012/12/31/6-ideas-to-promote-innovation-in-your-workplace-this-year/2/#5e1ce7563521>

The Advisory Committee on Measuring innovation in the 21st Century Economy. (2008). Innovation measurement: Tracking the state of innovation in the American economy. Retrieved from http://www.esa.doc.gov/sites/default/files/innovation_measurement_01-08.pdf

The World Bank. (2012). Agricultural Pull Mechanism (AGPM) Initiative. Retrieved from http://siteresources.worldbank.org/CFPEXT/Resources/AGPM_OVERVIEW_April.pdf

Trewhella, J. (2009). Multidisciplinary research—an essential driver for innovation. Retrieved from <https://globalhighered.wordpress.com/2009/06/26/multidisciplinary-research-an-essential-driver-for-innovation/>

Washington State Department of Enterprise Services. (n.d.). Root cause analysis. Retrieved from <http://www.des.wa.gov/services/Risk/AboutRM/enterpriseRiskManagement/Pages/rootCauseAnalysis.aspx>

West, H. (2012). Three rules for innovation teams. Retrieved from <https://hbr.org/2012/03/making-innovation-teams-even-m>

West, M. A. (1990). The social psychology of innovation in groups. In M. A. West & J. L. Farr (Eds.), *Innovation and creativity at work: Psychological and organizational strategies* (pp. 4–36). Chichester: Wiley.

Weston, M. J. (2010). Strategies for enhancing autonomy and control over nursing Practice. *Online Journal of Issues in Nursing*, 15(1).

Wilson, J., Speroni, K. G., Jones, R. A., & Daniel, M. G. (2014). Exploring how nurses and managers perceive shared governance. *Nursing*, 44(7), 19–22. doi:10.1097/01.NURSE.0000450791.18473.52

Wright, T. (2016). Tips to bring creativity to employee engagement. Retrieved from <http://www.talentculture.com/tips-to-bring-creativity-to-employee-engagement/>

Voilleque, C. (2012). Starting your innovation think tank. Retrieved from <http://areyouevolutionary.com/blog/starting-your-innovation-think-tank/>

Von Oech, R. (2008). *A whack on the side of the head*. New York, NY: Business Plus.

Zuckerman, A. M. (2012). Innovation in healthcare leadership: The time is now. *Becker's Hospital Review: Business & Legal Issues for Health System Leadership*. Retrieved from <http://www.beckershospitalreview.com/hospital-management-administration/innovation-in-healthcare-leadership-the-time-is-now.html>