Making the Case for Evidence-Based Leadership and Innovation

Bernadette Mazurek Melnyk and Tim Raderstorf

"Innovation distinguishes between a leader and a follower."
—Steve Jobs, Apple Co-founder

LEARNING OBJECTIVES

- Define *evidence-based decision-making*, *evidence-based practice*, and *evidence-based leadership*.
- Discuss outcomes that result when leaders implement evidence-based decision-making and create a culture that supports evidence-based practice.
- Discuss innovation, the evidence on its impact, and how to create innovation cultures in healthcare systems.
- Describe various leadership styles and the evidence on their association with organizational outcomes.
- Identify the steps that leaders need to take when having crucial conversations.

INTRODUCTION

As optimists, it is really hard to say this; after all, every contributor in this book believes that healthcare leaders are doing the best they can. However, the evidence is just too overwhelming; we cannot ignore it any more. *It is time to sound the alarm. Our healthcare system is broken.* Here is the good news: **with every broken system comes boundless opportunities**—those that will be capitalized on by the most creative leaders, which include those with the ability to understand the complexity of healthcare; those who empathize with patients, providers, and payers; and those who innovate solutions to the most pressing health and healthcare problems. This book presents evidence-based approaches to becoming that type of leader. Through the principles of innovation and entrepreneurship, you will gain insights into how you can become

a leader who can help your organization to understand the task at hand, develop a comprehensive strategic approach to tackling the mountain of issues that impact your system, and address those issues head-on in order to facilitate the best outcomes.

UNDERSTANDING THE PROBLEM

Before diving deeply into the content of this text, you must first develop an understanding of our dire (not an exaggeration) need for improved evidence-based innovative leadership, more rapid innovation, and the need for healthcare professionals to become more involved in companies that are designing the future of healthcare. Some statistics and key points will be frequently repeated throughout this book. Although this may seem redundant, the frequency and repetition is meant to drive important points home. Our healthcare system is broken, and, by reading this book, you are being asked to commit yourself to helping this cause by developing solutions to resolve the inherent problems that are threatening healthcare quality, safety, and patient outcomes as well as driving an increase in costs.

Preventable Medical Errors: The Third Leading Cause of Death in America

Estimates indicate that between 250,000 and 400,000 people die each year in the United States owing to preventable healthcare errors (James, 2013; Makary & Daniel, 2016). On the high end of these estimates, this would be the same number of lives lost if eight (yes, eight) fully loaded 737 jet airliners crashed and killed *every passenger on board every day*, in the United States alone. This makes preventable medical errors the third leading cause of death in this country (Makary & Daniel, 2016). Would you ever get on an airplane if even one 737 crashed just once a month or if airplane accidents led to the 10th largest cause of death in the United States? This statistic is easy to dismiss or ignore, but healthcare leaders must keep this information as ammunition for implementing evidence-based practice, driving innovation, and encouraging clinicians to engage in solving this massive problem.

Clinician Burnout, Depression, and Compassion Fatigue

Over 50% of clinicians in the United States are currently affected by burnout, depression, and compassion fatigue (Dzau, Kirch & Nasca, 2018; McHugh, Kutney-Lee, Cimiotti, Sloane & Aiken, 2011; Melnyk et al., 2018; Shanafelt et al., 2015); as a result, the quality and safety of healthcare are being compromised as health professionals who are experiencing poor mental and physical health are at greater risk of making medical errors. In a recent national study, depression was the leading cause of medical errors in nurses (Melnik et al., 2018). Clinicians typically invest in taking great care of their patients, but do not tend to prioritize their own self-care. Burnout also is very costly to the American healthcare system as turnover rates soar. Nursing turnover costs an organization nearly \$90,000 per vacancy (Kurnat-Thoma, Ganger, Peterson, & Channell, 2017), and estimates of the cost of replacing a physician are as high as \$1,000,000 (Shanafelt, Goh, & Sinsky, 2017). As a result of this alarming public health epidemic, the National Academy of Medicine launched the Action Collaborative on Clinician Well-Being and Resilience (see nam.edu/initiatives/clinician-resilience-and-well-being), a national initiative to

raise awareness of the problem and generate evidence-based solutions to combat it. In order to improve this situation, healthcare leaders must invest in a system that prioritizes clinician well-being and provides a culture and resources that support it.

Gross Domestic Product Versus Outcomes

Gross domestic product (GDP) is an economics term that represents the total value of the goods and services of a country produced over a specific time (Kramer, 2018). It is commonly viewed as one of the most important indicators of the health of a nation's economy. In the United States, health spending accounted for 17.9% of the GDP in 2017. To provide some perspective, in 1940, health spending accounted for 4.5% of the nation's GDP. In 1990, health spending reached 12.2% of the GDP (Centers for Medicare & Medicaid Services [CMS], 2018). Is spending a large portion of GDP on healthcare such a bad thing? Isn't health, as is said, our greatest wealth? The issue lies in the fact that Americans are not seeing a comparable return on investment for this astronomically high level of health spending. The United States ranks highest in healthcare spending (Organisation for Economic Co-operation and Development [OECD], 2018) but falls to an abysmal ranking of 34 in life expectancy outcomes (World Health Organization [WHO], 2018). Leaders need to create more value (i.e., innovate) for care and challenge the status quo to develop new methods that improve outcomes while simultaneously reducing cost.

The Opioid and Mental Health Crises

Almost as alarming as the number of deaths per day related to preventable medical errors is the fact that over 115 people die every day in the United States owing to an opioid overdose (Centers for Disease Control and Prevention/National Center for Health Statistics, 2017). More alarming is the rate at which opioid overdoses are increasing; the Midwest region has seen a 70% increase in opioid overdoses from July 2016 through September 2017 (Vivolo-Kantor et al., 2017). Multiple innovations are being piloted across the country, and healthcare leaders are reminded on a daily basis just how challenging it can be to change human behaviors and the mental health of the population.

Mental health problems are a contributing factor to the addiction epidemic and are in urgent need of solutions. Currently, one in four to five children, adolescents, and adults has a mental health problem, such as depression and anxiety (as common as broken bones), yet the majority do not receive treatment (see www.nimh.nih.gov/health/statistics/mental-illness.shtml for current data; Wainberg et al., 2017). Untreated depression is now the second leading cause of death among 10- to 34-year-olds (www.nimh.nih.gov/health/statistics/suicide.shtml). Although the United States Preventive Services Task Force recommends depression screening in primary care for both adolescents and adults (www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/depression-in-children-and-adolescents-screening), it is often not performed because of lack of reimbursement for screening or because there are inadequate systems in place to deal with mental health problems once diagnosed. Further, even though there is a strong body of evidence to support cognitive behavioral therapy (CBT) as the gold standard evidence-based treatment for depression and anxiety (Weershing et al., 2017), few individuals receive it because of inadequate numbers of mental health providers, especially in rural and underserved areas. More

innovative solutions, such as the evidence-based Creating Opportunities for Personal Empowerment (COPE) program, a manualized seven-session CBT-based program that can be delivered by nonmental health practitioners in primary care settings and schools, are needed. Multiple studies have found that COPE is effective in decreasing depression, anxiety, behavior problems, and overweight/obesity and in improving self-esteem and academic performance in children, teens, and young adults (Hoying & Melnyk, 2016; Hoying, Melnyk, & Arcoleo, 2016; Kozlowski, Lusk, & Melnyk, 2015; Lusk & Melnyk, 2018; Melnyk et al., 2013, 2015; Melnyk, Kelly, & Lusk, 2014). Healthcare providers in 44 states who are using this program with depressed and anxious children and teens are receiving reimbursement for it in primary care settings. More information about the research-based COPE program is described in Chapter 24, Key Strategies for Moving From Research to Commercialization With Real-World Success Stories.

The Chronic Disease Epidemic

Although cardiovascular disease remains the leading killer of Americans, considering all causes of death and disease in the United States, behaviors are truly the number one killer owing to physical inactivity, unhealthy eating, smoking, and alcohol/drug abuse. One out of two Americans has a chronic condition, such as high blood pressure, diabetes, and heart disease. Yet, 80% of chronic disease is totally preventable with the adoption of healthy lifestyle behaviors, such as engaging in 30 minutes of physical activity 5 days a week, eating at least five fruits and vegetables per day, not smoking, and limiting alcohol intake (Ford, Zhao, Tsai, & Li, 2011). In addition, 7 hours of sleep per night and the practice of regular stress reduction (e.g., mindfulness, cognitive behavioral skills-building) could nearly obliterate chronic disease.

However, behavior change is not easy. Most people do not change their behaviors unless a crisis occurs or their emotions are raised. Obesity, which is largely preventable with the adoption of healthy lifestyle behaviors, will soon surpass smoking as the leading cause of preventable death and disease in the United States. Although people should be counseled in regard to healthy lifestyle behaviors at every healthcare visit, we still live in a sick care healthcare system. We desperately need to turn sick care into well care, even for those patients at the end of life; every person should be helped to achieve his or her optimal state of well-being.

Need for Emphasis on “So What” Outcomes

“So what” outcomes are factors that are highly significant to the current healthcare system, including rehospitalizations and complications that are currently not reimbursed (e.g., falls, pressure ulcers), as well as costs (Melnik & Morrison-Beedy, 2019). Researchers do not often include these types of “so what” outcomes in their studies. As a result, they often have much difficulty scaling their evidence-based interventions into real-world clinical settings. When designing studies, it is critical that “so what” outcomes are incorporated into the evaluation plan so that if an intervention is found to positively impact outcomes through research, healthcare systems will be more likely to adopt that intervention and implement it in practice.

The Social Determinants of Health

Integrating the **social determinants of health** into the care of all people has become a major global priority. According to the WHO, the social determinants of health are the conditions in

which people are born, grow, live, work, and age (e.g., housing, schools, employment, food); in other words, they are factors aside from healthcare (Braveman & Gottlieb, 2014). The social determinants of health are largely responsible for health inequities, which are the unfair and avoidable differences in health status seen within and between countries. However, the manner in which health systems are designed, operate, and financed also act as a powerful determinant of health. Changes in healthcare, including value-based reimbursement, increased health system and provider accountability, and the addition of millions of Americans to health insurance rosters, have created incentives and demand social determinants of health are addressed (Robert Wood Johnson Foundation, 2016).

Small Percentage of Healthcare Start-Ups Being Founded by Clinicians

As healthcare tends to move at a much less rapid pace than other industries, it can be very challenging to keep up with new technologies that could be applied in healthcare settings. Health professionals tend to maintain their focus on the challenges they face on a daily basis, placing little emphasis on strategizing about the future. If healthcare leaders are not involved in the creation of the new technologies, products, processes, and services that are being developed, then these leaders are essentially allowing nonhealthcare professions to determine the future of healthcare. Conversely, if companies looking to develop a new technology or service for healthcare do not involve healthcare professionals in the creation of the new technology or service, then they are less likely to develop something that can be readily adopted in practice. This proverbial double-edged sword showcases the need for clinicians and healthcare professionals to become more involved with start-ups and for companies implementing new healthcare technologies and services to ensure that clinicians provide meaningful input into the future of healthcare.

EVIDENCE-BASED DECISION-MAKING AND PRACTICE: A MUST FOR LEADERS

With so many problems to address, it can be intimidating and challenging to know where to begin. The innovative leader knows it's always best to start with the evidence. Findings from a strong body of research indicate that healthcare quality, population health outcomes, costs, and clinician engagement and satisfaction, otherwise known as the *Quadruple Aim* in healthcare (Bodenheimer & Sinsky, 2014), are improved when decisions and care are based on solid evidence versus care that is steeped in tradition (e.g., “that is the way we do it here; that is the way the outdated policy says it needs to be done”). Further, clinicians are empowered and more satisfied when they engage in evidence-based practice (EBP) and work in a culture that supports it, ultimately leading to higher job satisfaction and less turnover (Kim et al., 2016, 2017; Melnyk, Fineout-Overholt, Giggelman, & Choy, 2017). Despite all of its positive impactful outcomes, *EBP*, which was initially defined in medicine as the conscientious use of current best evidence to make decisions about patient care (i.e., **evidence-based decision-making**; Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000), is not consistently implemented by clinicians and leaders in healthcare systems across the nation and globe. Since the earlier definition appeared, EBP

has been broadened to include a lifelong problem-solving approach to the way that healthcare is delivered, one that integrates the best evidence from high-quality studies with a clinician's expertise and a patient's preferences and values (Melnik & Fineout-Overholt, 2019). Within the scope of a clinician's expertise are (a) clinical judgment; (b) internal evidence from the patient's history and physical exam, and data gathered from EBP, evidence-based quality improvement, or outcomes management projects; and (c) an evaluation of available resources required to deliver the best practices (Melnik & Fineout-Overholt, 2019). **Evidence-based leadership** is a problem-solving approach to leading and influencing organizations or groups to achieve a common goal that integrates the conscientious use of best evidence with leadership expertise and stakeholders' preferences and values (Gallagher-Ford, Buck, & Melnik, 2019).

It typically takes a number of years or even decades to translate findings from research into real-world clinical practice settings to improve outcomes. A recent national study of 276 chief nurses from across the United States found that their implementation of EBP was low, even though their beliefs about the value of EBP were high (Melnik et al., 2016). Although these chief nurses named healthcare quality and safety as their first and second priorities, respectively, EBP fell to the bottom of their priority list. The majority of the chief nurses also invested a very small percentage of their budgets in ensuring their clinicians were skilled in EBP, indicating that they did not recognize evidence-based care as a potent direct pathway to quality and safety. As a result, a large number of their hospitals did not meet benchmark data on the CMS's Core Measures (e.g., falls, pressure ulcers) and the National Database of Nursing Quality (NDNQI) Indicators.

Innovation typically involves the creation of a solution to something when a solution or evidence does not exist (Ackerman, Porter-O'Grady, Malloch, & Melnik, 2018). In this book, *innovation* is defined as the process of implementing new products, services, and/or solutions that *create new value*. However, for an innovation to "stick" or sustain, evidence must be generated that supports its value or outcomes. Studies have found that clinicians who are involved in innovations that generate solutions to healthcare problems are more satisfied in their roles (Warmelink et al., 2015).

Unfortunately, EBP is not the standard of care in healthcare systems throughout the United States and globally because of several barriers that have persisted over recent decades, including (a) inadequate knowledge of and skills in EBP by clinicians; (b) lack of cultures and environments that support EBP; (c) misperceptions that EBP takes too much time; (d) organizational politics and policies that are outdated; (e) limited resources and tools available for point of care providers, including budgetary investment in EBP by chief nurse executives; (f) resistance from colleagues, nurse managers, and leaders; (g) inadequate numbers of EBP mentors in healthcare systems; and (h) academic programs that continue to teach baccalaureate and master's students the rigorous process of how to conduct research instead of taking an evidence-based approach to care (Melnik & Fineout-Overholt, 2019; Melnik, Fineout-Overholt, Gallagher-Ford, & Kaplan, 2012; Melnik et al., 2016; Titler, 2009).

Given that evidence-based clinical decision-making leads to the highest quality of safe and cost-effective care, leaders must implement evidence-based clinical decisions, role model EBP, and provide the resources/support for the seven-step EBP process if evidence-based care is to be delivered consistently in their healthcare system.

The seven steps of EBP, as outlined by Melnyk and Fineout-Overholt (2019), adapted to a leader's role in implementing and supporting them, are outlined in the following text.

Step #0. Cultivate a Spirit of Inquiry Within an EBP Culture and Environment

Leaders must have an ongoing spirit of inquiry, continually asking questions about the current practices followed in their hospital or healthcare system, such as: Does using an evidence-based fall-prevention protocol reduce fall rates in older adults? Is mindfulness or cognitive behavioral skills-building better at reducing burnout and turnover rates in clinicians? Does early ambulation in the ICU lead to reduced episodes of ventilator-associated pneumonia? A continual spirit of inquiry will lead to a search for the best evidence to answer questions that will improve healthcare quality, safety, and outcomes.

Leaders must also cultivate this spirit of inquiry in clinicians and build an EBP culture and environment where they have easy access to EBP resources (computers, databases, librarians), opportunities for EBP education and skills-building, space for reading and reflective thinking, opportunities for interprofessional collaboration, consistent access to EBP mentors, time to read and critically appraise the literature, and autonomy to change practice based on best evidence when indicated (Melnik et al., 2017; Pryse, McDaniel, & Schafer, 2016; Spiva et al., 2017). EBP should be included in the organization's vision, mission, and goals, staff performance evaluations, and clinical ladders to set the expectation that all clinicians will meet the EBP competencies (see Chapter 8, *Achieving the Quadruple Aim in Healthcare With Evidence-Based Practice: A Necessary Leadership Strategy for Improving Quality, Safety, Patient Outcomes, and Cost Reductions*). When evidence-based clinical decision-making is the standard approach or norm for all decision-making, an EBP environment and culture are actualized (Gallagher-Ford et al., 2019).

Step #1. Ask the Burning Clinical Question in PICO(T) Format (Patient/population, Intervention/area of interest, Comparison, Outcome(s), Time)

To conduct a successful search of the literature in a time-efficient way, leaders must place their questions in the PICO(T) format to avoid countless hours or weeks of searching for best evidence. For example, reformatting the preceding clinical questions according to the following PICO(T) format will yield the quickest search for the best evidence.

1. In hospitalized older adults (P), how does using an evidence-based fall-prevention protocol (I) versus not using an evidence-based fall-prevention protocol (C) affect fall rates (O)?
2. In clinicians (P), how does mindfulness training (I) versus cognitive behavioral skills-building (C) affect burnout and turnover rates (O) 6 months after training (T)?
3. In adults in intensive care (P), how does early ambulation (I) versus delayed ambulation (C) affect rates of ventilator-associated pneumonia (O)?

Leaders can stimulate clinicians to ask PICO(T) questions through a variety of mechanisms, including the placement of PICO(T) boxes on units throughout a healthcare system and unit-unit contests that recognize clinicians for their spirit of inquiry. Meetings can also be started by asking clinicians for their latest burning PICO(T) questions.

CALL TO ACTION

Formulate three PICO(T) questions from issues that you see in your healthcare system.

Step #2. Search for and Collect the Most Relevant Best Evidence

Once a leader's clinical question is posed in the PICO(T) format, each of the key words in the PICO(T) question should be used to systematically search for the best evidence; this strategy is referred to as *key word searching*. For example, to gather the evidence needed to answer the intervention PICO(T) questions noted earlier, you would first search databases, such as the Cochrane Database of Systematic Reviews, MEDLINE, and the Cumulative Index of Nursing and Allied Health Literature (CINAHL), for systematic reviews and randomized controlled trials as they provide the strongest levels of evidence to guide practice decisions. However, the search should extend to include all evidence that answers the clinical question. Each key word or phrase from the second PICO(T) question noted earlier (e.g., clinicians, mindfulness-based training, cognitive behavioral skills-building, burnout, turnover) should be entered individually and searched. Searching controlled vocabulary that matches the key words is the next step in a systematic approach to searching. In the final step, each key word and the controlled vocabulary that was previously searched is combined, typically yielding a few studies that should answer the PICO(T) question. This systematic approach to searching for evidence usually yields a few studies to answer the PICO(T) question versus a less systematic approach that typically produces a large number of irrelevant studies.

A leader needs to ensure that his or her clinicians have the knowledge and infrastructure support to search for best evidence to answer their PICO(T) questions. Having access to a librarian, or better yet one on staff specifically assigned to assist with evidence searches, as well as having designated EBP mentors with expertise in evidence-based care, is key to assisting clinicians with the steps in the process (Melnik & Fineout-Overholt, 2019).

Step #3. Critically Appraise the Evidence

Leaders need critical appraisal skills to evaluate the evidence once the search is completed. As a first step, conduct a rapid critical appraisal (RCA) of each of the studies from the search to determine whether or not it is one of your “keeper studies” (i.e., those that indeed answer the clinical question; Melnik, Gallagher-Ford, & Fineout-Overholt, 2017). This process includes answering the following questions:

1. Are the results of the study valid (i.e., did the researchers use the best methods to conduct the study (**study validity**)? For example, assessment of a study's validity determines whether the methods used to conduct the study were rigorous.

2. What are the results (i.e., do the results matter, and can I get similar results in my practice; **study reliability**)?
3. Will the results help me in caring for my patients (e.g., is the treatment feasible to use with my patients; **study applicability**; Melnyk & Fineout-Overholt, 2019)?

RCA checklists can help evaluate the validity, reliability, and applicability of a study in a time-efficient way (see Melnyk and Fineout-Overholt [2019] for a variety of rapid critical appraisal checklists). After an RCA is completed on each study and it is found to be a keeper, it is included in the evaluation and synthesis of the body evidence to determine whether a practice change should be made.

Leaders must provide their clinicians with time and skills-building to learn the art of critical appraisal, evaluation, and synthesis. This step is often the most difficult for clinicians, and practice is absolutely necessary to learn these skills. Again, EBP mentors have this expertise and should be available to work with clinicians on this critical step in EBP.

Step #4. Integrate the Best Evidence With One's Clinical Expertise and Patient/Family Preferences

Once the body of evidence from the search is critically appraised, evaluated, and synthesized, it is integrated with a leader or clinician's expertise and the patient's preferences and values to decide whether a practice change should be made. Providing the patient with existing evidence and involving the patient in the decision regarding whether a certain intervention or treatment is performed is an important step in EBP. Patient decision support tools that provide evidence-based information in an understandable format should be used when they are available (Elwyn et al., 2015).

Leaders must provide a culture that empowers and supports clinicians through the process of making EBP changes. Clinicians should all be oriented to the process through which practice changes can be made. Bureaucratic systems that make it cumbersome to effect change based on best evidence will diminish enthusiasm for EBP and be disempowering for clinicians. Therefore, leaders must ensure that the process is workable in a timely fashion for clinicians and population health outcomes.

Step #5. Evaluate Outcomes of the Practice Decision or Change Based on Evidence

An *outcome* is the consequence of an intervention or treatment. For example, an outcome of providing evidence-based CBT is a decrease in depressive symptoms. Outcomes evaluation is absolutely critical to assess the impact of an EBP change on healthcare quality and patient outcomes. Consider and include "so what" hard outcomes that the current healthcare system considers important, such as complication rates, length of stay, rehospitalization rates, and costs, because hospitals are currently being reimbursed on the basis of their performance on these outcomes (Melnik & Morrison-Beedy, 2019).

In their national study of chief nursing executives, Melnyk et al. (2016) reported that over 50% of the executives reported that they were not sure how to measure outcomes of the care that was being delivered in their hospitals and healthcare systems. Outcomes management is a

critical skill for leaders to use to garner the evidence needed to demonstrate the positive impact and cost savings of their initiatives.

Step #6. Disseminate the Outcomes of the EBP Decision or Change

The outcomes of an EBP change should be disseminated so that findings can be scaled or spread to benefit other units or healthcare systems. Various mechanisms for disseminating evidence-based change projects—including institutional EBP rounds; poster and podium presentations at local, regional, and national conferences; and publications—can overcome barriers to spreading the results, such as silos even within the same healthcare organization. Leaders should allocate a percentage of their budgets for such dissemination efforts. Not only will staff feel appreciated for being supported in the effort to disseminate their terrific work, but also the organization will gain considerable visibility.

TABLE 1.1 Similarities and Differences in the Seven Steps of Evidence-Based Practice and Innovation-Based Practice

Evidence-Based Practice	Innovation-Based Practice
Step #0. Cultivate a spirit of inquiry within an EBP culture and environment.	Step #0. Cultivate a spirit of inquiry within an EBP culture and environment.
Step #1. Ask the burning clinical question in PICO(T) format.	Step #1. Ask the burning clinical question in PICO(T) format.
Step #2. Search for and collect the most relevant best evidence.	Step #2: Search for and collect the most relevant best evidence.
Step #3. Critically appraise the evidence.	Step #3. Critically appraise the evidence.
Step #4. Integrate the best evidence with one’s clinical expertise and patient or family preferences in making a practice decision or change.	Step #4. Innovate a solution, which could be an intervention, product, technology, or process, when high-quality evidence is lacking.
Step #5. Evaluate outcomes of the practice decision or change based on evidence.	Step #5. Conduct research to generate the efficacy or impact of the innovation on “so what” outcomes in order to increase its potential to scale and sustainability.
Step #6. Disseminate the outcomes of the EBP decision or change.	Step #6. Disseminate the findings of the study.
EBP, evidence-based practice. Source: Copyright 2019, Bernadette Mazurek Melnyk.	

CALL TO ACTION

Name two issues within your healthcare system for which innovation is necessary because evidence does not currently exist to guide the current practices.
What innovative solutions might you suggest to address these issues?

INNOVATION-BASED PRACTICE

When evidence does not exist to support a change in care, a leader must generate innovative solutions to address problems in healthcare systems with a view to ultimately improving healthcare quality and patient outcomes. Innovation-based practice occurs at the intersection of what is known on the basis of evidence and what is needed or desired (Ackerman et al., 2018). In practice, evidence should guide clinical decisions about what is best or works best for patient outcomes.

When there is a lack of evidence to support a certain practice, clinicians are uncertain about what is best practice, which stimulates a spirit of inquiry (step #0 in EBP). The clinician must decide on the best approach to patient care, and this becomes difficult when faced with no or poor-quality evidence, conflicting evidence, or only opinion to guide practice. These types of uncertainties that lack quality evidence encourage clinicians to innovate or implement “work-arounds,” which are a source of potential struggle because, although innovation arises in response to a need, there exists a lag in evidence to support the innovation. Without evidence, the innovation is often discarded. The degree of disruption that the innovation presents has an impact on the rate of adoption, giving the highest chance of adoption to those innovations that cause minimal disruption (Ackerman et al., 2018). Whenever possible, evidence should be generated of the innovation’s impact through research as it is typically critical for the innovation to be sustained.

HEALTHCARE IMPROVEMENT THROUGH INTERPROFESSIONAL INNOVATION AND AN EBP MODEL

When a problem becomes evident in healthcare (e.g., an increase in the number of patient falls or rehospitalizations), leaders must make a decision about how to solve that problem. That decision must be based on the best evidence available and, therefore, both leaders and clinicians throughout an organization must be proficient in evidence-based decision-making and practice, possessing skills in the critical appraisal of evidence. After a decision is made and a change is implemented on the basis of best evidence, an evaluation must be conducted to determine the impact of the EBP change. When high-quality evidence is not available to guide strategic decisions, leaders and their interprofessional team members must innovate new solutions. **Innovation is more than having good ideas; it adds measurable value to a system.**

The Healthcare Improvement Through Interprofessional Innovation and Evidence-based practice (HITT²E) Model is a framework that can be used to improve clinician and healthcare outcomes. The first step in this model is assessing organizational culture and readiness for interprofessional EBP and innovation. Once this assessment is conducted, an infrastructure should be created or the current structure strengthened to support both EBP and innovation. A critical mass of interprofessional innovation and EBP facilitators should then be developed to work with point-of-care clinicians at the grassroots level on how to implement EBP to improve healthcare quality and patient outcomes.

Without quality evidence to drive positive practice change, these facilitators must work with point-of-care clinicians to spark innovation to solve important practice challenges. Having this critical mass of innovation and EBP facilitators throughout the grassroots of the organization

Figure 1.1 The Healthcare Improvement Through Interprofessional Innovation and Evidence-based practice Model.
EBP, evidence-based practice; ROI, return on investment; VOI, value of investment.
Source: Copyright 2019, Bernadette Melnyk and Tim Raderstorff.

should result in an increase in ideation rate and EBP implementation, eventually bringing about a decrease in clinician burnout/depression and an increase in return on investment/value of investment, including improved clinician engagement and job satisfaction as well as decreased turnover rate. In addition, an increase in EBP implementation and ideation rate should result in improved healthcare quality and safety. The final outcomes should be improved patient outcomes and decreased healthcare costs (Figure 1.1).

Interprofessional teams at the grassroots of the organization should be skilled in EBP and encouraged to innovate solutions to the healthcare problems that they are encountering in their daily practice. In fact, innovation and EBP should be inherent in the values of an organization and set as an expectation for all interprofessional clinicians. Leaders must understand that for innovations to sustain, evidence must be generated to support them and their positive outcomes. Both innovation and EBP take investment from leaders, but the return on investment and value of investment will be well worth it.

BUILDING A STRUCTURE AND CULTURE TO ADVANCE INNOVATION

Although a structure and a culture of innovation are often used interchangeably, they are, in fact, two dichotomous elements that are heavily dependent on each other. It is not a chicken-or-egg scenario, it is the chicken *and* the egg. Regardless of the culture of an organization, innovation cannot flourish without a solid structure to advance innovation. The inverse of that statement also is true. You can build the most beautiful innovation center in the world, but if the end users do not experience a positive culture where innovation is the norm, organizational innovation will wither and die on the vine.

You can see the structure of innovation through organizational policies on intellectual property (IP) creation, the designation of physical space for employees to use to collaborate on new ideas, and the appointment of a chief innovation officer whose role is to advance innovations within the organization. These elements (and surely many others) provide the structure for innovation to occur. The structure for innovation is not as fragile as the culture for innovation. The people who fill chief innovation officer positions will come and go, but the role continues to exist. The structure to make innovation possible remains.

Building a culture of innovation is much more challenging, and the concept will be explored in depth. Perceived barriers of innovation (such as *it costs too much money, it takes too much time, that is not part of my job description*) should be eliminated to build a culture of innovation. Three simple steps set the foundation:

1. **Provide the permission to innovate.** “We do not just want you to innovate in our organization; we expect it to be a foundational component of your work.”
2. **Provide validation that all ideas are worth perusing.** “We hired you because you are an intelligent problem solver. We rely on your problem-solving skills to be successful.”
3. **Showcase your structure to innovate.** “Let’s reach out to the innovation team to find out how we can set you up for success.”

Clearly, this is an oversimplification of a complex process, but you will hear from top-tier organizations that have used the core model of eliminating the barriers to innovation to find success. Innovation can take years to complete and gobble up a budget, but with the proper innovation structure and culture in place, innovation is often timely, rewarding, and financially beneficial (see medtechboston.medstro.com/blog/2018/11/09/300-days-240-20-2-empowered-nurses-1-makerspace-and-endless-impact).

COMMON LEADERSHIP STYLES

All leadership styles have positive attributes. Leaders typically have one predominant leadership style, but many individuals display attributes of two or more styles. Leadership style and organizational culture should match, as “dis-”synchrony can result in adverse outcomes for both the leader and the organization.

Innovation Leadership

Innovation leaders create an infrastructure that integrates innovation into the DNA of their organization (Gallagher-Ford et al., 2019). Within a culture of innovation, employees are both empowered and encouraged to develop innovative solutions to solve healthcare issues for systems to operate smoothly and to produce positive patient outcomes. Today, leaders are constantly faced with the need to improve healthcare quality and safety while reducing costs. Innovation leaders support innovation and oversee change effectively (Porter-O’Grady & Malloch, 2017).

Innovation leaders create the context for innovation to occur, developing both (infra)structure and culture. They provide the roles, decision-making structures, physical space, partnerships, and networks that support innovative thinking and testing (Malloch & Porter-O’Grady, 2009). Malloch (2010) contends that the following competencies are necessary for innovation leaders:

- Assessment for innovation: Personal knowledge of one’s propensity, ability, and skill with innovation work
- Future focused: Actively plans for a better future and understands the value of change
- Value-driven: Believes new ideas will advance performance and value

Transformational Leadership

Transformational leadership is defined as a state in which leaders and followers “find meaning and purpose in their work, and grow and develop as a result of their relationship” (Barker, Sullivan, & Emery, 2006, p. 16). Because of this special relationship, leaders and followers become partners in pursuing common goals. Transformational leaders are enthusiastic, energetic, and compassionate. They generate an exciting vision and inspire others to engage in a journey to achieve that vision. They support and encourage people within the organization and regularly recognize and appreciate them for their efforts. Followers typically respect, admire, and trust a transformational leader. The culture created by transformational leaders is innovative

and change oriented, supportive of new ideas, and open (Klainberg & Dirschel, 2010). Transformational leaders create cultures in which staff are creative, innovative, and open to change (Guerrero, Padwa, Fenwick, Harris, & Aarons, 2016).

Servant Leadership

Robert K. Greenleaf first described the concept of a servant leader in 1970. Servant leadership is based on a focus on others along with trust, empathy, and caring (Greenleaf Center for Servant Leadership, 2013). Greenleaf asserted that great leadership grows from service and that great leaders are servants first (Gersh, 2006). A servant leader practices shared power and focuses on enhancing the growth and optimal well-being of his or her followers. What counts is not power, but whether those being served become more autonomous, healthier, independent, wiser, and likely to become servant leaders themselves (Greenleaf for Servant Leadership, 2013). Spears (2010) describes 10 foundational characteristics central to servant leadership: listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to growth of people, and building community.

Authentic Leadership

Authentic leaders are transparent, confident, hopeful, optimistic, resilient, and of high moral character. These leaders are keenly aware of how they think and behave and have firm convictions of who they are and where they stand on issues, values, and beliefs (Wong & Cummings, 2009). They are role models, focusing on ethics and working to develop others. Followers perceive them as being transparent and valuing others' perspectives and strengths (Avolio, Gardner, Walumbwa, Luthans, & May, 2004). Authentic leaders create and sustain high-quality relationships with their followers. They build trust and healthy work environments. Authentic leaders conduct thorough self-assessments and objectively analyze data for the purpose of informing their decisions. They hold high moral and ethical standards for themselves and their people and are transparent in their communication. Authentic leaders listen to others and take their opinions into consideration when making decisions. This leads to open and trusting cultures where people feel free to share innovative ideas (Avolio et al., 2004; Walumbwa, Peterson, Avolio, & Hartnell, 2010; Wong & Cummings, 2009).

Autocratic Leadership

Also known as *authoritarian leadership*, *autocratic leadership* is characterized by high control over decisions with little input from others. Autocratic leaders typically make decisions based on their ideas, knowledge, and judgment. They typically do not accept feedback or constructive criticism well and move forward with their ideas and decisions without much regard for others' opinions. Although this style of leadership is usually not favored by people in an organization, it is common. At the extreme, autocratic leadership is stifling and can damage the morale of an organization. Autocratic leaders are often perceived as micromanagers who have no consideration for people's feelings and emotions. On a positive note, this style of leadership is helpful when decisions need to be made quickly to turn a poor-performing organization around. People with low and unstable self-esteem tend to prefer autocratic leaders whose powerful abilities

they believe in and in whom they can place their trust and hope (Schoel, Bluemke, Mueller, & Stahlberg, 2011).

CALL TO ACTION

Which of these styles capture your type of leadership?

Are you satisfied with your leadership style?

If not, what specific steps will you take in the next 90 days to come more in alignment with the leadership style you most desire?

EVIDENCE ON THE VARIOUS LEADERSHIP STYLES AND ORGANIZATIONAL OUTCOMES

A growing body of studies indicates the many positive outcomes associated with a transformational leadership style. To be specific, transformational leadership has been found to be significantly related to increased satisfaction and well-being in nurses as well as decreased burnout, stress, and incivility among them (Kaiser, 2017; Weberg, 2010). Another study of emergency room nurse leadership style and its impact on nurse turnover indicated that a transformational leadership style was related to less nurse turnover, although there was no association between transformational leadership and patient satisfaction (Raup, 2008). Another study with primary care clinicians also found that the transformational leadership style is linked to high job satisfaction (Jodar, Badia, Hito, Osaba, & Del Val Garcia, 2016). Transformational leadership by surgeons also has been associated with better team performance in the operating room (Hu et al., 2016).

Marmo and Berkman (2018), in a study of 203 hospice social workers, found that the perception of servant leadership was related to higher job satisfaction. Other variables linked to job satisfaction were interdisciplinary collaboration and feeling valued by the hospice physician.

A recent systematic review by McCay, Lyles, and Larkey (2018) found that relational leadership traits, similar to authentic leadership traits, contribute to greater nurse satisfaction, whereas task-oriented styles decrease nurse satisfaction. The high-quality relationships that authentic leaders create and sustain result in increased engagement, increased motivation, commitment, and job satisfaction (Avolio et al., 2004; Wong & Laschinger, 2013).

In a systematic review of 20 studies (Wong, Cummings, & Ducharme, 2013), findings indicated that there are associations among positive relational leadership styles and higher patient satisfaction and lower patient mortality, medication errors, restraint use, and hospital-acquired infections. However, more rigorous studies are needed to generate additional evidence regarding specific leadership characteristics, including the innovation leadership style, and patient as well as clinician outcomes.

CRUCIAL CONVERSATIONS: A NECESSARY LEADERSHIP SKILL

Regardless of the type of leadership style an individual has, he or she must be effective at having **crucial conversations**, that is, a discussion between two people in which the stakes are high,

opposing positions, and emotions are strong (Patterson et al., 2012). Leaders must possess the ability to speak up even when it is not comfortable to do so and to engage in conversations when there is disagreement in order to achieve a positive outcome.

The book *Crucial Conversations* (Patterson et al., 2012) teaches a seven-step process for managing difficult conversations, including:

1. Start with the heart, which includes asking yourself what you really want and what's at stake.
2. Learn to look. Observe carefully when safety may be at risk.
3. Make it safe. ... learn how to step out of the content, create a mutual purpose, resolve conflict, and return to a healthy dialogue.
4. Master your story. ... what we tell ourselves is the cause of all emotions. Learn how to retell your story and create emotions that make you want to resume a healthy dialogue; separate facts from stories.
5. State your path. ... learn to say things in ways that decrease the other person's defensiveness; the best way to start is to share facts (e.g., "I was expecting to receive this at 3 p.m. and now it's 4 p.m.; this lateness leads me to conclude that meeting a deadline isn't a goal"; avoid "you" statements that appear to fix blame).
6. Explore others' paths ... ask the other person to share his or her story so you can understand his or her point of view (e.g., "Can you help me to better understand where you are coming from?").
7. Move to action (who does what by when; the follow-up).

In conclusion, leaders must act as role models in evidence-based decision-making and innovation if they expect their employees to also engage in these practices. Leaders must also create cultures and environments that allow their staff to consistently engage in evidence-based practice and innovation. In addition, they must be aware of their own leadership style and understand its impact on clinician and organizational outcomes as well as having the necessary skills to engage in crucial conversations.

KEY TAKEAWAY POINTS

- Evidence-based decision-making and practice are key to achieving the Quadruple Aim in healthcare.
- When evidence does not exist or is of weak quality, it is critical to innovate new solutions.
- When an innovation is created, it is important to generate evidence through research on its efficacy or impact so that it will be likely to be sustainable.
- Building cultures that promote EBP and innovation is necessary to make them the norm in a healthcare system.
- It is essential that leaders learn the skills of having crucial conversations.

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