# CHAPTER 1

# Key Foundations of Successful Quality Project Planning, Implementation, Evaluation, and Management: An Overview

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#### **CHAPTER OBJECTIVES**

- **1.** Differentiate between a quality improvement project, project plan, and project management for deliverable outcomes.
- **2.** Discern the differences between the scope of quality improvement projects and research.
- **3.** Discuss the importance of legislation, health policy, and economic conditions when designing quality improvement projects.
- Identify historical influences, determinants, and unintended consequences/ risks related to a well-defined quality improvement project in a culturally diverse healthcare environment.
- 5. Identify requisite skills and techniques of the project leader and designated team members whether on-site or virtual when designing value-based quality improvement projects from inception to completion, including dissemination of outcomes.

#### **KEY TERMS**

Continuous quality improvement	Political environment
Design	Project budget
Diversity	Project life cycle
Economics	Project management
Environment	Project plan
Evidence-based	Quality improvement
Health disparities	Regulations
Health policy	Research
History	Social factors
Influences and determinants	Stakeholders
Just culture	Sustainability
Legislation	Teams
Management	Unintended consequences
Organizational culture	Value
Outcomes	Virtual environment

#### ROLES

Analyzer	Educator
Communicator	Leader
Designer	Manager

#### **PROFESSIONAL VALUES**

Civility Ethics	Norms Patient- and customer-centeredness
Inclusivity	Quality
Integrity	Values

#### **CORE COMPETENCIES**

Analysis Appreciative inquiry Assessment Communication Critical thinking Emotional intelligence Evidence-based practice Health policy knowledge Innovation Regulatory knowledge Risk anticipation and mitigation of unintended consequences Systems thinking Understanding of civility and diversity

# Introduction

Vision coupled with transformational change is central to the future success of efficient healthcare delivery in an evolving global economy. What was once merely pondered by many in the healthcare arena has now evolved into sustainable project plans and value-based programs that are driven by the basic instinct of survival. With release of the 2020–2030 Future of Nursing report (National Academies of Sciences, Engineering, and Medicine, 2021), new vistas of appreciative inquiry await a mindful revolution of individuals, teams, and global leaders dedicated to seamless integration and coordination of improvement (Stratton-Berkessel, 2016). New paths of improvement will be charted that are dedicated to a culture of health, reduced health disparities, and improved health and well-being of society. Appreciative inquiry will guide each improvement, highlighting current industry trends, and act as a catalyst for organizational change.

As individuals and teams consider the daunting task of establishing a culture of health, reducing health disparities, and improving the health and well-being of society, they must recognize that having a project idea and implementing it are two different actions. Understanding the scope of a project, the dynamics associated with stakeholder and partnership involvement, culture, information technology, team dynamics, economics, and the political environment can easily result in a state of project paralysis. In the current healthcare industry, the path to an innovative project must include micro-, meso-, and macro-level input linked to global considerations for substantive change and influence that evidence ongoing opportunities.

Successful planning and implementation of any project are supported by the notion that for an effective system to be strengthened, it requires systems thinking and attention to how the parts work together to create a seamless whole (Crisp, 2010). As knowledge is gained from project outcomes, knowledge transfer becomes an imperative. Evidence is spread and systems of care are strengthened and sustained. This is relevant in the current environment, where the focus of work is on obtaining the right outcomes, as opposed to past decades, where performing the right processes was emphasized (Porter-O'Grady & Malloch, 2015, 2017). Likewise, the relevance is increasingly predominant in a global market driven by value-based versus volume-based care delivery and reimbursement (Frist, 2016; Simatupang et al., 2017).

This chapter focuses on differences between a quality improvement project, project plan, project management, and research related to deliverable outcomes. The importance of legislation, health policy, and economic conditions when designing projects will also be addressed. The importance in identifying historical influences, determinants, and unintended consequences or risks in culturally diverse settings is examined. In addition, the skills and tools of an improvement team leader and identified members for a sustainable project are described as work environments become increasingly virtual.

# Quality Improvement Projects, Project Plans, and Project Management: Necessary Distinctions for Deliverable Outcomes

The genesis of any quality improvement project is planning, but ongoing management of the project is essential as well. All projects have a beginning, duration, and an end, which collectively constitute the project's life cycle. Project outcomes may, for example, be adopted in the form of evidence-based guidelines or viewed as opportunities for conducting additional inquiry and validation studies before incorporating them in practice. It is critical, however, not to immediately adopt findings from a small project, as they may not be generalizable to a broader context. According to Peters (1999), approximately 50% of the work completed in organizations may be considered as projects. Many staff working on projects as de facto members or managers may not possess the critical path and earned value analysis skills, which are key to orchestrating and managing a project from inception to completion (Lewis, 2011).

What is a quality improvement project? Projects are temporary endeavors that focus on producing a unique operational entity such as a product, service, or result differing from that obtained in prior projects (Project Management Institute, 2013). Through a systematic process, outcomes are produced that improve system efficiency and patient experiences. Regardless of the project, it should be based on the idea of accomplishing a goal for systems, stakeholders, and/or customers.

When does the project begin? A series of iterative processes, activities, and actions precedes the initiation of a project. One fundamental consideration is readying the project environment by identifying and validating the need for the project, developing the plan, and obtaining system buy-in and/or approval from stakeholders. Identifying and engaging stakeholders early and throughout the improvement project is pivotal to success. The value of stakeholder involvement cannot be underestimated in any project as new partnerships are formed, their interests are represented, ownership is reinforced, and support becomes center stage (Ives, 2019).

A project plan encompasses several components that collectively culminate in a realistic and well-planned sequence of actions and processes. The project plan goes beyond a general project scope and includes the details necessary to make a meaningful and value-based addition that reduces or eliminates variation in a work unit or an entire system. As the project proceeds and causative factors are eliminated, productivity and measureable quality outcomes are evident.

According to Tuthill (2014), the project plan includes a project budget, a work and activity breakdown and schedule, an overall project schedule, and any supporting documents. Haughey (2014) identifies other related parts of the project plan, including project goals, deliverables, schedule, and supporting documents (human resources, communications, and risk management plans). Additionally, other project plan considerations were outlined by Billows (2014), whose project plan template provides for scope definition, major deliverables, risk identification, team resource requirements, and decomposing individual tasks. A variety of project-planning programs are available commercially and often used by larger, more complex projects within systems.

Thinking and rethinking what one needs or desires in relation to the project plan are key aspects of complex ecosystem planning to extend beyond the workplace view (Merrifield, 2009). This author identified three important "rethinking questions" for any student or project planning team:

- 1. Does the project exactly correlate with any of the organization's key business goals?
- 2. Does the project have a strong connection to the organization's brand or corporate identity?
- 3. Does the effort required for the project result in increased organizational performance and change the value of the project to achieve organizational effectiveness?

What is project management? The Project Management Body of Knowledge (PMBOK) Guide defines project management as "application of knowledge, skills,

tools, and techniques to project activities to meet project requirements. Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing" (Project Management Institute, 2013, p. 6). Of interest, the *PMBOK Guide* has, as its primary objective, the explanation of how each of the processes may be accomplished in practice.

Although consistent management of activities is essential for project completion, project management extends beyond managing and scheduling activities. Project management entails a combination of tools, people, and systems (Lewis, 2011). Tools may include computers, software applications and platforms that include electronic management systems, and daily planners. People include organizations and project teams who engage in processes geared toward goal accomplishment within systems. Management of people may present as a challenge in this endeavor, and leaders and communicators must use multiple skills to coach and mentor individuals toward achieving the common goal. The manager's emotional intelligence may be tested along the way, as will be examined further in this chapter.

Regardless of the depth or breadth of the project, plan, and management, the various stages of the project life cycle must not be neglected. Tuthill (2014) identified this cycle as having four phases:

- 1. Initiating the project (including identifying customer-driven factors and obtaining leadership approval and support)
- 2. Planning (including human and physical resources)
- 3. Executing (monitors, control, and cycle of efforts)
- 4. Project closing (training, operations, and support)

Project planning across the life cycle should additionally consider the project's feasibility, value, key drivers for success, skills and tools needed, and processes whereby project teams may be managed in virtual environments. Virtual work environments have gained popularity in the last decade as more employees work from distant locations, especially when operating in a contingency or crisis situation as demonstrated during the COVID-19 pandemic. Likewise, virtual work environments proved advantageous as organizations remained responsive to customers and stakeholders with fewer expenditures dedicated to office space, supplies, and indirect costs (Bloch, 2017).

# Differentiation of Quality Improvement Projects and Research

Creating an environment receptive to change and evidence-based practice requires a series of purposeful actions and partnerships. Actions include various quality improvement projects that are led by interprofessional team members that culminate in sustainable practice change and outcomes. As project teams form, partnerships emerge and a common goal is established. Including researchers as equal partners on the quality improvement project team is an asset, thus avoiding a waste of valuable resources. This creates opportunities for the design and methodology, allowing teams to disseminate relevant information to the larger community. This opportunity informs decisions with reliable and evidence-based data (Marjanovic et al., 2017).

Often, individuals use language indiscriminately. Differentiating between quality improvement and research is essential to avoid barriers that lead to misunderstandings by quality improvement team members. For purposes of this chapter, the following definitions of *quality improvement* and *research* apply.

Quality improvement focuses on systems, processes, and functions associated with clinical quality, satisfaction, and cost outcomes. Meaningful quality improvement projects contribute to a better understanding of care processes through the application of knowledge. Research involves a process of systematic inquiry, whereby knowledge is developed, refined, and/or expanded. Research answers questions to develop knowledge grounded in a scientific method (Melnyk & Fineout-Overholt, 2005, 2019). Although there are connections between quality improvement and research, differences also exist. These differences include intent, design, setting benefits, generalizability of findings, oversight, subject and risk consent, ethical justification, and dissemination. Research can focus on quality improvement initiatives, but a quality improvement project is not always considered research (Gregory, 2015). Further consideration of the differences is discussed in Chapter 2.

# Importance of Legislation, Health Policy, Economic Conditions, Culture, Social and Environmental Factors, Values, and Norms When Designing Quality Improvement Projects

Demonstrating effectiveness in healthcare operations is required for sustainability in today's market. Doing more with less has resulted in organizations charging teams to design quality improvement projects that strengthen efficiency and accountability while achieving sustainable outcomes. Cost, quality, safety, and access provide a basis for innovative improvement teams. Innovation is a critical value of alignment between the multiple forces affecting health care and decisions that follow (Porter-O'Grady & Malloch, 2015). To appreciate the impact of innovation in health care, sharing the project outcomes that used identified dissemination plans must become the lifeblood of a 21st-century organization and be linked to new ideologies of business and a data-rich environment (Porter-O'Grady & Malloch, 2017). The shift from volume-based to value-based care has required innovative leaders to shift previous mental models of care to those that ensure advancement of the health of a nation (Centers for Medicare and Medicaid Services, 2013; U.S. Department of Health and Human Services, 2011). Likewise, quality improvement project design must balance innovation with value if a return on investment is realized. Using a cost-benefit model, project teams can create opportunities for practice change, whereby evaluation of outcomes is based on implementation with their fidelity to the original project design. This necessitates for project designs to reflect all work processes and activities subject to ongoing inquiry and reassessment (Porter-O'Grady & Malloch, 2015, 2017). Incentives that balance innovation with value also have sizable implications for survival in the current healthcare arena. Incentives should be developed based on evidence-based economies, fairness, and equitability that have an intuitive appeal that benefits patient outcomes and system efficiency. Economics will continue to shape the landscape of health care and the design of quality improvement projects as reimbursement processes are reformed.

As a quality improvement team begins to design a project, examining the impact of legislation and health policy provides insight into the demand to demonstrate effectiveness. Legislation, regulations, and health policy are grounded in evidence, inform budgets and management decisions, and strengthen accountability (Pew-MacArthur Foundation, 2015). The exponential number of federal regulations affecting the healthcare industry increasingly requires multiple resources to manage and meet mandates. According to the American Hospital Association (AHA, 2017), 629 regulations are mandated by four agencies (Centers for Medicare and Medicaid, the Office of Civil Rights, the Office of Inspector General, and the Office of the National Coordinator of Information Technology) that promulgate the requirements with additional directives forthcoming.

Laws and public policies do not exist in a vacuum. Action taken in one domain may have unintended consequences in another domain while having synergistic, positive effects in yet another (Senterfitt et al., 2013). If quality improvement teams dismiss this reality, a disconnect will prevail, and the efficacy of project improvement project design, implementation, and outcomes will be jeopardized.

There is no question that the culture of an organization, social and environmental factors, and values and norms also affect the design, implementation, and adoption of quality improvement project outcomes. Universally, change in health care is driven by projects that result from errors, inefficiency, and survival instincts. Getting to the root cause of an issue becomes the foundation for a well-designed and executed quality improvement project. Innovation of key stakeholders is a key to integrating organizational culture for sustainability of quality improvements.

Projects are advanced as leaders acknowledge the importance of context and culture. Assessing organizational culture is pivotal to planned change and adoption of improvements. Organizations that value quality improvement project team activities and their outcomes create windows of opportunity. As a result, the full potential of employees is realized, and care access, delivery, and efficiency are advanced. This requires moving from an organizational culture that blames others to adoption of a just culture (Khatri et al., 2009).

A just culture is an environment where an atmosphere of trusting, encouraging, and rewarding others for providing essential safety-related information occurs (Reason, 2008). A just culture addresses two areas: (1) the role of punitive sanction in the safety of the healthcare system and (2) the effects of a punitive sanction as a remedy for human error as a help or hindrance to safety efforts (Marx, 2001). With adoption of a just culture based on consideration of human limitations, numerous advances in healthcare practices and operations have been achieved, yet advances are needed in cultural transformation (Kennedy, 2016).

Social and environmental factors are important to consider for any quality improvement project team. These factors are the largest predictor of health outcomes and are influential in changing practices (Senterfitt et al., 2013). Health and health-related problems result from multiple factors. For example, factors such as educational level, employment, environment where individuals live and work, and support are primary determinants of health outcomes. As quality improvement teams design projects, remaining aware of these factors is essential if outcomes are realized (Mosadeghrad, 2014). Consider the current debate surrounding requirements for immunizing infants and preschoolers. Addressing the social and environmental factors related to immunizations requires others to interpret evidence, advocate for adherence, and align messages that are supportive of universal practices. Similarly, the adoption of quality improvement project findings can be impacted by social group acceptance and the environment targeted for change. Advocacy for change becomes paramount in these circumstances.

One's values and norms in society also influence quality improvement projects. If individuals or organizations have conflicting values associated with a project, the likelihood of the development or success is endangered. Societal norms also affect acceptance of a project and its outcomes. If the norm is to only adopt changes from one specific group, new projects and ideas are destined for disapproval or failure. An environment of constant evaluation and adaptation is essential.

The convergence of team efforts and consideration of the aforementioned factors form a collective network of knowledge and facts as improvement projects are developed, implemented, and evaluated. Ruland (2010) concluded that reliable data increase decision quality, diminish errors, and strengthen the adoption of projects and outcomes. Regardless of the system, whether local, national, or international, data guides legislation, policy formulation, and decisions. However, this will require individuals to question if existing policy and practices are achieving the balance between potential risks and benefits (Heitmueller et al., 2014).

Some of the most prominent healthcare organizations arise from the accumulation of knowledge. When a healthcare organization improves services, others adopt what works and benefit from its knowledge. The spread of this knowledge and its universal adoption result in situations that influence the economic outlook, sustainability, quality of services, and satisfied consumers.

Quality improvement project design must balance innovation with value if a return on investment is realized. Using a cost–benefit model, project teams can create opportunities for practice change, whereby evaluation of outcomes is based on implementation with their fidelity to the original project design. This calls for project designs to reflect all work processes and activities subject to ongoing inquiry and reassessment (Porter-O'Grady & Malloch, 2015). Incentives that balance innovation with value also have sizable implications for survival in the current healthcare arena.

# Historical Influences, Determinants, and Unintended Consequences/Risks Associated with Quality Improvement Projects

The current healthcare system is driven by the need to respond to a rapidly changing environment and delivery of quality care. Healthcare quality is a universal marker that systems use to measure if care and desired outcomes are achieved (Batalden & Davidoff, 2007). The status quo is no longer acceptable. Current assumptions and processes must be challenged and replaced with robust improvements driven by measurable quality, safety, and value-based outcomes. Influences, determinants, and any unintended consequences or risks must be considered if improvements are valuable and sustainable within organizations. This requires positive engagement and actions by the entire healthcare team if systems of care are changed. Change must be based on clear expectations relevant to the situation that foster relevant learning (Nelson et al., 2007). This is not a linear process, but a series of explorations resulting in meaningful outcomes (Moran, 2014). History guides individual and group actions (Fairman & D'Antonio, 2013). This includes preparation and dissemination of policies, funding allocations, system improvements, and the design of quality improvement projects. Making sense and understanding the value of history when designing a quality project are invaluable. Historical data provide a lens to assess prior improvement attempts, processes, and variations in outcomes. History offers evidence that guides the work of quality improvement project teams and provides direction when choices are vague and lack basis.

Gaining insight into an organization's quality improvement project attempts and determinants of success is made easier when one considers three domains: process, structure, and outcomes (Donabedian, 1985). Process provides the context necessary to understand approaches that guide quality improvement project development and engagement of team members. Structure includes the specific elements that are most likely to have relevance and attain desired outcomes. Outcomes provide pathways for documenting the efficacy and impacts of the project. Outcomes are further evident as project data are analyzed and communicated, and changes are adopted across the healthcare system.

Beyond the value of history and determinants of quality improvement project success are unintended consequences and project risks. Anticipating and managing the unintended consequences and potential risks can be difficult even for a skillful leader. Unintended consequences extend beyond clinical effectiveness and include dismissal of evidence, social factors, financial impacts, and stakeholder partisanship. Evidence may be dismissed in geographical regions, cultures, and groups. Evidence may be jeopardized when controversy and differing opinions exist, limiting the development of a meaningful quality improvement project. Thus, environments may not be conducive to change based on the current evidence. Evidence is desirable to ensure interventions are optimized, negative outcomes are minimized, and resources are used effectively. Realizing an immediate financial gain or incurring upfront costs may be viewed as a risk and limit the full impact of a quality improvement project or its adoption. Partisanship among and between stakeholders may also affect buy-in of a quality improvement project, thus preventing or curtailing the design and initiation of projects that solidify quality, safety, and value-added outcomes.

Addressing and remaining cognizant of unintended consequences and potential risks require the actions of all quality improvement team members. Advocating for the use of current evidence, interpreting the need for an evidence-based quality improvement project, and using available tools and resources are essential determinants of success.

# Requisite Skills and Techniques of an Improvement Team Leader and Members for Sustainable Projects in Healthcare Systems

In the fast-paced, ever-changing healthcare landscape, a plethora of project leader and team member skills and techniques are needed throughout the life cycle of a project, especially quality improvement ones. The basic nature of individuals to learn and use new techniques creates a positive sense of competition and often uncertainty that can benefit project activities and outcomes (Khan, 2012). The idea that evidence-based quality improvement project outcomes transform practice and advance quality is a strategic differentiator tool for sustaining a competitive edge (Mosadeghrad, 2014). Achieving equilibrium between practice and quality offers a strategic regimen that ensures all evidence is available as quality improvement projects are envisioned, developed, and completed. However, this does not occur in a singular process, but requires use of various tools and techniques that support meaningful projects. Envisioning a future state where the path forward can readily be recognized and followed by others is a deliberate action that leads to meaningful projects and supports their sustained management. The ability to manage the delicate maneuvers of leading, engaging, and inspiring others toward greatness is among the many skills needed by a project leader. Investment in skill development and core competencies for project planning and management is central to shaping business outcomes in all industries, especially in health care.

Applying human factors engineering in health care allows one to gain the knowledge needed to examine human behavior and interaction with others or with their surroundings and apply information for greater efficacy (Carayon & Wood, 2010; Gosbee & Anderson, 2003; Weinger & Gaba, 2014). Human factors engineering can further assist both the novice and expert project planner and manager in gaining insight into processes quickly and being able to initiate actions for course correction, as indicated. The patient's journey through the multifaceted and complex systems should be a consideration of the process (Carayon et al., 2020).

The skills and techniques needed for success with a project include an array of critical approaches. Although there is no singular set of skills and techniques that guarantees success, some options are mutually beneficial to teams, individuals, and organizations. The process for instilling these skills and techniques into practice requires first understanding each of them and then linking it to goals and measurable, sustainable outcomes. The skills and techniques will be examined in this text, keeping in mind no particular skill or technique is necessarily better than—or a replacement for—another.

Throughout an improvement project, keeping activities focused on the customer is important, especially when the organization depends on those customers for revenue and most of its market share. When the customer is satisfied, loyalty is preserved and repeat business occurs. For example, if a manager requests the development of a quality improvement project that will increase customer satisfaction, it is important to first understand customer needs and expectations and then to communicate those needs and expectations throughout the organization, while measuring value and reporting results. The understanding is gleaned through an organizational analysis and assessment tools, which are explored in Chapters 5 and 6.

Every project requires a designated leader to establish the project's direction and goal. Although there may be informal leaders, the project leader should possess the skills needed to create and maintain the environment where others engage in meeting the project's goal. Creating opportunities to encourage others and involve them in both the current project and future projects is a mark of transformational leaders, who continually inspire and recognize others' contributions.

Being an effective communicator who possesses emotional intelligence will engage others and provide the leverage necessary to initiate and complete projects in an expeditious fashion (Galli, 2020; Goleman, 2005). However, this outcome will not occur without the ability, awareness, and cultural sensitivity to address cultural and diverse differences in today's workforce. All individuals process information differently because of their diverse backgrounds and cultural beliefs. Being aware and sensitive can facilitate progress on projects (Saxena, 2014; Seibert et al., 2002; Young & Guo, 2016).

Planning and organizational skills, such that one can assimilate information from various assessment processes and break down information into discrete parts, can set the stage for effective ongoing management of the project. Individual creativity may flourish when these skills are applied to organize outcomes for dissemination.

# Managing Projects and Teams in a Virtual Environment

One of the great rewards of technology is the opportunity to have global project team members contribute remotely. Project managers can leverage the strengths and talents of multiple individuals that match the project plan, strategy, and desired outcomes. As Porter-O'Grady and Malloch (2015) explain, teams are small systems and often mirror the complexity in other levels of the larger system. The effectiveness and performance of a project team, whether virtual or not, are contingent upon a combination of attributes and skill sets. These personal assets include, but are not limited to, individual competence, interpersonal skills, flexibility, accommodation, creativity, strong work ethic, and a focus on outcomes, to name a few. If the team has no identified purpose or end point, there is no meaning to the work to be accomplished. Projects may fail or yield limited outcomes that are not sustainable, and future virtual teams may be considered suspect.

As the moral compass for the virtual team, the leader should bring diplomacy to bear in the discourse with staff, managers, stakeholders, and/or distractors. In particular, it is the virtual team leader's responsibility to defend the project and virtual team by shielding the overarching goal from distractors (Sturmberg & Martin, 2012). Adaptability becomes pivotal to success and is often more important than anticipation in such an environment.

Managing a team, whether onsite or virtual, can be rewarding as well as challenging. Virtual Hires (2014) identified nine guidelines that apply when selecting and managing individuals and teams in virtual environments, which are easily applicable to on-site teams:

- 1. Perform a project evaluation. Project leaders must be knowledgeable about goals, tactics, and deliverables if they are to communicate effectively with prospective team members.
- 2. Determine the skill sets needed by team members. Match the skills of team members to the delegated tasks and mutually reach consensus on assignments. Leveraging individual strengths promotes measurable outcomes.
- 3. Identify and anticipate obstacles. Knowing what has been attempted previously to resolve a problem or opportunity can only benefit the present outcomes. Conversely, disregarding this information can mean a loss for the plan, as the strategy may actually require only a minor redesign or assignment of a team member with matching skills and competencies.
- 4. Constantly engage members and encourage bidirectional communication. Contact with virtual team members often is employed to verify needs for

supervision and encouragement. Likewise, the team member can communicate successes and challenges encountered that require intervention.

- Establish a timeline and milestones. Identify expectations and the schedule needed to move the project toward completion. Monitor progress at designated intervals. Share accomplishments with all virtual members and stakeholders.
- 6. Ensure individual team member accountability. Recognizing the importance of each individual member's investment in achieving the critical priorities of a specific project and their buy-in to the larger institutional performance is a critical success factor.
- 7. Be cognizant of cultural differences. Being aware and sensitive to the diversity of virtual team members is important to avoid conflicts and delays in completing assigned tasks.
- 8. Manage conflict and difficult team members. Avoiding a conflict will only perpetuate the issue and result in inefficiency of the individual and team function. Although crucial conversations may be difficult on a personal level, they are valuable for resolution of identified issues that may create project paralysis.
- 9. Provide education and training. Just-in-time or accelerated learning techniques may be required to assure all team members are on the same page with respect to the project goal and strategies. Using practical application examples and techniques matched with evidence, flexibility, and innovative teaching strategies can strengthen project outcomes and create synergy among virtual team members.

Effective governance and ownership of any project is critical to its success. A poorly articulated and organized management structure, overlapping roles and decision-making authority, and mismatched roles and team members can prevent a project from achieving any momentum or producing valuable outcomes. The designated leader is the guardian of a finite project, who is charged with creating the structure and practices needed to guide the plan forward and strategically align it with the enterprise's overall direction.

The expansive use of virtual teams provides a substantial trend in the healthcare arena, where changing reimbursement models and movement toward greater industry transparency have placed substantial pressure on organizations to deliver stronger performance and improved value. In the long term, this trend is expected to continue. In turn, current improvements and projects focused on cost and quality performance will impel healthcare organizations toward higher standards requiring visionary leaders and dedicated project teams positioned to meet the challenges facing the healthcare industry.

#### Summary

- Planning successful projects requires a series of deliberate and purposeful activities and a well-developed budget that result in an attainable goal.
- Projects may be limited to the microsystem or may extend to the meso- and macrosystem level(s) within an organization or industry.
- Projects are finite in scope, whereas program management extends across a system or industry.

- Leadership is central to successful projects and their sustainability.
- Projects benefit systems, stakeholders, and various customers.
- Envisioning a futuristic state opens avenues for changes in behavior and value-based project outcomes.
- Technology affords opportunities for global project team membership where talents are leveraged toward an achievable goal.
- The status quo in health care is no longer acceptable. Current assumptions and processes must be challenged and replaced with robust quality improvement projects driven by measurable quality, safety, and value-based outcomes.
- Influences and determinants must be considered if improvements are valuable and sustainable within organizations. This requires positive engagement and actions by the entire care team if systems of care are changed and sustainable.
- Quality improvement focuses on systems, processes, and functions associated with clinical quality, satisfaction, and cost outcomes.
- Research involves a process of systematic inquiry, whereby knowledge is developed, refined, and/or expanded.
- History guides individual and group actions. Making sense of, and understanding the value of, history when designing a quality improvement project is invaluable. Historical data provide a lens to assess prior improvement attempts, processes, and variations in outcomes.
- Process provides the context necessary to understand approaches that guide quality improvement project development and engagement of team members. Content includes the specific elements that are most likely to have relevance and attain desired outcomes. Outcomes provide pathways for documenting the efficacy and impacts of the project.
- Cost, quality, and access provide a basis for innovative improvement teams.
- Current legislation, regulations, and health policy are grounded in evidence that informs budgets, guides management decisions, and strengthens accountability.
- The spread of this knowledge and its universal adoption result in situations that influence the economic outlook, sustainability, quality of services, and satisfied stakeholders and consumers.
- The culture of an organization, social and environmental factors, and diverse values and norms affect the design, implementation, and adoption of quality improvement project outcomes.
- A just culture is an environment where an atmosphere of trusting, encouraging, and rewarding others for providing essential safety-related information occurs.
- Social and environmental factors are the largest predictors of health outcomes and are influential in changing practices.
- Values and norms in society influence the outcomes of quality improvement projects.
- Evidence-based quality improvement projects transform practice and advance quality. Such projects are a strategic differentiator tool for sustaining a competitive edge.
- Achieving equilibrium between practice and quality offers a regimen to ensure all evidence is available as quality improvement projects are developed and completed.
- Multiple tools and techniques exist that offer quality improvement project teams to identify latent or hidden failures in a system.

### **Reflection Questions and Learning Activities**

- 1. Reflect on your current work environment and identify how leaders and stakeholders within the organization impact project successes, sustained practice change, and spread of evidence.
- 2. Identify and discuss a technological advance that may assist you in developing a capstone or improvement project.
- 3. What attributes contribute to a virtual project team's success? How can you ensure positive changes and outcomes as the project leader?
- 4. You are tasked with developing a quality improvement project. What are the primary components to include in the project plan?
- 5. When developing a quality improvement project or proposal, what are the primary considerations to ensure success and practice change outcomes are sustained?
- 6. Select a quality improvement project. What are the tools and techniques that will assist you throughout the process?
- 7. How would you differentiate between structure, process, and outcome indicators? How may each be incorporated in a quality improvement proposal?
- 8. How would you evaluate the quality improvement project's outcomes?

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# **Case Exemplars**

### Guidepost for Students Selecting a Meaningful Capstone Project Topic

Jacqueline M. Lollar

As a former labor and delivery nurse in a teaching hospital and a current nurse educator, Sandy had always wanted to remain in the teaching and learning role. She began to recognize she had an excellent opportunity to advance her education. Sandy had a great desire to earn a doctorate of nursing practice (DNP) degree and began discussing her options with mentors and colleagues. The university in which she was teaching had started a simulation program, which Sandy had been involved in from its inception. She knew she wanted to incorporate human patient simulation and education into her capstone project.

When conducting literature searches related to simulation and nursing education, Sandy found that medication errors were a recurring theme. The first idea she considered for her proposed capstone project was to implement simulated scenarios into the various nursing courses to decrease medication errors by student nurses and newly graduating novice nurses. That way, the students would be able to use their knowledge and skills in medication administration without causing harm to live patients. If an error occurred, the students would be able to see the immediate reaction to a medication error.

After having numerous meetings with her faculty advisor and discussing the process for a needs assessment, Sandy completed a needs assessment at the institution. Upon its completion, it was evident that the institution's faculty were already integrating medication administration in each simulated scenario. Thus, Sandy's idea was abandoned because medication administration was already a current practice at the College of Nursing. Additionally, with the guidance of her advisor, Sandy realized the project should have a more inclusive systems-change approach that would be better suited to a hospital setting. A change that could be incorporated into one unit in a hospital had the potential to change the entire culture of education throughout each department within a hospital.

After more meetings with her faculty advisor, Sandy began to explore the practices of area hospitals to determine the use of human patient simulation for educational purposes. One area hospital's labor and delivery unit shared a birthing simulator, Noelle, with another area hospital's labor and delivery unit. Each hospital had Noelle to use for a 6-month period of time. The labor and delivery nurse educator desperately wanted to utilize the simulator for educational purposes but had no expertise in its application. The nurse educator began explaining that the unit had numerous novice nurses and wanted them to participate in simulated scenarios focused on high-risk, low-volume obstetric patients. Additionally, she commented that The Joint Commission would be evaluating the hospital soon and the nursing staff was very weak in knowledge related to the National Patient Safety Goals (NPSGs). A shared belief between Sandy and the nurse educator working with the project was that competence in the discipline of nursing is paramount. Maintaining a level of competence is imperative for nursing staff to provide quality and safe patient care. However, competency is challenging to measure because of its many different components. The proposal of annual competencies, including NPSGs, was discussed at length with the nurse manager and nurse educator. At this time, buy-in for Sandy's capstone project was obtained.

Further conversations and meetings followed with the unit educator to determine the specific obstetric emergencies and NPSGs to be included in the annual competencies. The obstetric emergencies finally selected included fetal distress, amniotic fluid embolism, placental abruption, and postpartum hemorrhage. At the time, 10 NPSGs were in existence. Four NPSGs were selected for inclusion in the simulated scenarios based on common errors and staff needs: improve the accuracy of patient identification, improve the effectiveness of communication among caregivers, improve the safety of using medications, and accurately and completely reconcile medications across the continuum of care (The Joint Commission, 2008).

Sandy then began working closely with her faculty advisor to make the project both meaningful and sustainable. Her advisor questioned, "What theory would be the driving force for the project?" After conducting numerous literature searches and conversations with the faculty advisor, Sandy identified Dr. Patricia Benner's theory, from novice to expert, as the foundation for the project.

At this point, the DNP project had a theoretical basis and needed a model for change. The ACE Star Model of Knowledge Transformation, the model used for the quality improvement project, enabled the discovery of knowledge to be implemented and transformed into practice. The ACE model consisted of five cyclical phases: discovery, summary, translation, integration, and evaluation (Bonis et al., 2007). While planning and implementing the project of using human patient simulation for annual competency validation for labor and delivery nurses, each phase of the ACE model was encountered.

Many variables were significant in planning for the implementation of each phase of the project. First, the institutional review board (IRB) had to approve the project to maintain protection for those subjects participating in the project. Although the project was one of quality improvement, protection of the participating subjects was an important aspect of the project, including future publication options. IRB approval was required before any steps in the implementation phases could begin at the institution. The information provided in the IRB application explained the purpose of the systems change project, as well as the risks and benefits to the participants. The faculty advisor played a major role in assisting and advising Sandy throughout the IRB approval process.

Information throughout the IRB application described the process of implementing the use of human patient simulation for annual competency validation. Although there were no anticipated risks associated with the quality improvement project, there was a minimal risk that staff might experience the normal anxiety typically associated with performance during the annual competency validations. Job security would not be compromised as a result of poor performance during the annual competencies. If a nurse did not perform at a level to meet the goal of 100% compliance, the staff nurse would be provided with review information and given more opportunities to repeat the simulated experience until the desired performance was achieved. However, the projected positive outcome would be an increase in the nursing staff's confidence in their management of obstetric emergencies, especially with high-risk, low-volume patients.

All labor and delivery nurses were required to participate in the annual competencies. Data collected for competency validation were kept confidential. The results of the successful completion of the annual competencies were stored in the nurse's personnel folder to maintain confidentiality. However, some level of privacy and confidentiality was lost because of group participation, evaluation, and debriefing.

Approximately 60 labor and delivery nurses participated in the annual competency validation. The anticipated outcomes of the annual competency validations were positive. The goal of 100% compliance was met with each labor and delivery nurse. Human patient simulation provided an excellent learning opportunity for the labor and delivery nurses.

Continuous quality improvement was evident throughout the entire systems change process. The project provided benefits to both the hospital staff and their obstetric patients. Because the purpose of the project was one of quality improvement, the Institute of Medicine (IOM) aims were an important factor in the project, although each aim was not distinctly defined in this case. In general, the IOM aims included patient-centeredness, safety, effectiveness, efficiency, timeliness, and equity (Institute for Healthcare Improvement, 2009). Each aim was addressed in Sandy's quality improvement project, but the aim of safety was clearly a focal point throughout the implementation of the project. The project also incorporated evidence supporting human patient simulation as an effective learning tool for staff nurses. Experience is imperative for nurses to develop critical thinking skills and achieve competence. Once critical thinking skills and proficiency of psychomotor skills have been established, patient safety can be ensured.

The component was in place from the initial meeting with the nurse manager and nurse educator. Many inquiries were made during the project regarding different strategies for future simulated experiences for annual competencies. At the completion of the project, educational information and modules for the educator, as well as the staff nurses, were given to the unit educator for future use of the simulator. Information included in the modules dealt with pathophysiology, incidence, assessments, interventions, evidence-based practice articles, and case studies related to each of the obstetrical emergencies. Additionally, general information regarding The Joint Commission, accreditation, NPSGs, and elements of performance were included in the nurse's educational module.

Additional training and information were provided for educating the unit educator to maintain the sustainability of the project. Hands-on training, ranging from assembly of the simulator to moulaging to running scenarios, was provided to enable the unit educator to become proficient in using the simulator. A user manual was also developed for the unit educator, which included written and pictorial guides for future use.

Finally, several evaluation tools were developed and used for various aspects of the project and given to the nurse educator. One evaluation tool was developed to evaluate competence for each nurse with the obstetric emergencies as well as the chosen NPSG to be completed by the unit educator. Upon completion of the

simulated scenarios, the staff nurses were given another evaluation tool to evaluate the experience during the scenarios.

Because it was well received by the institution and all of those involved, Sandy's project had great potential for sustainability. The labor and delivery unit educator planned to continue to use human patient simulation for annual competency validations. Also, other departments in the hospital were interested in using human patient simulation for various educational needs. One very exciting possibility was interprofessional use of human patient simulation, which was under discussion by the departments. The dissemination of findings, a very important factor, was also guided and supported by the faculty advisor. The project was presented at various conferences and introduced to surrounding hospitals.

The guidance by Sandy's advisor throughout the entire process of the quality improvement project and systems change was critical to the project's success. Without the direction and education provided by the advisor related to evidence, the project's theoretical basis, the project plan, the IRB process, analysis of data, and dissemination of the results, the project would not have had a solid foundation or the ability to maintain sustainability. Incorporating the use of human patient simulation for annual competency validation in a labor and delivery unit was a process that encompassed multiple strategic methods and various models. Obstetric emergencies are rare occurrences, but the nursing staff must be competent and maintain the ability to respond to them quickly and appropriately. The advisor, Sandy, the nurse educator, and the nurse manager firmly supported the use of human patient simulation for annual competency validation. The simulated scenarios assisted in bridging the gap between real patients and the learning opportunities for the labor and delivery nursing staff. Additionally, the incorporation of the NPSGs into the simulated experiences assisted the organizations in maintaining compliance with The Joint Commission standards.

### **Reflection Questions**

- 1. What are the benefits of completing a needs assessment before developing a clinical project? Consider which parts of a needs assessment may benefit you later as you engage in a clinical project.
- 2. How might a faculty advisor guide students throughout the clinical project?
- 3. How does completing the IRB process benefit the clinical project and its sustainability?

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# Praxis: The Benefit to the Chief Nursing Officer as Projects Are Planned and Implemented

Wes Garrison

In any professional discipline, the overarching question of what guides practice is essential to understanding the framework within which practice occurs (Cody, 2013). Many factors influence the integration of theories and experiences that form the practice choices of an individual, and understanding the interrelation of those factors allows the individual to pursue knowledge, articulate practice, and communicate ideas more effectively. The process of integrating those theories and experiences is the underlying concept of praxis. As explained by Rolfe (1993), praxis is an ongoing, circular process of reflection in action whereby theory and practice continually inform, modify, and guide each other. Understanding the integration of informal theory and practice, a nurse executive can advance the profession and improve practice through a continual, circular process of reflection and action as projects are planned, implemented, and evaluated.

As the healthcare industry is evolving into a more technology-driven and resource-limited business model, the role of the nurse executive is becoming more business-focused. Certainly, clinical knowledge and skill are required for effective leadership of a nursing workforce, but a nurse executive also must understand how to direct quality care efficiently and communicate and collaborate effectively. Nurse executives must lead quality improvement initiatives to ensure cost-effective delivery of quality care (Carlson & Staffileno, 2013). Using relevant influences to form a nursing praxis to guide leadership allows for a structured, intentional approach to practice. By intentionally operating within the framework of a personal praxis, a nurse executive will continually improve leadership and advance the profession as projects evolve.

## Ideological, Theoretical, and Ethical Influences

For a chief nursing officer (CNO), embracing an analytic approach as the primary philosophical viewpoint for practice allows for quantifying and measuring a variety of operational metrics. Based on empiricism, an analytic approach involves quantifiable data and definable results (Monti & Tingen, 1999). Empirical data allow a CNO to analyze relationships between quality improvement measures and cost-savings strategies. However, incorporating the continental approach to understand qualitative factors also is important for addressing less quantifiable aspects of nursing care and leadership (Monti & Tingen, 1999). Integrating both the analytic and continental approaches into leadership practice provides for a greater understanding of the nursing meta-paradigm and other relevant theoretical influences that guide projects throughout all phases.

From the broader framework of Fawcett's (1984) nursing meta-paradigm, Orem's (1991) Self-Care Deficit Nursing Theory (SCDNT) acts as an instructive guide for teaching organizational goals for improving patient health and decreasing readmissions. McMahon and Christopher's (2011) middle-range theory for teaching the aesthetic skill of nursing presence is also an excellent guide for the continued education of nurses. In addition to nursing theories, the field of complexity science offers important guidance for practice in the explanation and understanding of complex adaptive systems. CNOs must recognize the potential butterfly effect when even a small project or practice change is implemented (Florczak et al., 2012).

Operating within an ethical framework is also imperative to effective and professional nursing practice. The theory of virtue ethics offers an appropriate context for professional practice. Focusing on the qualities of compassion, discernment, trustworthiness, integrity, and conscientiousness, virtue ethics provides a guideline for developing the qualities necessary for professionalism and for integrating those qualities into practice (Chism, 2013). In any leadership activity, a CNO must recognize the importance of instilling in nurses the ethical standards required for practice. By integrating the virtue ethics framework with the hospital-specific code of ethics, a nurse executive can communicate effectively to the nursing workforce the ethical expectations for practice. Keeping in mind the relevance of an ethics framework and its transparency is also pivotal as any project transpires.

### **Utilization of Framework: A Case Study**

Understanding the benefit of a nursing praxis can be demonstrated by analyzing a CNO's personal praxis (**Figure 1-1**) in the context of the phenomenon of interest of nurse residency programs (NRPs) for new graduate registered nurses (RNs). Analyzing empirical data related to a high level of RN vacancies across the hospital, the CNO quantified the operational impact of the vacancies. Hospital volume was increasing, but the size of the RN workforce remained stagnant. Hospital policy required any RN being hired to have at least 2 years of RN experience. Available qualitative information revealed engagement and organizational loyalty within the existing RN workforce were decreasing because of the work demands caused by the vacancies.

Understanding the ethical obligation to provide quality care and the stewardship responsibilities for leading nursing practice, the CNO discerned the need to change the policy on hiring only experienced RNs. This change required implementing an NRP to address the needs of RNs transitioning to professional practice. In designing the NRP, the CNO stressed the importance of communicating the SCDNT for health promotion and the use of nursing presence theory to guide training simulations. Understanding the complex, adaptive nature of the hospital, the CNO anticipated a positive butterfly effect as the NRP eliminated vacancies, increased RN engagement, and improved the quality of care. As the NRP proceeded, the CNO planned to collect data on the effects of the NRP and determine which data will influence the CNO's praxis (Figure 1-1) for future guidance.



Figure 1-1 Chief Nursing Officer Framework for Praxis

## **Reflection Questions**

- 1. What are two benefits of praxis to nurses assigned to clinical and administrative roles?
- 2. How can you use the benefits of praxis to enhance your nursing knowledge and practice?

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## **Effective Virtual Teams**

James L. Harris

To nurture innovation, creativity, and measurable outcomes, cultures are required that are supportive of virtual teams. Virtual teams offer opportunities for collaboration and generation of knowledge from different individual, organizational, and geographical perspectives. The Department of Veterans Affairs Office of Nursing Services is an excellent example of how virtual project teams are formed, work collaboratively to standardize standards of practice, spread innovation, and generate evidence (Thorne-Odem et al., 2015).

Virtual Field Advisory Committees (FACs), composed of clinical experts and staff from 152 Veterans Affairs Medical Centers, were formed, and a program coordinator provided national oversight. Each FAC identified key priority areas within the specialty area (gap analysis) and developed projects that focused on improving veteran care and providing tools and resources for staff in order to meet care needs. Outcome metrics were identified in order to track team effectiveness and outcomes that were aligned with national performance measures. FACs collaborated with multiple internal and external stakeholders, quality indicators, and competency-based assessment processes.

As indicated in this brief example, virtual teams provide value to organizations and patient care, and they engender staff engagement. Although this was only one example, numerous healthcare organizations form virtual teams daily and collectively engage interprofessional teams to meet benchmarks and improve care.

### **Reflection Questions**

- 1. How can you effectively contribute to a virtual team?
- 2. What are the key determinants of an effective virtual improvement team?

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## Increasing Therapeutic Communication Skills Using Behavioral Simulation

**Bettina Riley** 

Based on an identified need to improve therapeutic communication skills in an undergraduate nursing course, behavioral simulation was used. This was based on one component of a team-based learning (TBL) strategy, the use of active learning versus passive learning techniques to increase knowledge (Michaelsen et al., 2008). Parmelee (2010) purports that TBL improves knowledge and critical thinking among nursing students.

The behavioral simulation session focused on a specific patient safety goal (i.e., depression with suicide risk) and was linked to suicide risk assessment, which was cited as a major patient safety goal by The Joint Commission (2017). The behavioral scenario emphasized the importance of suicide risk assessment, building on the establishment of a trusting, therapeutic nurse-patient relationship. The simulation experience utilized standardized patients trained in a prepared scenario before the event. Training emphasized depression criteria with suicidal ideations. The participants included 96 undergraduate nursing students who were involved in a presimulation educational TBL activity on suicide and suicide risk assessment. Next, individual students interviewed a standardized patient for purposes of completing a psychiatric assessment focused on suicide risk. Students were rotated through eight simulation rooms, and students and peers videotaped the assessment for future review. Debriefing sessions, led by psychiatric mental health faculty, followed each behavioral simulation. The purpose of debriefing was expression of feelings and exploration of benefits for clinical application. Student and faculty evaluations of the TBL, simulation, and debriefing experiences have been very positive. Positive evaluations by students centered on the ability to have a safe practice zone for acquiring assessment skills, particularly in sensitive-topic areas—over 93% of nursing students expressed more confidence in the ability to assess suicide risk, and over 90% of the students found that the standardized patient scenario, combined with the TBL, was helpful and effective. Anecdotal findings from faculty included comments suggesting that when students went to community and inpatient clinical sites after the behavioral simulation, they exhibited greater confidence and knowledge in clinical assessment of suicide risk and therapeutic communication skills.

### **Reflection Questions**

- 1. What are other components of TBL that can be developed to enhance learning and competency development in baccalaureate nursing students?
- 2. In what ways can TBL activities be evaluated?

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### Increasing Access to Mental Health Treatment Using the Internet: A Quality Improvement Project Proposal

Jennifer Anne Blalock

### Background

Although the Affordable Care Act (ACA) continues to face challenges, it nevertheless has presented an opportunity to improve mental health treatment. Underfunded and underutilized mental health treatment is desperately in need of change. The age of technology and widespread use of the internet present a new avenue for access and mental healthcare delivery. Rural populations will be able to receive more efficient and timely care.

Han et al. (2015) report that in 2012, approximately 9.6 million Americans older than the age of 17 were diagnosed with a serious mental illness (SMI). Depression alone affects 35 million Americans older than 65 years of age (Golden &Vail, 2014). Richards et al. (2015) acknowledge that depression is among the leading causes of disability worldwide, creating a significant economic burden, and the gap in treatment for depression is estimated to be 56.3%. Several contributing reasons are identified, including stigma associated with mental health treatment, physical and financial access to care, and availability of services. Costs of treatment for patients with an SMI are significant. However, the cost of preventive care, such as therapy and medication management, is considerably less than the cost of inpatient care or criminalization of those left untreated. According to Stensland, Watson, and Grazier (2012), the average hospital's cost of care delivery was highest for patients with Medicare and lowest for those who were uninsured. To use two common diagnoses, treatment for depression ranged from \$6,990 for 8.4 days to \$3,616 for 4.4 days, and alcohol use disorder treatment ranged from an average of \$5,908 for 6.2 days to \$4,147 for 3.8 days. Hoban (2013) compared the cost of mental health treatment, including medication management and outpatient services, for those on Medicaid to the cost of arrest and involvement in the criminal justice system; those arrested cost the government an average of \$95,000 during the study period compared with \$68,000 for those not arrested and channeled into mental health treatment. Although treating mental illness is expensive, the cost of NOT treating mental illness is more so. With this and similar studies in mind, a proposal to increase outreach and provide new access to care is presented.

### **Addressing the Treatment Gap**

As healthcare providers in the United States struggle to meet the needs of mental health consumers, the use of the internet, or eMental Health, has become an attractive option. Batterman et al. (2015) reviewed four models of eHealth implementation in the community and found that all four were effective in the treatment of depression. ePrograms demonstrated several advantages to patients, particularly in the availability of services and increased access. By providing a common point of access, patients were able to locate both free and paid services in the community,

allowing for self-referral without initial contact with a primary care physician (PCP). Handley et al. (2014) provide further support for internet-based mental health treatment, noting that such services make treatment options available to rural communities that would otherwise lack access to a mental health provider. Their results indicate that eHealth is as effective in treating mental health disorders as face-to-face contact and reduces the anxiety some patients experience in these interactions. Not only do web-based programs increase care access, but they also improve the timeliness of treatment, as there is no wait time and adherence to normal business hours is not necessary.

### **Proposed Project Implementation**

Psychiatric providers will have the option of utilizing web-based services in several ways: continuation of already established, ongoing therapy; as a component of aftercare treatment upon completion of intensive services; and provision of a 24-hour crisis line to direct new patients to web-based services as determined appropriate by telephone triage. More patients can be treated, including those without access to transportation or those hesitant to seek face-to-face treatment. Use of eServices will be established on a sliding scale and fee-for-service copays based on insurance providers, providing additional revenue. Free services can also be included, funded by endowments or special purpose funds.

A business model with three layers will be developed, creating an eMental Health program: the patient layer (patients or payers that use the service), the operational service layer (operations, equipment, management, training, legal, billing, reimbursement), and the infrastructure layer (the telecommunication itself, including internet and wireless services). Implementation of eMental Health services can be integrated as part of the already-existing services as part of a behavioral health program, which encompasses two residential facilities as well as outpatient care.

For successful delivery of this relatively new concept, a development team will be necessary. This team will incorporate a variety of practitioners, including psychiatrists, medical physicians, nurses, and social workers, as well as a clinic manager, hospital administrator, and information technology (IT) development and support staff. Practice guidelines will be developed (hours of operation, policies specific to web interactions, etc.). Although these can run parallel to and include those already in place for existing psychiatric care facilities, attention to internet-related confidentiality must be considered. A new policy will be written. IT staff are critical in the development of web-based program components, with input from direct-care users, and in identifying costs and limitations. Design of the program will be done within the existing computer programs, thus reducing the cost of new software and licenses. Training time for staff already familiar with the platform will be reduced. Having an electronic medical record operational will strengthen the success of the eMental Health program. Once fully operational, with outcome measures that support continued use of an eMental Health program, additional delivery methods can be considered and employed, such as smartphone applications. Nicholas et al. (2017) found, in a study of individuals diagnosed with bipolar disorder, that the mobility of smartphone apps further increased accessibility, was cost effective, and allowed more client anonymity.

#### Evaluation

The structure of this proposal includes the use of computers and Wi-Fi, both public, such as those available in libraries, and those located within the patient's home. Staff involved in the program will utilize technology provided in on-site facilities. However, some home access may be granted as determined by the program director. Additional staffing will be needed to address the increased referrals anticipated from the implementation of eServices. The numbers required will likely increase over time as use of the program broadens. Use will be monitored to determine how many new staff are required. Initially, patient interactions will be managed with current staff plus one new psychiatrist, two family psychiatric nurse practitioners (FPNPs), and two additional psychiatric RNs. Web-based client interactions will be a portion of total patient contacts, the majority of which will remain face-to-face. Web visits will be billed at a lower cost than face-to-face visits, with some patients receiving pro bono services.

Process measures of the eHealth program will include tracking referrals and comparing data collected at three points: before program initiation, during the implementation phase, and later, during the sustainability phase. It is important to know not only if the number of referrals increased but also the number of patient contacts within the website. User-friendliness is a critical measure for web-based interactions and should be assessed regularly to ensure ease of use by patients and staff. The use of patient-satisfaction surveys will be critical in determining this aspect of the program. These can be mailed for completion or "attached" at the end of an internet session. Staff surveys will be utilized to determine areas that work well and those that require modification.

More important than use alone, the program needs to be effective and increase access to mental health services. The outcome of the program will be determined by comparing the number of patient psychiatric contacts before initiation of web-based services to those after implementation. This should be calculated at 6-month intervals for the first 18 months. The number of crisis inpatient admissions must also be compared to determine if web-based services produced a reduction in admissions by providing more access to psychiatric care by 50%. Pre- and postevaluations by patients will be conducted to gain an understanding of what patients found helpful and what needs to be improved. In addition, pre- and postsymptom assessment will be completed to determine effectiveness.

The return on investment for eMental Health services should not be anticipated as a black-and-white, financially based result. Initial investment costs could take several years to demonstrate cost savings related to decreased inpatient admissions or revenue created by increased patient contacts. Rather, the main purpose of the investment is enhancement of care quality. Swensen et al. (2013) note four instances of poor care quality that can be improved with this program: overuse care, defective care, inefficient care, and underuse care. By broadening effective psychiatric services, all of these can be addressed among individuals with mental health diagnoses. Overuse of inpatient psychiatric crisis admissions can be reduced, more effective and efficient care can be provided, and access to care can be increased. Although these changes, over time, have the potential to reduce costs to Medicare, Medicaid, and private insurance, the reason to adopt the program is not financial gain. This initiative is recommended to improve quality of care, not produce a financial return. By investing more in patients, genuine care and concern for patients' health outcomes will be evident, contributing to an improved reputation in the community and, ultimately, gaining increased credibility and potentially more patient flow and revenue as a result.

## Conclusion

Web-based services provide a new opportunity for growth in the initial and ongoing treatment of patients with mental health diagnoses. Although use of this form of treatment remains in the introductory phase, the capacity to further the development of this approach is promising. Providing mental health care to a larger portion of the population by significantly increasing access, particularly for patients hesitant to engage face-to-face, those in rural communities, or those simply lacking transportation, is a valid rationale for the proposal. The timeline may vary, but it is anticipated to take approximately 18 months from the first team meeting to a full live rollout. Financially, the return on investment cannot yet be clearly defined, although in time reduced cost for services and increased revenue are anticipated. Mental health is a global issue and one that remains underfunded and underrecognized. With the inception of web-based services, the chance to become an innovator and a leader in the rapidly changing world of health care is possible. More importantly, many more patients can benefit from mental health treatment that was previously out of reach.

### **Reflection Questions**

- 1. Consider that the mental health clinic where you are employed has experienced a 40% face-to-face missed-appointment rate. What options would you propose to the program director and why?
- 2. Reflect on a change in an organization. What are key considerations that resulted in the success or failure associated with the change, and why? What would you propose to improve the change?

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