CHAPTER ONE

Key Foundations of Successful Project Planning and Management

James L. Harris

Chapter Objectives

1. Differentiate between a project, a plan, and their management.
2. Prioritize needs to support a project plan and program sustainability.
3. Combine the components of project planning to design a value-based program.
4. Identify requisite skills and tools for the development, initiation, evaluation, and dissemination of quality improvement projects and their continuous management.
5. Generate processes necessary to manage individuals and system-wide projects and teams in virtual environments.

Key Terms

Continuous quality improvement
Management
Project plan
Project management
Stakeholders
Sustainability
Teams
Value
Virtual environment

Roles

Communicator
Designer
Educator
Leader
Manager

Professional Values

Integrity
Patient-centeredness

Core Competencies

Analysis
Appreciative inquiry
Assessment
Communication
Critical thinking
Emotional intelligence
Evidence-based practice
Leadership
Integration
Risk anticipation and mitigation
Systems thinking

Introduction

Regardless of the industry, transformation is central to the future success of a global economy. What was once merely pondered by many in the healthcare arena has evolved into sustainable project plans and value-based programs that are driven by the basic instinct of survival. New vistas of appreciative inquiry await a mindful revolution of individuals and global leaders dedicated to seamless integration and coordination of projects that will ultimately benefit the health and economic well-being of society (Robert Wood Johnson, 2014).

As individuals consider the daunting task of improving health and well-being at the micro level of a global society, they must recognize that having a project idea and actually implementing it are two different things. Understanding the scope of a project, the stakeholder involvement, team dynamics, and the actual requirements can lead many to become daunted and enter a state of paralysis. In the healthcare industry, the path to an innovative project that will add **value** from the micro level and potentially globally centers around six elements as identified by the World Health Organization (WHO, 2008):

1. Addressing the service to be delivered
2. Financing
3. Governance
4. Workforce
5. Information systems
6. Supply management

Successful planning and implementation of any project are supported by the notion that effective system strengthening 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).

This chapter focuses on differences in a project, the project plan, the project's **management**, and strategies used to prioritize project needs. Linking value to the project design, requisite skills, and tools necessary for a successful and sustainable project are then described. As work environments continue to become more virtual, managing project **teams** remotely also becomes a concern; such virtual management is discussed in this chapter as well.

Projects, Project Plans, and Project Management Defined

The genesis of any project is planning, but ongoing management of the project is essential as well. All projects have a beginning, an end, and a duration, which collectively constitute the project's life cycle. Project outcomes may be, for example, adopted in the form of evidence-based guidelines or seen as opportunities to conduct additional inquiry and validation studies prior to including 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 key to orchestrating and managing a project from inception to completion (Lewis, 2011).

What is a project? According to the Project Management Institute (2013), a project is a temporary endeavor focused on producing a unique operational entity (e.g., a product, a service, or a result differing from that obtained in prior projects). Juran (1992) describes a project as a problem scheduled for solution. While the word "problem" may elicit a negative emotion, it does not necessarily imply negativity. Outcomes can create a positive problem, such as a new product or clinical procedure directed at reducing urinary tract infections among elderly individuals or addressing other clinical phenomena. In any event, the project should be based on the notion of accomplishing a goal for systems, **stakeholders**, and/or customers.

When does the project begin? A series of 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.

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 to a work unit or an entire system. According to Tuthill (2014), the project plan includes a budget, a work and activity breakdown and schedule, an overall project schedule, and any supporting documents. Haughey (2009) identified other, but 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 planning captured by 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 Book 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.

While 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 packages, 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 discussed 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. Executive (monitors, control, and cycle of effort(s)
4. Project closure (training, operations, and support)

Project planning across the life cycle should also take into account the project's feasibility, value, key drivers for success, skills and tools needed, and processes whereby project teams may be managed in **virtual environments**.

Prioritizing Needs That Support Project Plans and Programs

The challenges facing the healthcare industry today are complicated by rising expenditures, quality and safety concerns, changes in service needs and expectations, new technologies, provider shortages, and care reform legislation, to name a few of the myriad influences in this environment. In such a complex and rapidly changing landscape, identifying what needs to be done and determining how to quickly accomplish a task is essential if projects are supported, sustained, and manageable, and if they are to truly impact organizations and programs. To

ensure effectiveness of a project, one must start by prioritizing the primary need and any evidentiary basis that underpins a need for change and rapid response. Otherwise, the feasibility of any project will be jeopardized from its inception.

Which steps should a student or project team take to prioritize needs? An assessment of the environment is an initial step, which is then followed by development of a strategy. Strategy planning must include consideration of any unintended consequences of the project. This requires the identification of "what if" scenarios and solutions with projected and/or desired measurable outcomes.

Assessing the Environment

New circumstances require a "new state" that is not known and must emerge from development of a vision, innovation, and learning. Such an effort requires a fundamental shift in mindset, organizing principles, behavior, culture, and infrastructure. A critical mass within the organization or work unit must operate from a new mindset and behavior if change is to be achieved.

A prudent individual who is beginning to develop a project plan must also be aware of the constancy of change. Change is not necessarily a linear or sequential process, but rather may appear at any point during an environmental assessment. Scholars have gleaned much from studies of complex adaptive systems in relation to change. Specifically, change cannot be specified and managed in detail. Small changes in critical elements or leverage points, however, have the potential to engender large changes. Leadership, values, and culture are important for achieving any change, whether that change is implemented by a student engaging in a capstone project or through a system-wide initiative (Plsek & Greenhalgh, 2001). Change can have a profound impact on developing the best strategy necessary to initiate and complete a project. Being attuned to emerging conditions, forces, and trends may provide an individual with insight into the convergence of subtleties that create and affect work environments and the readiness for change (Porter-O'Grady & Malloch, 2015).

When assessing the environment, two fundamental activities should occur sequentially: an assessment of strengths, weaknesses, opportunities, and threats (SWOT analysis) and a gap analysis. Input from both the SWOT analysis and the gap analysis are used in all systems. Output from one type of analysis can be

Table 1-1 SWOT and Gap Analysis: Uses in Health Care

SWOT Analysis	Gap Analysis
Hospital comparison data	Patient discharge by 11 A.M.
Eliminate hospital-acquired pressure ulcers (Zero HAP Program)	Reduce emergency department wait times by: • 15% in Quarter 1 • 75% in Quarters 2–4 • 90% for fiscal year
Build comprehensive cardiac care center	Streamline waits for elective cardiac studies

used as input for the other, and vice versa. In completing the SWOT analysis, all levels (micro, meso, and macro) must be examined, as information from each area can provide valuable insights when delimiting the scope of the project and strategies to control positive and negative factors affecting success.

Closely linked to the SWOT analysis is the gap analysis, in which individuals seek to establish the root problem and collect evidence that supports the need for engaging in the project. A gap analysis compares actual performance with potential performance, such as that demonstrated via performance measures. This type of analysis may also be referred to as a needs assessment. During the gap analysis, the current state of the system, factors needed to reach a target or benchmark, and a plan to fill the gap may be identified. This type of assessment is very beneficial in all systems, but especially in today's healthcare arena, where the impetus is on identifying areas with performance deficits that impact resource allocation, planning, productivity, and quality indicators.

Both SWOT analysis and gap analysis are useful to a system, and their findings can be drilled down to identify a common denominator. Indeed, both types of analyses can be used in different contexts with different meanings. **Table 1-1** describes the different uses of each from a healthcare perspective.

Strategy Development

Upon completion and analysis of the SWOT and gap analysis, the strategy is selected and developed to address the priority need(s). As noted by Lewis (2011),

strategy is the overall approach to a problem. Strategy is very important because it is often possible to generate multiple alternative solutions to a problem. It is not uncommon for students to take away differing ideas from assessment data and then find themselves conflicted about which problem to tackle first. Should the problem selected be of personal interest, rather than based on system needs? This type of question is why strategy is so important.

In the situation where several problems are identified (based on personal preference and system need), one technique is to rank order them by engaging a team for their prioritization. Engaging others in the process engenders buy-in and ownership of a successful project. Consideration should be given to the environmental assessment, various variables, and data points available in this process.

The selected strategy should also address various levels of need—micro, meso, and macro system needs—depending on the scope of the project. Many healthcare systems today maintain a list of quality improvement projects at a variety of levels needing intervention, as suggested by root-cause analysis findings, internal focused reviews, and/or external reviews. Regardless of whether a "wish list" of projects is provided, any student engaged in a capstone project should complete the environmental assessment and strategy development steps. This creates opportunities for gleaning new information and learning more about the process—knowledge that will prove useful when the student is engaged in or leading projects.

As previously stated, anticipating unintended consequences and managing them to achieve measurable and desired outcomes are steps that cannot be ignored. Unanticipated and unintended consequences are present in all environments. Many such consequences can be traced to prior decisions and attempts to solve problems without projecting those actions' long-range consequences or providing for risk mitigation. It is human nature to want to do the right thing. Without careful analysis of issues and engagement of stakeholders, however, situations may occur that have deleterious effects. Risk anticipation and mitigation are therefore needed, as is identification of ways to avoid and overcome problems, while preserving the intent and integrity of the project.

Good communication at all levels is a cornerstone of successful projects. Consensus on a final project that is clearly presented and mutually agreed upon is needed before the project starts. Many individuals and project teams present

a succinct project plan or business case in a concise format. Gaining the support of team members and all stakeholders early on in the process becomes essential to the ongoing sustainability of the project, as ultimately programs depend on both individual and collective input. Milestones must be detailed and met, though these points may be communicated in different ways.

Value-Based Project Attributes for Project Sustainment and Management

The healthcare system in the United States remains the most costly in all developed countries, with healthcare expenditures expected to increase from 17% to 20% of the gross domestic product by 2020 (Centers for Medicare and Medicaid Services, 2010). Regardless of the country, however, all health systems are challenged to create greater value from the resources dedicated to health care (Institute for Healthcare Improvement [IHI], 2014). Porter-O' Grady and Malloch (2015) contend that clinical work processes today must derive value from a purpose directed toward a desired outcome and emphasize work that achieves real value, rather than focusing on the work itself. Achieving high value for patients must be the primary goal for any project. If value improves, all stakeholders can benefit, and the economic sustainability of programs and the healthcare system will, in turn, increase (Porter, 2010).

Since value is expressed relative to costs, efficiency and accountability should be shared among all individuals involved. This reinforces the need to involve others in any project, concentrating on integrated activities where all stakeholders are accountable for value-based outcomes (Porter, 2010). Projects planned with the IHI Triple Aim (IHI, 2014) in mind can optimize health system performance and engage other stakeholders. But why consider the Triple Aim when planning projects? The dimensions of the Triple Aim—namely, improving the patient's experience of care, improving population health, and reducing the per-capita cost of care—are foundational to harnessing a broad range of community determinants of health and services, where others are engaged and a seamless journey of care follows. As projects are planned and all components are considered, adopting a strategy that will achieve the Triple Aim can

be realized as solutions to problems are identified further upstream, beyond the inpatient setting. Fundamentally, the value proposition of the project, thought of mathematically as "Value = Quality/Cost," extends beyond a unit or acute care setting to community-based care (Lighter, 2011). Ideally, the burden of illness is decreased through coordinated care and the per-capita costs are stabilized or reduced.

Well-designed projects with measurable outcomes solidify evidence-based practice and support further inquiry. One means to project value that is commonly used by organizations, accrediting and certification agencies, and students is the six industry services characteristics highlighted by the Institute of Medicine (IOM):

1. Safe
2. Effective
3. Patient-centered
4. Timely
5. Efficient
6. Equitable (IOM, 2001; Steinwachs & Hughes, 2008)

Regardless of how small or large the project is, all well-developed and well-executed projects are driven by key markers of value and success. These key markers include innovation, inclusiveness, an evidence-based foundation, and transparency. New innovative practices and technology are spurred daily by individual and group brainstorming, which often serves as the originating point for value-driven projects that sustain effective programs. Including others in any project idea and design can only enhance outcomes and provide more stakeholders who want to be a part of the planned change. Otherwise, enthusiasm for projects may deteriorate rapidly, and what was initially recognized as a need or gap may become lost in the shuffle. All projects and their design should have solid supporting evidence and be guided by sound methods with rigor, keeping in mind the strategy and ultimate deliverables. Transparency cannot be emphasized enough with any project plan, design, implementation, and dissemination of outcomes. From a project's inception through its end point, remaining open and communicating progress engenders the spirit of ownership necessary for the final outcomes of the value-based project to be readily adopted by programs.

Skills and Tools as Contributors to Meaningful Projects

In the fast-paced, ever-changing healthcare landscape, a plethora of skills and tools are needed throughout the life cycle of a project, but especially quality improvement ones. 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 dance of leading, engaging, and inspiring others toward greatness is one of the many skills needed by a project designer and manager. Investment in skill development and core competencies for project planning and management is central to shaping business outcomes in all industries, but especially 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 (Gosbee & Anderson, 2003). 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 applicable.

The skills and tools needed for success with a project include an array of critical techniques and approaches. While there is no singular set of skills and tools that guarantees success, some options are mutually beneficial to individuals and organizations. The process for instilling these skills and tools into practice requires first understanding each and then linking it to goals and measurable, sustainable outcomes. Examples of skills and tools will be provided in this text, keeping in mind none is necessarily better than—or a replacement for—another.

Throughout an improvement project, keeping activities focused on the customers is important, especially when the organization depends on those customers for revenue and the majority of its market share. When customers are 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 (understanding gleaned through the assessment process) and then to communicate those needs and expectations throughout the organization, while measuring value and reporting results.

Every project requires a designated leader to establish the direction of and ultimate goal for the project. While 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 inspire others and involve them in both the current project and future projects is a mark of transformational leaders, who continually encourage and recognize others' contributions.

Being an effective communicator will engage others and provide the leverage necessary to initiate and complete projects in an expeditious fashion. However, this outcome will not occur without the ability, awareness, and sensitivity to address cultural differences in today's highly diverse workforce. All individuals process information differently due to their different cultural backgrounds and beliefs. Being aware and sensitive can facilitate progress on projects (Seibert, Trejo, & Zimmerman, 2002).

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 individual competence, interpersonal skills, flexibility, accommodation, creativity, strong work ethic, and an outcomes focus, 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 gentle 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 virtual team 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:

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.
5. 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 his or her 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 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.

Virtual teams hold much promise 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 that result in an attainable goal.
- Projects may be limited to the micro system or may extend to the meso and macro system 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 that include the Triple Aim goals will benefit both systems and stakeholders.
- Envisioning a futuristic state opens up 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.

Reflection Questions

1. Reflect on your current work environment and identify how leaders within the organization impact project successes, sustained practice change, and spread of evidence.
2. Identify and discuss a technological advance that may assist you as a capstone project is developed and implemented. Which technology might help you evaluate the project's impact within a healthcare system?
3. Which attributes contribute to a virtual project team's success? How can you ensure positive changes and outcomes as the project leader?

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Case Exemplar

■ CASE STUDY 1

Guidepost for Students Selecting a Meaningful Capstone Project Topic

Jacqueline 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. She 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, and Sandy was involved in that program from the 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 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 while causing no harm to live patients. If an error occurred, the students would be able to see the immediate reaction of 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 the completion of the needs assessment, it was evident that the institution's faculty were already integrating medication administration in each simulated scenario. 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 use of human patient simulation for educational purposes. One area hospital and 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 six-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 (TJC) would be evaluating the hospital soon and the nursing staff was very weak in knowledge related to the National Patient Safety Goals (NPSG). 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 due to its many different components. The proposal of annual competencies, including NPSG, 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 NPSG 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 NPSG were in existence. Four NPSG 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 (TJC, 2008).

Sandy then began working closely with her faculty advisor to make the project both meaningful and sustainable. What theory would be the driving force for the project was a question approached first by the advisor. 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 was the model used for the quality improvement project. It enabled the discovery of knowledge to be implemented and transformed into practice. The ACE model consists of five cyclical phases: discovery, summary, translation, integration, and evaluation (Bonis, Taft, & Wender, 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. Approval by the IRB was required to be obtained 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 the nurses 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 successful completion of the annual competencies would be stored in the nurse's personnel folder to maintain confidentiality. However, some level of privacy and confidentiality would be lost due 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 include 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 of **sustainability** was in place from the initial meeting with the nurse manager and nurse educator. Many inquiries were made during the project regarding different strategies to incorporate into 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, National Patient Safety Goals, 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 National Patient Safety Goals 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 prior to 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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CASE STUDY 2

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

Frank 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, 2014). 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

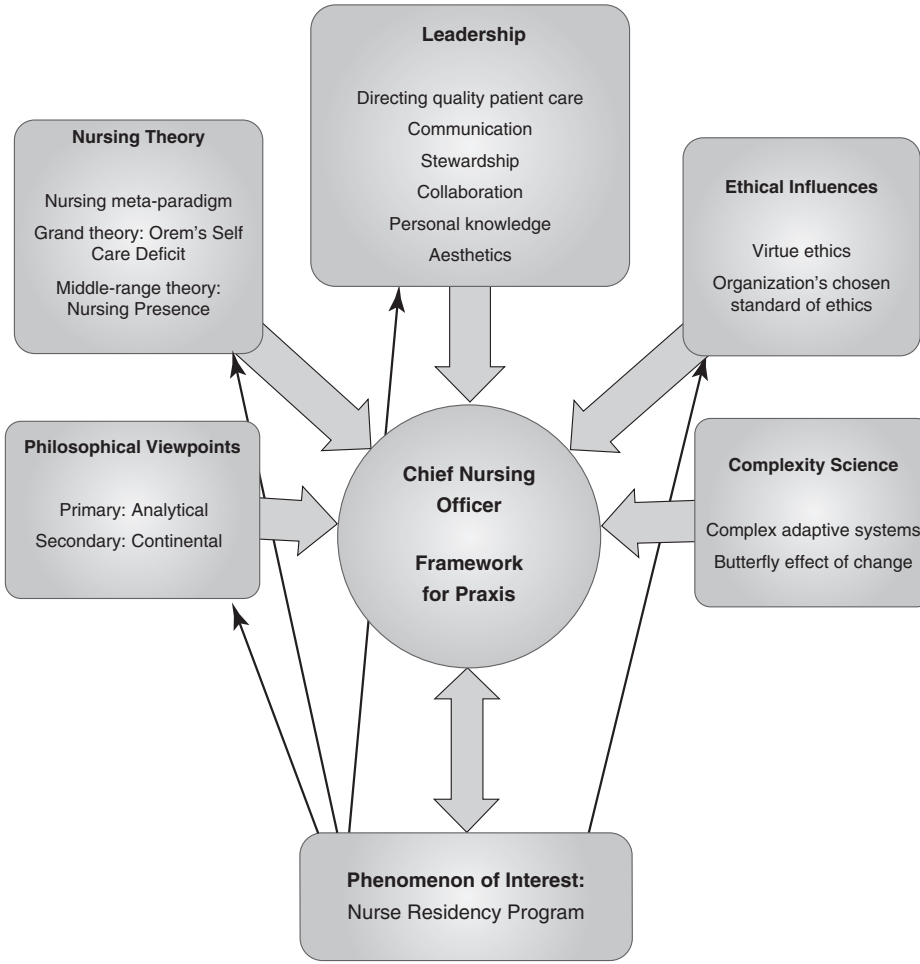
For a chief nursing officer, embracing an analytic approach as the primary philosophical viewpoint for practice allows for quantifying and measuring a variety of operational metrics. Based on empiricism, an analytic approach involves

quantifiable data and definable results (Monti & Tingen, 1999). Empirical data allow a chief nursing officer 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 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 also is an excellent guide for 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. Chief nursing officers must recognize the potential butterfly effect when even a small project or practice change is implemented (Florczak, Poradzisz, & Hampson, 2012).

Operating within an ethical framework also is 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 chief nursing officer 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.

Figure 1-1 Chief Nursing Officer framework for praxis.



Utilization of Framework: A Case Study

Understanding the benefit of a nursing praxis can be demonstrated by analyzing a chief nursing officer's (CNO) 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 two years of RN experience. Available qualitative information revealed engagement and organizational loyalty within the existing RN workforce were decreasing due to 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 a 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.

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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