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## Clinical Fellowship for an Innovative, Integrated BSN-PhD Program: An Academic and Practice Partnership

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### Abstract

Opportunities for research-focused doctoral education must be available to nurses early in their careers in order to ensure the further development of nursing science. Early entry into the research doctorate through an integrated BSN-PhD program is one innovative approach. This approach highlights the value of integrating post-licensure clinical training into the doctoral curriculum. To better prepare innovative nurse scientists early in their careers we developed a clinical nurse fellowship within an integrated BSN-PhD program in partnership with an affiliated health system. The aims of this clinical fellowship are to integrate post-licensure clinical experience with academic preparation, cultivate scholarly reflection on the connections between research and practice, educate nurse researchers to work effectively in interdisciplinary teams, and develop nurses' contributions to health care innovation. Major considerations for the development of similar clinical training opportunities include clarifying and articulating the major aims of the fellowship, enlisting the support of executive clinical leadership, and placing fellows on nursing units with experienced and advanced nursing teams and management that supports the fellowship's aims. We emphasize the fully integrated and collaborative activities, decision-making, and commitment required of both academic and health system partners to successfully implement similar clinical training opportunities.

### Keywords

nursing education; innovation; PhD; clinical training; early entry PhD program

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## Introduction

Nurse-led research has emerged as a source of innovative and impactful scientific inquiry (NINR, 2003; NINR 2015). In order to create a strong cadre of nurse scientists who are able to advance nursing science, opportunities to pursue research-focused doctoral education must be available. Yet, the aging and forthcoming retirement of the current cadre of nurse researchers threatens both the current contribution to science and the development of the next generations of nurse researchers (AACN, 2005). Confronted with a significant shortage of nurse researchers, there is a compelling need for increased innovation in preparing new nurse scientists, leaders, and innovators earlier in their careers. These new scientists will be able to dedicate more years of their career to scientific inquiry and advancement and to educate a sufficient number of new nurses and expand education for practicing nurses.

At the University of Pennsylvania School of Nursing, we created an innovative pathway to the PhD through an integrated BSN-PhD program with funding from the Rita and Alex Hillman Foundation (the Hillman Scholars Program for Nursing Innovation). This innovative BSN-PhD program now exists at three research-intensive schools of nursing — University of Pennsylvania (Penn), University of North Carolina, and University of Michigan. In this highly selective program at Penn, we integrate the curriculum so that scholars are simultaneously undergraduate and PhD students beginning as early as the junior undergraduate year or at entry to the second degree accelerated BSN program. Thus, the Hillman Scholars complete almost one full year of PhD coursework during the BSN. Scholars accomplish this rapid progression through rigorous coursework in two major ways. First, as dually matriculated students in the BSN and PhD programs, scholars replace specific required undergraduate courses such as healthcare policy and research methods with the graduate-level versions of these courses. These courses then fulfill requirements for both the BSN and PhD degrees. Secondly, scholars enroll in advanced coursework in their selected research content area during undergraduate semesters when they have room for electives. This integration streamlines the path to PhD completion, thus enabling completion of the PhD expeditiously. The creation of this integrated BSN-PhD program was received positively by the School of Nursing Faculty at Penn, which was committed to the idea of expanding the pipeline into PhD programs in nursing by increasing undergraduate students' interest in careers in research. The faculty was reassured that no rigor would be sacrificed by facilitating rapid progression.

There was some concern from faculty that these scholars would be sacrificing post-licensure clinical practice experiences, which might adversely impact programs of research. We therefore developed the Clinical Nurse Fellowship, which occurs soon after BSN completion and RN licensure, to facilitate the application of clinical nursing skills and practice independence while scholars are continuing to develop innovative research questions. The Clinical Nurse Fellowship draws on meaningful partnerships between academic institutions and health systems that share a common goal of advancing a culture of scientific inquiry in nursing. Each of the three universities that host the Hillman Scholars Program implements this fellowship somewhat differently, but all are guided by the principles of clinical and research integration, innovation, and inquiry.

## Background

**Nurse faculty shortage**—The American Association of Colleges of Nursing (AACN), National Academy of Medicine formerly the Institute of Medicine (IOM), and National Advisory Council on Nurse Education and Practice (NACNEP) have each recommended strategies to increase enrollment in nursing PhD programs and to streamline academic progression to the PhD (AACN, 2005; IOM, 2011; NACNEP, 2010). These recommendations are motivated in part by the well-documented shortage of nursing faculty. Schools of nursing consistently cite insufficient numbers of faculty as a leading factor in their inability to admit the increasing number of applicants (NACNEP, 2010). In 2005, a special committee of the AACN published a white paper outlining major causes of the faculty shortage and made several strategic recommendations (AACN, 2005). The 2011 landmark IOM *Future of Nursing* report also recommended re-envisioning nursing education to incorporate seamless progression through all levels of education, and set a goal to double the number of doctorally prepared nurses (IOM, 2011). The Hillman Scholars Program in Nursing Innovation was not designed to solve the faculty shortage but rather to develop innovative nurse leaders and scientists early in their careers. However, it certainly contributes to the development of future potential nursing faculty with research doctorates and provides a replicable new approach to PhD education.

**Increasing enrollment in the nursing PhD**—In addition to the shortage of faculty, there is a more specific need to develop research-focused doctorates in nursing. A 2015 IOM update on the Future of Nursing report found that enrollment in DNP programs had more than doubled, from 7,034 to 18,352 students, but enrollment in PhD programs had increased by only 15% over the past 5 years, with 5,290 students currently enrolled in the research-focused doctorate (National Academies of Sciences, Engineering, and Medicine, 2015). This report highlighted the need for more emphasis on PhD program expansion, incentives for nurses to pursue the PhD, and scholarships for baccalaureate-to-PhD programs (National Academies of Sciences, Engineering, and Medicine, 2015). A 2010 report from the AACN Task Force on the Research-Focused Doctorate in Nursing also addressed the establishment of programs that more rapidly transition students to research-focused doctoral programs in nursing and proposed that curricular innovation was needed to better prepare graduates of research-focused programs for faculty and scientist roles (AACN, 2010). The report outlined recommendations to: 1) increase the pipeline of nurses entering PhD programs by promoting early entry into PhD studies; 2) increase the rigor and mentoring of PhD students and graduates; and 3) provide environments for PhD graduates that foster and promote their development as nurse scientists (AACN, 2010).

Also in 2010, the National Advisory Council on Nurse Education and Practice (NACNEP), an advisory council under the United States Health Resources and Services Administration, produced their eighth annual report. This report recommended that the US Department of Health and Human Services and the Department of Education should provide individual faculty fellowships for baccalaureate and masters' prepared nurses to fast track their doctoral education as they prepare to assume faculty positions (NACNEP, 2010). All three of these major reports point to the increasing need to develop new educational trajectories to the PhD that more rapidly produce well prepared nurse scientists earlier in their careers.

The shortage of doctorally prepared nurse researchers has been attributed to various features of the traditional academic progression in nursing. The AACN and others have cited “the historical trend in nursing to enter doctoral education late in one’s career,” and “the ongoing belief of some members of the discipline that achieving competence in practice is an essential prerequisite to furthering one’s education” (AACN, 2010; Yordy, 2006). The average age of students entering nursing PhD programs (in the early 40’s) is far older than in many other disciplines (NACNEP, 2010) which shortens the duration of nurse scientists’ productive research and teaching careers.

**Clinical Partnerships**—One option to expedite earlier entry of nurses into research-focused doctoral education has been to increase opportunities for students to move directly from BSN education to a PhD program (AACN, 2010). However, these programs can be criticized for producing nurse scientists with little or no clinical experience or perspective from which to frame clinically important research questions. The Robert Wood Johnson Foundation and the NACNEP have both recommended that schools of nursing build clinical partnerships to integrate clinical expertise with research training (NACNEP, 2010; Yordy, 2006). In addition, the AACN states that for programs promoting the BSN-PhD progression, “practice-focused education experience may be needed as a part of formal PhD study.” Their suggested models include students participating in an accredited residency, a faculty-guided clinical practicum, relevant practice experiences, or in courses with advanced clinical nursing content (AACN, 2010). These innovations align with the AACN’s recent recommendation to “embrace a new vision for academic nursing,” which includes enhancing the clinical practices of nurse leaders, engaging health systems as full partners in the development of new nurse leaders, and better integration of research and clinical nursing (Enders, Morin, & Pawlak, 2016).

## The Clinical Nurse Fellowship

### Aims of the Fellowship

In order to support the Hillman Program in Nursing Innovation’s goals to produce innovative nurse scientists early in their careers in a rapid progression from BSN to PhD, we developed the Clinical Nurse Fellowship. The major aim of this fellowship is to improve the effectiveness of a rigorous, integrated BSN-to-PhD program by integrating clinical experience with academic preparation and cultivating scholarly reflection on the connections between research, nursing practice, and innovations in health care delivery. The clinical fellowship prepares nurse researchers to work effectively in interdisciplinary teams, and develops nurses’ contributions to health care innovation. The fellowship is a collaborative effort between the three research-intensive schools of nursing that host the Hillman Program and their affiliated academic health systems. The Clinical Nurse Fellowship’s design combines features of AACN’s recommended models, providing authentic practice experience as a registered nurse under the mentorship of expert clinical nurses, faculty-guided reflection and inquiry, and participation in a new-to-practice nurse residency program where available.

The fellowship is designed to permit maximal integration into a nursing unit and health system, develop independence as a professional nurse, and encourage guided scholarly reflection on nursing practice. The fellowship is distinct from existing residencies for new nurse graduates in several ways, including the high level of clinical and scholarly mentoring and in the shorter length of the program and waiver of the usual requirement of committing to work in the sponsoring institution for up to 2 years. Such a commitment would interrupt the seamless educational transition central to the Hillman Scholars Program. The fellowship is shorter in time frame than many residency programs so that it allows for consistent progression in clinical practice and research simultaneously.

### **Development of the Clinical Nurse Fellowship**

The Hillman Scholars Program in Nursing Innovation and the clinical fellowship are supported by the Rita and Alex Hillman Foundation. As Fontaine and Dracup (2007) argue, “a key role of a foundation is to enable others to collaborate” through the identification of common goals. To initiate the development of the integrated clinical nurse fellowship, we capitalized on the University of Pennsylvania being associated with an extensive academic health system with strong existing relationships between academia and practice. The essential first step was to establish a commitment to the fellowship at the highest levels of the health system, including the Chief Nursing Officer of the hospital where the fellowship was piloted, the program officer from the Rita and Alex Hillman Foundation, and the faculty Director of Penn’s Hillman Scholars Program in Nursing Innovation. Once executive support was obtained, the model was co-created by a fully integrated partnership of academic faculty, clinical directors in the health system, and one BSN-PhD scholar who agreed to participate in the fellowship’s formative development.

As the recent AACN report on Advancing Healthcare Transformation reports, stronger partnerships between academic nursing and academic health centers are needed to “advance integrated systems of health care... and foster new models for innovation” (Enders, Morin, & Pawlak, 2016). Mutually beneficial academic-clinical partnerships are both an indicator and a driver of innovation; “the solving of real-world complex healthcare problems is sparked and enhanced through interdisciplinary partnerships” (Melnyk & Davidson, 2009). Healthy partnerships can benefit students and their university or college, as well as help health care institutions earn special notation from their Magnet® reviewers (Moscato, Miller, Logsdon, Weinberg, & Chorpenning, 2007) and increase staff satisfaction.

The development and implementation of this innovative clinical fellowship requires equal partnership, clarity of communication, joint decision-making, and high levels of trust between entities. Agreeing on the values and principles underlying the fellowship has provided a firm foundation for joint decision-making at each phase of the fellowship. We emphasize below the fully integrated and collective activities, decision-making, and commitment required to bring this fellowship to fruition.

### **Fellowship Implementation**

Clinical Nurse Scholars are hired for a unique full-time clinical position for 7 months (called the “Clinical Nurse I Fellow” at the University of Pennsylvania Health System). The time

frame of the fellowship varies somewhat across the 3 institutions but was established as 7 months at Penn to comprise a full semester and summer months at the beginning or end depending upon whether students complete the BSN in December or May. Because of this relatively short commitment, health system leaders were included in all formative discussion from the beginning of the process and were able to identify the ways that scholars' presence on the units might benefit the host organization in exchange for their financial commitment. The scholar's responsibilities are identical to those of all new-to-practice nurses; they include participation in health system and hospital orientation, the residency program for new to practice nurses (in health systems where a residency program is offered), and any other education determined by clinical nursing leadership, such as telemetry monitoring.

Clinical fellows are individually placed on nursing units that match their research and practice interests and that have stable and mature nurse leadership teams who are supportive of the fellowship's goals. The scholar's preceptor nurse is chosen carefully by clinical leadership on the unit based on level of experience as a preceptor and support of the vision and goals of the clinical fellowship. The preceptor is responsible for overseeing the scholar's clinical advancement and learning for the duration of the seven-month fellowship. This provides opportunities for a collaborative relationship to develop, and for the nurse preceptor to make a unique contribution to the unit as the fellow becomes more independent. Specifically as scholars gain increasing independence and assume care for a patient assignment, preceptors, with input from the nurse manager, often take on additional responsibility for special professional projects. Previous fellowships have facilitated the creation of new unit "champions" for specific nursing-sensitive indicators, trialing an attending nurse model, and pilot testing new functions in the charge nurse role. While we aim to place scholars on units with leaders who are supportive of the fellowship, we also make an effort to socialize the entire nursing staff by providing information about the Hillman Scholars Program in Nursing Innovation and the aims and structure of the fellowship prior to the start of the clinical experience. Table 1 summarizes the key lessons learned from the initial pilot fellowship, completed in 2014.

The clinical fellowship experience is embedded in an academic course that carries doctoral level course credit (comparable to two courses), and scholars simultaneously register for one additional course that meets a core curriculum or concentration course (cognate) requirement during the fellowship semester. Scholars are typically enrolled in the year after completing the BSN portion of their doctoral education and after they have passed the NLCEX. Scholars are responsible for meeting the standards of professionalism, work ethic, and continuous improvement in clinical skills at their clinical sites. Additionally, scholars complete scholarly reflective logs that focus on the intersections of theory, practice, and research, and document new research questions and ideas. Each fellow is matched with an individual faculty mentor who guides reflection, helps set goals, and recommends readings that can help connect the clinical experiences with research interests. The faculty mentor is responsible for providing regular narrative feedback on the scholar's written work to help develop the scholar's critical thinking. Grading for the academic course component of the fellowship is based on a combination of written assignments and feedback from clinical supervisors on the scholar's clinical development, performance, and professionalism.

Because the Clinical Fellowship is structured as an academic course, Hillman scholars remain continuously enrolled and pay tuition which enables student health insurance through the University to continue and alleviates the need for the clinical partner to assume expensive health insurance costs. Tuition support may be through their scholar status with the Hillman Foundation or other sources typically used within the PhD program. The equivalent of the scholar's stipend is paid by the clinical entity. At Penn, a pay rate was determined by using the NIH National Research Service Award pre-doctoral fellowship stipend as a standard; the hourly rate paid to scholars assuming a full-time schedule is approximately the same monthly amount as NRSA pre-doctoral fellows would be paid. In our setting, this rate is slightly lower than the typical rate paid to new to practice nurses, which alleviates some of the financial burden for the health system and increase their comfort level with investing in such an innovative program. All members of the leadership team work closely with administrative leadership to determine budgeting details and needs for each fellowship cycle. Prior to each fellowship cycle, the Hillman Scholars Program director and the health system clinical directors meet with the incoming fellows to map out expectations including the timing of routine checkpoints, which help ensure that any logistical issues are addressed immediately. True partnerships between academic and health system leaders are vital to open and thoughtful conversations about these sometimes sensitive matters.

### **Challenges with Scaling Up**

The expansion of the Clinical Nurse Fellowship from one fellow in an initial pilot to multiple scholars who embark on the fellowship each semester requires thoughtful consideration by the leadership team. First and foremost are the financial considerations by the health system that pays a stipend to the fellow throughout the fellowship. The stipend is typically less than the salary of an entry-level clinical nurse, but nonetheless requires a financial commitment as multiple scholars are placed. Maintaining the status of Fellows as full time students and maintaining their student health insurance benefits substantially reduces the cost of the fellowship to the clinical partners. The distribution of fellows temporally (to distribute the impact on budget) and spatially (across different budget centers) also requires advanced planning. Priority is given to placements that match the research interests of the fellow; however, significant thought needs to be given to logistical issues as well. These considerations include the number of other new nurse orientees on the unit, timing of major programmatic or leadership transitions on the nursing unit (e.g. change in patient population, physical relocation, changes in leadership), and multiple scholars with interest in the same patient population. Table 2 outlines key operational considerations for the development and implementation of post-licensure academically embedded clinical training.

While Penn piloted the Fellowship, the two other schools of nursing who host the Hillman Program in Nursing Innovation have also implemented Clinical Nurse Fellowships. These fellowships are philosophically aligned with the fellowship at Penn, and share the same goals to produce innovative, research-focused nurse scientists early in their careers whose research trajectories address urgent and clinically relevant problems. Each institution has navigated the details of implementing the clinical fellowship individually. Decisions about

funding, timing, and clinical placement depend on the University's own funding patterns and semester structure, the health system partner's clinical opportunities, and employment circumstances such as the presence of nursing unions. While the clinical fellowships at each site function uniquely, they have each maintained a commitment to integrate clinical experience with academic preparation and to cultivate scholarly reflection on the connections between research and practice.

## Discussion

### Value Added by the Clinical Fellowship

The Clinical Nurse Fellowship has demonstrated value to both scholars and participating health systems, by reflecting and demonstrating the value of clinical practice expertise. Scholars are better able to understand the complexities of health care delivery and what is required to provide high quality care. They learn to navigate the health system to meet patients' needs and to coordinate care within diverse teams of health care providers. This lived experience enhances scholars' ability to ask meaningful research questions related to patient care, clinical problems and priorities, health systems, and outcomes. Additionally, scholars begin to think about the potential impact of scientific inquiry, and develop an understanding of the importance of dissemination and implementation of scientific findings.

The nursing units and health systems that host scholars report significant value added by the Clinical Nurse Fellowship, despite the relatively short-term commitment to full time work. The scholar-preceptor partnership allows the unit to use existing personnel resources in new ways. The introduction of scholars who engage others on the nursing team to think critically and engage in deep inquiry has inspired others to question practice norms and engage in both formal and informal inquiry. One fellow working on a trauma unit was interested in determining nurses' knowledge about the trauma-informed care paradigm. The fellowship team translated this interest into a partnered research study, in which an interdisciplinary survey was conducted to ascertain knowledge, attitudes, and competency around trauma-informed care for acutely injured patients. Practicing nurses, who can at times undervalue nursing research, discovered the potential of nursing inquiry to improve care, a goal in which they were highly invested.

An additional benefit to both the Fellows and the host institution has often been a voluntary opportunity following completion of the Clinical Fellowship for the Scholars to continue their clinical experiences through regular employment as a per diem nurse. An average of one shift per week is permitted by many research fellowships including the T32 and F31 NIH doctoral fellowships thus providing a source of additional financial support to the student and continuation of a clinical emersion experience in their host clinical setting. Host units have also benefitted from the addition of a per diem nurse to their staff.

### Future Extensions and Expansions

As we continue to expand the Clinical Nurse Fellowship to meet the interests and needs of multiple scholars in an integrated BSN-PhD program, future extensions of the fellowship will focus on expanding opportunities to ambulatory care and community health settings. We



tested the prototype fellowship and have continued the early cycles of the fellowship in inpatient settings because of established partnerships in these inpatient settings and the capacity to easily absorb learners. In smaller and community-based care settings, there may be fewer available nurse preceptors, smaller physical space, more competition for learning opportunities with APRN students, complicated networks of sponsoring organizations with which partnerships must be developed, and productivity challenges for clinical practices. These factors can all influence the feasibility of optimal learning experiences, and therefore fellowships in ambulatory and community-based settings must be chosen and planned carefully. One way to address these challenges is to capitalize on the fact that many health systems have substantial home health, hospice, and ambulatory services that can be utilized.

The Clinical Nurse Fellowship shows early signs of being attractive to doctoral students. Within the Hillman program, a high proportion of Scholars are choosing to complete the optional Clinical Nurse Fellowship each year. In the larger nursing community, a number of different scholarship and graduate student fellowships are incentivizing schools to invest in BSN to PhD trajectories. These new trajectories underscore a deficiency in clinical immersion experiences and course content in PhD nursing education in a context in which more students lack clinical experience and graduate level clinical coursework. The Clinical Nurse Fellowship, designed to meet a specific need in the Hillman Scholars Program, contributes to the redesign and expansion of clinical nursing content and experiences in PhD education for nurses more broadly.

## Conclusions

Direct-entry PhD programs or integrated BSN-PhD programs that have existing relationships with health care system partners may be able to replicate this model. To be successful, partner institutions need to value developing and sustaining a culture of inquiry, be committed to nursing excellence, and prioritize innovation in nursing practice. Clinical entities that are likely to support similar fellowships would value the tangible and intangible benefits of the scholar's presence, such as role modeling a culture of inquiry in a clinical setting, encouraging higher education among other nurses, and stimulating evidence-based practice initiatives. Academic health systems and Magnet® designated hospitals in particular will understand the value of strengthening ties to academia. Given our experience, it is clear that research-intensive schools of nursing will be able to build relationships with academic health systems and will be able to replicate or remodel the fellowship outlined here.

Individual programs may navigate funding differently depending on the needs and resources of each institution. The Clinical Fellowship program has been successful in both a private and two public state universities. Since our scholars are funded by a foundation, we were able to keep scholars enrolled as graduate students and the foundation continued to fund tuition and health insurance. Our clinical partner institution was then able to fund the scholars' wages, or living stipend as commonly provided to PhD students. Institutions without foundation funding will need to think creatively to find novel ways to integrate clinical experience into their PhD programs. Building or strengthening partnerships with clinical entities and sharing a commitment to the advancement of a culture of nursing inquiry and evidence-based practice will be a crucial first step in creating these

opportunities. While doctoral students can take on specific short-term projects for the host institution to strengthen the business case for the fellowship, the main purpose of the experience for the fellow is clinical emersion in real life practice so care should be taken to avoid undermining this goal with non-clinical assignments. Alternately, the academic institution may work the clinical experience into a teaching or research assistantship so that the university can fund the scholars' stipend. The complicated and sensitive process of funding such an innovative combined training and employment opportunity illustrates the importance of developing strong partnerships between academic and clinical entities.

Earlier entry into the PhD provides tremendous opportunities for innovation as we consider how best to develop nurse scientists to conduct rigorous, clinically relevant research. The integrated BSN-PhD program as in the Hillman Scholars in Nursing Innovation program provides an important and replicable model to support this development. The Clinical Nurse Fellowship highlights the value of including post-licensure clinical practice in the development of nurse scientists enrolled in research-intensive doctoral programs. The inclusion of post-licensure clinical experiences in early-entry PhD programs offers multiple benefits to students as they develop their clinical and inquiry skills, prepare for careers as nurse scientists and faculty, and build impactful programs of research. These clinical partnerships also provide benefits to health care entities where scholars are placed. Ongoing, open, and communicative relationships between academic and health system partners are vital to the feasibility and sustainability of any clinical fellowship. Embedded post-licensure clinical education opportunities can add significantly to the success of early- and direct-entry and research-focused nursing PhD programs by enhancing the potential impact of future nursing science and broadening scholars' understanding of the health care system and gaps in knowledge.

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## References

- American Association of Colleges of Nursing (AACN). Faculty shortages in baccalaureate and graduate nursing programs: Scope of the problem and strategies for expanding the supply. Washington, DC: AACN Task Force on Future Faculty; 2005. (White Paper)
- American Association of Colleges of Nursing (AACN). The research-focused doctoral program in nursing: Pathways to excellence. Washington, DC: AACN Task Force on the Research-Focused Doctorate in Nursing; 2010.

- Enders, T., Morin, A., Pawlak, B. Advancing health care transformation: A new era for academic nursing. Washington, DC: AACN, Manatt Health; 2016.
- Fontaine DK, Dracup K. The accelerated doctoral program in nursing: A university-foundation partnership. *Journal of Nursing Education*. 2007; 46(4):159–164. [PubMed: 17474485]
- Institute of Medicine (IOM). *The future of nursing: Leading change, advancing health*. Washington, DC: The National Academies Press; 2011.
- Mlenyk BM, Davidson S. Creating a culture of innovation in nursing education through shared vision, leadership, interdisciplinary partnerships, and positive deviance. *Nursing Administration Quarterly*. 2009; 33(4):288–295. DOI: 10.1097/NAQ.0b013e3181b9dcf8 [PubMed: 19893441]
- Moscato SR, Miller J, Logsdon K, Weinberg S, Chorpenning L. Dedicated education unit: An innovative clinical partner education model. *Nursing Outlook*. 2007; 55(1):31–37. S0029-6554(06)00311-3 [pii]. [PubMed: 17289465]
- National Academies of Sciences, Engineering, and Medicine. *The future of nursing*. Washington, DC: The National Academies Press; 2015. *Assessing progress on the Institute of Medicine report*.
- National Advisory Council on Nursing Education and Practice (NACNEP). *Addressing new challenges facing nursing education; Solutions for a transforming healthcare environment*. Washington, DC: Health Resource and Services Administration; 2010.
- National Institute of Nursing Research (NINR). *Making a Difference, Part Two: NINR Research Results*. Washington, DC: National Institutes of Health, US Department of Health and Human Services; 2003.
- National Institute of Nursing Research (NINR). *Notable Advances: 2011–2015*. Washington, DC: National Institute of Health, US Department of Health and Human services; 2015.
- Yordy, KD. *The nursing faculty shortage: A crisis for healthcare*. Princeton, NJ: Robert Wood Johnson Foundation; 2006.

### Highlights

- Early-entry nursing PhD programs highlight the need for embedded clinical training.
- We developed a Clinical Nurse Fellowship focused on innovation and inquiry.
- Goals of the fellowship include...
  - Integrating post-licensure clinical experience with academic preparation;
  - Cultivating scholarly reflection on the connections between research and practice;
  - Training nurse researchers to work effectively in interdisciplinary teams; and
  - Developing nurses' contributions to health care innovation.
- Key considerations include...
  - Ongoing communication between academic partners and executive leadership is key.
  - Academic assignments should reinforce clinical work during the fellowship.
  - Mentors (faculty and nurse preceptor) should be chosen thoughtfully.
  - Both the scholar in training and the health system can benefit.

**Table 1**

Lessons Learned from the Fellowship’s First Iteration

• Choose a unit with experienced/advanced clinical nurses
• Educate the nursing staff on the aims of the fellowship and the role of the fellow
• Units with diverse patient populations will spark critical thinking
• Capitalize on opportunities for interdisciplinary learning and functioning within a health care team
• Build in reflection on communication, collegiality, and teamwork
• Choose institutions and units that value and support advanced nursing education
• Consider how the fellow will impact the unit, both short- and long-term

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**Table 2**

Key Operational Considerations for developing a post-licensure clinical fellowship for early-entry PhD students.

Collaborative	• Clarify and articulate the major aims of the fellowship.
	• Clarify expectations for regular, formal feedback from clinical preceptor, unit leadership, and academic faculty mentor.
	• Plan for long-term financial impact of the fellowship, including timing of multiple cohorts of scholars.
	• Plan for post-fellowship transition (continued employment per diem, or transition out of the institution).
Academic	• Introduce the clinical fellowship option early in the scholar's progression to allow maximum planning time.
	• Identify supportive faculty with clinical and research expertise in the scholar's interest area.
	• Clearly outline expectations for written/academic work.
	• Articulate and document scholar's individual goals prior to the fellowship's start, and document evolving goals throughout.
Health System	• Enlist the support of executive leadership.
	• Identify executive management professionals who will manage budgetary, legal, and other practical issues.
	• Identify nursing units with experienced/advanced nursing teams and management supportive of fellowship aims.
	• Facilitate shadowing or observational experience on the potential nursing unit prior to the final placement decision.
	• Work closely with recruiting/hiring department for onboarding.