



Collaborative Strategies to Enhance Research and Evidence-based Practice

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Whether the goal is to generate new knowledge through basic research or to effectively use existing knowledge in evidence-based clinical practice, collaborative exchange between service and academia is essential. The authors describe 2 successful strategies that have been mutually beneficial to a clinical agency and a school of nursing in fostering research and evidence-based practice. These strategies can be used by other institutions as they strive to meet standards for excellence in academia and service.

None of us is as smart as all of us. (Japanese Proverb)

The advancement of nursing knowledge requires collaboration between nurses in clinical and academic settings. Whether the goal is to generate new knowledge through basic research or to effectively use existing knowledge in evidence-based clinical practice, collaborative exchange between service and academia is essential. To address this goal, the NIH Road Map¹ has set forth an ambitious plan to bridge the gap between basic research and clinical practice. The plan recognizes that the bench-to-bedside approach to translational research is a 2-way street. Basic research provides new tools for patient care but researchers in clinical settings make novel observations about the nature

and progression of illness that can stimulate basic research.

The needed synergy between the academic and clinical setting was recognized in a position paper developed by a Joint Task Force of the University Health System Consortium and the American Association of Colleges of Nursing.² Although the major focus of this article is to promote educational capacity through innovative practice/education partnerships, there is a clear recognition that emerging collaborative models must focus not only on the practice environment or the educational experience, but also on collaborative research. With attention to all 3 areas, the work environment of the nurse, the educational experience of students, and positive outcomes for patients can be fostered.

Standards in academic settings have historically recognized the need for active, clinical research programs. The quality indicators of doctoral programs clearly state that schools of nursing with doctoral programs must have faculty that are engaged in active research and they must mentor future nurse scientists.³ Similarly, accreditation standards for masters and baccalaureate education address the need for preparation in nursing research.^{4,5}

A similar emphasis on the importance of research and evidence-based practice is found in standards which are used to evaluate clinical agencies. The standards of the Joint Commission on Accreditation of Healthcare Organizations⁶ address the need for clinical agencies to be involved in research, particularly as it relates to the protection of human subjects and the utilization of research to support best practices. The Joint Commission on Accreditation of Healthcare Organizations has

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implemented disease-specific certification programs driven by evidence-based practice protocols. The Institute of Medicine Report on Patient Safety, the National Quality LeapFrog Initiatives, and the Center for Medicare and Medicaid Services regulations are other initiatives that have led practice settings to become more interested in evidence-based practice as a part of the mandate to improve patient safety and quality.⁷

The American Nursing Credentialing Center Magnet Standards⁸ have also provided impetus for clinical agencies to adopt a stronger focus on research. The inclusion of research in the core measurement criteria to become a Magnet hospital has stimulated the development of clinical research projects, research utilization, and evidence-based practice as hospitals seek to obtain the Magnet hospital services designation.⁹

Although the value of clinical research is clearly recognized in standards, position papers, and strategic planning, the reality of collaborative research has been more elusive. Nursing research is considered the basis for evidence-based practice and the utilization of scientific evidence in the practice setting. However, successful, collaborative research programs are usually found in well-established research extensive universities that are affiliated with a major medical center where there is a shared model of governance between the hospital and the academic medical center.

In our situation, the clinical agency and the University are governed by different administrative structures. The clinical agency has its roots as a community-based hospital serving a rural underserved area with high levels of morbidity and mortality and the school of nursing has historically been service-driven rather than research extensive. Despite these barriers, there has been a successful collaboration that has spanned 15 years.

The Academic and Service Partners

East Carolina University School of Nursing has a long history of preparing baccalaureate nurses for entry into practice. It is the largest undergraduate program in the state and graduates approximately 200 baccalaureate students each academic year. In addition, there is an online RN/BSN program and a master's program with over 300 students. Much of the master's program has recently converted to an online format and the school has experienced exponential growth in its online program. In 1992, the school made a commitment to develop a doctoral program in nursing and over the next 10 years

successfully gained approval for the program. The first students were enrolled in 2002.

The process of moving to doctoral education was a challenge in a school that was also in the process of expanding its undergraduate program to meet the nursing shortage and developing several online options in the MSN program. All of these activities were labor intensive. The same faculty members who were teaching at the undergraduate level and in distance education were also needed to increase scholarly productivity. When the school began planning for the doctoral program, few faculty members had active, funded research programs particularly in the area of clinical research.

As the school of nursing was undergoing its transition to doctoral education, there was a parallel evolution occurring at the hospital. Pitt County Memorial Hospital grew from a community base hospital to a 745-bed tertiary referral center. The hospital became a major medical center and was faced with providing quality care to increasingly complex and diverse patients. In addition, the hospital was evolving as a clinical site for several benchmarking studies and clinical trials, most of which were led by physicians at the medical school. In an effort to advance nursing research and to foster evidence-based practice among the nursing staff, a decision was made to pursue Magnet status. As a part of the Magnet journey, research and evidence-based practice became an integral part of the nursing strategic plan. Research had become the core of the changing paradigms and delivery systems, driven by the new realities of technology, economics, and service. Therefore, it was essential that nurse clinicians stay abreast of the most current research related to practice.

Recognizing a mutual interest and need to foster research, a steering committee that included leaders at the school of nursing and the hospital was formed. Everyone agreed that the operational definition of collaborative research had to be based on a commitment to teamwork, reciprocity, and mutual benefit. Clinicians needed to be equal partners in the research endeavor and faculty had to be willing to be flexible and adaptive to clinical realities.

A variety of strategies were considered to promote increased collaboration in the area of research. One of the earliest challenges was to find common ground. Although there was enthusiasm in both organizations, the research interests of faculty and clinicians were not always a good match. In addition, the availability of seasoned

researchers as mentors was limited. Therefore, it became clear that the first task was to build a shared vision of topics for research as well as methods to stimulate research. The steering committee decided to develop 2 mechanisms to foster collaboration: a Collaborative Research Day (CRD) and a Collaborative Research Award (CRA).

Collaborative Research Day

Faculty from the school of nursing and the hospital began a dialogue on how to establish a forum for reporting research and encouraging collaborative projects. The first CRD was a luncheon held in 1993. The speaker was the President-Elect of the American Association of Critical Care Nurses. Involving the American Association of Critical Care Nurses gave credibility to the event in that a faculty member and a staff nurse had participated in a recent study funded by this organization (Thunder Project I). The purpose of the study was to evaluate the effectiveness of heparinized and nonheparinized solution on the patency of arterial pressure monitoring lines. The Thunder Project was an excellent model of collaboration. It provided clinical nurses with an opportunity to participate in a national, multisite research project under the mentorship of experienced researchers. The CRD built on the success of this project and provided an opportunity for clinicians and faculty to discuss the project, network with a key leader from the sponsoring organization, and brainstorm other types of collaborative projects.

This first endeavor set the stage and accomplished our initial goal of blending a presentation from a noted nursing leader with presentations from local faculty and clinicians. During subsequent years, this focus was retained and the planning committee for CRD consisted of faculty in the school of nursing as well as leaders from the hospital. As both organizations developed their research initiatives, CRD topics were chosen to reflect a "hot topic" that was of interest to nurses in academia and practice. Each year a theme was selected; priority was given to identifying a topic that would be mutually beneficial. Figure 1 provides a list of the themes that have been used. For example, the hospital had been a clinical site for a study funded by the National Institute of Nursing Research on the impact of hospital restructuring on patient outcomes. The principal investigator was invited to present study findings and clinicians learned how their participation in the study contributed to the knowledge gained from the study.

- Collaborative clinical research: Role of professional associations
- Collaborative research: The way to go
- Significance of no significant difference in clinical research
- Making a difference: Using nursing research in clinical practice
- Nursing outcomes in acute care settings
- Nursing sensitive outcomes
- Hospital restructuring's impact on outcomes
- Evidenced-based nursing: What is it? How does it differ from what we are doing?
- The relationship between magnet hospitals and quality indicators of patient care
- The restructured healthcare environment: opportunities and challenges for clinicians
- Building and sustaining a nursing research center
- Strategic planning to advance nursing research: From dream to reality
- Research strategies for clinicians
- Residency Program that foster transition from education to Practice: State of the Science

Figure 1. Collaborative research day themes (years 1993-2005).

The presentation also provided an opportunity for faculty members to network with a National Institute of Nursing Research-funded researcher and discuss components of a successful proposal. In subsequent years, as the interest in evidence-based practice and Magnet recognition expanded, the conference focused on these issues. Speakers were often chosen because of their expertise in developing successful models of clinical research.

As the content of the CRD topics evolved to reflect contemporary issues, the format also evolved through the years. Initially, the program was funded and organized by staff at the hospital and the school of nursing. Usually, the hospital funded the luncheon and the publicity and the school of nursing funded the speakers' honorarium and travel. Funding for CRD was built into the budget of the school of nursing and the hospital and expenses were shared. This worked for several years but as our attendance grew to about 100 people, a decision was made to involve 2 more partners. The Eastern Area Health Education Center was approached to handle the logistics of the conference. This proved very beneficial because their mission is providing continuing education and they are experts at planning, advertising, implementing, and evaluating programs. Their involvement eased the burden for the planning committee.

Another partner that joined the committee 5 years ago was the Sigma Theta Tau Chapter of the school of nursing. Again, this was a win/win situation. The local chapter sponsored a research-focused banquet the evening before the CRD.

By combining efforts, we often could share speakers—a real advantage in an area that is somewhat “off the beaten path.” The chapter also used this conference as partial evidence for their Key Award, an honor they have received 7 times.

Another evolution that has occurred in the format is a switch to a more focused presentation with the addition of a poster session. The early CRD programs featured a speaker and then 3 to 5 individual presentations. Prospective presenters submitted an abstract and the planning committee designed the program by choosing from among these abstracts. Often the presentations did not relate to the theme developed by the keynote speaker and they were not related to each other. The wide disparity in topics was a concern raised on the evaluations by participants. In addition, this format resulted in more presentations from faculty members than clinicians as many of the staff members at the hospital were not comfortable with a formal research presentation. Therefore, 3 years ago, the format was changed in several ways. Rather than inviting abstracts for presentations, specific presenters were invited. For example, in 2004, when the theme was on strategic planning, the leaders of strategic planning in both of the institutions presented an overview of their strategic plan. Last year, the keynote speaker used a workshop format that included breakout sessions focused on specific clinical areas. Faculty and clinicians participated together in identifying researchable topics during the breakout sessions. During the luncheon, clinicians and faculty continued their dialogue and also networked with the speaker. This flexibility in format was well received and participants commented that it fostered a better sense of collaboration. Several research topics have evolved from these discussions and some are currently being implemented.

The other change in format included the introduction of a poster session. Abstracts were solicited for poster presentations and were reviewed by the planning committee for inclusion. This had several advantages. First, it resulted in more submissions by staff nurses and graduate students. Although only a few presentations could be accepted, we frequently have 13 to 15 posters accepted. Completed research, work in progress, as well as descriptions of clinical innovations, are accepted for poster presentation. A mentor from the CRD committee works with clinicians who do not know how to prepare an abstract. The poster session is less intimidating for clinicians and again it provides a better opportunity for dialogue and sharing. Encouraged by their positive experience at

CRD, several clinicians have submitted and presented posters at state and national conferences.

Collaborative Research Award

Another integral part of the CRD is the CRA. This has been a \$1,000 award that is equally funded by the school of nursing and the hospital to support a clinical investigation that includes a faculty member and a hospital staff member. There have been several successful projects launched with this award. The recipients are recognized at the CRD and they are expected to present their work the following year. The collaborative research teams have varied in size. For some projects, 1 faculty member and 1 clinician comprise the team, in other situations the team has consisted of 5 to 6 people. The unifying requirement is that there must be at least 1 person from the hospital and 1 from the school of nursing on the team.

Results from these projects have been presented and published at national meetings and in refereed journals. Mentors from the school of nursing and the hospital provide guidance to novice researchers and an editorial consultant who comes to the school twice a semester is also available for assistance with publication.

In one case, a clinical specialist from the hospital and a faculty member at the school of nursing used the grant to complete a study on staffing issues related to bariatric patients. This study was completed and published, the clinical specialist received recognition as a “Rising Star” from Sigma Theta Tau, and a national organization (the Bariatric Nurses Society) was formed. The faculty member serves as the president of this organization and the clinical specialist and faculty member have been co-presenters at several meetings.

Another collaborative research project demonstrated a reduction in maternal and newborn complications for participants in nurse-run prenatal classes compared with women who did not attend the classes. This study examined admissions to the NICU as well as insurance claim costs for participants as outcomes of the intervention. This project was also published in a refereed journal.

Although there have been many successful collaborative projects, in some years there have been no applicants for the award. Occasionally, the timeline for submission and the amount of money available were not a good match with projects being considered. Clinicians felt that the application was time-consuming and burdensome. Therefore, several revisions have occurred recently.

Applications are now accepted twice a year and collaborative teams can ask for smaller amounts of money such as \$500. The application has been simplified and the proposals can be submitted for either pilot research projects or research utilization projects. (This has been very successful and resulted in an increase in submissions. This year one hospital, the school of nursing, agreed to increase their contributions and provided awards each for \$1000).

Another strategy under exploration is a research fellowship program for staff nurses. The intent of this program is to provide a structure to support staff nurse involvement in clinical research. The major barriers for involving staff in research are limited research skills and time to conceptualize and implement a research project. The fellowship program will identify staff nurses who have research questions and pair them with hospital or school of nursing mentors who have expertise in research design. A specific timeframe and incentives for participation (such as coverage of salary during the fellowship) will be a part of the program.

Summary

These initiatives have provided opportunities for collaborative teams to conduct research, disseminate

findings, and apply research results in clinical settings. They have been instrumental in bridging the gap between nursing practice and nursing education. The CRD and CRA have provided an opportunity for participants to interact with national speakers and discuss current issues related to nursing research. Linking academicians and clinicians is one way to bridge the gap between the clinical question and a successful research study.

The success of the CRD is evident in the research studies that have evolved over the years and the way in which the goals of both organizations have been advanced. The commitment of the clinical agency and the school of nursing to provide funding and support as well as the willingness of the partners to evaluate and revise the program based on new trends and issues have been critical in sustaining these endeavors over the past 15 years.

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References

1. NIH Road Map: accelerating medical discovery to improve health. Available at: <http://nihroadmap.nih.gov>. Accessed June 2, 2005.
2. UHC/AACN. *Building Capacity Through University Hospital and University School of Nursing Partnership*. Washington, DC: American Colleges of Nursing and University HealthSystem Consortium; 2003.
3. American Association of Colleges of Nursing. *Indicators of Quality in Research-focused Doctoral Programs in Nursing*. Washington, DC: American Association of Colleges of Nursing; 2001.
4. American Association of Colleges of Nursing. *The Essentials of Baccalaureate Education for Professional Nursing Practice*. Washington, DC: American Colleges of Nursing; 2002.
5. American Association of Colleges of Nursing. *The Essentials of Master's Education for Advanced Practice Nursing*. Washington, DC: American Colleges of Nursing; 2002.
6. Joint Commission on Accreditation of Healthcare Organization. *2005 Hospital Standards: An Education Program Resource*. Oakbrook Terrace, IL: Joint Commissions Resources; 2005.
7. Nurse Executive Center. *Evidence-based Nursing Practice: Instilling Rigor Into Clinical Practice*. Washington, DC: Advisory Board Company; 2005.
8. American Nurses Credentialing Center. *The Magnet Recognition Program: Recognizing Excellence in Nursing Services and Application Manual*. Washington, DC: American Nurses Association; 2004.
9. Wilson P, Madary A, Brown J, Gomez L, Martin J, Molina T. Using the forces of magnetism to bridge nursing research and practice. *J Nurs Adm*. 2004;34(9):393-394.