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From the Bedside to the Books:

How Creating Innovative Educational Research Pathways Helps to Retain Clinical Nurses

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Abstract

This commentary explores how educational research pathways tailored for bedside nurses ignite professional vitality and influence organizational retention. Engagement with clinically-based professional development has been linked to increased job satisfaction, yet opportunities for bedside nurses to engage specifically in research and emerging technology remain scarce. To fill this educational gap, ChristianaCare's Nursing Research Fellowship in Robotics and Innovation offers a "first-of-its-kind" innovative program that couples diverse didactic content with applied robotics research. Early preliminary programmatic survey data indicate high levels of program satisfaction, psychological safety, and a strengthened sense of community. Nurse fellows reported an increased intent to pursue further professional development (e.g., clinical ladders, certifications) and a renewed commitment to bedside practice. Investing in non-traditional educational pathways, such as research fellowships, allows healthcare organizations to harness nurses' unique bedside perspective to drive transformative changes in patient care leading to fulfillment and retention.

Introduction

If you have ever thought about getting involved in nursing research, but did not know where to start, you are not alone. Nursing is one of the few professions where one can pivot into different training and careers,[1] but often at the expense of leaving the bedside to seek professional growth opportunities, especially within the field of nursing research. This trend reflects a systemic gap where clinical expertise is separated from scientific advancement rather than being integrated at the point of care.[2] To enrich and optimize nurse retainment strategies, healthcare organizations should consider providing professional development opportunities centered on clinically-based research education. This non-traditional learning pathway has the potential to cultivate passion, curiosity, and excitement by fostering the integration of research skills into clinical practice.

Professional Development Educational Pathways

Dynamic, clinically-based educational pathways can act as an effective mechanism to spark bedside nurses' passion through professional growth, mastery of new knowledge, and a renewed sense of purpose.[3] Typical professional development offerings found within hospital systems include new-graduate transition programs, cross-training among specialty units, charge nurse development, certification pathways, and clinical ladder advancement through practice-based projects.[1,4] The literature supports that professional development and dedicated mentorship, paired with supportive work environments, are among the most influential strategic factors contributing to nurses' decisions to stay in practice rather than leave for alternative roles.[4] Further, nurses' continuing professional development improves the quality of nursing care,

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patients' safety, nurses' satisfaction, and healthcare costs.[5] However, participating in nursing research is not commonly offered to bedside nurses. While Provision 7 of the American Nursing Association's Code of Ethics[6] tasks nurses with advancing the profession through "multiple approaches to knowledge development," the failure to utilize bedside nurses' clinical expertise represents a significant missed opportunity to advance nursing science at the point of care.

Nurses provide a unique perspective to identify practice gaps, develop, evaluate, and implement solutions; and promoting research at the bedside has the potential to increase nurses' contentment and satisfaction caring for patients.[7] Creating a clinically-based research pathway involves PhD-trained mentorship, and a structured and rigorous curriculum design that empowers nurses to expand their expertise through a different lens while remaining firmly rooted in direct patient care.[8]

ChristianaCare's Nursing Research Fellowship in Robotics and Innovation

To invest in bedside nurses and to create a unique learning pathway, ChristianaCare in Newark, Delaware, took a bold step in professional development with its support of the Nursing Research Fellowship in Robotics and Innovation. This unique program aims to empower bedside nurses to participate in research at the intersection of clinical practice and advanced technology. Originally supported and funded by the American Nurses Foundation *Reimagining Nursing Initiative* grant, this fellowship program is now fully integrated into ChristianaCare and was recognized as a New Knowledge, Innovative and Improvement Magnet exemplar in 2025 for its "outstanding nursing research engagement and growth of the nursing research enterprise."[9] Grounded in its mission, this training equips the nurse fellows with skills to conduct research, nurture their spirit of inquiry, engage in scholarly dissemination, and explore how collaborative robots (cobots) — defined as artificially intelligent machines that can sense, plan, and act to execute a task-specific goal[10] — could one day influence the nursing workforce.

This fellowship broke traditional boundaries by delivering research education in emerging technologies, enabling bedside nurses to step out of their clinical routines and develop entirely new skills more commonly obtained in graduate school. Led by a PhD prepared nurse scientist and supported by a master's-prepared research educational specialist, this comprehensive curriculum combines in-person and online synchronous sessions, featuring expert speakers on a wide range of topics such as research methodology, robotics engineering, and artificial intelligence. In addition to the didactic content, the nurse fellows are mentored in the research process as co-investigators to apply their learnings to an Institutional Review Board approved robotics study.

Preliminary and early programmatic evaluation data broadly demonstrated that the second cohort of nurse fellows are new to research, looking for new opportunities to learn and grow their skillsets and are excited to apply research to technology. A survey conducted after the first quarter of this program highlighted several strengths of the program such as curriculum satisfaction, feeling supported by the fellowship team, having psychological safety to discuss different ideas, and facilitating engagement in more nursing activities. All fellows strongly agreed they would recommend this fellowship to their colleagues and they felt a stronger commitment to the organization. Open-ended responses indicated the fellows felt inspired to increase their engagement within clinical nursing (e.g. through professional development,

clinical ladder growth, and certifications), a greater sense of community within this cohort, and gratitude because of participation in this fellowship. These preliminary results validate current evidence that when nurses feel supported, their commitment improves, resulting in stronger retention for the organization.[11]

Conclusion

Investing in bold opportunities for nurses seeking to advance their professional growth in research and emerging technology offers a rare and pioneering avenue for professional development. The Nursing Research Fellowship in Robotics and Innovation, while only in its second year, provides clinical nurses with structured opportunities for development of new skillsets, diverse mentorship, and cutting-edge innovation that supports their well-being, professional fulfillment, and commitment to practice. ChristianaCare's investment in this fellowship provides a model for how health systems can evolve by incorporating innovative research education. This approach reinforces the value of clinical nurses and ensures that commitment to the bedside remains not only sustainable, but deeply meaningful.

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