

Engaging Nurses as Leaders in Healthcare Innovation

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Introduction

- As the largest group of healthcare providers, nurses provide care 24/7 in every conceivable setting where care is delivered, making nurses uniquely qualified to identify and address everyday health care issues and challenge assumptions and the status quo.
- This robust interdisciplinary innovation and research program supports the implementation of nursing research in a large magnet recognized academic medical center.
- The engagement and professional development of frontline nurses in research is fundamental to the program's success.
- The program is led by a full-time Nurse Scientist and supported by additional part-time Nurse Scientists/Academic Nursing Faculty, and a Professor of Engineering.
- Frontline nurses are actively engaged in collaborative projects in implementation science, nurse-engineer teams for healthcare innovation, usability research, and clinical outcomes research.

Academic-Clinical Practice Partnership

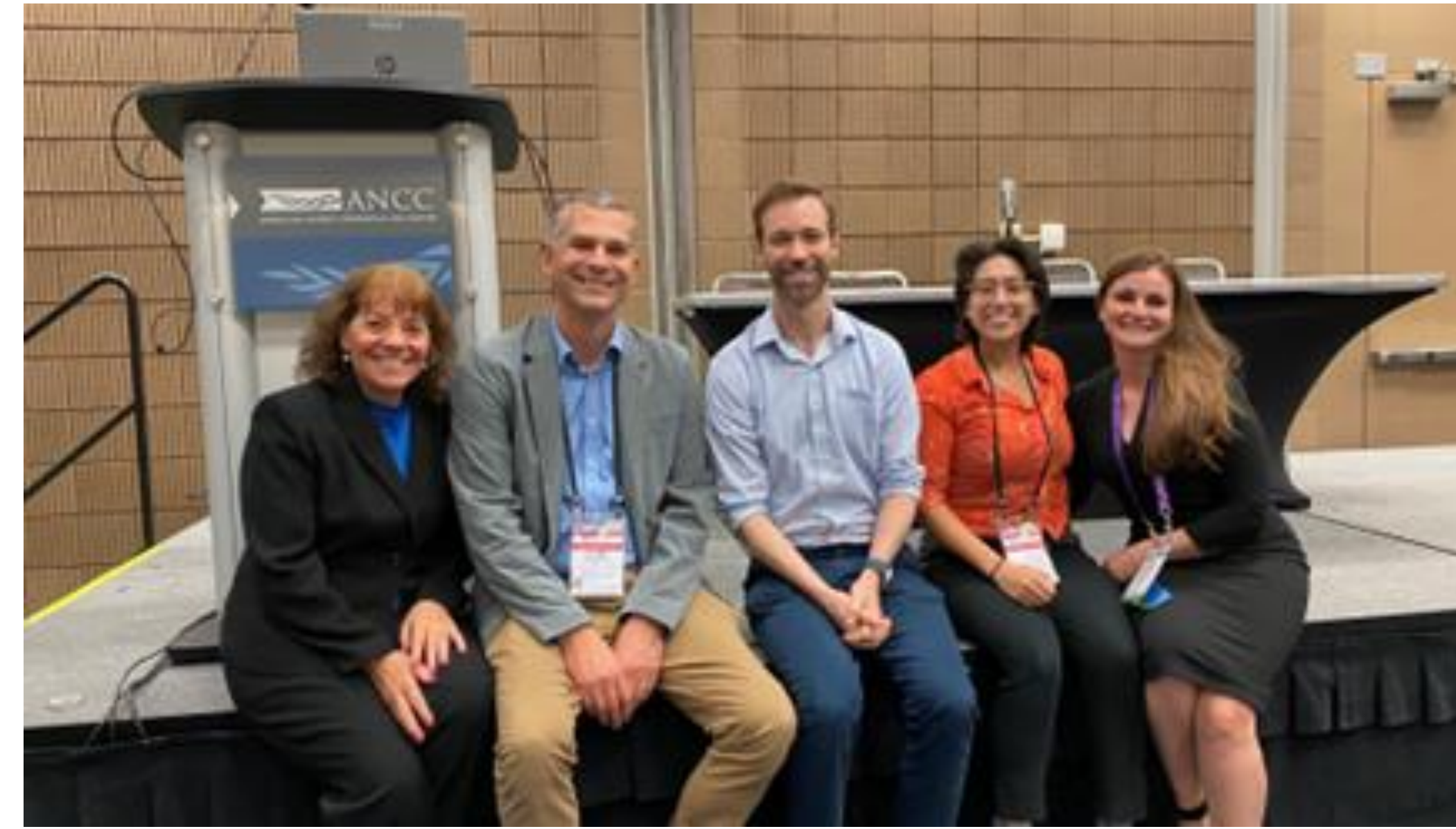
- **Baystate Medical Center** is a 780-bed Level 1 Trauma Center and Pediatric Trauma Center for western Massachusetts and is New England's busiest emergency department with over 110,000 patient visits annually. As a Magnet-recognized hospital, Baystate exemplifies nursing excellence and empowers nurses to take on leadership roles in research and innovation.
- **The Elaine Marieb Center for Nursing and Engineering Innovation** works closely and collaboratively with Baystate Medical Center to help nurses and engineers become interdisciplinary healthcare innovation leaders.

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Outcomes & Impact

- In 26 months, this academic/clinical partnership has resulted in the completion of 7 research studies, 9 quality improvement projects, 13 additional active studies, 7 published manuscripts and 9 manuscripts in review/development.
- The partnership has also resulted in dissemination of findings through 9 podium/poster presentations at national conferences including a podium presentation on our partnership at the National Magnet Conference in New Orleans Louisiana in 2024.



Karen Giuliano, PhD, RN; Frank Sup, PhD, Colin Plover, PhD, RN, Gina Georgadarellis, PhD (c), Cidalia Vital, PhD, RN at the 2024 Magnet Conference

- Several nurse-engineer product development projects are active, including a new approach to falls prevention and designing and testing a new chest tube product, which is expected to generate patented intellectual property.
- The research program on improving the safety and usability of IV smart pumps (IVSP) is well-funded, has resulted in the development of evidence-based practice and technology recommendations which will improve care for the entire IVSP industry, and has helped to make our hospital a recognized leader in this important area of patient safety.
- The Innovation Unit at Baystate, led by a postdoctoral fellow, tackles critical pain points in patient care and nursing workflows through innovative, nurse-led solutions that address challenges faced by marginalized populations. Collaborating with engineers at UMASS, the unit is well-equipped to support the evaluation and feasibility of new innovations developed in partnership with the nurse-engineer team model.

Lessons Learned

- This academic/clinical partnership has highlighted the unique value of frontline nurses as leaders in healthcare innovation. By fostering ongoing mentorship, it supports clinical nurses in advancing scientific research, enhancing interdisciplinary collaboration, and achieving measurable improvements in patient care. This approach has also led to the development of innovative healthcare products and improvements at the point-of-care.
- Additionally, the program has created meaningful and productive collaborative research opportunities with interdisciplinary colleagues, significantly increasing our access to funding for nursing research.
- Magnet recognition serves as a benchmark for nursing excellence, empowering nurses to take on leadership roles in research and innovation, further advancing the field of nursing and improving patient outcomes.

Implications/Applications to Other Settings

- Our program of mentoring and supporting interdisciplinary nurse-led research empowers frontline nurses to become both researchers and leaders in healthcare innovation.
- This approach ensures improvements in patient care are implemented as quickly as possible where they are needed most.
- It is our hope this model can inspire leaders in all healthcare settings to recognize the transformative potential of interdisciplinary nurse-led research for improving healthcare.



Senior UMass nursing honors student Katie Fortnam working with Baystate Nurse Scientist Dr. Cidalia Vital on IVSP research in the Intensive Care Unit.

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