

Overview and Summary: Innovation and Design Thinking in Nursing Education and Healthcare Settings

[Shanina Knighton, PhD, RN, CIC](#)

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Overview

As a Cleveland native and first-generation high school graduate, my career trajectory exemplifies the transformative power of innovation and resilience. For over 15 years, I have dedicated my work to redefining the role of nurses as solutionaries—leaders who not only identify healthcare challenges but craft impactful solutions that bridge gaps where no pathways exist. My journey began with identifying unmet needs in infection prevention and patient hygiene during my time as a bedside nurse, which inspired a series of groundbreaking initiatives. From creating technology-based interventions to improve patient hand hygiene to addressing hygiene poverty through research and community engagement, I have embraced innovation as a core principle of my work.

One of my most recent proudest achievements is developing a technology-based self-management intervention designed to improve patient hand hygiene practices particularly among older adults and patients unable to leave their hospital beds. The bed-rail affixed dispenser provides personalized verbal reminders, tracks usage, and adapts to patient needs, reducing hand in contamination and preventing infections in populations where these challenges are most critical. This innovation exemplifies how simple technology can empower individuals to take control of their health and prevent infections while addressing disparities in care.

Through my entrepreneurial endeavors, I have extended my impact beyond traditional healthcare settings. As co-owner of the largest appliance store in my community, I innovatively integrated voucher acceptance from nonprofits and government agencies to make essential household goods accessible to underserved populations. This model is an example of practical, systemic innovation that addresses economic disparities while preserving dignity. I have also licensed educational materials that empower individuals and families to improve hygiene and infection prevention, tackling hygiene poverty at its root by making basic hygiene accessible, understandable, and actionable.

The culmination of my experiences has been enriched by my work in translational research and interprofessional collaboration. As a nurse scientist and entrepreneur, my journey with BioDesign—a course I took over a decade ago and have co-taught through the department of biomedical engineering for several years now—profoundly transforms my approach to problem-solving, innovation, and interdisciplinary collaboration. Initially developed at Stanford University, the BioDesign framework taught me to identify clinical unmet needs, collaborate across disciplines, and craft solutions that address both micro and macro healthcare systems. Collaborating with peers in engineering, business, social sciences, and medicine, I experienced firsthand how diverse perspectives and interprofessional education catalyzes innovative healthcare improvements. My mentors, from CEOs to community activists, reinforce the importance of viewing problems and solutions through varied lenses. Whether it is reducing environmental pathogens through eco-friendly interventions or advocating for better healthcare policies, my efforts demonstrate that innovation thrives when driven by empathy, systems thinking, collaboration and bold action. The six introductory articles that follow in this OJIN topic align with my commitment to fostering innovation within nursing and beyond. A colleague of mine, Dr. Cheryl Bradas, often says, “Nurses Light the Way,” and within each article our colleagues highlight how structured education, interprofessional collaboration, and the development of entrepreneurial thinking are empowering nurses to transform healthcare. From the American Nurses Association's (ANA) accelerator program to the groundbreaking taxonomy of nurse innovators, these pieces emphasize the need for structured innovation education and interdisciplinary collaboration to tackle healthcare's biggest challenges. Through these scholarly contributions, I hope that nursing students and nurses of any and many levels are inspired to embrace their roles as innovators and changemakers. Validating that role with vision and determination, we can collectively reimagine the future of healthcare. It

The article, "[The ANA Innovation Accelerator: Galvanizing the Future of Nursing Innovation](#)," by Lemberger and colleagues demonstrates that nurses as entrepreneurs, intrapreneurs, and innovators are no longer anomalies, but key factors to reshaping healthcare. ANA's groundbreaking innovation accelerator is empowering nurses to become pioneers in their field by providing critical education and resources often absent in traditional nursing programs. More excitingly noted in this article is that nurses are at the heart of this transformation. Results from ANA's nine-month program not only elevated participants' skills but catalyzed change, equipping nurses to lead innovation in care delivery, technology, and health systems. The accelerator's success is evidenced by a 14% increase in early adopters and testimonials from nurses who leveraged the experience to launch businesses, secure patents, and influence bedside care. Dive into this article to discover how this initiative is redefining nursing and creating a pipeline of innovators poised to tackle healthcare's biggest challenges.

The study by Leary and her colleagues, "[Creating a Phenotype and Taxonomy of Nurses Engaging in Innovative Behaviors](#)," dives deep into the traits and habits that set nurse innovators apart, revealing a groundbreaking taxonomy and phenotype. By analyzing hundreds of nurses who actively engage in innovation, the research uncovers four unique categories—from the "optimal innovator" to the "wary innovator"—and explores how exposure to innovation activities can reshape nursing practice. What if you could unlock the secrets of innovative behaviors in nursing and identify exactly what makes a nurse an innovator? What if you could learn what is keeping you from taking risks? Whether you are a nurse leader, educator, or bedside practitioner, this article provides the blueprint to nurture creativity, risk-taking, and empower nurses to lead transformative change in healthcare. Discover how these scientific findings can spark your journey to becoming an innovator and revolutionize the profession.

Talsma and colleagues' study, "[Evaluation of a Synchronous Online Innovation and Design-Thinking Module for Graduate Nursing Students](#)," highlights the transformative potential of innovation-focused education in preparing nurses to address persistent healthcare challenges. Integrated into a graduate-level quality and safety course, the module used design-thinking principles, such as human-centered design and Lean Launch methods, to guide students in developing practical solutions to clinical issues. Participants reported significant improvements in creative self-efficacy, psychological empowerment, and experimentalism—a key design-thinking trait. Student projects included an app to assist new nurses with job-related challenges and a tool to streamline hospital supply management. Discover how this program is shaping the future of nursing by embedding innovation at the core of education, demonstrating that with the right tools, every nurse can be a changemaker.

Over a decade, The Ohio State University (OSU) has launched several trailblazing initiatives such as the Master of Healthcare Innovation program and the Innovation Studio, which have driven interdisciplinary collaboration and transformed healthcare education. In this article by Raderstorf and colleagues, OSU innovators share how their programs have resulted in practical solutions to real-world healthcare challenges. They emphasize that by investing in both human capital and resources into nurse-focused innovation and entrepreneurship programs, nurses who are often overlooked in innovation can shift healthcare. These authors highlight that innovation in nursing education is not one-size-fits-all but must be tailored to organizational needs. The "[Building, Sustaining, and Sunsetting Innovation Programs in Higher Education: Lessons Learned](#)" findings align with wider perspectives, such as Christensen and Eyring's (2011) emphasis on the need for universities to innovate from within to remain competitive, reinforcing the value of these tailored, evidence-driven approaches. Key takeaways include the necessity of strong institutional support, adaptability, and regular feedback to ensure program and relevance and longevity.

The "[Academic-Practice Partnership Builds Innovation and Creative Capacity Following a Human-Centered Design Workshop](#)" article explores the transformative impact of an academic-practice partnership between a Midwestern Veterans Health Administration (VHA) and a university innovation center, which implemented a one-day human-centered design (HCD) workshop. The program aimed to enhance creative self-efficacy, psychological empowerment, and design-thinking traits among nurses and administrators, developing their ability to address healthcare inefficiencies. Participants reported increased confidence and practical skills to apply innovative solutions in their work environments, including quality improvement projects and patient care strategies. These insights from author Holt and her colleagues underscore the role of structured training in equipping clinicians to lead innovation in complex healthcare settings.

The article by Den Ouden and colleagues, "[Future-Proof Healthcare and Social Work Professionals: Innovative Approaches from Canada, The Netherlands, and the United States of America](#)" explores how healthcare professionals in these three countries are being prepared to innovate in response to the challenges of aging populations, chronic disease, and technological change. Examples include integrating 21st-century skills such as critical thinking and design innovation into curricula, nurturing professional development in technology-rich environments, and creating interdisciplinary learning platforms. This approach emphasizes collaboration and adaptability, ensuring professionals can navigate in rapidly evolving healthcare landscapes. These connections underscore the need for global, multifaceted strategies to future-proof healthcare education and practice.

The journal editors invite you to share your response to this OJIN topic addressing innovation and thought design either by writing a Letter to the Editor or by submitting a manuscript. We welcome for consideration content to further the discussion of this topic which has been initiated by these introductory articles.

Author

Shanina Knighton, PhD, RN, CIC

Email: scknightonresearch@gmail.com

ORCID ID: 0000-0001-8667-7589

Shanina Knighton is a nurse-scientist, infection preventionist, and research assistant professor at Case Western Reserve University, with additional roles in biomedical engineering and as a senior nurse scientist at MetroHealth System. She specializes in translating infection prevention science into equitable, practical tools, focusing on interdisciplinary approaches to address complex health challenges. Dr. Knighton is the Principal Investigator on an NIH-funded R01 grant aimed at improving hand hygiene among older adults through a technology-based self-management intervention. Her innovative work has led to numerous peer-reviewed publications and recognition as a 2023 Veale Institute Entrepreneurship Faculty Fellow.

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