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Technology and Health Care: Balancing Innovation and Patient Safety

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Editor

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At the 2024 Editorial Board meeting in December, members had a great discussion about the role of technology in health care. We had general consensus that it was both blessing and curse. Anyone who practiced in the days of paper charts, for example, could only be grateful for a quicker charting method when electronic health records (EHRs) became available. As I remember, we first started documenting patient vital signs in the computer for easy access by providers. Before I left my first post in the mid-1990s, we were documenting nursing notes in the computer. It still involved a great deal of typing, as there was no clicking our way through a list of symptoms or actions, but it was so much quicker than writing a lengthy note in DAR format.

Since then, having worked with multiple documentation platforms, I question the defensibility of some of our nurse charting. I spent several years working as a legal nurse consultant in Colorado, when charting was still largely on paper, and I've wondered more than once since then if we nurses were capturing enough detail about a patient's condition as we click our way through the assessment platform in the computer. There are certainly times when a free-text box is handy to capture more detail about the condition (and our nursing actions) for a patient with deteriorating health status. However, the EHR is nothing short of a miracle in a profession that requires consistent, rapid communication. Nurses and other providers – and even patients receiving outpatient care – can find needed information about the history of a health concern, laboratory finding, or plan of care through the EHR or patient portal.

Often embedded in the EHR, clinical decision support systems (CDSSs) also help nurses evaluate patient symptoms and determine relative risk, typically with suggested actions. Nurses are able to put the pieces of a patient assessment together in a meaningful way that drives patient-centered, evidence-based actions and in theory improves patient outcomes. Sophisticated tools driven by artificial intelligence (AI) now are being integrated into CDSS platforms. During that Editorial Board discussion in December, members wondered about the impact of technology in general (and AI in particular) on patient safety. While acknowledging the great potential of CDSSs in improving patient outcomes and thus reducing healthcare costs, Chen and co-authors (2023) recognized their optimization remains a challenge. In particular, they identified ethical concerns that included the potential for algorithmic bias.

NeuroLeadership Institute (2019) very cleverly described algorithmic bias as "groupthink gone digital." Their staff remind us that algorithms are designed by humans, and thus "far from neutral and impartial" (para. 4). Some algorithms have been shown, for example, to have unequal impact on currently disadvantaged groups because of lack of diversity in the data set.

Cross and colleagues (2024) specifically discussed bias in medical AI. They identified the potential consequences as "substandard clinical decisions and the

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Journal Mission Statement

MEDSURG Nursing is a scholarly, peer-reviewed journal dedicated to advancing evidence-based medical-surgical nursing practice, clinical research, and professional development. The journal's goal is to enhance the knowledge and skills of medical-surgical nurses to promote health, prevent and manage disease, alleviate suffering, and improve health outcomes across medical-surgical populations.

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perpetuation and exacerbation of longstanding healthcare disparities" (abstract). Bias can develop, for example, through insufficient sample size for some patient groups. That can lead system users to make predictions that are not clinically meaningful. This in turn suggests the risk of negative impact on outcomes for certain patients, and it takes us back to the Editorial Board discussion about technology and patient safety. Are we confident we are using the best possible tools to achieve positive patient results? More to the point, perhaps, are we confident users of those tools? Have we been well trained in their potential and their areas of concern? Are we combining our sound clinical judgment with any AI input?

AI will no doubt become an astounding tool in health care. We nurses need to be prepared to use it. In this issue, learn more about the implications of AI through the excellent overview from Chargualaf and coauthors (2025). MSN

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Clinical Practice

Artificial Intelligence: What Does It Mean for Medical-Surgical Nursing Practice?

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Although not new to nursing, artificial intelligence (AI) is transforming medical-surgical nursing practice. In broad terms, AI uses information to support patient care and facilitate problem solving (Stryker & Kavlakoglu, 2024). Aligning with the nursing process, AI can improve outcomes by facilitating assessment, early detection, clinical decision-making, and timely intervention. Despite this opportunity, there is hesitancy among nurses to adopt AI fully into practice; confusion may exist as to what it is and how it could be leveraged. This hesitancy may be attributed to a gap in knowledge along with apprehension toward pragmatic patient and role considerations. Only recently was a concept analysis of AI in nursing completed (Shang, 2021).

AI uses technology to simulate human intelligence and problem-solving (Sharma, 2024). Computerized tools or programs using substantial amounts of data can be designed to detect or perform tasks quickly that traditionally require human critical thinking (Castagno & Khalifa, 2020; Vishnoi & Yadav, 2024). This can be accomplished by quickly analyzing and interpreting massive amounts of data through machine learning (Ghane et al., 2024). Over time and repeated

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Artificial intelligence integration in medical-surgical nursing supports efficient clinical decision-making and care delivery. Through this article, authors increase awareness of its use, present an overview of its benefits and opportunities, and address ethical concerns and potential fears.

Keywords: artificial intelligence, AI, medical-surgical nursing, ethics, clinical decision-making

Learning Outcome: After completing this education activity, the learner will be able to discuss benefits and concerns related to the use of artificial intelligence in medical-surgical nursing practice.

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use, AI programs can detect patterns in data that might take a long time for a human to analyze. This can be helpful in using clinical information to detect a potential or actual problem long before a person could, simply because of the time involved (Babu & Snyder, 2023).

Other examples of AI include voice assistance (e.g., Siri®), chatbots, functional programs (e.g., self-driving cars), and robotics (e.g., robots to deliver medications). Without purposeful programming, machine learning can facilitate timely clinical decisions by adjusting established rules for interpreting available data and accounting for missing data (Mhasawade et al., 2021). Although AI can facilitate timely data interpretation or early identification of potential patient concerns, it does not replace clinical judgment (Johnson et al., 2024).

Concerns Related to AI Use in Nursing Practice

Historically, nurses have adapted to practice changes in response to new research or technologies. However, uncertainty and concern also can accompany change. This holds true with the integration of AI into clinical practice. A search of the literature revealed several key concerns: (1) fear of displacing the nurses' role in patient-centered care; (2) inability of technology to empathize; (3) data accuracy and security; and (4) ethical and legal considerations.

The foundation of nursing practice is the nurse-patient relationship. The ability to connect with patients directly influences the provision of safe, timely, evidence-based care. Nurses use critical thinking to assess, analyze, and interpret data to draw conclusions and execute a plan of care. As digital technologies, including AI, expand and become more deeply integrated into healthcare processes, nurses may fear not only a loss of therapeutic relationships but also their ability to provide person-centered, compassionate care (Booth et al, 2021). Further, concern about AI lacking capacity to convey human emotions and true empathy resonates with many (Malla & Amin, 2023; Martinez-Ortigosa et al., 2023; Morrow et al., 2023). The risk then is a nursing practice that is a mechanical process devoid of human connection, empathy, and shared decision-making inclusive of contextual and individualized considerations in holistic care (Karimian et al., 2022).

Nurses also worry about job security if technological advancements and AI appear to replace nurses' clinical reasoning and ability to connect with patients (Kelly et al., 2019; Pailaha, 2023). This point was noted by 10% of surveyed healthcare professionals who, in a study in the United Kingdom, expressed concern their jobs would be lost to AI (Castagno & Khalifa, 2020). These concerns may result in unintended consequences, including effects on patient health and well-being (Buchanan et al., 2020).

Beyond role displacement and the value-added benefits nurses bring to the patient experience, concerns regarding data accuracy and security within AI frequently were reported in the literature. Uncertainty remains regarding the quality and accuracy of data that inform AI models (Bates et al., 2021). The expectation is for clinicians to use AI-generated data to inform patient care decisions, yet it is unclear if original data used to inform AI algorithms are accurate; there also is often no way for the nurse to verify AI-generated data are not flawed. As clinicians are responsible for extracting accurate data to make evidence-based decisions, assurance is needed to increase confidence in use of AI. The potential also exists for unintended loss of protected health information through patient privacy breaches. As data sharing increases, the risk of interception through hacking also increases; this is a concern held by patients (Richardson et al., 2021).

Because advocating for patient interests is a key role for nurses as members of the most trusted profession (Saad, 2025), it is not surprising concerns exist regarding ethics of AI. While AI can help gather, interpret, and analyze data, facilitating quick decision-making, questions exist about whether biases may emerge or data may be skewed, making outcomes less accurate (Cross et al., 2024). Because existing data used to train AI may not be representative of diverse populations, algorithmic data and resultant information may be partial to one race and not specific to other population groups (Agnew, 2022; Amara, 2023). When using data that are not representative of diverse populations, AI has the potential to perpetuate social biases and cause harm to persons already affected by health disparities and inequities (Agnew, 2022). These potential flaws must be considered when assessing outcomes accuracy and problem-solving changes to reduce errors (Pailaha, 2023).

Karimian and colleagues (2022) noted ethical concerns regarding the lack of patient-centered care, shared decision-making, privacy, trust, and accountability, as well as bias associated with greater dependence on AI. Johnson and co-authors (2024) addressed legal and policy challenges with AI in practice by questioning potential liability. For example, if an AI program recommends a clinical action inconsistent with the standard of care and patient harm occurs when the nurse completes

this action, does the nurse hold any liability for not using clinical judgment? Further clarity is needed to determine where liability lies. Concepts, such as trust, quality, data privacy and security, potential introduction of biases, fair use of AI technologies, and job-related concerns for nurses, also must be addressed as AI becomes more pervasive.

Benefits of AI in Clinical Practice

To ensure patient safety and promote optimal outcomes, medical-surgical nurses critically appraise large volumes of patient information while simultaneously navigating complex tasks. Bates and co-authors (2021) argued AI can contribute to effective and safe patient care. Medical-surgical nurses who understand AI use in practice can capitalize on its potential to enhance and transform the nurse-patient relationship and improve patient outcomes (Buchanan et al., 2020). As AI is capable of rapidly scanning information from the entire health record, nurses' ability to make clinical judgments efficiently and respond effectively improves (Rony et al., 2023). AI also can develop a comprehensive, interprofessional approach to patient care, aligning patient data with the nursing process and generating patient-specific plans of care (Ng et al., 2021).

Ng and colleagues (2021) identified six uses for AI to support medical-surgical nurses: (1) documenting; (2) identifying nursing diagnoses; (3) creating care plans; (4) monitoring patients; (5) predicting patient needs; and (6) predicting patient conditions based on data input. AI tools can facilitate early diagnosis, clinical decision-making, care management and monitoring, workflow optimization, and nursing education (Martinez-Ortigosa et al., 2023), thus reducing errors and increasing productivity and efficiency (Bates et al., 2021; Wangi et al., 2024). Furthermore, AI can predict when a patient is at risk for a complication by comparing patient-specific data against the vast amount of data in its algorithms and then notify the nurse for early intervention. Examples include the potential for healthcare-associated infections, adverse drug events, venous thromboembolism, and surgical complications (Bates et al., 2021). A common predictive AI tool is the Rothman Index Score (Moguillansky et al., 2022), which detects patient deterioration using 26 risk score variables, including 11 nursing assessment metrics (Robert, 2019). With this tool, the clinical team can access critical information quickly to facilitate decision-making (Moguillansky et al., 2022).

AI's capability to assist with repetitive tasks, such as documenting and monitoring assessment metrics, can provide medical-surgical nurses with more time for direct patient care (Huang et al., 2022). Robert (2019) reported up to 16% of nurses' work time involves nonnursing tasks that AI could complete, providing more time for nurses to engage with patients. This extra time can translate to focused patient-centered interventions to improve patient satisfaction and clinical outcomes. Moreover, when used synergistically with other technologies, AI can support and enhance interprofessional team outcomes and reduce costs from physical and cognitive work (Ng et al., 2021).

Application of AI in Current Practice

AI provides surveillance and predictive analytics within clinical settings (Sharma, 2024). For example, AI can identify patients who are at elevated risk for falls with injuries by applying mathematical models to information within the electronic health record. The nurse then can implement fall reduction strategies as preventive measures to increase patient safety (Amara, 2023).

The Modified Early Warning Score also can help the nurse identify a patient's risk for deterioration. This score uses the patient's systolic blood pressure, heart rate, respiratory rate, body temperature, and mental status, and provides information rapidly to predict a patient's need for critical care (Kang et al., 2020). During the COVID-19 pandemic, AI technology provided insight into virus transmission, infection rates, and patient outcomes using clinical, epidemiological, and omics data (Lv et al., 2024), resulting in an informed, timely response, and improved clinical outcomes.

As AI can improve efficiency by identifying and signaling a patient's status to nurses and other clinical staff, nurses are better able to manage the needs of multiple patients on a unit. With the integration of AI tools, Huang and colleagues (2022) demonstrated nurses were able to identify a patient's status more intuitively, reducing the average nurse-patient interaction time per patient from 18 minutes to 10 minutes. This has the potential to enhance the nurse-patient relationship, grounded in caring and compassion, by affording dedicated time otherwise spent analyzing data and making clinical decisions to supporting patient interactions.

AI further supports workflow efficiency with generated documentation and standardization, or natural language processing techniques to improve collaboration with the patient and healthcare team (Yadav, 2024). Evidence-

based interpretations and recommendations generated from AI also can enhance workflow related to patient education and charting (Vishnoi & Yadav, 2024). AI thus has the potential to reduce the nurse's cognitive load, promoting more effective and efficient care delivery (Gandhi et al., 2023). AI can decrease a nurse's cognitive load through simultaneous multipatient data interpretation, prioritization of critical information, application of consistent rules for optimal decision-making, and augmentation of workflow processes (Shamszare & Choudhury, 2023). The nurse ultimately maintains the final responsibility for the appropriateness of implementing any AI-generated care recommendation.

Nurse's Role in the Adoption of AI in Clinical Practice

Medical-surgical nurses are in an ideal position to provide perspective and insight into developing and adopting AI tools. As such, they should be involved in decisions regarding using and incorporating AI into practice (Amara, 2023; Douthit et al., 2020; Johnson et al., 2024). Further, nurses' role in designing AI algorithms, developing guidelines, making policy, and implementing AI-based technologies in nursing practice cannot be understated (Rubeis, 2020; Seibert et al., 2021; von Gerich et al., 2022). Nurses should leverage their clinical expertise and patient advocacy skills to ensure AI advancements consider patient interests as well as implications for practice (Ronquillo et al., 2021). A key step for nurses to ensure they are an integral part of AI is to understand core concepts about AI and seek training or resources to stay current with AI advancements (Rony et al., 2023).

The American Nurses Association (ANA, 2025) recognizes nurses' importance in advocacy, patient safety, health promotion, and decision-making. As such, medical-surgical nurses are in a prime position to advocate for AI policies that align with the *Code of Ethics for Nurses*. These policies include promoting patient health and safety to ensure optimal care (ANA, 2025), along with ensuring the humanistic side of the nurse-patient relationship remains uncompromised and focused on helping and not harming patients or the broader public (ANA, 2023).

Opportunities exist for nurses to be involved actively in Boards of Nursing to ensure the scope of practice includes nurses' role in AI adoption and implementation. Medical-surgical nurses need to be involved in decision-making about adoption of AI tools in clinical practice and nursing overall (Johnson et al., 2024). Nurses can assist in writing AI position statements for professional associations and organizations, reflecting practice and supporting safe patient care to improve outcomes. Furthermore, medical-surgical nurses can reimagine nurses' role in providing care with the advancement of AI technologies. Stokes and Palmer (2020) concluded AI must be implemented ethically without changing aspects of human caring and core values of nursing.

Implications

Medical-surgical nurses must consider several implications of the integration of AI in clinical practice. The first relates to the ethical impact of AI in clinical practice. Karimian and colleagues (2022) argued AI use directly impacts five ethical principles: autonomy, explicability, privacy, fairness, and prevention of harm. Autonomy refers to the right to make healthcare decisions for oneself. As the integration of AI alters nursing care delivery, opportunities to create a patient-centered relationship built on a model of shared decision-making inclusive of individual preferences for care and care decisions could be influenced. Explicability is the ability to understand and explain an interpretation derived by AI. At the heart of explicability is transparency and trust by nurses and other members of the healthcare team that outputs influencing patient care decisions are sound and justifiable (Ursin et al., 2023). Privacy may be impacted when data use is expanded beyond a single care encounter and control over personal health information changes to facilitate data sharing to inform decision-making (Richardson et al., 2021). Fairness relates to AI algorithms that may not appreciate diverse populations fully or embed unconscious biases that directly influence care decisions (Liu et al., 2023). Finally, little is known about the connection between AI and patient harm prevention (Karimian et al., 2022). To ensure AI is collecting and interpreting data correctly, nurses should advocate for research that explores clinical outcomes associated with AI use in practice.

The influence of AI on the perpetuation of biases and prejudice is a second implication. Amara (2023) contended AI uses data that may not be representative of diverse populations. AI trained on data not inclusive of diverse populations or on a preponderance of data partial to one race may offer outputs not tailored to individuals from diverse backgrounds. Data under-representation occurs when descriptors embedded within the electronic health record are racially, ethnically, or culturally inaccurate or irrelevant (Liu et al., 2023). One example is the accura-

cy of oxygen saturation values in persons with dark skin tones, which may influence the diagnosis of hypoxemia (Jamali et al., 2022; Okunlola et al., 2022). If AI models or data reports do not appreciate specific nuances unique to various groups or populations, clinicians can make decisions based on erroneous or less specific results, thus increasing the risk of patient harm.

A scoping review by Celi and colleagues (2022) concluded most datasets used to inform clinical AI originate from the United States or China; these datasets overlook a substantial part of the global population reliant on AI algorithms for decision-making. Thus, individuals from these countries stand to benefit more from the decisions generated by AI compared to those who live elsewhere. AI algorithms that use datasets inclusive of broad "sociodemographic representation" (Celi et al., 2022, p. 2) are needed to decrease biases and healthcare inequities (Agnew, 2022). Medical-surgical nurses can help overcome these potential inequities by understanding how AI collects and interprets information, and reporting inaccurate information within the electronic health record (Douthit et al., 2020). Collectively, these efforts will acknowledge diversity, appreciate respect for the individual, and reduce mistrust in healthcare providers or the healthcare system (Celi et al., 2022).

A third implication relates to the preparation of nurses to use AI in clinical practice. Internationally, nurses' perceptions of their knowledge and understanding vary widely. Among registered nurses surveyed by Swan (2021), 70% reported an awareness of AI in health care, but only 30% understood how nursing practice uses AI. Ghane and colleagues (2024) surveyed nurses in the United Arab Emirates, concluding only 9% maintain sufficient knowledge of AI. Seventy-five percent of participants in this study agreed basic information about AI should be included in nursing curricula. Among providers working at the National Health Service Foundation Trust, 64% reported never using AI in practice; this finding suggested a lack of familiarity with AI (Castagno & Khalifa, 2020).

Exposure to AI needs to begin in prelicensure nursing programs. A group of 15 AI subject matter experts who convened to develop AI-related clinical competencies for healthcare professionals described AI as a "new form of literacy" (Russell et al., 2023, p. 350). As such, the first of six competencies they developed was a basic knowledge of AI. If AI were threaded into undergraduate nursing curricula, graduates would enter the workforce with basic knowledge and understanding of how AI guides patient care and influences clinical outcomes (Seibert et al., 2021).

Nurses also need ongoing professional development related to AI to maintain competent practice. Without sufficient exposure to and understanding of AI early in professional practice, fear and hesitancy to learn about and apply technological tools in the future could be perpetuated. This could slow the progress of innovation, impeding creativity and medical breakthroughs, and erecting a barrier to forward-thinking progress. Notwithstanding costs associated with AI integration and use, healthcare organizations must commit to professional development for nurses related to AI in clinical practice (Seibert et al., 2021).

Nurses are the gatekeepers of providing safe patient care. They should feel comfortable with the latest technological advances in AI to perform safe patient care throughout a patient's plan of care. AI has the potential to surpass human intelligence and enhance nurses' ability to spend more time with patients (Huang et al., 2022; Robert, 2019). Assessing the medical-surgical nurse's AI literacy level can help to determine/predict the nurse's ability and hesitance to grasp AI and become efficient in AI basics (Amara, 2023; Ghane et al., 2024; Russell et al., 2023).

Discussion

Nurses informed of the benefits of AI are in a better position to be decision-makers in the development and implementation of AI. Further, they can help alleviate fears that AI may replace nurses. Humans can think critically, use their clinical judgment skills, and show empathy toward patients, whereas AI does not have the ability to express genuine human emotions in situations encountered by nurses. The literature reviewed for this article did not support fears of AI replacing nurses working in the clinical setting (Johnson et al., 2024). The literature does suggest AI can reduce redundancies and improve efficiencies for nurses by facilitating data collection to inform practice-related decision-making and care delivery. In addition, nurses can be involved in a leadership role for AI. At institutional and local community levels, medical-surgical nurses can serve on committees to provide the nursing perspective as patient advocates. On a broader scale, nurses can extend their advocacy by reaching out to local and state legislators to inform policy and engage with professional organizations to inform the adoption and implementation of AI in curricula and practice.

Nurses and healthcare leaders can take a series of actions to embrace AI in clinical practice.

The first step would be to develop a universal definition of AI recognized and understood by practicing medical-surgical nurses. The second step would incorporate an assessment of nurses' readiness to acknowledge what is known about AI and address knowledge gaps. Next, resources should be allocated to support professional development opportunities related to AI. This would include integration of AI competencies in nursing curricula (Seibert et al., 2021). The fourth step would involve situating AI within nursing care frameworks, including the nursing process and evidence-based practice models. Following would be a demonstration of the ways AI is or could be used in clinical practice to improve patient care and efficiency. The sixth step would involve advocacy for integration of AI into nurse practice acts to assure proper and ethical use. The next step would include assessment and re-evaluation of nurses' knowledge, skills, and attitudes related to AI and the ability of AI to impact care outcomes and workflow optimization positively. Finally, provisions would be made for nurses to be involved in AI research and dissemination of the findings (Seibert et al., 2021).

Conclusion

AI is transforming health care and medical-surgical nursing practice. Broadly defined as using information to support patient care and solve problems, AI presents benefits and concerns. Technologies using AI have the potential to influence clinical workflow systems and also support efficient decision-making necessary for high-quality care and patient safety (Martinez-Ortigosa et al., 2023). Nurses must be involved in all stages of AI use from development to implementation. Leaders in higher education should consider embedding AI competencies into curricula to prepare future nurses while leaders in healthcare organizations must commit to ongoing professional development for practicing nurses. Armed with knowledge, medical-surgical nurses can play a pivotal role in adoption and appropriate use of AI in clinical practice. MSN

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Nursing Pharmacology

Anticholinergics and Antimuscarinics for Treatment of Overactive Bladder

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Kenneally, M., Lindstrom-Mette, A., Inocian, E.P., & Felicilda Reynaldo, R.F.D. (2025). Anticholinergics and antimuscarinics for treatment of overactive bladder. *MEDSURG Nursing, 34*(5), 222-226. https://doi.org/10.62116/MSJ.2025.34.5.222

Anticholinergic and antimuscarinic medications are cornerstone therapies for overactive bladder (OAB). Nurses play a vital role in the management of OAB by understanding pharmacologic effects and risks of these therapies. A review of commonly prescribed anticholinergic and antimuscarinic agents for OAB is presented with a summary of their pharmacologic properties, formulations, clinical efficacy, safety profiles, and considerations for patient selection.

Keywords: overactive bladder, medications, anticholinergic, antimuscarinic, pharmacologic effects

Learning Outcome: After completing this education activity, the learner will be able to discuss the pharmacology, clinical efficacy, safety profiles, and patient selection considerations of commonly prescribed agents for the treatment of overactive bladder.

Overactive bladder (OAB) is a urologic condition characterized by a sudden and frequent urge to urinate that is difficult to suppress. Common symptoms include urgency incontinence, increased daytime frequency (more than eight voids per 24 hours), and nocturia, which disrupts sleep and impairs quality of life (Funada et al., 2023; Holzbeierlein et al., 2024).

The pathophysiology of OAB involves neurogenic, myogenic, and urothelial mechanisms. Neurogenic contributions include dysregulated afferent signaling and heightened neuronal excitability, which can amplify bladder activity (Chess-Williams & Sellers, 2023). Myogenic factors such as spontaneous detrusor contractions increase bladder contractility (Kwon et al., 2024). Urothelial dysfunction alters sensory signaling, intensifying urgency symptoms. Additional factors, such as bladder ischemia, oxidative stress, and low-grade infections, may exacerbate OAB symptoms further (Chess-Williams & Sellers, 2023).

Among available treatments for OAB, anticholinergic and antimuscarinic medications remain cornerstone therapies. Anticholinergics non-selectively inhibit acetylcholine activity throughout the body, which may result in adverse effects, such as dry mouth, constipation, and cognitive impairment. In contrast, antimuscarinics selectively target muscarinic receptors in the bladder, reducing detrusor overactivity while minimizing systemic side effects. Newer agents, including solifenacin (Vesicare®) and darifenacin (Enablex®), offer improved tolerability and reduced central nervous system penetration compared to older drugs such as oxybutynin (Ditropan®). These properties make antimuscarinics more

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suitable for long-term use, particularly in older adults who are more vulnerable to cognitive side effects (Alghamdi et al., 2024; American Urogynecologic Society, 2021; Vevers, 2023). A medication-by-medication review of commonly prescribed anticholinergic and antimuscarinic agents for OAB is presented with a summary of their pharmacologic properties, formulations, clinical efficacy, safety profiles, and considerations for patient selection.

Anticholinergics/ Antimuscarinics Approved for OAB Treatment

Oxybutynin

Oxybutynin (Ditropan®) is a first-generation anticholinergic agent used to manage OAB symptoms by inhibiting M3 receptor activation in the detrusor muscle, thereby reducing involuntary bladder contractions. Its various formulations include oral syrup (5 mg/5 mL), immediate-release (IR) tablets (5 mg), extended-release (ER) tablets (5, 10, or 15 mg), and transdermal patches (Drugs.com, 2024). This medication was approved in 1975. In 2013, marking a shift toward broader accessibility, the U.S. Food and Drug Administration approved over-the-counter use of the transdermal oxybutynin patch (Oxytrol®) (Chancellor et al., 2024).

Oxybutynin accounts for more than half of OAB prescriptions. However, it is associated with notable anticholinergic side effects, including dry mouth, constipation, and blurred vision, due to muscarinic receptor blockade in non-target tissues such as the salivary glands and gastrointestinal tract (Chancellor et al., 2024). A large retrospective cohort study using TriNetX data (n=83,550) identified increased risk of dementia in patients treated with anticholinergics such as oxybutynin compared to untreated OAB controls (Sheyn et al., 2025). Because of its systemic anticholinergic activity, oxybutynin is contraindicated in individuals with glaucoma (Drugs.com, 2024).

Tolterodine

Tolterodine (Detrol®) is an antimuscarinic agent that selectively and competitively binds to muscarinic M3 receptors in the bladder, decreasing detrusor muscle tone and enhancing urethral sphincter function. It is associated with improved tolerability relative to oxybutynin, particularly in terms of dry mouth severity (Narain & Parmar, 2023).

Available formulations include IR tablets (2 mg twice daily) and ER capsules (4 mg once daily), which offer pharmacokinetic equivalence while potentially improving adherence (Narain & Parmar, 2023). Although tolterodine patches have shown therapeutic efficacy with fewer adverse effects such as dry mouth and constipation, they are not used as commonly as oral formulations. Clinical comparisons suggest ER oxybutynin (10 mg once daily) is more effective than conventional tolterodine (2 mg twice daily) in symptom reduction (American Society of Health-System Pharmacists, Inc. [AHSP], 2025).

Tolterodine is contraindicated in patients with gastric retention, uncontrolled angle-closure glaucoma, myasthenia gravis, severe constipation, intestinal atony, ulcerative colitis, or bladder outlet obstruction (AHSP, 2025; Narain & Parmar, 2023). Clinicians should assess comorbidities carefully before initiating therapy.

Solifenacin

Solifenacin (Vesicare®) is a selective M3 muscarinic receptor antagonist that reduces detrusor muscle contractility and suppresses involuntary bladder contractions, making it effective for OAB symptom control (DrugBank, 2025). It is administered once daily in 5 mg or 10 mg oral tablet form. Tablets should not be crushed; a liquid suspension is available for patients with dysphagia (Drugs.com, 2025a).

A systematic review and meta-analysis of eight randomized controlled trials found solifenacin significantly reduced urgency, urinary incontinence, frequency, and nocturia (Ananda et al., 2025). However, patients receiving the higher 10 mg dose reported more frequent anticholinergic side effects, including dry mouth, constipation, and blurred vision. Solifenacin is contraindicated during pregnancy and lactation, and should be discontinued if either condition occurs (Drugs.com, 2025a).

Darifenacin

Darifenacin (Enablex®) is a once daily antimuscarinic agent that selectively antagonizes M3 receptors to inhibit detrusor muscle overactivity and improve bladder control in individuals with OAB (Burn, 2024). It is available as ER tablets in 7.5 mg and 15 mg strengths. Tablets must not be crushed or chewed due to their controlled-release formulation (Burn, 2024). Safety during pregnancy has not been established. Because darifenacin has been detected in breast milk, its use during breastfeeding is not recommended (Burn, 2024).

In a randomized, open-label trial, Prakash and colleagues (2024) found darifenacin to be effective in reducing OAB symptoms. The most commonly reported adverse effects included dry mouth and constipation. Moreover, combination therapy with duloxetine (Cymbalta®) resulted in greater improvements in

patient-reported quality of life compared to darifenacin monotherapy.

Fesoterodine

Fesoterodine (Toviaz®) is a muscarinic receptor antagonist approved for the treatment of OAB in adults. It also is approved for neurogenic detrusor overactivity in pediatric patients age 6 and older weighing at least 25 kg (Cerner Multum, 2024). Fesoterodine is available in 4 mg and 8 mg ER tablets, which can be taken with or without food. Tablets must not be crushed, divided, or chewed. Common adverse effects include dry mouth, constipation, blurred vision, abdominal discomfort, and diarrhea (Cerner Multum, 2024; Pfizer Inc., 2024).

A network meta-analysis of 60 randomized controlled trials with over 50,000 participants identified fesoterodine 8 mg as the most effective among oral OAB medication in reducing daily urgency incontinence episodes (He et al., 2023). The 4 mg dose was particularly beneficial for improving nocturia. However, both doses carried a similar risk of anticholinergic side effects, with headache being more common compared to other agents.

Fesoterodine has been classified as having a lower risk of cognitive impairment according to the Lower Urinary Tract Symptoms Fit fOR The Aged (LUTS FORTA) criteria, making it a possible favorable option for older adults, particularly women at risk for cognitive decline (Taha et al., 2025; Tsubouchi et al., 2023). However, a systematic review by Tsubouchi and colleagues (2023) found fesoterodine, similar to other antimuscarinics, was associated with increased risk of urinary tract infections, urinary retention, dysuria, and elevated post-void residual volume. As with all OAB treatments, individualizing therapy based on patient characteristics is essential for balancing efficacy and safety.

Trospium

Trospium (Sanctura®, Sanctura® XR) is an anticholinergic agent used to manage OAB symptoms, including urinary urgency, frequency, and incontinence (Cerner Multum, 2023). It is available as a 20 mg IR tablet taken twice daily and a 60 mg ER tablet administered once daily in the morning. The ER formulation should not be split or crushed. Special precautions are warranted for patients age 75 years and older due to potential interactions with sedatives, narcotics, and muscle relaxants, which may increase central nervous system or anticholinergic burden (Cerner Multum, 2023). Additionally, because trospium can reduce sweating, patients in hot climates should be advised of the risk of heat-related illness (Drugs.com, 2025b).

A key pharmacologic advantage of trospium is its limited ability to cross the blood-brain barrier, reducing the likelihood of cognitive adverse effects compared to other agents (Fisher et al., 2024). In a comparative study by Getaneh and colleagues (2024), the efficacy of three treatment modalities – anticholinergic medications, onabotulinumtoxinA (BTX), and sacral neuromodulation (SNM) – was evaluated for their impact on nocturia in patients with overactive bladder. The anticholinergic treatment arm utilized solifenacin and trospium. After 6 months of treatment, the anticholinergic group demonstrated a mean reduction of 1.3 nocturnal voids per night, a result that was comparable to the reductions observed in the BTX and SNM groups. These findings reinforce prior evidence supporting the effectiveness of anticholinergic agents in managing nocturia symptoms. Reporting on proceedings from an international meeting, Sahai and colleagues (2024) confirmed trospium's efficacy in reducing daily incontinence episodes, urgency, and micturition frequency.

Nursing Implications

Nurses play a critical role in safely administering and monitoring anticholinergic and antimuscarinic therapies for patients with OAB. Particular attention should be given to older adults and persons taking multiple medications, as these populations are at elevated risk for adverse drug interactions and anticholinergic burden (Cameron et al., 2024). Regular assessment for central nervous system and cardiovascular side effects, including dizziness, confusion, and palpitations, is essential, as these symptoms may increase the risk of falls or injury (Dinh et al., 2023).

Patient education is a central nursing responsibility. Nurses should counsel patients on expected side effects, such as dry mouth, constipation, blurred vision, and dizziness, and advise caution when operating machinery or engaging in tasks requiring alertness (University Hospital Southampton NHS Foundation Trust, 2023). For patients with hepatic or renal impairment, nurses should be alert to prescriber-adjusted dosages and ensure medication administration aligns with individualized treatment plans (Kyriakopoulus & Gupta, 2024).

Guidelines from the American Urology Association and the Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction emphasize the importance of shared decision-making and patient-centered care, in which nurses often serve as key communicators and educa-

tors (Cameron et al., 2024). Furthermore, the American Geriatrics Society's 2023 Beers Criteria® recommend minimizing anticholinergic use in older adults due to associations with cognitive decline, delirium, and increased fall risk (American Geriatrics Society Beers Criteria® Update Expert Panel, 2023; Cameron et al., 2024). Nurses should monitor for early signs of cognitive changes and advocate for alternative treatments when appropriate.

Emerging evidence also highlights long-term cognitive risks associated with antimuscarinic therapy. A large, nested case-control study found OAB medications, including oxybutynin, solifenacin, and tolterodine, were associated with an elevated risk of new-onset dementia, particularly with use exceeding 3 months (Iyen et al., 2024). Nurses should be proactive in identifying at-risk patients and initiating conversations with the care team when deprescribing; alternative therapies may be warranted.

Conclusion

Nurses play a vital role in the management of OAB by understanding pharmacologic effects and risks of anticholinergic and antimuscarinic therapies. Close monitoring is essential, especially for older adults at increased risk of cognitive side effects. Patient education on proper use and potential adverse effects helps promote safety and adherence. By applying evidence-based knowledge, nurses contribute to improved patient outcomes and quality of life. MSN

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Virtual and Experiential Approaches to an Interactive Research Program Among Bedside Nurses

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Lack of time or confidence, opportunities, and knowledge may impede clinical nurses from engaging in research. The impact of the COVID-19 pandemic prompted investigators for this mixed methods study to explore innovative approaches to increase nurse learning and research interest. A virtual and experiential interactive research exercise learning program was used.

Keywords: virtual learning, research, nurse engagement, experiential, interactive

The Institute of Medicine (2011) recommended actions to transform the ability of the nursing profession to address demands of an ever-changing healthcare landscape, improve patient outcomes, and ensure access to high-quality care. Nurses inherently want to make a difference and experience satisfaction in practicing beyond tradition and tasks. Through nursing inquiry, nurses are able to reflect on practice issues and develop projects, and are able to realize outcomes. Nursing reflective practice and research knowledge development lead to sense of purpose and fulfillment and joy at work (Sherwood, 2024).

A scoping review reported nurses' positive perception of the value of research, but there was limited awareness and familiarity with use of evidence; nurses' self-rated knowledge and practice remained low (Adombire et al., 2024). The authors recommended investment in nurses with evidence-based practice (EBP) competencies and resources to engage others in improving healthcare quality, safety, and efficiency. Nurses' EBP knowledge and skills are important in identifying evidence gaps.

Mercy Medical Center (MMC; Baltimore, MD) is a community-based midsize hospital with physician practices, outpatient facilities, and urgent and acute care. Strategic goals for the Division of Nursing include improving nursing care and patient outcomes by cultivating an environment that encourages nurses' professional development. The goals directed nurse leaders to advance research and EBP as hallmarks of nursing practice. In 2009, nurse leaders adopted the Johns Hopkins EBP Model (Dang et al., 2021) as a framework for evidence analysis and synthesis. This model provided structure for nurses to conduct EBP projects

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Background

A need exists for innovative approaches to motivate nurses to be engaged in evidence-based care. Use of virtual and experiential interactive learning among clinical nurses has not been tested as a strategy to motivate their interest in research.

Aim

Evaluate changes in clinical nurses' research knowledge and attitudes after completing a virtual and experiential learning program.

Methods

A mixed methods study using a pre/post-survey design evaluated nurses' research knowledge and attitudes using a virtual and experiential interactive research exercise learning program. For the qualitative arm, participants were asked to describe experiences and areas of improvement for research.

Data Analysis

Nurses' attitudes and knowledge about research were evaluated with pre- and post-questionnaires. Although attempts were made to match the samples, anonymity precluded matched data for the two measures. Given unmatched samples, independent sample t-tests were used to compare mean scores before and after the intervention. Statistical significance was set at $p \leq 0.05$ and all analyses were done with SPSS version 23.0. Qualitative data were organized into codes or categories with supporting participant quotations.

Results

A convenience sample of 63 nurses completed the pre- and post-questionnaires. Nurses' knowledge ($p<0.001$) and attitudes toward research ($p=0.005$) improved. Relation of resources, communication, and education to increased knowledge was found to be statistically significant. However, nurses' interest in initiating research was not increased significantly. Qualitative responses on research were categorized as intimidated in initiating research and need more allocated time to do research with structured support and guidance throughout the research process.

Limitations and Implications

Use of a single site is a limitation. Implementing innovative approaches to promote research-related educational activities is encouraged to sustain nurses' ongoing interest in research.

Conclusion

This study found an interactive virtual and experiential learning program enhanced nurses' knowledge and fostered greater interest in evidence-based practice and research when adequate support was provided.

and research. Despite the model's ease of use, multiple barriers impeded development of related initiatives. Local barriers, such as lack of support, a structured educational program, supervision and training, and allocated time were consistent with those identified in the work of Alatawi and coauthors (2020). Addressing such obstacles could enhance nurses' confidence and engagement in the process of scholarly inquiry and research.

The COVID-19 pandemic additionally created multiple workplace challenges, exacerbating previously existing barriers and placing demands on nurses' time. Participation in EBP and research activities declined. Organizational leaders explored innovative approaches to encourage nurses to engage in professional development and to promote activities with components critical to patient safety and care quality. Although the concept of participatory learning is not new, application of creative approaches to motivate nurses' involvement in research through use of a virtual, experiential interactive practice exercise learning program has not been tested. A creative and innovative approach using virtual and experiential strategies was developed to promote continuous learning despite the compounding challenges of COVID-19.

Purpose

The purpose of this study was to evaluate changes in clinical nurses' research knowledge and attitudes after completing a virtual and experiential learning program. The study also provided learning and experiential opportunities for research team members as they prepared and implemented the institutional review board (IRB) requirements.

Review of the Literature

A literature search of original research only was completed using PubMed and CINAHL. Search terms included *nurses*, *engage*, *bedside nurses*, *research*, *EBP*, *knowledge*, *attitude*, and *virtual learning*. Because there was limited published research on approaches to motivate nurses to be more engaged in evidence-based care, the literature search was expanded to sources published 2017-2024. Most studies focused on identifying barriers to nurses' involvement in EBP and strategies to gain and sustain participation. A recurring theme was a knowledge deficit, which often contributes to non-participation. Clinical nurses in hospital settings reported lower levels of involvement in EBP processes compared to their counterparts in other roles or settings, perhaps due to differences in training, autonomy, or access to resources (Rudman et al., 2024).

Inadequate coursework or postgraduate education in EBP left many nurses underprepared and hesitant to engage in such initiatives. Regular workshops and ongoing educational programs can be effective in equipping nurses with needed skills and confidence to drive change within their practice settings (Farokhzadian et al., 2021). While knowledge and education are critical, sustained engagement in EBP also requires mentoring and institutional support. Nurses benefit from guidance provided by role models and mentors who can offer feedback, remove barriers, and maintain motivation (Friesen et al., 2017; Karlsson et al., 2019; Khoddam et al., 2023). Nurses often hold negative perceptions of EBP due to a combination of organizational and individual barriers, including limited access to information and resources, lack of motivation, and insufficient understanding of its importance; however, when nurses recognize the value of EBP and view it positively, their motivation and willingness to engage significantly increase (Mohamed et al., 2024).

With the evidence showing increased education combined with ongoing mentorship improve participation, this study's approach to engagement and motivating research interest is distinctive in that it combined virtual and experiential learning methods in the educational program. The virtual component offers flexibility and accessibility, particularly beneficial for adult learners who can proceed at their own pace and revisit materials as needed. The experiential component reinforces learning through hands-on application, helping to make abstract concepts more tangible. Nurses demonstrate greater enthusiasm for learning when engaged in stimulating, supportive environments promoting critical thinking and offering a fun, stress-free atmosphere that allows them to apply newly gained knowledge immediately (Ward, 2022).

Ethics

IRB approval was obtained before study implementation. Nurses were recruited from various specialty areas, including clinical nurses who had just completed their nursing orientation as new employees. Study information was circulated through email and meeting forums. Potential participants were given an overview of study purpose, methodology, risks and benefits, privacy, and confidentiality. They were informed they could decline participation with no repercussion related to performance or employment. Nurses were excluded if they planned to resign during the study, had not completed nursing orientation, or refused to take alternative choice of popcorn (if allergic to potato chips) for the experiential testing.

Methods

This mixed methods study with pre/post design evaluated clinical nurses' research knowledge as well as their attitudes and motivation toward research using a virtual, experiential interactive learning program. Mixed methods research is especially useful and relevant for research students and early career researchers who typically take generic research courses and have no practical ideas about how to begin developing a study (Dawadi et al., 2021). Mixed methods research enables investigators to integrate qualitative research (i.e., open-ended research experience and areas of improvement survey questionnaire) and quantitative research (i.e., knowledge, motivations, and attitudes) conceptually and analytically to facilitate translation (Poth, 2023). Qualitative and quantitative data emphasized additional innovative approaches, organizational support, and flexibility toward translation of findings into practice.

A convenience sample of 63 clinical nurses participated. After participants provided informed consent, a pre-questionnaire was emailed with a brief study overview and survey instructions. The pre- and post-survey related to knowledge and attitudes toward EBP and research was adopted from Melnyk and colleagues (2008). This instrument had been used previously at MMC, and research team members were familiar with it. Members assessed items for content and face validity, adapting them to the specific audience and choosing items based on team consensus. Open-ended questions were added to

the survey as were demographic questions

Participants then were sent a link to a virtual educational program using three videos and voice-over PowerPoint® presentation to address the difference among quality improvement (QI), EBP, and research; the step-by-step research process with exemplar; and assembly of IRB documents with exemplar. Each video was approximately 15 minutes long and incorporated pre- and post-tests.

An experiential interactive learning experience was another innovative exercise approach. It involved a practice exercise in which participants received a brief introduction to research and informed consent in a one-to-one session with a research team member scheduled in the clinical setting at the convenience of each participant. Nurses were able to ask questions and receive feedback. The educational session was followed by a blinded evaluation of two types of potato chips for taste and preference.

This mock study began with a brief overview from the research team member and included informed consent from participants. A mobile study cart containing hand sanitizer, paper towels, water, two kinds of potato chips, and containers was covered to avoid bias based on the actual label. Popcorn was available as an alternative for individuals with potential allergy to potato chips, but no participant identified an allergy. Each participant tasted potato chip A and rated the characteristics using a Likert Scale (1=*least preferred*, 5=*most preferred*), drank water, and repeated the same steps for potato chip B. After the tasting was completed, the potato chip containers were uncovered, and the participant was asked to comment verbally about the experiential learning exercise. The last step of the study was the completion of a post-survey questionnaire conducted online with a flexible time frame.

Findings

The sample was described using the demographic and descriptive information derived from the pre-intervention questionnaire (see Table 1). The sample was predominantly female (n=61, 96.8%), and a majority was over age 40 (n=34, 54%). Nursing experience demonstrated a bimodal distribution, with nearly 40% of the sample having more than 15 years of experience and 30% having less than 5 years. About half had participated previously in research or an EBP project.

Questionnaire responses reflecting attitudes and knowledge about research were analyzed to assess any changes. Efforts were made to match the pre- and post-samples, but anonymity precluded matched data. Given unmatched samples, independent samples t-tests were used to compare mean scores. All statistical significance levels were set at $p \leq 0.05$ and all analyses done with SPSS version 23.0.

Mean scores for all attitude questions increased after the intervention. However, only one statistically significant change was identified concerning how respondents valued reading reports of nursing research (p=0.005). Other areas of significantly increased agreement included resources (p=0.005), research education and communication (p=0.001), ability to do practical research (p=0.050), research environment (p=0.022), and opportunity and interest in joining a research team (p=0.024 and p=0.027, respectively). Although most respondents reported a higher mean score for an experiential learning style (3.95 post intervention), a statistically significant change was found for those who preferred virtual learning compared to traditional lecture (p=0.035). Finally, respondents' knowledge increased significantly on four questions: basic research knowledge; differences among QI, EBP, and research; step-by-step knowledge; and implementation of research (all p<0.001) (see Table 2).

Participants also were asked to describe experiences and areas of improvement for research. Three categories emerged from participants' responses: Schedule (time), Resource (support), and Perception (intimidation). Pre-intervention, the overwhelming response was reflected by this comment: "I need more time during work hours to work on EBP/research projects." One participant noted, "For staff nurses, we should be allotted time during work shifts to work on projects." This general sentiment was echoed by 11 other respondents: "Provide nurses time to do project, study, implement, and participate until project completion." "Never have enough time."

Participants perceived research as intimidating and overwhelming. "I know we have clear instructions, but the entire process seems overwhelming before starting a project." One respondent expressed a desire for support, identifying a "need to explain the process of projects to nurses on a regular basis to show it does not need to be an intimidating process."

Post-intervention, the primary focus was time to conduct and implement research. This was expressed by 18 participants in some form, but may be illustrated best by one participant: "There are plenty of resources at MMC to assist in EBP/research. The downfall is the time commitment." "Support throughout the research

TABLE 1.
Demographics (*N*=63)

	N	Percentage
Gender		
Female	61	96.8
Male	2	3.2
Age (years)		
21-30	13	20.6
31-40	16	25.4
41-50	10	15.9
51-60	19	30.2
61+	5	7.9
Birth Generation		
1946-1964	11	17.5
1965-1980	23	36.5
1981-2000	29	46.0
Years in Nursing		
<5	19	30.2
6-10	7	11.1
11-15	12	19.0
>15	25	39.7
Highest Level of Education		
Associate degree in nursing	5	7.9
Bachelor's degree in nursing	38	60.3
Bachelor's degree (other)	1	1.6
Master's degree in nursing	17	27.0
Master's degree (other)	2	3.2
Previously Participated in Research		
Yes	32	50.8
No	31	49.2
Number of Studies Completed as Team Member		
0	10	15.9
1	18	28.6
2	4	6.3
>3	3	4.8
Missing/blank	28	44.4
Number of Studies Completed as Co-Primary Investigator		
0	26	41.3
1	3	4.8
Missing/blank	34	54.0
Number of Studies Completed as Primary Investigator		
0	25	39.7
1	3	4.8
2	1	1.6
Missing/blank	34	54.0

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process with the step-by-step guideline would be helpful." One participant stated, "I need step-by-step instructions from experienced researchers. Provide nurses time to do project, study, implement, and participate until project completion." "Need more time for professional activities like EBP and research." Other recommendations were as follows: "More frequent exposure to research projects and steps/process would be helpful." "Communications via emails, boards, posters, virtual classes, etc., would be great." In the post-intervention survey, responses related to intimidation were nearly absent (see Table 3 for additional comments).

Discussion

Study investigators designed the virtual education and experiential interactive exercise to allow participants to follow the content and process with ease. Participants were able to access the virtual education link at their convenience regardless of time and location. The content was divided in small segments so participants did not have to finish the virtual education at a single time. This approach addressed barriers related to not having enough time or having to use an inconvenient location to complete research education (Newall & Khair, 2020; Speroni et al., 2020). A blended teaching and learning strategy has been shown to have a positive impact on nursing students' capacity for self-management and self-control (Govindan et al., 2023).

Experiential learning theory guided participants in grasping experience through the innovative approaches used in this study. The experiential approach helped participants in transforming their involvement, constructing broader evidence-based knowledge and

TABLE 1. (CONTINUED)
Demographics (*N*=63)

	N	Percentage
Number of EBP Projects Completed as Team Member		
0	14	22.2
1	18	28.6
2	4	6.3
>3	6	9.5
Missing/blank	21	33.3
Number of EBP Projects Completed as Project Team Co-Leader		
0	25	39.7
1	8	12.7
2	4	6.3
Missing/blank	26	41.3
Number of EBP Projects Completed as Project Leader		
0	27	42.9
1	6	9.5
2	4	6.3
Missing/blank	26	41.3

EBP=evidence-based practice

TABLE 2.
Attitudes and Knowledge of Participants (*N*=63)

	Pre-Intervention		Post-Intervention		
	Mean	*SD*	Mean	*SD*	*p*-value
Attitudes					
I am excited about nursing research.	3.84	0.83	4.00	0.77	0.343
I am intimidated by the research process.	2.75	1.03	3.05	1.10	0.101
I would be likely to participate in nursing research project.	3.73	0.92	3.86	0.83	0.613
I am interested in nursing research to answer practice questions.	4.05	0.73	4.16	0.59	0.550
I think that nursing research can be fun and interesting.	3.81	0.84	4.05	0.69	0.105
I value reading nursing research.	3.81	0.80	4.19	0.76	0.005
I would like to initiate a nursing research project.	3.02	1.10	3.28	1.11	0.231
I have access to available research resources (example: electronic databases, librarian, mentor, and advisor).	4.25	0.57	4.54	0.60	0.005

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experience (Cherry, 2025). Retaining and engaging 63 participants for a 6-month study were recognized. Learning was perceived positively and consistent with other findings (Ward, 2022).

Participants significantly valued reading research (p=0.005); intimidation by research was not significant. In the program evaluation, some participants identified positive experiences with their EBP project as well as their participation in the potato chip study. They valued the organizational resources and experts in assisting them with their projects. Findings indicated access to available research resources and experts was significant (p=0.005), as was research education and communication (p=0.001). However, participating in research-related opportunities was not significant. D'Arrietta and co-authors (2022) supported the identified barriers to engagement with research as lack of knowledge, skills, and competence to conduct research; lack of protected research time; lack of funding; and lack of organizational support. Differences were significant on basic research knowledge; differences among QI, EBP, and research; knowledge on step-by-step research process in obtaining IRB protocol; and implementation of research with assistance and support (see Table 2). These topics are incorporated in various organizational programs and implementation of nurse projects; however, more work needs to be done on the application of knowledge.

Following the common response categories (time, support, intimidation), it is important to continue to build the culture of inquiry. This has been evolving within the hospital infrastructure and processes, including improved resources and nurses' use and application of evidence in practice. Time was a common

TABLE 2. (CONTINUED)
Attitudes and Knowledge of Participants (*N*=63)

	Pre-Intervention		Post-Intervention		
	Mean	*SD*	Mean	*SD*	*p*-value
Attitudes (continued)					
I am satisfied with research education and communication.	3.78	0.73	4.21	0.56	0.001
I am able to do practical research application (apply research evidence in practice).	3.76	0.78	4.05	0.59	0.050
The hospital provides a research-supportive environment.	4.05	0.75	4.32	0.77	0.022
I am interested in initiating an EBP project.	3.11	0.97	3.34	1.07	0.289
I am interested in joining a research team to plan and implement a research study.	3.25	1.02	3.70	0.89	0.027
I have the opportunity to participate in the preparation and/or dissemination of EBP/research projects.	3.73	0.90	4.07	0.74	0.024
I like virtual educational learning versus traditional lecture approach.	3.11	0.95	3.52	1.06	0.035
I learn more using experiential interactive learning approach (based on experience and observation).	3.86	0.64	3.95	0.75	0.443
Knowledge					
Basic research knowledge	3.35	0.94	3.98	0.62	<0.001
Differences among QI, EBP, and research	3.37	0.85	4.11	0.59	<0.001
Knowledge of step-by-step research process in obtaining IRB approval	2.37	0.89	3.41	0.99	<0.001
Implementation of research study with assistance and support	2.79	1.00	3.71	0.85	<0.001

EBP=evidence-based practice, QI=quality improvement

issue. Working collaboratively with unit managers to integrate meeting times with staff and expert resources supports the ability to advance staff projects. As one participant stated: "I need an allocated time during my worktime to focus on my project with the available expert resources."

Educating nurses regarding available resources, such as access to databases, librarian, biostatistician, and the expert advisor, is an ongoing process to increase participants' awareness of a support system. As one participant stated, "I need to know how to use the database; I do not know where to start." One participant's needs were described: "I am working night shift, and the resources are mostly available during day shift." In addition to social media, telephone and virtual meetings can be used to increase visibility and communication with staff by the expert resource regardless of staff shifts. Sense of intimidation is related to lack of knowledge and skills. Developing educational programs with guided practicum or a 1:1 or 1:group approach formal and informal was suggested by one participant: "I would like to have time with the expert resource to show me the step-by-step process with my project." Another participant stated, "Reading nursing research has a significant value to me professionally."

Findings support the increased value of evidence and the ability to differentiate purpose, methodology, and outcomes of QI, EBP, and research. Understanding the increasing demands of clinical nurses and their time constraints is important in knowledge application. Education format was redesigned, and modules were divided into segments in consideration of nurses' limited time for learning. Although participants recognized the availability of resources and experts in the work environment, mentors and preceptors must be innovative and creative to overcome the perception of research being intimidating or overwhelming. Use of qualitative and quantitative methods enabled investigators to integrate data conceptually and analytically related to knowledge, motivations, and attitudes, and facilitat-

TABLE 3.
Representative Participant Responses to Open-Ended Questions

	Schedule (Time)	Resources (Support)	Experience (Intimidation)
Pre-Intervention	"I need more formal training to include classroom time and lecture."	"I need support from experts who are knowledgeable about the research process."	"Explain the process of projects to nurses on a regular basis to show it does not need to be an intimidating process."
	"Provide nurses time to do project, study, implement, and participate until project completion. Never have enough time"	"Obtaining providers' buy in and support go a long way."	"I know we have clear instructions, but the entire process seems overwhelming before starting a project."
	"Nurses should be allotted time during their work shifts to work on projects."	"Leading by example with leadership conducting and discussing their project"	"Breaking down the process to really make it easy to understand and not as overwhelming."
Post-Intervention	"Implement accessible paid time for floor nurses to work on projects outside of staffing numbers for the unit."	"More frequent exposure to research projects/steps/ process would be helpful." "Emails/boards/posters/virtual classes, etc. would be great."	"I feel that a seminar is needed or some sort of meeting should be arranged so that interested participants know the how-to approach and someone to hold their hand so that it is not so intimidating."
	"Allowance of dedicated time out of staffing"	"Continue to support the nurses who find a problem that may benefit from a research project."	
	"Ability to have dedicated time off for projects"	"Additional support from the leadership team and the educators"	

ed translation of findings into practice.

Limitations

The sample, consisting solely of clinical nurses from a single site, is not representative of the broader nursing workforce. This lack of diversity limits generalizability of findings across different nursing roles, settings, and populations. This limitation may diminish the depth and consequence of the qualitative responses, potentially leading readers to overlook important variations in experience and perspective.

Recommendations for Future Research

Further study is recommended on the effectiveness of an innovative research program with structured learning and guided practicum. Use of blended approaches to develop a research protocol from an idea to completed IRB protocol also should be studied. Future studies would benefit from including a more diverse setting and participant population. Additionally, mixing qualitative and quantitative methodologies could lead to minimalizing the gravity and richness of the qualitative responses.

Nursing Implications

Findings suggest the value of virtual learning to provide increased flexibility given nurses' work schedules. Given multiple responses from nurses identifying lack of time as their greatest hurdle, the flexibility of virtual learning is one strategy to overcome this barrier. Providing easily accessible audio-visual equipment and use of QR codes should be considered. For clinical nurses, the convenience of having readily accessible equipment, including Word® and Excel®, is crucial in saving time. The experiential learning approach provided a simple way for nurses to understand research concepts. It also engaged participants actively, encouraging them to ask questions and receive feedback; they learned through an experience they perceived to be fun. Further, to address ongoing intimidation with the research process and the desire for further support in conducting research, the organizational Nursing Inquiry Council or EBP/Research Committee web page could be enhanced to in-

clude more information on the step-by-step research process, research checklist, educational video, and tools through on-demand or self-directed learning. Visitors to the page could learn how to develop an abstract or exemplar, complete IRB documents, and access resource links and contact information for direct mentoring and guided practicum.

A structured program guiding nurses on how to develop an IRB protocol with guided practicum throughout the research process would create a partnership between novice nurse researchers and expert resources. This program would address basic research needs as a participant stated: "I need support from experts who are knowledgeable about the research process." Another nurse verbalized the need for a positive experience: "Explain the process of projects to nurses on a regular basis to show it does not need to be an intimidating process." An allocated time can be coordinated and supported by the nurse manager to meet needs: "Provide nurses time to do project, study, implement, and participate until project completion." Incorporating virtual learning can provide flexibility in the structured program. If resources are limited, nurses can access school databases, use Google Scholar or PubMed, and connect with advanced practice nurses or specialty organizations for expert consultation.

Conclusion

This study was designed to engage and motivate nurses in research through innovative blended virtual education and an experiential exercise. Results showed the blended learning program was effective in improving nurses' knowledge and attitudes as well as increasing interest in research with support. Within organizational infrastructure, integration of a scheduled time for research learning should be considered with resources and support through mentorship, coaching, and strong leadership. A more structured research program with flexibility and guided practicum encourages nurses' research interest and motivation to continuous learning. MSN

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Clinical Practice

Breaking Barriers: The Role of Medical-Surgical Nurses in Caring for Undocumented Immigrants

Rachael Salguero
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Salguero, R., & Cross, L. (2025). Breaking barriers: The role of medical-surgical nurses in caring for undocumented immigrants. *MEDSURG Nursing, 34*(5), 236-241. https://doi.org/10.62116/MSJ.2025.34.5.236

This case study examines the critical role of medical-surgical nurses in providing compassionate, evidence-based care to undocumented immigrants by addressing healthcare barriers, advocating for resources, and navigating ethical concerns, cultural and linguistic challenges, and systemic gaps to improve access and health outcomes.

Keywords: undocumented immigrants, health equity, medical-surgical, advocacy, heat-related illness

Learning Outcome: After completing this education activity, the learner will be able to describe the role of medical-surgical nurses in recognizing and addressing the health disparities experienced by undocumented immigrants.

Undocumented immigrants (UIs) are individuals who do not fall under the definition of lawful residence in the country in which they live. An estimated 12.8 million immigrants are in the United States without legal status (Lee, 2024). However, determining precise figures is challenging due to the complexities of residence status. UIs in the United States face substantial barriers to receiving health care. They often delay or avoid seeking medical attention due to financial concerns, fear of being reported or deported, and limited access to health services. This population is particularly vulnerable to occupational health risks as many UIs work in physically demanding jobs with prolonged exposure to extreme environmental conditions and little workplace protection. Lee (2024) suggested undocumented immigration status functions as a social determinant of health, with challenges in accessing care contributing to adverse health outcomes.

Financial and transportation barriers, concern for job loss, and difficulty accessing a provider are further reasons UIs avoid seeking healthcare services (Lee, 2024; Metcalf et al., 2024). UIs may be unable to obtain drivers' licenses without proper documentation in certain states, which limits their ability to travel to and from work and other appointments. Many UIs take on jobs without formal contracts, putting them at higher occupational risk as this allows them to work without the legal status required for signed agreements (Metcalf et al., 2024). Often receiving wages in cash without Social Security cards or bank accounts, they are at risk of wage exploitation (Clifford et al., 2023).

UIs also face a high risk of work-related injury and often lack insurance coverage for medical treatment. According to a recent survey, half of UIs reported being uninsured (Lee, 2024). The absence of insurance coverage has been associated with negative health outcomes (Clifford et al., 2023). Beyond lacking insurance and job security, UIs may be excluded from federal and state programs that provide additional services and support, such as Medicaid and Women, Infants, and Children (Lee, 2024).

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When UIs do access the healthcare system, they are frequently in advanced stages of illness, having postponed care until their symptoms became unbearable (Kisa & Kisa, 2024). Furthermore, UIs encounter challenges related to their own mistrust and fear. Fear is a pervasive force for those who are undocumented, shaping their daily experiences and overall well-being. The ongoing fear of deportation, family separation, and adverse health effects contribute to sustained distress (Metcalf et al., 2024). UIs are often afraid of the healthcare system and have difficulty navigating care for themselves or their families. Without insurance and a primary care provider, many UIs depend on emergency departments and urgent care facilities for medical care (Brenner et al., 2021). UIs entering the healthcare system may face systemic gaps in understanding their cultural backgrounds, languages, or health traditions. This may lead to misunderstandings in care delivery and further feelings of mistrust, potentially preventing future visits (Kisa & Kisa, 2024).

Medical-surgical nurses play a critical role in recognizing and addressing the health disparities experienced by UIs by delivering timely, evidence-based care and linking patients with community resources. Their expertise in holistic assessments and person-centered care uniquely positions them to meet these challenges. Nurses are well-equipped to identify the obstacles faced by UIs and address individual and systemic challenges to optimal care delivery. Despite being situated to provide care, however, nurses may lack knowledge, comfort, or confidence in caring for UIs. A case is presented illustrating common challenges UIs encounter when seeking health care, exploring implications for nursing practice, and identifying future directions for research and practice.

TABLE 1.
Laboratory Results and Assessment

Assessment/Diagnostic	Finding
Potassium	5.8 mEq/L
Lactate	3.2 mmol/L
Hemoglobin A1C	7.2%
Serum glucose	273 mg/dL
Urine	Dark, concentrated, large amounts of protein
Heart rate	122 bpm, irregular
Blood pressure	88/54 mm Hg
Oxygen saturation	95% on room air
Respiratory rate	24 breaths per minute
Mental status	Confused
Skin	Dry and hot to the touch, delayed capillary refill
Bilateral lower extremities	+3 pitting edema

Case Description (Vignette)

Javier Gómez, a 47-year-old UI from Guatemala, has been working as a farm laborer in southern Texas for the past 6 years. Spanish is his first language, and his highest level of education is seventh grade. It is July, and he works 6 days a week from 8:00 a.m. to 5:00 p.m., enduring long hours in extreme heat. Over the past week, he told his wife he is experiencing decreased urine output, bilateral lower extremity swelling, and a loss of appetite. However, due to his immigration status and lack of health insurance, he has avoided seeking medical care. One afternoon, while working in the fields, Javier's condition deteriorated significantly. He became confused and disoriented, prompting his coworkers to call emergency medical services. His laboratory results and assessment are reported in Table 1.

Based on these values and findings, Javier is diagnosed with heat-related acute kidney injury (AKI) secondary to dehydration and rhabdomyolysis. He is admitted from the emergency department to the medical-surgical unit for treatment. The medical-surgical nurse must deliver care based on Javier's current physiological needs. The priority is to treat the dehydration, stabilize kidney perfusion, and continue to monitor laboratory results and patient status. Given his altered mental status, the nurse should conduct frequent neurological assessments to ensure he remains responsive and oriented as his condition stabilizes. The hypotension and tachycardia place him at high risk for cardiac instability, necessitating continuous telemetry monitoring to detect potential arrhythmias, particularly due to hyperkalemia. The nurse should observe closely for signs of worsening electrolyte imbalances, including muscle weakness, cardiac dysrhythmias, and worsening confusion (Dennison, 2022).

Javier will require intravenous fluid resuscitation carefully titrated to restore perfusion without exacerbating his fluid overload. Given the patient's +3 pitting edema and AKI, fluid administration should be balanced with output monitoring to assess kidney

TABLE 2.
Nursing Care of Undocumented Immigrants

Best Practice	Practices to Avoid
Use person-centered, respectful language (e.g., "undocumented" instead of "illegal").	Using stigmatizing terms such as "illegal" or "alien"
Engage in cultural humility by asking about personal values and care preferences.	Assuming cultural beliefs or making decisions based on stereotypes
Use professional medical interpreters for effective communication.	Relying on family members for medical interpretation instead of professional interpreters
Collaborate with social workers and case managers to connect patients with resources.	Attempting to address complex social needs without support from interdisciplinary team members
Ensure discharge planning includes accessible follow-up care, medication options, and health education.	Discharging patients without a sustainable plan for follow-up care
Monitor for signs of moral distress in healthcare providers and support self-care strategies.	Ignoring the emotional impact of care delivery on staff, potentially affecting the quality of patient care

Source: American Medical Association (2021)

function. An indwelling urinary catheter will be needed to ensure accurate output measurement. A nephrology consult should be entered to determine the need for dialysis intervention. Electrolyte replacement therapy will be essential, particularly for managing potassium, sodium, and calcium imbalances (Dennison, 2022).

Because rhabdomyolysis can lead to worsening AKI, serial creatine kinase values should be monitored to assess the extent of muscle breakdown. Given the elevated lactate (3.2 mmol/L) and AKI, metabolic acidosis is likely present; an arterial blood gas analysis should be performed to guide treatment. If acidosis progresses, sodium bicarbonate therapy may be required to help correct acid-base balance (Dennison, 2022). In addition to immediate medical interventions, the nurse also must address Javier's long-term care needs. His A1C of 7.2% and serum glucose of 273 mg/dL indicate undiagnosed type 2 diabetes, requiring new medication management and lifestyle modifications.

The nurse will identify Javier's values, beliefs, and concerns related to treatment, make sure he understands his treatment plan, and identify any family members who should be involved in his care. All preferences, including language, should be identified, and education should be provided in his preferred language with an interpreter if needed (Kisa & Kisa, 2024). Additional socioeconomic concerns may include Javier's uncertainty about his length of stay and potential confusion about medical treatment due to language barriers. Javier typically works 6 days per week, and being in the hospital even 1 day may cause significant stress over possible lost income or job security.

Given Javier's illness, it is also important to identify any healthcare preferences. If dialysis were needed, Javier might not be able to afford this service. The nurse should collaborate with the case manager to determine if Javier has any coverage. Additionally, he should be involved actively in his care decisions and may benefit from counseling on alternative treatment options. Nurses should use respectful, person-centered language when caring for UIs, avoiding terms such as *illegal* or *alien*. Terms such as *undocumented* or *immigrant* should be used instead to promote respect (American Medical Association, 2021). See Table 2 for guiding principles in nursing care of UIs, including best practices for advocacy, communication, and ethical considerations to ensure equitable, person-centered care.

After 3 days of aggressive intravenous hydration and electrolyte correction, Javier's kidney function begins to improve. His serum creatinine gradually stabilizes, his urine output normalizes, and his confusion resolves. The medical-surgical nurse provides discharge education about the importance of oral hydration and education on heat illness prevention.

During this hospitalization, Javier also is diagnosed with hypertension and type 2 diabetes, conditions previously unfamiliar to him. The healthcare team provides comprehensive education on managing these chronic conditions, including nutritional counseling, lifestyle modifications, and medication adherence (Dennison, 2022). He is started on an appropriate antihypertensive and oral hypoglycemic regimen

and receives guidance on monitoring his blood pressure and blood glucose. He is discharged with prescriptions and instructed to follow up with a primary care provider.

Javier's current outdoor job places him at risk for recurrent AKI. His new diagnosis will require follow up with a provider. Given Javier's UI status, he likely will not have insurance, a primary care provider, or a designated pharmacy to monitor his prescriptions. Without a driver's license, Javier may find it challenging to pick up his prescriptions if a pharmacy is not conveniently located or accessible by public transportation (Metcalf et al., 2024). He may be unable to drive to appointments, and without insurance coverage, he might not be able to afford his new prescriptions, nor the supplies needed to monitor his blood glucose. Additionally, his demanding 6-day work schedule outdoors could impede required lifestyle changes to manage his newly diagnosed comorbidities. He has already missed 3 days of work and may not be able to miss any more days for appointments. His position as a laborer with no benefits may not include having paid days off (Metcalf et al., 2024).

Discussion

This case reflects a common reality today. Many UIs similarly delay seeking emergency care or other healthcare services until their symptoms become severe and unavoidable. UIs with acute illnesses such as AKI and renal disease, as in Javier's situation, often have delayed care and services due to fear of the consequences of arranging appointments or accessing emergency departments. This delay contributes to increased stress for UIs and healthcare providers, exacerbates fears rooted in mistrust, and results in more severe illness by the time treatment is sought (Kisa & Kisa, 2024). In this case study, the patient's condition progressed to AKI, which could have led to permanent kidney damage and required more intensive interventions if left undetected (Dennison, 2022). Fortunately, kidney perfusion was stabilized during Javier's 3-day hospitalization. However, the treatments, interactions with healthcare providers, and overall stress of illness throughout his stay further heightened his anxiety and fear.

A significant concern for UIs is the threat of deportation, leaving them uncertain about if they can trust nurses and other healthcare providers. This lack of trust directly impacts the foundation of the nurse-patient relationship. Medical-surgical nurses must address patients' fears and anxieties to build trust and provide effective therapeutic care. Recognizing and validating these emotions is essential in fostering a trusting nurse-patient relationship (American Nurses Association [ANA], 2025). Language and cultural barriers often are compounded by fear and a lack of understanding of the care being provided (Kisa & Kisa, 2024). Nurses must be attentive to patients' fears and anxieties throughout care delivery, as anxiety can worsen a condition and further contribute to mistrust.

Another barrier to effective care delivery is the limited time nurses must engage in educational efforts aimed at understanding the lived experiences of UIs. This may prevent nurses from recognizing the reasoning behind feelings and actions exhibited by UIs. A medical interpreter can help foster trust between UIs and the healthcare team, and nurses should seek their assistance whenever possible. However, interpreters may not always be available for every language or dialect, which may complicate communication and understanding further. Additionally, nurses must recognize understanding instructions in a patient's native language does not mean the patient grasps all cultural nuances relevant to care. Traditions, rituals, and other cultural considerations may play a significant role in healthcare decisions. To provide quality care, medical-surgical nurses should assess these factors continuously along with health literacy concerns (Clifford et al., 2023).

Another factor that jeopardizes successful outcomes for UIs as illustrated in this case study is the structure of the healthcare system. Medical-surgical nurses initiate discharge planning as soon as patients are admitted, determining where to send follow-up notes, prescriptions, and discharge instructions. However, a smooth transition at discharge may not always be feasible. UIs cannot obtain a Social Security card and may not have access to health insurance or benefits, making it more difficult to obtain necessary care (Ayon et al., 2020). In this case study, the patient must return to work quickly to recover lost wages. A referral to a legal advocate, nurse case manager, or social worker may help identify community resources as well as social service agencies that may assist with prescriptions (Reyes & Gularte-Rinaldo, 2025). Due to delayed care, the patient in this case study has been diagnosed with two comorbidities that require education, follow-up care, and adherence to new prescriptions. This patient's limited English proficiency and education may reduce health literacy, creating a barrier to healthcare access (Ayon et al., 2020). The medical-surgical nurse must evaluate the patient's ability to understand written instructions in a preferred

language and provide resources to support understanding. In this case study, the patient missed 3 days of work. UIs' employment may not be secure upon discharge, further complicating the situation (Metcalf et al., 2024). A patient may be unable to afford care or follow future care recommendations, including medications, nutritional counseling, support groups, blood pressure and blood glucose monitoring, and follow-up appointments. These disadvantages further complicate the ability to navigate the healthcare system.

In addition to instructions on new prescriptions, discharge directions include guidance on when to follow up with a provider. However, UIs often rely on urgent care or emergency departments for last-resort situations, as seen in this case study, and typically do not have an established healthcare provider (Kisa & Kisa, 2024). Securing follow-up care presents multiple challenges, including finding a provider willing to accept a UI who likely lacks health insurance and must pay out of pocket. This creates a bidirectional financial concern: the UI worries about affording care, while the provider questions if compensation will be received for services rendered (Brenner et al., 2021).

The patient in this case study lacks the necessary documentation for a valid driver's license, which UIs are unable to obtain in some states in the United States. This restriction further limits travel options for medical appointments, making it even more challenging to secure timely care from a provider who can meet the needs of UIs (Metcalf et al., 2020). The medical-surgical nurse should determine if the UI has an established provider and work with the case manager to address this concern before discharge (Brenner et al., 2021). The nurse should seek appropriate resources proactively when unfamiliar with how to care for UIs (Reyes & Gularte-Rinaldo, 2025).

Nursing Implications

Medical-surgical nurses play an essential role in addressing unique challenges faced by UIs through advocacy, ethical practice, and collaboration with the healthcare team to ensure equitable care (Reyes & Gularte-Rinaldo, 2025). Advocacy may involve identifying inpatient resources to improve communication, ensuring high-quality care, and promoting dignity for UIs. Nurses also may need to collaborate with social service or case management professionals who have experience navigating complex and sensitive situations. In cases where care interventions are not being followed, consulting an ethics committee may be necessary. Additionally, medical-surgical nurses can support UIs by connecting them with community organizations, legal aid, and social services that enhance access to health care. Ethically, all nurses are obligated to provide equitable care, acknowledging the dignity and rights of all patients regardless of immigration status (ANA, 2025).

When systemic barriers hinder the delivery of optimal care, nurses may experience moral distress (Jawed et al., 2021). A significant concern for medical-surgical nurses and healthcare team members is the moral distress they may experience while caring for UIs. This distress arises from the inability to provide care that meets the profession's ethical standards (American Association of Critical-Care Nurses, n.d.). Nurses often face moral distress when patients present with severe illnesses that cannot be addressed adequately within the limited time the patients are able or willing to allocate. Furthermore, when patients decline certain care options due to cost concerns, often prioritizing basic needs such as food, housing, or family security over health care, nurses struggle to meet the ethical expectations of their practice (Clifford et al., 2023; Metcalf et al., 2024).

Nurses' moral distress stems from the frustration of having insufficient resources to provide culturally and linguistically appropriate care during the brief encounters UIs often have with healthcare personnel. The limited availability of interpreters for the diverse languages spoken by these patients further complicates care, and the inability to offer education or interventions in a language the patient understands causes distress for nurses and patients (Clifford et al., 2023). UIs may face health literacy challenges. Clifford and co-authors suggested these concerns may go unnoticed if education is not delivered in the patient's preferred language. Nurses also experience added stress while caring for patients who are anxious about not receiving care in their preferred language. Additionally, UIs may fear being reported or deported and worry about potential penalties from employers for taking extended time off to address their own or a family member's health concerns (Metcalf et al., 2024).

Medical-surgical nurses can advocate for hospitals to maintain essential inpatient resources that support care for UIs, such as medical interpreters, case managers, social workers, legal counsel, and ethics committees (Reyes & Gularte-Rinaldo, 2025). Nurse leaders and medical-surgical nurses also can promote ongoing training and professional development opportunities to enhance communication, improve access to care, and facilitate smoother care transitions for this vulnerable

population. Additionally, nurses should be aware of the emotional and ethical challenges healthcare providers may encounter when caring for UIs. Addressing moral distress is crucial, as unrecognized distress can lead to burnout and negatively impact staff retention (Jawed et al., 2021).

Adopting coping strategies, such as peer support, reflective practice, and debriefing sessions, is essential for preserving well-being and maintaining professional integrity. Additionally, improving access to care requires addressing structural barriers, including transportation and financial limitations, as well as cultural and linguistic obstacles (Ayon et al., 2020). By doing so, medical-surgical nurses not only provide high-quality clinical care but also play a vital role in dismantling obstacles that prevent UIs from accessing the comprehensive healthcare services they need (Reyes & Gularte-Rinaldo, 2025).

Conclusion

UIs face substantial barriers that impact their access to timely, comprehensive health care. Medical-surgical nurses play a crucial role in addressing disparities through advocacy, education, and culturally responsive care. By recognizing systemic obstacles and promoting resource accessibility, medical-surgical nurses can improve health outcomes for UIs while upholding ethical and professional standards. Additionally, addressing moral distress among healthcare providers is essential to fostering a supportive work environment. Through continued commitment to equity, medical-surgical nurses can uphold the profession's standards while advancing health outcomes for UIs. MSN

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The Beat Goes On: Understanding Atrial Fibrillation

Sonya Blevins

Patients are diagnosed increasingly with atrial fibrillation (afib). Globally, 33.5 million people are diagnosed with afib, with one in three persons having a lifetime risk of developing this condition (Dahlberg & Jakobsson, 2025). Caring for patients with this condition is not limited to nurses in the emergency department or intensive care unit. Patients with afib also are seen by medical-surgical nurses. Nurses should be part of the holistic, interprofessional approach needed for ongoing management of this condition. Nurses not only need to understand the etiology of afib but also must be able to educate patients on this condition and its numerous complications (e.g., stroke, heart failure, increased mortality, reduced quality of life) (Hassan et al., 2025).

What Causes Afib?

In normal sinus rhythm, the electrical impulse of the heart is initiated in the sinoatrial (SA) node. This impulse creates a conduction pathway by which the atria contract. The impulse then travels to the atrioventricular node, causing the ventricles to contract. With the coordination of these impulses, the atria and ventricles are allowed adequate time to contract and relax fully, allowing perfusion throughout the body (Little, 2022).

With afib, the concern is with initiation of the electrical impulse. It no longer starts in the SA node; instead, the impulse is initiated beyond the SA node, often in the pulmonary veins of the left atrium. Because of the different location of the electrical impulse, there is no coordinated contraction of the atria. Contraction occurs in a more disorganized fashion, causing the atria to quiver or fibrillate. This disorganized impulse then travels to the ventricles, which also will contract quickly and irregularly. When the atria quiver, blood pools in them and the risk of clot formation increases. Clot formation further increases the risk of stroke. In addition, the irregular rhythm and ineffective atrial contraction decrease the efficiency of the atria, reducing cardiac output by 20% (Little, 2022).

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Atrial fibrillation is a chronic condition impacting millions of individuals annually. Health complications can arise due to its pathophysiology. Nurses must educate patients on the disease process to maintain adherence to treatment regimens and reduce long-term complications.

Keywords: atrial fibrillation, afib, heart rhythm, heart rate, patient education

Types of Afib

According to the American Heart Association (AHA, 2025), there are four types of afib. While symptoms are the same, the length of time the person experiences afib may vary. *Paroxysmal fibrillation* occurs when the heart rhythm returns spontaneously from afib to normal rhythm. Typically, this occurs within 7 days. Occurrence may vary from a few times a year to every day. *Persistent afib* occurs for more than 7 days and requires some sort of intervention to return to a normal rhythm. *Longstanding afib* is an irregular rhythm occurring for more than 12 months. *Permanent afib* occurs when the irregular rhythm does not stop, and the provider and patient have decided not to restore the rhythm to a normal one.

Non-Modifiable Risk Factors

Risk for developing afib increases with aging, especially for persons age 55 and older. Genetics also are involved with afib. A person with a positive family history has a 40% chance of also developing afib (Little, 2022). Men have a higher prevalence of the condition, but women experience complications more than men, according to Little; they also may experience decreased efficacy of antiarrhythmic agents (Hassan et al., 2025). Persons of European descent have a higher incidence of this arrhythmia (Little, 2022). White individuals have 30%-40% risk of developing afib while Blacks have 20% risk; Chinese persons have 15% risk (Hassan et al., 2025).

Symptom Presentation

A patient with afib may or may not detect the condition. Common symptoms experienced by patients include a rapid or irregular heart rate, dizziness, shortness of breath, fluttering in the chest, chest pain, and anxiety (AHA, 2025). With afib, a 12-lead EKG shows an irregular R-R interval and narrow QRS complexes with no detectable P waves (Little, 2022).

Patient Education

Patient education is a key component to help patients who live with afib. While some patients are able to convert from afib to a sinus rhythm, others do not. Alenzi and colleagues (2024) noted patients who are better informed about afib not only have increased treatment adherence but also lower related complications. Recommendations for patient education center around modifiable risk factors, medication and treatment options, and psychosocial support (Dahlberg & Jakobsson, 2025).

Modifiable Risk Factors

Obesity (body mass index >30kg/m^2) contributes to chemical and structural remodeling of cardiac tissue, increasing the risk of afib. Research has shown a 51% increase in afib with patients who are obese (Hassan et al., 2025). A 10% weight reduction is recommended for patients with obesity diagnosed with afib. To assist in weight loss, 150 minutes of moderate-intensity exercise or 75 minutes per week of vigorous-intensity aerobic exercise are recommended. Maintaining weight loss helps in achieving a normal rhythm over time (Little, 2022).

Hypertension is considered a significant risk factor for afib development. It increases left ventricular pressure, causing left ventricular hypertrophy and cardiac remodeling (Hassan et al., 2025). In addition to collaborating with a provider for medication therapy to reduce blood pressure, the patient should consider lifestyle modifications. Limiting salt intake while consuming fresh fruits and vegetables helps in reducing blood pressure. Reducing caffeine and alcohol intake along with smoking cessation also are recommended (Little, 2022).

Diabetes contributes to afib development due to glycemic changes that can affect the structure and electrical pathways of the heart. People with diabetes have a 28% chance of developing afib (Hassan et al., 2025). Maintaining glycemic control is needed through medication management and lifestyle changes, such as weight control, physical activity, smoking cessation, and following a diabetic diet (Little, 2022).

Obstructive sleep apnea, a common sleep disorder, is more prevalent in men than women. Persons with this condition who received continuous positive airway pressure treatments have a reduction in the development of afib (Little, 2022).

Medication and Treatment Options

Medication and treatment options for afib focus on rate control, rhythm control, complication prevention, and psychosocial support.

Rate Control

Obtaining a target heart rate is necessary with afib. Possible pharmacological treatments include beta blockers, calcium channel blockers, digitalis glycosides, and antiarrhythmics. Beta blockers provide a first-line therapy for patients with hypertension, heart failure with preserved ejection fraction, and no other existing comorbidities. However, beta blockers are contraindicated in patients with acute heart failure exacerbation or bronchospasm. Non-dihydropyridine calcium channel blockers are the treatment of choice for patients with afib who have asthma and chronic obstructive pulmonary disease. These medications also can be used for first-line therapy for patients with hypertension and heart failure with preserved ejection fraction. On the other hand, digitalis glycosides can be used in low doses or in combination with other medications, such as verapamil (Calan®), beta blockers, and diltiazem (Cardizem®). However, they have been correlated with mortality in patients with afib. Antiarrhythmics such as amiodarone (Cordarone®) are used in conjunction with other medications such as beta blockers and digoxin to maintain rate control (Little, 2022).

Rhythm Control

While there are no guarantees a person will stay in sinus rhythm with some treatments, the healthcare provider will guide the patient on appropriate options based on the medical history (Alenzi et al., 2024). Electrical cardioversion involves electrode pad placement to provide a synchronized coordinated electrical shock based on the patient's current rhythm. This procedure can be completed as an outpatient, with the patient not eating or drinking within an identified time before the procedure. The patient receives IV sedation and vital signs are monitored closely before and after the procedure. Skin assessment also is needed after the procedure due to potential burns from electrode pad placement (Little, 2022).

Catheter ablation is used when pharmacological therapy is not successful in converting persistent or paroxysmal afib to sinus rhythm. A catheter is placed

in the femoral vein and uses radiofrequency energy to ablate abnormal electrical currents. About 20% of patients revert to afib after this procedure (Little, 2022).

Left atrial appendage (LAA) closure provides a seal to close the LAA, a small, ear-shaped sac in the left atrium muscle wall. When a person experiences afib, blood pools in the LAA. As the blood forms clots in the pouch, the clots then are released and may cause a stroke. Currently, three options are available for LAA closure. They include the WATCHMAN™ implant, lariat procedure, and AtriClip® device. Patients who are ideal candidates for these options cannot take anticoagulant therapy due to gastrointestinal bleeding, frequent falls, or other contraindications to anticoagulation therapy (Georgilis & Byfield, 2022).

Complication Prevention

With afib, major complications include stroke and thromboembolism. To prevent these complications, anticoagulation is needed unless there are contraindications, such as active bleeding or thrombocytopenia. Oral anticoagulants (e.g., dabigatran [Pradaxa®], rivaroxaban [Xarelto®], apixaban [Eliquis®], edoxaban [Savaysa®]) can be used without the routine blood tests that are required with warfarin (Coumadin®), a vitamin K agonist (Georgilis & Byfield, 2022). Routine monitoring of the international normalized ratio is required for patients taking warfarin. Warfarin is the preferred anticoagulant in patients with afib who have a history of prosthetic mechanical heart values. Because warfarin is a vitamin K agonist, patients have to limit intake of foods such as broccoli and green leafy vegetables that contain vitamin K. Also, patients need to understand their bleeding risk and use a soft toothbrush and electric razor to reduce bleeding. Fall prevention awareness is needed due to bleeding tendencies while taking this medication. Regardless of which anticoagulant is used, any drug-drug interactions should be assessed. Patients should carry a current list of all prescription and over-the-counter medications used so they can be evaluated by their healthcare providers and pharmacists (Little, 2022).

Psychosocial Support

When a person is diagnosed with afib, certain lifestyle changes are necessary. Support is needed to help cope with this diagnosis, whether from a person's family, friends, or community support groups. Using these systems to communicate concerns about managing the diagnosis provides the emotional support needed. In addition, having effective stress and coping skills aids in dealing with this chronic condition. Mindfulness, breathing exercises, and meditation exercises have been found useful for patients. Counseling services also are appropriate options to help individuals in coping with chronic conditions (Alenzi et al., 2024).

Conclusion

Afib is a chronic condition impacting millions of individuals annually. Health complications can arise due to its pathophysiology. Nurses must educate patients on the disease process to maintain adherence to treatment regimens and reduce long-term complications (Georgilis & Byfield, 2022). MSN

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Nursing Considerations When Administering Vasopressors Via a Peripheral Intravenous Catheter

Patricia J. Bartzak

Just a decade ago, it was practically unheard of to infuse a vasopressor through a peripheral intravenous catheter (PIV). Nurses were taught a vasopressor must be administered through a central venous catheter (CVC). If a PIV was used for a vesicant medication such as a vasopressor, prevailing wisdom reinforced the dangers of extravasation with resultant patient pain, suffering, and long-lasting disfigurement from plastic surgery interventions. Nurses also learned phentolamine (Regitine®), an antidote for dermal necrosis caused by norepinephrine (Levophed®) extravasation, should be available if extravasation occurred.

A number of studies in the last 10 years aimed to determine the safety profile for administering a vasopressor through a PIV. Most studies have been conducted in single centers involving up to a few hundred patients (Dansereau et al., 2024; Fabick et al., 2023; Syed et al., 2022). Two meta-analyses were identified (Araiza et al., 2022; Tran et al; 2020). Based on recent research, some acute care facilities are beginning to incorporate practice guidelines that allow vasopressor administration through a PIV. Kalinoski and colleagues (2024) surveyed pharmacists from 132 institutions and reported 86% are using PIV vasopressors in the intensive care unit.

Vasopressors are the mainstay medication for patients experiencing hypotension unresponsive to a fluid challenge. Vasopressors are used in sepsis protocols and severe hypotension with altered tissue perfusion as seen in cardiac, neurogenic, and hypovolemic and obstructive shock (Vincent & Annoni, 2024). Vasopressor interventions typically are titrated to maintain mean arterial pressure (MAP) and therefore are monitored carefully and titrated by a nurse (VanValkinburgh & Hashmi, 2024). Vasopressors, such as norepinephrine, phenylephrine (Neo-Synephrine®), and vasopressin (Vasostrict®), are familiar to nurses. However, norepinephrine is used commonly because of its mild inotropic effect to support cardiac output and minimal risk of arrhythmia (Vincent & Annoni, 2024)

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Although vasopressors are being infused increasingly via peripheral intravenous catheters, no standard of nursing care currently exists for this treatment. Nurses should use the Infusion Nurses Society Infiltration Scale to ensure timely, accurate assessments and appropriate nursing interventions. More research is needed to inform the evolving practice of peripheral vasopressor administration.

Keywords: vasopressor, infusion, extravasation, peripheral intravenous catheter, central venous catheter

No Standard of Care

The Surviving Sepsis Campaign (SSC) is the product of an international and interprofessional group of experts who used the Delphi method to update sepsis guidelines. Their work is represented by two entities: the Society of Critical Care Medicine and the European Society of Intensive Care Medicine. The goal of this workgroup is to reduce morbidity and mortality due to sepsis and septic shock (Evans et al., 2021).

The SSC lists recommendation #44 with evidence grading and rationale:

> For adults with septic shock, we **suggest** starting vasopressors peripherally to restore MAP rather than delaying initiation until a central venous access is secured.
>
> *Weak recommendation, very low quality of evidence.*
>
> **Remark:**
> When using vasopressors peripherally, they should be administered only for a short period

of time and in a vein in or proximal to the antecubital fossa. ("Executive Summary," 2022, p. e1095)

SSC is not a standard of care; more well-designed robust studies are needed, although some studies align with the SSC (Samara et al., 2024; Stolz et al., 2022). Starting a hemodynamically unstable patient with PIV vasopressors reduces time to initiate treatment compared to placing a CVC, also reducing risk of infection and pneumothorax, which are known complications of CVC placement (Araiza et al., 2022). Although a PIV infusion time limit for each vasopressor has not been established, research suggests a CVC can be inserted later if needed, emphasizing time is critical in addressing sepsis, hypotension, and shock (Fabick et al., 2023). Each hour of delay in vasopressor administration results in an approximate 2% increase in in-hospital mortality (Dansereau et al., 2024). Also, under-resourced practice environments may not have the expertise or equipment to start a CVC safely (Marques et al., 2022).

Vasopressor Administration Via a PIV

Risk of PIV vasopressor extravasation is approximately 3.4%, with few patients requiring surgical intervention or experiencing long-term sequelae ("Executive Summary," 2022; Kalinoski et al., 2024). Research suggests optimal IV placement should be proximal to the antecubital fossa (Dansereau et al., 2024; "Executive Summary," 2022; Kalinoski et al., 2021). Approximately 85% of extravasations occurred when the PIV was distal to the antecubital fossa (Kalinoski et al., 2024). Dansereau and colleagues (2024) recommended two large-bore IVs be placed for backup in case extravasation occurs in the first large-bore IV.

The PIV infusion timeframe depends on the specific vasopressor, dose, rate, and patient condition, with additional stratified studies needed for clinical guidance. Acceptable PIV vasopressor infusion times have been identified as 6 hours ("Executive Summary," 2022), 24 hours (Tran et al., 2020), 48 hours (Kalinoski et al., 2024), or 72 hours (Dansereau et al., 2024). Stolz and colleagues (2022) suggested the duration of vasopressor infusion (by PIV only, PIV converted to CVC, or CVC only) is not associated with an increased risk of leakage, extravasation, or erythema as specific complications.

Several studies suggested use of ultrasound-guided PIV insertion to achieve placement success, and reduce time to vasopressor initiation and chance of extravasation (Dansereau et al., 2024; Fabick et al., 2023). Tran and co-authors (2020) indicated large-gauge PIVs reduce risk of extravasation. However, Syed and colleagues (2022) suggested PIV gauge is not associated with medication leakage leading to extravasation. Marques and co-authors (2022) used mostly 16-18-gauge PIVs, whereas other studies used 18-20-gauge PIVs (Fabick et al., 2023; Kalinoski et al., 2024). One study found patient obesity was a key factor that hampered PIV placement (Munroe et al., 2024). Those findings were corroborated by Rodriquez-Calero and colleagues (2020), further suggesting obesity is a statistically significant risk factor for PIV cannulation due to a higher burden of subcutaneous fat and obscured landmarks.

Nursing Considerations

Monitoring

No standard addresses how often nurses should check the PIV infusing the vasopressor. Kalinoski and colleagues (2024) suggested nurses monitor the PIV site infusing a vasopressor every hour and carefully assess for fluid leakage, edema, skin injury, skin discoloration, and vesicles. Nurses must be familiar with the Infusion Nurses Society Infiltration Scale, regardless if this scale is embedded in the electronic health record. This scale represents a 0-4 nursing assessment with key signs and symptoms summarized (Nickel et al., 2024, p. S256):

- Grade 0: no symptoms
- Grade 1: skin blanched, edema <1 inch, cool to touch, with or without pain
- Grade 2: skin blanched, edema 1-6 inches, cool to touch, with or without pain
- Grade 3: skin blanched, gross edema >6 inches, cool to touch, pain, possible numbness
- Grade 4: skin blanched, skin tight, leaking, skin discolored, gross edema >6 inches, deep pitting tissue edema, circulatory impairment, pain

Nurses also are encouraged to notify and partner with Vascular Access Department colleagues, if available, when a patient has a vasopressor infused via a PIV.

Grading the Site and Extravasation Damaging

Tarpey and colleagues (2023, p. 292) developed a table that directs providers to take various actions, such as extravasation antidote selection, consult to the plastic surgery team, and other specific directives for nursing. These authors indicated nurses should take the following actions when they observe an extravasation:

- Stop the infusion.
- Disconnect the IV tubing.
- Leave the catheter in place.
- Do not flush the line.

- Notify the provider to come for bedside assessment and next steps.

A number of antidotes beyond phentolamine are available, with specific instructions based on the infused vasopressor. Nurses should consult their agency policies for vesicant antidotes related to other potential vesicants, such as chemotherapy medications and contrast agents.

Conclusion

Vasopressors are being infused increasingly via PIVs, although CVCs continue to be used in cases of sepsis and hypotension with altered tissue perfusion as in shock states. No standard of nursing care currently exists for this treatment. The SSC has provided recommendations, but evidence for use of PIVs for vasopressor infusion has been rated as weak. Research also has raised questions about specific criteria, such as catheter size, IV location, duration of infusion, infusion rate, and schedule for nurse monitoring of the PIV site. Nurses should use the Infusion Nurses Society Infiltration Scale to ensure timely, accurate assessments and appropriate nursing interventions. More well-designed, robust studies are needed to inform the evolving practice of peripheral vasopressor administration. MSN

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Medical-Surgical Nurses and Patients with Behavioral Health Needs

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Daddario, D. (2025). Medical-surgical nurses and patients with behavioral health needs. *MEDSURG Nursing, 34*(5), 248-250, 254. https://doi.org/10.62116/MSJ.2025.34.5.248

Nurses play an important role in caring for patients with behavioral health needs while on medical-surgical units. Ongoing education, including related to psychiatric diagnoses, and development of verbal and nonverbal therapeutic communication skills can enhance nurses' confidence in providing care and increase patients' satisfaction with the care they receive.

Keywords: mental illness, behavioral health, stigma, therapeutic communication, nursing care

Mental illnesses have increased in the United States and around the world. In 2022, more than one in five adults (23.1% of U.S. adult population) was estimated to live with a mental illness (National Institute of Mental Health [NIMH], 2024). This can include one or multiple diagnoses of potentially many different conditions. Also, conditions can vary in degree of severity, ranging from mild to moderate or severe. An example could be the patient having mild depression with severe anxiety. The NIMH identified two broad classifications of mental illnesses: any mental illness (AMI) and serious mental illness (SMI). AMI includes all recognized mental illnesses, while SMI includes a lesser number of persons who are severely ill. Other related statistics are tracked. In this same year, the NIMH estimated 59.3 million adults age 18 or older in the United States had AMI. This represented 23.1% of U.S. adults, with a higher prevalence among females (26.4%) than males (19.7%).

Patients with mental health problems tend to seek medical care more frequently and present more challenges when admitted to medical-surgical units (or other non-psychiatric units). It is no longer solely the role of psychiatric units or institutions to provide care to patients with mental illness. Patients with disorders, such as depression, anxiety, panic disorder, bipolar disorder, suicidal ideation, uncontrolled anger, schizophrenia, alcohol use disorder, substance use disorder, and delusions, now receive care in medical-surgical units, intensive care units, extended care facilities, clinics, and other similar settings (Azar et al., 2020; Gruber et al., 2022).

Seeking Care for Medical Symptoms

Patients previously not diagnosed with a mental disorder may be admitted to a medical-surgical unit seeking evaluation of worsening medical symptoms. A new and serious diagnosis may be very frightening to a patient, leading to anxiety or depression, the two most common types of mental illnesses associated with physical illness. Persons with these common mental disorders frequently have co-occurring, long-term physical health conditions and have a higher rate of seeking hospital care (Gruber et al., 2022). Patients with mental illness may have physical illnesses, and those with physical illnesses also may have mental illnesses. Mental health and medical conditions are risk factors for each other, and the presence of one can complicate the treatment of the other as they are interconnected (Azar et al., 2020).

Estimates for healthcare costs are 50% higher for individuals with a co-occurring mental disorder compared to those with physical health disorders alone. These costs were found to be related to physical health services, such as additional hospitalizations, increased visits to primary care, and increased referrals to specialists (Gruber et al., 2022).

Anxiety may interfere with the management of medical-surgical problems due to its systemic physical responses (see Table 1).

Negative Stereotyping

Over many years as a medical-surgical nurse as well as an adult and psychiatric mental health nurse practitioner, I have heard patients with anxiety,

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TABLE 1.
Systemic Responses to Anxiety

System	Effect
Cardiovascular	Increased heart rate and blood pressure, chest pain, stronger heart muscle contractions, dilation of the heart, redirection of blood to large muscles
Respiratory	Increased respiratory rate; bronchial hyperresponsiveness and inflammation; increased mucus production; changes in breathing patterns due to airway constriction, leading to shortness of breath and rapid shallow breathing which exacerbate respiratory symptoms; compromised immune function which increases susceptibility to respiratory infections
Gastrointestinal	Delayed gastric emptying and reduced intestinal transit (motility); reduced blood flow to the gut, inhibiting gastrointestinal secretions and nutrient absorption; stress-induced changes in gut motility manifesting as diarrhea or constipation, irritable bowel syndrome, abdominal distress
Musculoskeletal	Increased muscle tensing, tremors, tension headaches, temporomandibular joint disorders, prolonged recovery from musculoskeletal injuries, risk of developing conditions such as fibromyalgia and low back pain
Immune	Increased infection susceptibility, delayed wound healing, exacerbation of inflammatory conditions
Reproductive	Women: menstrual irregularities, anovulation, infertility, polycystic ovary syndrome Men: impaired sexual desire, decreased sperm quality, erectile dysfunction, hypogonadism

Source: Chu et al., 2024

depression, or other mental illnesses described as "difficult" or "needy." This has led to patients being stereotyped negatively while hospitalized on various medical-surgical units and other nursing departments. These attitudes can have adverse influence on the quality of nursing care provided to patients. Undesirable perceptions toward patients with SMI (or even with mild symptoms) can compromise staff's ability to respond to medical symptoms. Symptoms may be considered insignificant and discounted while the patient's physical condition worsens. These attitudes may deter the delivery of quality, competent, compassionate, and holistic care (Subramaniam, 2024).

Relevance to Clinical Practice

Medical-surgical nurses can play a crucial role in improving inpatient care and overall medical care of this vulnerable population with psychiatric needs. Stigma is formed when people are perceived as having exaggerated negative characteristics, resulting in an overall diminishing of their worth. Stigma can be defined as "to carve, to mark as a sign of shame, punishment or disgrace" (Subramaniam, 2024, p. 533). Stigma affects the person with a mental health condition but also can create distress for persons providing care, such as the nurse, other healthcare providers, and family caregivers. There may be embarrassment and fear of being labeled as mentally ill, which discourages the person from seeking help. This may lead the affected person to downplay or deny symptoms, which delays diagnosis and treatment and can exacerbate the condition. This denial and delay in seeking care can lead to worsening of symptoms, with poorer outcomes: a tragic sequence of events (Subramaniam, 2024).

I have heard comments by healthcare staff, such as "Why did you wait so long to come to the hospital?" and the opposite, "Why did you come to the hospital when this could have been treated at the clinic or at home?" The person's general understanding of the symptoms and a possible diagnosis are part of what determines when that individual may decide to seek care. Other factors can be the person's mental and emotional status. A person who is anxious, for example, may seek care very early when symptoms initially develop instead of adopting a wait-and-see approach. Alternatively, the person may delay seeking care due to anxiety related to what may be found. I also have heard comments from healthcare staff, such as "It's only a simple test. Why are they so stressed out over this?" and "I don't have time to stay with them just because they are so anxious." I have thought and even made similar statements. It is easy to become overwhelmed by a busy patient assignment and feeling the needs of the patients will not be met.

I also have observed medical-surgical nurses expressing anxiety about providing care to patients with psychiatric diagnoses or who present with behaviors associated with mental illness. When a psychiatric diagnosis is noted on the electronic

TABLE 2.
Examples of Therapeutic Communication

Technique	Statement
Open-ended questions	"Please tell me more about how you're feeling today."
Empathy	"That sounds really difficult. I'm here to help you get through this."
Validation	"It's OK to feel this way."
Active listening	"It sounds like you're a bit overwhelmed dealing with this new diagnosis. Please share your concerns with me."
Encouragement and reassurance	"Even though you're feeling overwhelmed right now, take it day by day. Don't hesitate to ask questions of what you don't understand. We're here to support you."
Clarification	"When you say you're overwhelmed, what part of your new diagnosis is most concerning right now? Let's start with small segments to understand better."

Source: Sharma & Gupta, 2023

health record, a negative picture may appear in the minds of nurses. These uncomfortable feelings have been attributed to a lack of essential communication skills and negative perceptions toward caring for a patient with mental illness based on stereotypes (Subramaniam, 2024).

Role of Medical-Surgical Nurses

Medical-surgical nurses play a crucial role in the care of patients with mental health concerns. Medical-surgical nurses spend the most time with hospitalized patients, offering direct care and support. They are often the first to notice signs of mental illness. Medical-surgical nurses can identify patients at risk for unsafe behaviors, including suicide (National Academies of Sciences, Engineering, and Medicine, 2021). Estimates indicate 48.5-64.9 hospital inpatient suicides occur per year in the United States. Although 31.0-51.7 of these events occurred during inpatient psychiatric hospitalizations, a significant number of suicides occurred on non-psychiatric units, making this a concern for non-psychiatric nurses (Chammas et al., 2022). A risk factor for suicide is the feeling of hopelessness, an element of psychological pain that Chammas and colleagues defined as "a dimension characterized by negative expectancies for the future, lack of general motivation, and the attribution of wrong interpretations to personal experiences" (pp. 6-7). A patient may feel hopeless in the hospital, depending on the diagnosis and prognosis.

Medical-surgical nurses are skilled at managing complex cases. They provide care for patients with mental health and medical conditions, which can become complicated rapidly with multiple comorbidities. Medical-surgical nurses are also experts in routinely collaborating with hospitalists, social workers, occupational and physical therapists, and case managers. This collaboration also can include psychiatrists, psychiatric mental health nurse practitioners, and clinical nurse specialists when indicated.

Improving Nursing Care with Therapeutic Communication

Caring for patients with psychiatric concerns requires specialized skills in verbal and non-verbal therapeutic communication, which leads to improved nurse-patient relationships. These skills are applicable to all patients. Statements should reflect a caring attitude, with empathic, supportive, and nonjudgmental interactions to help build trust in the nurse-patient relationship (Sharma & Gupta, 2023). See Table 2 for a sample of therapeutic communication techniques with statement examples.

Nurses should present as having time to be with the patient. Even if nurses are thinking of the needs of other patients, their focus should be on this patient during the discussion. Taking the time in that moment may save the patient from ringing the call bell frequently later when feeling stressed.

Categories and examples of negative comments may include the following:

- **Judgment or Dismissive Statements.** "There's no reason for you to feel so anxious about this diagnosis. It's no big deal, really!" This sounds uncaring and ignorant of the patient's experience.
- **Interrupting/Displaying Impatience.** "Let's move on to your next concern." The time may come to move on from the current topic or return to other patients. This transition should be handled as gently as possible.

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- **Minimizing Feelings.** "You're not the only one who has ever been diagnosed with ___." Right now, the patient is the one experiencing this diagnosis and needs time to process it. This response will increase the patient's anxiety and make it more difficult to understand any education being provided.
- **Using Very Technical Jargon.** "This is caused by ____." These types of statement are above the patient's level of understanding. The patient also may misunderstand the diagnosis and treatment, which may lead healthcare providers to view the patient as nonadherent.

Conclusion

Medical-surgical nurses have an important role in caring for patients with behavioral health needs while on medical-surgical units. Medical-surgical nurses spend the most time with patients; they see the need to improve care and keep patients safe. Ongoing education, including related to psychiatric diagnoses, can increase nurses' confidence in providing care and also increase patients' satisfaction with the care they receive. MSN

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Inspiring Hope in New Graduate Nurses

Susan B. Fowler

What Is Hope?

One robust definition of hope in nursing comes from the work of nurses Dufault and Martocchio (1985), who described hope as a multidimensional dynamic life force characterized by a confident yet certain expectation of achieving good that is realistically possible and personally significant. They displayed hope as a core of particularized hope and outer skin of generalized hope. Another nurse, Herth (1989) explained hope as an energized mental state characterized by an action-oriented, positive expectation that the present situation is temporary. Hope moves people to action; when others identify a person's need for hope, they may act to address this need. Because hope is dynamic in nature, it can change as a person's condition changes and transitions from one situation to another. Hope in new graduate nurses (NGNs) thus will be dynamic as they transition to the role of professional nurses. Additionally, they may have a specific hope focused on their present work situation as well as a general, more global hope related to the nursing profession and their future.

Many concept analyses have been done to identify antecedents, defining attributes, and consequences of hope. Antunes and co-authors (2023) conducted a synthesis of 15 analyses and identified the following frequently mentioned defining attributes of hope: an expectation of a positive outcome, a multidimensional and dynamic process of goal identification, a personal quality, an energy-action toward the future, a coping strategy, and an ongoing adjustment to personal and observed experiences. Additional attributes were an orientation toward the present and future, a feeling of comfort and safety, an interpersonal relationship and feeling of belonging and being needed, and spirituality. Many of these words or phrases align with the definition and description of hope by Dufault and Martocchio (1985) and Herth (1989), highlighting the dynamic and energizing nature of hope with an expectation of something good that is meaningful or important to the person. The hope of NGNs is depicted in their expectation of securing employment, which is very important to them as they begin their professional journey. NGNs are energized to begin their nursing careers, expecting to apply their knowledge and skills to practice, and be successful.

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New nurse graduates can be engaged in the profession by providing and supporting hope in themselves, their future, and the future of the profession. All nurses have an ethical obligation to assist new graduate nurses to flourish.

Keywords: nurses, new graduates, hope, hope-inspiring

Importance of Fostering Hope in NGNs

The United States is facing a nursing shortage. By 2027, a 10% shortage of registered nurses is projected; that shortage is expected to decrease to 6% by 2037 – a shortage of 207,980 full-time equivalent registered nurses (Health Resources & Services Administration, 2024). However, current nurses and healthcare consumers cannot afford for any NGNs to leave the profession in the first few years of practice.

NGNs go through transition shock described as "the initial experience of leaving the familiar student experience and entering the unpredictable and unfamiliar context of the professional practice realm" (Laskowski-Jones & Castner, 2022, p. 238). It is a professional and personal experience, affecting roles, responsibilities, relationships, and knowledge, and generating stress for NGNs. This transition should be addressed by expectations, support, and collaboration to provide a sense of hope.

As noted in the definitions and concept analyses of hope, there are outcomes, a future, and adjustments. NGNs face outcomes tied to their learning and performance, and the impact on patient care and outcomes. The hopes of NGNs and their employers are synergistic, such that both hope NGNs are successful in their transition to the professional nursing role as well as continued employment at the healthcare facility.

Although not specific to NGNs, Hu and colleagues (2020) found a significant negative relationship between hope and intention-to-turnover in nurses working in hospitals in Beijing, China. In an integrative review of 21 articles, Lyu and co-authors (2024) sought to understand why NGNs leave the nursing profession. They concluded the reasons are multifaceted, such as support from supervisors and peers, workplace challenges, cognition and emotions related to work, the work environment, role models, autonomous motivation, and resilience. Although hope was not identified specifically by Lyu and colleagues, many of these factors are negatively reflective of adjustments, comfort and safety, and a sense of belonging, which are defining attributes of hope (Antunes et al., 2023). These findings attest to the critical nature of the workplace environment and healthcare professionals in influencing the success and satisfaction on NGNs.

What Is Known about Hope in NGNs?

A review of literature about hope in NGNs showed hope was embedded in the concept of psychological capital. *Psychological capital* (PsyCap) is a positive state or capacity that cultivates during a time of growth and development. This capacity can be assessed, developed, and used for performance improvement (Luthans et al., 2007). PsyCap has four components: self-efficacy, optimism, hope, and resilience. Self-efficacy refers to confidence in making efforts to accomplish a challenging task. Optimism is related to the positive attitudes toward success now and in the future. Hope refers to the willpower to achieve goals and revise them, when necessary, while resilience involves the power to overcome troubles and problems and come out stronger in the end (Luthans et al., 2014, 2015; Youssef-Morgan & Luthans, 2015). These four variables are intertwined with hope in targeting goal setting, motivation, and adjustments that reflect definitions of hope.

Psychological Capital in NGNs

A search in CINAHL using terms *psychological capital* and *new nurse graduates* yielded six pertinent articles, one of which was a 2023 scoping review that included four of the other articles. In that scoping review of 114 peer-reviewed articles, Flinkman and colleagues (2023) found NGNs' PsyCap was correlated positively with work engagement, commitment and intention retention, and associated negatively with burnout.

Few studies took a deep dive into the four individual components of PsyCap, including hope. Grubaugh and co-authors (2023) explored PsyCap in NGNs enrolled in a nurse residency program using the Versant National Database. Efficacy increased from the beginning to the end of the immersion program; by year 3, it had increased by 6%. Optimism decreased from program beginning to end and continued to decrease through year 3. Hope slightly increased at the end of the program and slowly decreased throughout the next 3 years. Wang and colleagues (2023) found PsyCap was related highly to attainment of core competencies (r=0.70, p=0.01) in new nurses, with self-efficacy as an individual predictor. The authors of this article investigated PsyCap in 22 NGNs enrolled in a formal 12-month transition to practice residency program. In the first month of practice, scores were lowest in self-efficacy and highest in hope. Mean scores in self-efficacy, hope, and resilience steadily increased over the 12-month period. Optimism was most variable, increasing at 3 months, decreasing at 6 months, but achieving a high score at the end of the residency program.

What Is Known about Inspiring Hope?

No articles were found that specifically addressed inspiring hope in medical-surgical nurses. However, NGNs are part of the healthcare family and their dignity as professional nurses needs to be protected so they can move forward in their careers. Lessons can be learned from experiences in other specialty areas.

Fowler (2023) conducted a qualitative descriptive study and learned from rehabilitation nurses they inspire hope with a positive attitude, treating patients as persons, being present, and offering words about patient accomplishments. In previous qualitative research by Fowler (2020), critical care nurses acknowledged they target communication to inspire hope, get to know the patient as a person, and look for the positive. The definition of hope resonates in these findings because the person is the focus of hope as well as individual positive expectations tied to achieving goals or positive outcomes.

Kautz (2008), a rehabilitation nurse leader, suggested creating an environment of hope by helping patients manage negative feelings, sustain existing relationships with others, and forgive themselves and others. Additionally, he suggested promoting intimacy, use of literature, and humor can inspire hope. Nurses can help NGNs manage any negative emotions tied to their experiences and expectations of self. They can suggest additional resources, such as reading books focused on well-being and taking the time to bring humor to difficult situations to lighten the heaviness. Cutcliffe and Barker (2002) suggested engagement-hope inspiration when caring for suicidal patients is inspiring hope through interpersonal

relationships. Nurses inspire hope in NGNs by building relationships with them individually and collectively.

Using a grounded theory approach, Cutcliffe and Grant (2001) interviewed psychiatric/mental health nurses caring for persons with cognitive impairment. They identified four core variables focusing on recognizing the uniqueness of the individual where personal growth can occur, using knowledge to promote hope, developing interpersonal relationships with verbal and nonverbal communication, and using other variables to create an environment conducive to hope. The importance of relationships is echoed in these conclusions, which applies to healthcare staff within the NGN's environment. In a review of the literature on hope-inspiring strategies applicable to rehabilitation nursing, Kautz and Van Horn (2009) identified the following to promote hope and family integrity: facilitating open communication, fostering togetherness, and helping resolve guilt to move toward forgiveness. They concluded most strategies could fit under the overarching theme of promoting family dignity.

Inspiring Hope in NGNs

Hope should be considered in conjunction with self-efficacy, optimism, and resilience since investigation of hope in NGNs considers it as part of PsyCap. Self-efficacy, optimism, hope, and resilience represent the positive energy needed to make adjustments and seek goals, ensuring success in transitioning to professional practice by NGNs. Hope-inspiring strategies nurses use with patients and significant others can be applied to NGNs, along with knowledge gained from literature on why new nurses leave the profession (see Table1).

When nurses execute these strategies, they become role models for the profession, today and in the future. Additionally, nurses have an ethical obligation to facilitate human flourishing, as noted in the *Code of Ethics for Nurses* (American Nurses Association, 2025). Provision 5 states, "the nurse has moral duties to self as a person of inherent dignity and worth, including an expectation of a safe place to work that foster flourishing, authenticity of self at work, and self-respect through integrity and professional competence" (p. 18). Human flourishing as described in Provision 5.5 addresses relationships with colleagues in the workplace, the nursing community, and society-at-large. These relationships are interdependent and reciprocal where everyone is strengthened and flourishes. Through creation of an environment rich with hope, NGNs have the potential and expectation to flourish in their roles and within the profession, protecting their human and professional dignity.

TABLE 1.
Hope-Inspiring Strategies

- Foster a positive attitude in self and the new graduate nurse.
- Treat the new graduate nurse as a person and find individual uniqueness.
- Simply be present and available for support.
- Speak words of accomplishment to promote resilience, tapping your knowledge as a seasoned nurse and overriding any guilt expressed by the new graduate nurse.
- Communicate, communicate, communicate.
- Encourage the new graduate nurse to sustain present relationships and develop new ones, fostering a sense of togetherness.
- Laugh and express humor.
- Recommend literature to expand the new graduate nurse's understanding and appreciation of the nursing profession.
- Work with nurse leaders to foster a culture of hope within the healthcare environment and overcome inherent challenges.

Conclusion

Hope is a powerful, dynamic concept tied to self-efficacy, optimism, and resilience. Together, as PsyCap, NGNs can flourish in their transition to professional nursing practice with support from hope-inspiring strategies by nurses in the practice environment. NGNs enter the profession with hope that extends beyond simply being employed; they have expectations and goals. No matter their role, all nurses have a professional obligation to foster success in NGNs. MSN

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