

## The Evolving Heartbeat of Global Healthcare: Navigating Nursing's Future with Ethics, Innovation, and Growth

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### ABSTRACT

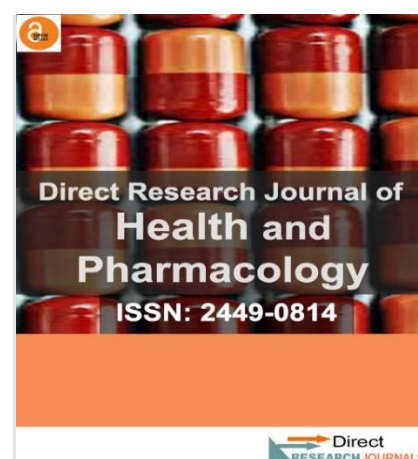
*In the wake of changes across global healthcare at an unprecedented pace, nursing stands as a resilient and essential pillar at its foundation. This commentary explores the multifaceted future of nursing, with a particular focus on ethics, innovation, and professional advancement. Drawing on a qualitative, descriptive, and thematic analytical approach, it thoughtfully examines the complex ethical challenges nurses encounter in an increasingly digital and interconnected world. It also explores the influence of emerging global trends, such as rapid technological advancements, shifting population demographics, and the growing imperative for equity, diversity, and inclusion in healthcare. Also, the discussion sheds light on the expanding leadership roles and career opportunities available to nurses as the profession adapts to meet contemporary demands. It emphasises the critical, irreplaceable role of nurses in promoting healthcare systems that are not only efficient and technologically adept but also deeply human-centred, equitable, and resilient. With highlights of the dynamic intersection of ethical responsibility, transformative global trends, and professional development, this commentary positions nurses not merely as caregivers, but as strategic leaders and innovators shaping the future of healthcare on a global scale.*

**Keywords:** Global Healthcare, Nursing, Ethics, Innovation, and Growth

### INTRODUCTION

In the face of accelerating global health transformations, nursing remains the enduring heartbeat of healthcare systems across the world. Whether in high-tech urban hospitals or resource-constrained rural clinics, nurses are often the first point of contact and the last line of care. As

emphasized by the World Health Organization (WHO, 2020; 2021) and the International Council of Nurses (ICN, 2021), nurses are not only caregivers but also educators, advocates, innovators, and policy leaders central to building equitable and resilient health systems. Global



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healthcare today reflects a paradigm shift. It is no longer confined to cross-border medical services or the priorities of affluent nations. Instead, it embodies a shared human endeavor, shaped by interdependent health outcomes across cultures, economies, and geographies (Kickbusch et al., 2021; Horton et al., 2023; WHO, 2022). The COVID-19 pandemic demonstrated how crises in one region can ripple across continents, while innovations in digital health and community-based interventions can catalyse global change (Kickbusch et al., 2016; Frenk et al., 2010). At its core, global healthcare demands recognition of shared vulnerability, cross-border collaboration, universal access to essential services, and a commitment to collective well-being (Gostin & Friedman, 2017). Nurses are uniquely positioned within this framework. As the All-Party Parliamentary Group on Global Health (2016) notes, nurses operate across clinical, community, and policy domains, making them pivotal actors in addressing health disparities and promoting inclusive care. Yet, the rapid digitization of healthcare driven by artificial intelligence (AI), telehealth, electronic health records, and wearable technologies has introduced new ethical complexities and leadership challenges (Topol, 2019; Topaz & Pruinelli, 2017; Adeleke et al., 2021; Marć et al., 2019). These shifts demand not only clinical competence but also moral courage, digital fluency, and visionary leadership (ANA, 2022; Nagle & Sermeus, 2016; Titzer et al., 2013). The ethical dimensions of nursing are being redefined. As care transitions to digital platforms and data is stored in cloud-based systems, nurses must navigate concerns around data privacy, informed consent, algorithmic bias, and equitable access to digital tools (Agnes & Bazzano, 2021; Mittelstadt et al., 2016; Zayhowski et al., 2025). Simultaneously, global demographic changes, migration, and advocacy for diversity and inclusion require nurses to be culturally competent and socially responsive (United Nations, 2020; Bajnok et al., 2020; ICN, 2021).

This commentary adopts a qualitative, descriptive, and thematic analytical approach to explore the future of nursing through four interconnected objectives. First, it examines ethical challenges as digital and human interactions become increasingly intertwined. Second, it analyzes global trends including technological innovation, health security imperatives, demographic shifts, and inclusive care models that are reshaping nursing practice (Johnson & Galatzan, 2025; Kumar, Mishra, & Varkey, 2025; Sanders et al., 2025; Al-Worafi, 2023). Third, it highlights emerging opportunities for nurses in leadership, education, and entrepreneurship (Monteagudo et al., 2025; Amin et al., 2025; Smith, 2025). Finally, it reaffirms the indispensable role of nurses in building future health systems that are human-centered, equitable, and resilient (Catton & Madigan-Pandora, 2024; Johnson, 2025). Technological advancements particularly AI, robotics, and the metaverse are reshaping nursing care modalities (Mistry, 2025; Osuji, 2024; Sandanasamy et al., 2024; Ashwini et al., 2025; Jain et al., 2025; Haider et al., 2025). These innovations offer promise but also raise ethical

dilemmas around autonomy, beneficence, and justice (Raman et al., 2025; Tiribelli & Calvaresi, 2024; Shafik, 2025; Helm & Matzner, 2024). Ethical automation must support not replace the human connection central to nursing care (Shafik, 2025). Persistent disparities in healthcare equity demand policy innovation and structural reform (Cary Jr. et al., 2025; Hoseini, 2024; Saadati, 2025; Rahayu et al., 2025). As WHO (2021) underscores, equity must remain at the heart of health systems, and emerging technologies must be deployed with transparency, inclusivity, and cultural sensitivity (Tiribelli, 2025; Goktas & Grzybowski, 2025). Patient-centered care and autonomy long emphasized in ethical nursing practice (Martin, 1998; Madder, 1997) are gaining renewed prominence. Contemporary research explores how virtual environments and participatory models empower patients as co-creators of their care journeys (Kim et al., 2024; Agrawal & Surendran, 2025; George, 2025; Matlhaba, 2025; Paliwoda et al., 2025). Innovation in nursing extends beyond technology to encompass new care models, education strategies, and workforce configurations (Vo & Fong, 2025; Prasai, 2025; Peeters et al., 2025; Smith, 2024). Nurses are increasingly stepping into roles as policy leaders and advocates (Carter, Brown, & Helms, 2025; Oso et al., 2025), with emotional intelligence and resilience emerging as key competencies (Gomez et al., 2025; Mullin, 2025). At the intersection of ethics and care lies the principle of beneficence the active pursuit of well-being (Page & Vella-Brodrick, 2012; Ayati et al., 2025; Hansen, Aleksandrova-Yankulovska, & Steger, 2025; Lead et al., 2024; Hodge Jr, 2025; Lovegrove & Haddock, 2024). As healthcare systems evolve, workforce development becomes critical (Asamani et al., 2018; Fanna, 2025; Shan & Wang, 2024), and nurses must be equipped to meet both technological and humanistic challenges. Ultimately, as Catton & Madigan-Pandora (2024) assert, the future of nursing is not merely about adapting to change it is about shaping it. This commentary synthesizes current literature, global health reports, and expert insights to inspire dialogue among nurses, educators, and policymakers. Its goal is to ensure that the essence of nursing compassion, ethical integrity, and patient-centered care is amplified by the tools, technologies, and values of the 21st century.

### **The Human Heartbeat of Healthcare: How Ethics Elevates Patient Care and Professional Excellence**

At its core, healthcare is a deeply human endeavour. It's about trust, vulnerability, and the fundamental right to well-being. This is precisely why the thoughtful integration of ethical principles isn't just a regulatory checkbox; it's the very heartbeat of exceptional patient care and professional dedication. When we weave in principles like autonomy (respecting choices), beneficence (doing good), non-maleficence (avoiding harm), and justice (ensuring fairness), we transform medical practice from a series of procedures into a holistic, person-centred experience.

(Kickbusch et al., 2016; Frenk et al., 2010; WHO, 2023). This ethical foundation ensures that every medical decision resonates with a patient's individual values and needs, fostering deep trust and promoting equity (Beauchamp & Childress, 2019). It guides healthcare providers in navigating complex situations with integrity, building stronger, more empathetic relationships with those they serve. Beyond individual interactions, this ethical compass helps us identify and address systemic inequities, moving us closer to healthcare delivery that truly sees and serves every person (Morley et al., 2021).

### **Autonomy: Giving Patients the Helm of Their Own Journey**

Imagine standing at a crossroads in your health facing difficult, life-altering decisions about your body, your future, and your well-being. In these moments, patient autonomy becomes more than a clinical concept; it becomes a deeply human right. Autonomy in healthcare is the unwavering principle that you, as the patient, have the ultimate authority to make informed decisions about your care, provided you have the capacity to understand and deliberate on your options governance (All-Party Parliamentary Group on Global Health, 2016; Duffield et al., 2021).. Even when your choices diverge from your healthcare provider's recommendations, your voice must not only be heard but genuinely respected. At its core, this principle is anchored in two deeply rooted ethical values:

**Liberty:** The freedom to make healthcare choices without coercion or undue influence. No clinician, regardless of expertise or intent, should pressure a patient into a decision that contradicts their personal values, beliefs, or comfort. Autonomy creates the space for individuals to take ownership of their health journey.

**Agency:** The recognition that individuals have the cognitive and moral capacity to weigh risks and benefits, ask questions, and arrive at choices that reflect their unique perspectives and life circumstances (Entwistle et al., 2010). It affirms patients as \*active agents\*, not passive recipients of care.

Autonomy is, at heart, the ethical embodiment of self-governance. It empowers patients to make decisions based not only on medical facts but also on personal narratives, cultural values, and desired quality of life (Varkey, 2021). This is especially crucial in today's healthcare systems where patients face increasingly complex choices, from genetic testing and robotic surgeries to end-of-life planning and digital health data sharing. The journey to recognizing autonomy as a central pillar of healthcare ethics is itself a powerful testament to humanity's capacity for moral evolution. The concept gained urgent moral relevance in the aftermath of World War II, particularly in response to the horrific abuses uncovered during the Nuremberg Trials. The Nazi regime's use of involuntary human experimentation shocked the

world and laid bare the catastrophic consequences of disregarding individual consent in medicine. In response, the Nuremberg Code (1947) was created, not merely as a legal safeguard, but as a global moral awakening. It established, informed consent as a non-negotiable element of ethical medical practice and research (Faden & Beauchamp, 1986; Moreno, 2013).

Today, autonomy remains a foundational component of modern bioethics. According to World Medical Association, (2017), it is upheld in international declarations, patient rights charters, and clinical practice guidelines across the globe. Still, as recent studies show, its application is still evolving. For instance, research in shared decision-making highlights that patients often feel their autonomy is constrained by time-pressured consultations, health literacy barriers, or paternalistic attitudes within some health systems (Joseph-Williams et al., 2017; Berger et al., 2022). The challenge, therefore, is not merely to protect autonomy in principle, but to actively cultivate conditions in practice that honour the patient's voice. In embracing autonomy, we affirm that healthcare is not simply about treatment, it is about partnership, dignity, and the right to make decisions that reflect one's full humanity.

However, autonomy is not an isolated island. It thrives in balance with other crucial ethical principles, particularly beneficence (doing good) and non-maleficence (doing no harm). This delicate balance becomes especially clear in heartbreaking situations involving patients with diminished decision-making capacity (Berlinger et al., 2013). Here, clinicians and families must step in, guided by the patient's best interests or their previously expressed wishes, striving to honour their essence even when their voice is temporarily muted.

### **Beneficence: The Active Pursuit of Well-being**

Beneficence is more than a clinical obligation; it is the moral heartbeat of healthcare. It represents the unwavering commitment to act in the best interest of others, to actively "do good," and to promote healing, comfort, and dignity in every interaction. In practice, beneficence means that healthcare providers go beyond simply treating disease; they work with intentional compassion to alleviate suffering, enhance patient outcomes, and support holistic well-being (Beauchamp & Childress, 2013; Varkey, 2021).

In a clinical context, beneficence requires that all actions and decisions prioritize the patient's welfare, be it physical, emotional, or psychological. It encompasses more than preventing harm; it demands a proactive and empathetic approach to care. Current research affirms that when healthcare professionals adopt beneficence as a guiding principle, patients experience not only improved satisfaction and trust but also better health outcomes, particularly in long-term or palliative care settings (Haahr et al., 2020; Lee & Kim, 2022). This ethical principle is often understood through three interconnected

components:

**Preventing Harm:** Beneficence involves anticipating potential risks and taking deliberate steps to safeguard patients not only from clinical errors but also from emotional distress, health misinformation, or socio-environmental threats. As McCormack et al. (2018) note, anticipatory care grounded in beneficence helps prevent avoidable suffering and supports safer healthcare experiences.

**Removing Harm:** When patients are already in distress or facing a health burden, beneficence calls for immediate and compassionate intervention. Whether through controlling pain, managing symptoms, or resolving systemic barriers to care, the healthcare provider is morally obligated to address harm where it exists (Varkey et al., 2021; Lee & Kim, 2022).

**Promoting Good:** This aspect extends beyond treating illness, it focuses on enhancing quality of life. Promoting good includes medical interventions, patient education, emotional support, and advocacy. (Haahr et al., 2020). In the same line, Haahr et al., (2020); Papadopoulos et al., (2021). Stresses the importance of relational care, actions rooted in empathy, presence, and respect which has been shown to enhance healing and personal empowerment, especially in vulnerable populations. Beneficence is, at its core, a reflection of humanity's most noble instinct: to care deeply for the well-being of others. In healthcare, it transforms professional duty into acts of compassion, making medicine not just a science but a healing art.

In view of Tagin et al., (2015), ethical healthcare decision-making is fundamentally about putting the patient's best interests first. This demands that professionals adopt a truly patient-centred approach, one that deeply respects and prioritizes their unique preferences (Denny & Guido, 2009). In any professional or personal context, actions should be driven by the goal of promoting goodness and ultimately benefiting the individual patient and, by extension, the wider community (Beauchamp, 2009). These concerted efforts are what lead to optimal patient care, improved health outcomes, and a greater sense of well-being for all (Strøm & Engedal, 2021; Manda-Taylor, 2017; Varkey, 2021).

For nurses, the principle of beneficence forms the very cornerstone of their professional care. They are often at the forefront, actively fostering recovery and ensuring patient well-being. Beauchamp and Childress (2013) describe beneficence as encompassing the three elements of preventing harm, removing harm, and promoting good. This principle also involves thoughtfully balancing a treatment's potential benefits against its inherent risks and costs (Rosah, 2003; Edwards, 2009). Often, beneficence and non-maleficence work hand-in-hand, as avoiding harm is intrinsically linked to improving a patient's health (Pope et al., 2016; Ivanov, 2013). For example, the principle of non-maleficence would outright

prohibit interventions that are unnecessary or could cause irreversible harm. Providing equitable care, free from any form of discrimination, is another essential dimension of beneficence (Bathaie et al., 2018). Yet, the path of care is rarely simple. Situations inevitably arise where beneficence might seem to conflict with patient autonomy. In such delicate cases, healthcare providers must weigh decisions with profound care, ensuring that any protective actions, though potentially limiting autonomy, genuinely align with the patient's underlying values and serve their true best interests (Mortensen et al., 2022). While overriding autonomy is a grave step, it may be justifiable when it unequivocally maximizes the patient's well-being and upholds their inherent dignity (Dowie, 2017).

Healthcare professionals, particularly nurses, frequently navigate these intricate ethical dilemmas where beneficence, autonomy, and other principles intersect. In these moments, the unwavering goal is to deliver the highest quality of care by deeply considering each patient's unique needs and preferences (Yönt, 2014). In fact, beneficence can often embrace respecting patient autonomy, recognizing that the most beneficial outcomes are intricately tied to a patient's values and choices. This principle reminds us that "doing good" must also involve recognizing and valuing the crucial cultural, social, and religious factors that shape each patient's needs (Ling, 2019; McCabe, 2014). A thoughtful address of these profound influences, gives healthcare professionals protection not only physical health but also patients' dignity, ensuring that care decisions resonate with their deepest well-being.

### **Non-Maleficence: The Solemn Promise to "Do No Harm"**

The principle of non-maleficence, often distilled into the ancient and powerful phrase "do no harm," is far more than a technical standard. It is a profound, deeply human commitment that resides at the very core of ethical healthcare. Cheraghi et al (2023) stated that it compels every healthcare professional to act with meticulous care, thoughtful deliberation, and unwavering vigilance to ensure that their actions, or inactions, do not inflict unnecessary suffering, distress, or damage on patients. Importantly, this obligation extends beyond physical interventions to include the patient's emotional, psychological, and social well-being.

Recently, studies have emphasized that non-maleficence must be applied holistically in healthcare practice, especially as modern care becomes increasingly complex. For instance, Chan et al. (2022) highlight how ethical decision-making in psychiatric care demands a balance between respecting autonomy and preventing psychological harm, particularly in patients with impaired decision-making capacity. Similarly, Kaldjian (2020) asserts that clinicians must engage in reflective ethical reasoning to avoid unintended moral or emotional harm, especially when uncertainty surrounds clinical outcomes.

Moreover, Zolkefli (2021) argues that overlooking emotional and relational dimensions of care, such as communication tone, rushed consultations, or cultural insensitivity, can also lead to non-physical but equally significant forms of harm. These findings reinforce that non-maleficence is not simply about avoiding overt mistakes, but about safeguarding the total well-being of individuals entrusted to care.

Modern healthcare, with its dazzling complexities, adds intricate layers to this foundational principle. Consider the stark reality revealed by a 2023 study: approximately 12% of hospital-related adverse events were preventable, with many stemming from communication breakdowns or inadequate care coordination (Johnston et al., 2023). These statistics are a sobering reminder of the critical need for healthcare systems to cultivate an unyielding culture of safety – where communication is crystal clear, protocols are rigorously followed, and every procedure is thoroughly reviewed. Equally vital is addressing the profound emotional toll of healthcare decisions, especially when delivering difficult diagnoses or navigating the sensitive terrain of end-of-life care. Smith et al., (2023) suggested that these vulnerable moments, empathy, active listening, and profoundly sensitive communication are indispensable for minimizing emotional harm and fiercely preserving patient dignity.

Non-maleficence also confronts significant challenges in contexts where resources are painfully limited or where cutting-edge technological advancements introduce novel risks. A 2022 global survey found that over 70% of healthcare workers in low-income settings grapple with immense barriers to upholding this principle, often struggling with insufficient staff or outdated equipment (World Health Organization, 2022). This can force agonizing decisions about whether to proceed with high-risk interventions or, conversely, to delay critical care due to overwhelming systemic constraints. Furthermore, as healthcare technology continues its rapid evolution, providers must constantly navigate the delicate balance between innovation and safety. For instance, while robotic surgeries promise incredible precision, they inherently carry risks of software glitches, mechanical failures, or insufficient operator training (Jones & Patel, 2023). These multifaceted challenges underscore the paramount importance of continuous learning, rigorous ethical reflection, and seamless collaboration in every decision made within the complex tapestry of modern healthcare.

### **Justice: Ensuring Fair and Equitable Healthcare**

The principle of justice in healthcare transcends abstract ideals; it is a vital, living commitment to ensuring absolute fairness and equity in access to resources, services, and opportunities for health for every individual. This principle mandates that quality care is distributed fairly, regardless of a person's socioeconomic status, ethnicity, gender, sexual orientation, disability, or any other characteristic.

It's a call to dismantle barriers and build bridges to health for everyone. In practice, justice becomes especially poignant and critical in situations where resources are scarce or overwhelmed. The global crisis of the COVID-19 pandemic offered a stark, agonizing illustration: the worldwide shortage of intensive care unit (ICU) beds and ventilators highlighted an urgent, ethical imperative for fair triage systems (Salminen-Tuomaala & Seppälä, 2022), Kluge et al., (2022). These systems were designed to prioritize care based purely on medical need and potential for survival, fiercely resisting any external factors like a patient's financial capacity or social standing. Yet, despite such earnest efforts, systemic inequities regrettably persist. A chilling 2023 global health report revealed that individuals from low-income communities were 2.5 times more likely to face delays in receiving emergency care compared to their higher-income counterparts (World Health Organization, 2023). This devastating statistic screams for urgent, equitable healthcare reforms. Beyond the walls of clinics and hospitals, justice also compels us to address the deeply rooted social determinants of health, to fiercely advocate for underserved and marginalized populations, and to ensure that care is profoundly culturally sensitive, truly meeting the diverse needs of every community.

Justice is equally concerned with the fairness of the process as it is about the fairness of the outcomes. Procedural justice champions the need for transparent, inclusive, and consistent decision-making within healthcare. This builds a robust foundation of trust between patients and providers. For instance, informed consent is not merely a legal checkbox; it's a vital, empowering conversation that allows patients to become active, knowledgeable participants in their own care journey. Study in 2022 powerfully demonstrated that patients who perceived decision-making processes as fair and inclusive reported 40% higher levels of trust in their healthcare providers and showed a greater commitment to their treatment plans (Smith et al., 2022). Beyond individual interactions, the principle of justice extends its reach to systemic, societal transformation. Advocacy efforts that courageously challenge deep-seated healthcare disparities, such as the tragic reality of higher maternal mortality rates among Black women in the U.S., who are three times more likely to die from pregnancy-related complications than White women (CDC, 2022), powerfully illustrate the principle's broader relevance and imperative on a grand, societal scale.

At its core, nursing practice is deeply ethical. The fundamental tenets of autonomy, beneficence, non-maleficence, and justice provide the moral framework for every nursing action (American Nurses Association, 2015). These principles guide nurses in respecting patient choices, acting in their best interests, preventing harm, and advocating for fair and equitable access to care, irrespective of geographical location or socioeconomic status. Therefore, the increasing integration of technology and the complexities of global health present novel ethical

challenges. The introduction of Artificial Intelligence (AI) in diagnostics and treatment raises questions about maintaining the crucial human element in care (Bakopov et al., 2023). How do nurses ensure that algorithmic decision-making enhances, rather than supplants, person-centred care? The proliferation of digital health records necessitates stringent adherence to data privacy and security regulations, safeguarding sensitive patient information across international borders (Johnson & Smith, 2022). Furthermore, nurses globally are on the frontlines of addressing health inequities, demanding ethical leadership to ensure that technological advancements and healthcare resources are distributed fairly and reach underserved populations in Nigeria and beyond (Benatar & Upshur, 2018). Figure 1 shows and illustration of the growing intersection of technological innovations (e.g., Modern diagnostics, telehealth, wearable sensors, digital records) with core ethical considerations in nursing practice (e.g., patient autonomy, data privacy, equitable access).



**Figure 1:** Created with Gemini web tools: Intersection of Technological Innovations with Core Nursing Ethical Considerations.

### Navigating the Tides of Change: Key Trends in Global Nursing

The global healthcare landscape is evolving at an unprecedented pace, shaped by technological innovation, shifting disease patterns, population ageing, climate-related health crises, and increasing health inequities. These profound transformations are not only changing how healthcare is delivered, they are also fundamentally redefining the scope, responsibilities, and expectations placed on nurses. From managing advanced digital tools to leading public health responses and advocating for vulnerable populations, nurses are increasingly being called upon to function beyond traditional clinical roles (ICN, 2021; WHO, 2023). This dynamic shift demands more than just clinical expertise. It requires nurses to be agile, digitally literate, ethically grounded, and capable of leading change within complex, often resource-

constrained environments (Jackson et al., 2022). A study by Kiernan et al., (2023). confirms that to remain relevant and effective, nurses must embrace lifelong learning and leadership development, while actively participating in shaping policy and system-level decisions. As health systems continue to face global threats, such as pandemics, workforce shortages, and socio-political instability, nursing must evolve in parallel, stepping into expanded and more autonomous roles to sustain equitable, responsive, and person-centred care across all settings (Kalaitzidis & Jewell, 2021).

### The Digital Transformation of Healthcare

Technology is no longer a supplementary tool in healthcare. It has become central to how services are designed, delivered, and experienced. Digital innovations such as telehealth platforms are breaking down geographical barriers, expanding access to care in underserved and remote regions, including rural communities in Nigeria (Adeleke et al., 2021). Mobile health applications, wearable devices, and remote patient monitoring systems are empowering individuals to manage chronic conditions, monitor vital signs, and engage more actively in their health journeys (Topol, 2019). Additionally, artificial intelligence (AI) and machine learning are transforming diagnostics, treatment planning, and health system efficiency, making healthcare delivery more personalized and data-driven (Jiang et al., 2017). For nurses, this digital evolution requires more than basic computer skills, it demands digital fluency, critical thinking, and the ability to balance technological competence with compassionate, patient-centred care. As emphasized by the Institute of Medicine (2011), nurses of the future must be equipped to lead in this new environment, integrating technology while safeguarding the human touch that is central to the nursing profession.

### Global Health Security and Pandemic Preparedness

The COVID-19 pandemic was a stark reminder of the vulnerabilities within global health systems and the indispensable role of nurses in crisis response. From managing critical care units under pressure to facilitating vaccine rollouts in congested urban centres and rural villages, nurses were at the forefront of the global health emergency (International Council of Nurses, 2020). This experience has highlighted the urgent need to strengthen public health infrastructure, build workforce resilience, and enhance training in emergency preparedness and infectious disease management. Looking ahead, nurses must be empowered with advanced competencies in outbreak response, epidemiological surveillance, and cross-border collaboration. A globally coordinated and well-prepared nursing workforce will be essential in tackling future pandemics and safeguarding health security (World Health Organization, 2022).

## The Demographic Imperative: Aging Populations and the Rise of Non-Communicable Diseases (NCDs)

With populations around the world living longer, healthcare systems are seeing a significant shift in disease burden toward chronic, non-communicable diseases such as diabetes, hypertension, cardiovascular conditions, and cancer (World Health Organization, 2018). In Nigeria, these challenges are layered atop ongoing struggles with infectious diseases like malaria and tuberculosis, creating a dual burden that complicates care delivery (Adeloye et al., 2017). This shift has important implications for nursing practice. Nurses are increasingly engaged in long-term care management, health education, preventive care, and palliative support. Their role is expanding beyond the hospital to encompass community health settings, where they provide holistic support to patients and families managing complex, lifelong conditions. Culturally sensitive, community-based nursing care is becoming the cornerstone of sustainable health systems, particularly in low- and middle-income countries (Abdulraheem et al., 2012).

## Promoting Diversity, Equity, and Inclusion (DEI) in healthcare

Health equity cannot be achieved without addressing the deep-rooted disparities influenced by social determinants of health, such as poverty, education, gender, and access to healthcare. A diverse and culturally competent nursing workforce is critical in meeting the unique needs of patients from various socio-economic, ethnic, and linguistic backgrounds (National Academy of Medicine, 2019). In Nigeria's multicultural context, this means training nurses to respect and understand differing cultural beliefs about health, illness, birth, and death, while also advocating for inclusive healthcare policies and services. Furthermore, nurses must be prepared to confront systemic inequities in healthcare delivery by participating in policy development, promoting culturally responsive care, and championing equal access to quality healthcare for marginalized populations (Salway et al., 2016).

## Harnessing the Power of Interprofessional Collaboration

Today's complex healthcare challenges require collaborative solutions. Interprofessional teamwork, where nurses work alongside physicians, pharmacists, social workers, physiotherapists, and other allied health professionals, is essential for delivering coordinated, patient-centred care. Nurses bring a unique holistic perspective, grounded in both clinical competence and compassionate communication, making them integral members of interdisciplinary teams (Interprofessional Education Collaborative, 2016). Effective collaboration enhances clinical outcomes, reduces medical errors, and improves patient satisfaction. To fully participate in

interprofessional teams, nurses must develop leadership, negotiation, and communication skills, and understand the scope of practice of other professionals within the healthcare system (Reeves et al., 2017). Figure 2 illustrates the collaborative nature of modern healthcare, pointing the nurse as a central member working alongside physicians, pharmacists, therapists, and other healthcare professionals to provide comprehensive patient care.



**Figure 2:** The Interprofessional Healthcare Team Source: Bing Image.

## Embracing Opportunities for Professional Advancement in Nursing

The nursing profession stands on the threshold of transformative growth, offering a wide range of opportunities for nurses to expand their roles, deepen their expertise, and step into leadership and decision-making positions. As healthcare systems worldwide continue to evolve, nurses are uniquely positioned to drive positive change across clinical practice, education, research, and policy.

## Advanced Nursing Practice

The global demand for Advanced Practice Nurses (APNs) continues to rise, reflecting the increasing need for accessible, high-quality healthcare. In Nigeria and other developing countries, APNs, including Nurse Practitioners (NPs), Clinical Nurse Specialists (CNSs), Nurse Midwives (NMs), and Certified Registered Nurse Anesthetists (CRNAs), play a critical role in filling the gaps in healthcare access, especially in underserved rural areas (Federal Ministry of Health Nigeria, 2019). These roles empower nurses with advanced clinical training to assess, diagnose, and treat patients, prescribe medications, and lead specialized health programs. Research has shown that APNs contribute significantly to improved health outcomes, patient satisfaction, and cost-effective care

delivery (Maier et al., 2018).

### Leadership and Health Policy Engagement

With their first-hand experience in patient care and system operations, nurses are well-positioned to shape health policies and reform healthcare systems. Increasingly, nurses are stepping into leadership roles across healthcare organizations, professional associations, and governmental bodies. In these positions, they advocate for patient-centred policies, champion equitable access to care, and influence decisions that shape the future of public health (National Council of State Boards of Nursing, 2020; World Health Organization, 2020). Nurse leaders also play a key role in fostering inclusive work environments, promoting interprofessional collaboration, and mentoring the next generation of nurses.

### Innovation, Research, and Evidence-Based Practice

Today's nurses are not only caregivers but also innovators and researchers (Figure 3). Through involvement in research projects, clinical trials, and health technology development, nurses contribute to the generation of new knowledge and the advancement of evidence-based practice. In the Nigerian context, nurses have led initiatives such as community-based health education programs tailored to local cultural beliefs and practices, resulting in improved health literacy and outcomes (Sigma Theta Tau International, 2021; Oyetunde & Ofi, 2013). By adopting a spirit of inquiry and continually evaluating care practices, nurses can drive innovations that improve patient care and system efficiency.



**Figure 3:** A Nurse Utilizing Telehealth Technology to Connect with a Patient in a Rural Community. Source: Visual Search.: A depiction of a nurse in utilizing telehealth technology to provide remote consultation and care to a patient in a rural area, highlighting the expanding role of digital health in nursing practice

### Education and Mentorship

As the demand for competent and compassionate nurses continues to grow, so too does the need for skilled educators and mentors. Experienced nurses have a vital

role in shaping the future of the profession by teaching in academic institutions, supervising students in clinical placements, and guiding professional development through continuing education. The shift toward blended and online learning models further opens avenues for experienced practitioners to engage in flexible, scalable mentorship (American Association of Colleges of Nursing, 2022). Effective nurse educators not only pass on clinical knowledge but also instill critical thinking, ethical reasoning, and a passion for lifelong learning (Benner et al., 2009).

### Conclusion

The future of nursing both in Nigeria and across the globe, is not a distant ideal but a living, breathing journey shaped each day by the hands, hearts, and minds of nurses. It is a future rich with possibility, but also one that demands intentional preparation and courageous adaptation. As the world continues to face complex health challenges, from pandemics and technological disruptions to demographic shifts and deepening health inequities, the role of nurses has never been more critical. The anchoring nursing practice in timeless ethical principles such as autonomy, beneficence, non-maleficence, and justice, nurses can ensure that humanity remains at the centre of innovation. Embracing digital tools, participating in leadership, and staying in stage to global health trends, they position themselves not only as caregivers but as trailblazers in system-wide transformation. The way forward calls for nurses to be learners, advocates, collaborators, and compassionate healers capable of navigating the sharp edges of modern medicine while holding firm to the values that define their profession. This vision is not abstract. It is unfolding every day, in community clinics, crowded hospitals, research labs, policy forums, and bedside encounters. The evolving heartbeat of global healthcare pulses with the commitment, resilience, and empathy of nurses. And as they rise to meet the demands of this changing world, nurses will continue to shape a more inclusive, just, and health-secure future for all.

### Recommendations

In order to ensure that nursing continues to thrive in the face of global change, several practical and strategic steps must be taken: Nurses must be empowered to handle the complex moral terrain of modern healthcare. Institutions and professional bodies should invest in ongoing ethics training that addresses digital dilemmas, cultural sensitivity, and patient autonomy in the context of emerging technologies. While embracing digital innovations like artificial intelligence, electronic health records, and telehealth, nurses must remain at the centre of care. Technology should enhance, not replace, the human touch that defines nursing. Training in digital literacy should become a standard part of nursing curricula and professional development programs. Health systems

must create pathways for nurses to lead, innovate, and influence policy. This includes involving nurses in strategic decision-making, encouraging research, and supporting nurse-led innovations that address local and global health needs. Global health challenges demand collective responses. International partnerships, knowledge exchange, and culturally competent practices should be encouraged. Nurses in both high- and low-resource settings must be equipped and supported to address shared challenges like pandemics, climate-related health threats, and health inequity.

## Limitations

In spite of the fact that this article offers a broad perspective on the evolving future of nursing, it is not without limitations: This paper relies on existing literature and thematic analysis rather than firsthand data collection. While valuable for synthesis, it may not capture the nuanced, lived experiences of nurses across diverse settings. Global trends may not affect all countries or health systems equally. The challenges and opportunities presented may vary based on factors such as economic resources, policy environments, and cultural expectations of care. Given the pace of change in healthcare technology and policy, some insights may quickly become outdated. Continued research is needed to keep pace with these changes.

## Relevance to Nursing Practice

This paper speaks directly to the heart of what it means to be a nurse today and in the future. Nurses are not merely adjusting to a changing world; they are helping shape it. Addressing ethics, innovation, and growth, this discussion reinforces several key implications for nursing practice: In spite of the rise of machines and digital tools, nursing remains a deeply human profession. Practitioners must balance the efficiencies of innovation with the emotional intelligence and empathy that patients still need most. As healthcare systems grow more complex, nurses will increasingly serve not only as caregivers but also as data interpreters, tech users, educators, advocates, and leaders. The future of nursing demands a mindset of adaptability, collaboration, and lifelong learning. Nurses must be equipped to respond to shifting health landscapes while advocating for systems that are just, inclusive, and responsive.

## REFERENCES

- Abdulraheem, I. S., Olapipo, A. R., & Amodu, M. O. (2012). Primary health care services in Nigeria: Critical issues and strategies for enhancing the use by the rural communities. *Journal of Public Health and Epidemiology*, 4(1), 5–13.
- Adeleke, I. T., Adebayo, O. T., & Adigun, T. S. (2021). Application of artificial intelligence in nursing practice: Implications for education and policy in Nigeria. *Nigerian Journal of Nursing Sciences*, 8(1), 34–40.
- Adeleke, I. T., Afolabi, M. O., & Akinwale, A. A. (2021). Telemedicine in Nigeria: Closing the healthcare access gap. *Nigerian Journal of Health Sciences*, 21(2), 85–92.
- Adeloye, D., David, R. A., Olaogun, A. A. E., O'Hagan, S., & Titiloye, M. A. (2017). Health workforce and governance: The crisis in Nigeria. *Human Resources for Health*, 15(1), 32. <https://doi.org/10.1186/s12960-017-0205-4>
- Agnes, M. N., & Bazzano, A. (2021). Ethical considerations in digital health: Data privacy and algorithmic accountability. *Journal of Medical Ethics*, 47(4), 245–251. <https://doi.org/10.1136/medethics-2020-106819>
- Agrawal, M., & Surendran, A. K. (2025, July). *Participatory Medicine and Reshaping Healthcare*. In *Proceedings of the IoT AND LiDAR Technologies in Healthcare Workshop (ILTH 2024)* (Vol. 14, p. 14). Springer Nature.
- Agrawal, M., Surendran, A. K., Vaishnav, R. B., Azmi, M. O., Agarwal, H., Podder, V., ... & Biswas, R. (2025, July). *Participatory Medicine and Reshaping Healthcare Technology*. In *IoT AND LiDAR Technologies in Healthcare Workshop (ILTH 2024)* (pp. 14–30). Atlantis Press.
- Aiken, L. H., Sloane, D. M., Griffiths, P., Rafferty, A. M., Bruyneel, L., McHugh, M., ... & Sermeus, W. (2017). Nursing skill mix in European hospitals: Cross-sectional study of the association with mortality, patient ratings, and quality of care. *BMJ Quality & Safety*, 26(7), 559–568. <https://doi.org/10.1136/bmjqs-2016-005567>
- All-Party Parliamentary Group on Global Health. (2016). *Triple Impact: How developing nursing will improve health, promote gender equality and support economic growth*. UK Parliament.
- Al-Worafi, Y. M. (2023). *Nursing care in developing countries: Achievements and challenges*. In *Handbook of Medical and Health Sciences in Developing Countries: Education, Practice, and Research* (pp. 1–20).
- American Association of Colleges of Nursing. (2022). *The essentials: Core competencies for professional nursing education*. <https://www.aacnnursing.org>
- American Nurses Association. (2015). *Code of ethics for nurses with interpretive statements*. Author.
- American Nurses Association. (2022). *Nursing scope and standards of practice* (4th ed.). ANA.
- Asamani, J. A., Chebere, M. M., Barton, P. M., D'Almeida, S. A., Odame, E. A., & Oppong, R. (2018). Forecast of healthcare facilities and health workforce requirements for the public sector in Ghana, 2016–2026. *International Journal of Health Policy and Management*, 7(11), 1040.
- Ashwini, A., Kavitha, V., Balasubramaniam, S., & Kadry, S. (2025). MetaHealth: Transforming healthcare through AI integration. In *Applying Metaverse Technologies to Human-Computer Interaction for Healthcare* (pp. 121–140). Auerbach Publications.
- Bajnok, I., Puddester, D., MacDonald, C. J., Archibald, D., & Kuhl, D. (2020). Cultural competence and cultural safety in nursing education: A framework. *Journal of Transcultural Nursing*, 31(4), 438–447.
- Beauchamp, T. L., & Childress, J. F. (2009). *Principles of biomedical ethics* (6th ed.). New York: Oxford University Press.
- Beauchamp, T. L., & Childress, J. F. (2013). *Principles of biomedical ethics* (7th ed.). Oxford University Press.
- Beauchamp, T. L., & Childress, J. F. (2019). *Principles of biomedical ethics* (8th ed.). Oxford University Press.
- Benatar, S. R., & Upshur, R. E. G. (2018). Global health ethics: The imperative of inclusivity. *Global Health Action*, 11(1), 1472935.
- Benner, P., Sutphen, M., Leonard, V., & Day, L. (2009). *Educating nurses: A call for radical transformation*. Jossey-Bass.
- Berlinger, N., Jennings, B., & Wolf, S. M. (2013). The Hastings Centre guidelines for decisions on life-sustaining treatment and care near the end of life (2nd ed.). Oxford University Press. [<https://ssrn.com/abstract=2324200>](<https://ssrn.com/abstract=2324200>)
- Canterbury v. Spence, 464 F.2d 772 (D.C. Cir. 1972).
- Carter, N. W., Brown, J. A., & Helms, C. (2025). Nurse practitioners as policy leaders: The art and strategy of advocacy. *The Journal for Nurse Practitioners*, 21(8), 105468.
- Cary Jr, M. P., Bessias, S., McCall, J., Pencina, M. J., Grady, S. D., Lytle, K., & Economou-Zavlanos, N. J. (2025). Empowering nurses to champion health equity & BE FAIR: Bias elimination for fair and responsible AI in healthcare. *Journal of Nursing Scholarship*, 57(1), 130–139.

- Catton, H., & Madigan-Pandora, H. E. (2024). The future of nursing in the 21st century. In *Global Health and Nursing-E-Book* (p. 181). Elsevier.
- CDC Ethics and Integrity Office (EIO). (2024, September 30). *Ethics program* [https://www.cdc.gov/about/organization/eio/](https://www.cdc.gov/about/organization/eio/)
- Chabal, L., & Hibbert, D. (2025). In mind and body! *bulletin: The Magazine for WCET Members*, 22(1), 1–9.
- Cheraghi, R., Valizadeh, L., Zamanzadeh, V., Hassankhani, H., & Jafarzadeh, A. (2023). Clarification of ethical principle of the beneficence in nursing care: An integrative review. *BMC Nursing*, 22(1), 89. [https://doi.org/10.1186/s12912-023-01246-4](https://doi.org/10.1186/s12912-023-01246-4)
- Duffield, C. M., Diers, D., O'Brien-Pallas, L., Aisbett, C., Roche, M., King, M., & Aisbett, K. (2021). Nursing leadership and health system transformation: How nurse leaders contribute to better outcomes. *International Journal of Nursing Studies*, 115, 103848. [https://doi.org/10.1016/j.ijnurstu.2020.103848](https://doi.org/10.1016/j.ijnurstu.2020.103848)
- Emanuel, E. J., & Emanuel, L. L. (1992). Four models of the physician-patient relationship. *JAMA*, 267(16), 2221–2226.
- Faden, R. R., & Beauchamp, T. L. (1986). *A history and theory of informed consent*. Oxford University Press.
- Fanna, B. C. (2025). Addressing shortages and ensuring a healthy workforce—Building teams for tomorrow. *Nephrology Nursing Journal*, 52(1), 9–10.
- Federal Ministry of Health Nigeria. (2019). *National nursing and midwifery policy*. Author.
- Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., & Zurayk, H. (2010). Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *The Lancet*, 376(9756), 1923–1958. [https://doi.org/10.1016/S0140-6736(10)61854-5](https://doi.org/10.1016/S0140-6736(10)61854-5)
- George, R. (2025). *Enabling allied health clinicians into health systems leadership: 'Less about the profession, and more about the person'* (Doctoral dissertation, Auckland University of Technology).
- Giger, J. N., & Davidhizar, R. E. (2008). *Transcultural nursing: Assessment and intervention* (5th ed.). Mosby.
- Goktas, P., & Grzybowski, A. (2025). Shaping the future of healthcare: Ethical clinical challenges and pathways to trustworthy AI. *Journal of Clinical Medicine*, 14(5), 1605.
- Gomez, E. G. M., Clarin, A. S., & Baluyos, G. R. (2025). Exploring the resilience among pre-service teachers in an evolving academic environment through photovoice.
- Haider, R., Megha, W. A., Juba, J. T., Alamgir, A., & Ahmad, L. (2025). The conversational revolution in health promotion: Investigating chatbot impact on healthcare marketing, patient engagement, and service reach. *International Journal of Science and Research Archive*, 15(3), 1585–1592.
- Hansen, D., Aleksandrova-Yankulovska, S., & Steger, F. (2025). Ethical analysis of the change of values in healthcare. *Nursing Ethics*, 09697330251319374.
- Helm, P., & Matzner, T. (2024). Co-addictive human-machine configurations: Relating critical design and algorithm studies to medical-psychiatric research on “problematic Internet use”. *New Media & Society*, 26(12), 7295–7313.
- Hodge Jr, J. G. (2025). Supreme court impacts in public health law: 2024–2025. *Journal of Law, Medicine & Ethics*, 1–4.
- Hoseini, M. S. (2024). Health equity and future public health interventions: Strategies for reducing disparities. *Journal of Foresight and Health Governance*, 1(2), 16–29.
- Institute of Medicine. (2011). *The future of nursing: Leading change, advancing health*. The National Academies Press.
- International Council of Nurses. (2020). *ICN COVID-19 update: Nurses at the forefront*. [https://www.icn.ch](https://www.icn.ch)
- International Council of Nurses. (2020). *ICN policy brief: Nurses: A voice to lead – Nursing the world to health*. Author.
- International Council of Nurses. (2021). *Nurses: A voice to lead—A vision for future healthcare*. [https://www.icn.ch/system/files/2021-05/ICN%20Toolkit\_2021\_ENG\_Final.pdf](https://www.icn.ch/system/files/2021-05/ICN%20Toolkit\_2021\_ENG\_Final.pdf)
- Interprofessional Education Collaborative. (2016). *Core competencies for interprofessional collaborative practice: 2016 update*. Author.
- Jackson, D., Bradbury-Jones, C., Baptiste, D., Gelling, L., Morin, K., Neville, S., & Smith, G. D. (2022). Life in the pandemic: Some reflections on nursing in the context of COVID-19. *Journal of Clinical Nursing*, 31(1–2), 1–4. [https://doi.org/10.1111/jocn.16157](https://doi.org/10.1111/jocn.16157)
- Jain, R. K., Vyas, A. K., Agarwal, V., & Kothari, P. (2025). Metaverse makeover: Transforming patient care and wellness in virtual realms. In *Metaverse Technologies, Security and Applications for Healthcare* (pp. 147–171).
- Jiang, F., Jiang, Y., Zhi, H., et al. (2017). Artificial intelligence in healthcare: Past, present and future. *Stroke and Vascular Neurology*, 2(4), 230–243.
- Johnson, E. A., & Galatzan, B. J. (2025). A critical juncture: Reimagining nursing professional identity and regulation in the ethical integration of innovation and technology in healthcare. *Journal of Nursing Regulation*, 16(1), 10–16.
- Johnson, M., & Smith, P. (2022). Ethical considerations in the use of electronic health records: A global perspective. *International Journal of Medical Informatics*, 160, 105687.
- Johnson, S. (2025). *Navigating nursing's future*. Ethics International Press.
- Johnston, L., Malcolm, C., Rambabu, L., Hockley, J., & Shenkin, S. D. (2023). Supporting the wellbeing of care home staff: Lessons from the first wave of the COVID-19 pandemic. *Journal of Long-Term Care*, 2023, 195–208. [https://doi.org/10.31389/jltc.20](https://doi.org/10.31389/jltc.20)
- Jonsen, A. R., Siegler, M., & Winslade, W. J. (2015). *Clinical ethics: A practical approach to ethical decisions in clinical medicine* (8th ed.). McGraw-Hill Education.
- Kalaizidis, E., & Jewell, P. (2021). The impact of global health challenges on the future of nursing education: A review. *Nurse Education Today*, 97, 104706. [https://doi.org/10.1016/j.nedt.2020.104706](https://doi.org/10.1016/j.nedt.2020.104706)
- Kickbusch, I., Franz, C., & Park, K. Y. (2016). *Global health diplomacy: Concepts, issues, actors, instruments, fora and cases*. Springer.
- Kiernan, F., O'Connor, M., & O'Shea, M. (2023). Preparing nurses for expanded roles: Integrating leadership and policy skills in clinical training. *Nurse Education in Practice*, 68, 103615. [https://doi.org/10.1016/j.nepr.2023.103615](https://doi.org/10.1016/j.nepr.2023.103615)
- Kim, C. M., der Heide, E. M. V., van Rompay, T. J., & Ludden, G. D. (2024). Reimagine the ICU: Healthcare professionals' perspectives on how environments (can) promote patient well-being. *HERD: Health Environments Research & Design Journal*, 17(2), 97–114.
- Kluge, H. H. P., et al. (2022). [Full title of report or publication related to COVID-19 ethics].
- Kumar, P., Mishra, R., & Varkey, L. C. (2025). No universal health coverage without nurses. *BMJ*, 390.
- Lovegrove, J., & Haddock, R. (2024). Harnessing data to improve patient care and prevent hospital-acquired complications.
- Lynge, F. P., Kirkeby, C. T., Denwood, M., Christiansen, L. E., Mølbak, K., Møller, C. H., & Mortensen, L. H. (2022). Transmission of SARS-CoV-2 Omicron VOC subvariants BA.1 and BA.2: Evidence from Danish households. *Nature Communications*. [https://doi.org/10.1038/s41467-022-33498-0](https://doi.org/10.1038/s41467-022-33498-0)
- Madder, H. (1997). Existential autonomy: Why patients should make their own choices. *Journal of Medical Ethics*, 23(4), 221–225.
- Maier, C. B., Aiken, L. H., & Busse, R. (2018). *Nurses in advanced roles in the EU: A cross-country comparative study*. European Observatory on Health Systems and Policies.
- Manda-Taylor, L., Mndolo, S., & Baker, T. (2017). Critical care in Malawi: The ethics of beneficence and justice. *Malawi Medical Journal*, 29(3), 268–271. [https://doi.org/10.4314/mmj.v29i3.8](https://doi.org/10.4314/mmj.v29i3.8)
- Marć, M., Bartosiewicz, A., Burzyńska, J., Chmiel, Z., & Januszewicz, P. (2019). A nursing shortage – A prospect of global and local policies. *International Nursing Review*, 66(1), 9–16. [https://doi.org/10.1111/inr.12473](https://doi.org/10.1111/inr.12473)
- Martin, G. W. (1998). Empowerment of dying patients: The strategies and barriers to patient autonomy. *Journal of Advanced Nursing*, 28(4), 737–744.
- Matlhaba, K. (2025). Patient-centered care. In *Enhancing Clinical Competence of Graduate Nurses* (pp. 149–160). Springer Nature Switzerland.

- Mistry, M. (2025). Exploring robotic nursing: A comprehensive systematic review of socially assistive robots within the healthcare professions. *Journal of Community Health Nursing*, 42(3), 155–168.
- Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2), 2053951716679679. <https://doi.org/10.1177/2053951716679679>
- Monteagudo, N. C., Rodríguez, D. E. C., Carhuajulca, D. B. G., Moral, J. M. L., & Martínez, O. N. (2025). Defining nursing entrepreneurship from the point of view of future professionals: A qualitative study. *Nurse Education Today*, 144, 106421.
- Morley, G., et al. (2020). What is 'moral distress'? A narrative synthesis of the literature. *Nursing Ethics*, 26(3), 646–662. <https://doi.org/10.1177/0969733017724354>
- Mullin, A. (2025). Pregnancy, gender identity, autonomy, and trust. *Journal of Applied Philosophy*.
- Nagle, L., & Sermeus, W. (2016). Nursing and informatics: The future is now. In E. Hovenga & H. Grain (Eds.), *Health Informatics: An Interprofessional Approach* (pp. 273–287). Elsevier.
- National Academy of Medicine. (2019). *Integrating social care into the delivery of health care: Moving upstream to improve the nation's health*. The National Academies Press.
- National Council of State Boards of Nursing. (2020). *2020 environmental scan: Resilience and transformation*. <https://www.ncsbn.org>
- National Council of State Boards of Nursing. (2023). The NCSBN 2023 environmental scan: Nursing at a crossroads—An opportunity for action. *Journal of Nursing Regulation*, 13(4), S1–S48.
- Newman Giger, J., & Davidhizar, R. (2007). Eliminating health disparities: Understanding this important phenomenon. *The Health Care Manager*, 26(3), 221–233. <https://doi.org/10.1097/01.HCM.0000285013.88278.1e> <https://doi.org/10.1097/01.HCM.0000285013.88278.1e>
- Numminen, O., Kallio, H., Leino-Kilpi, H., Stokes, L., Turner, M., & Kangasniemi, M. (2024). Use and impact of the ANA code: A scoping review. *Nursing Ethics*, 31(8), 1389–1412. <https://doi.org/10.1177/09697330241230522> <https://doi.org/10.1177/09697330241230522>
- Oso, O. B., Alli, O. I., Babarinde, A. O., & Ibeh, A. I. (2025). Impact-driven healthcare investments: A conceptual framework for deploying capital and technology in frontier markets. *International Journal of Multidisciplinary Research and Growth Evaluation*, 6(1), 1702–1720.
- Osuji, J. C. (2024). The race against the clock: Can artificial intelligence help nurses thwart. *Journal of Nursing Reports in Clinical Practice*, 3(1), 1–4.
- Owens, O. L., James, C., & Friedman, D. B. (2017). Overcoming the challenges of African-American recruitment in health sciences research: Strategies and recommendations. *Urologic Nursing*, 3, 293–315. <https://doi.org/10.7257/1053-816x.2017.37.6.293> <https://doi.org/10.7257/1053-816x.2017.37.6.293>
- Oyetunde, M. O., & Ofi, B. A. (2013). Nurses' knowledge of prevention of mother-to-child transmission of HIV in selected hospitals in Ibadan, Nigeria. *International Journal of Nursing and Midwifery*, 5(3), 31–39.
- Page, K. M., & Vella-Brodrick, D. A. (2012). From nonmaleficence to beneficence: Key criteria, approaches, and ethical issues relating to positive employee health and well-being. In *Work and Quality of Life: Ethical Practices in Organizations* (pp. 463–489). Springer Netherlands.
- Paliwoda, E. D., Trandafirescu, M., Gajjar, A. A., Dhulipalla, S., Paliwoda, N., Kim, J. J., & Schalet, B. J. (2025). In their own words: Patient narratives of breast cancer surgery and reconstruction. *Aesthetic Plastic Surgery*, 49(3), 758–766.
- Peeters, E., Wooning, M., Caniels, M. C., & Semeijn, J. H. (2025). Turning points and routines in careers: A phenomenological study on the sustainability of career patterns and processes among home-care nurses. *Career Development International*.
- Prasai, R. (2025). The status quo of nursing in Nepal: Challenges, opportunities and future prospects. *International Journal of Multidisciplinary Research in Arts, Science and Technology*, 3(3), 01–14.
- Rahayu, E. P., Ariyanti, R., & Rahayu, A. P. (2025, April). Analysis of health equity and access of healthcare in Indonesia: Literature review. In *Mulawarman International Conference on Tropical Public Health* (Vol. 1, No. 1, pp. 117–124).
- Raman, D., Madkour, N., Murphy, E. R., Jackson, K., & Newman, J. (2025). Intolerable risk threshold recommendations for artificial intelligence. *arXiv preprint arXiv:2503.05812*.
- Reeves, S., Pelone, F., Harrison, R., Goldman, J., & Zwarenstein, M. (2017). Interprofessional collaboration to improve professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*, 6, CD000072.
- Saadati, S. M. (2025). The future of health equity: Policy strategies to reduce disparities in public health. *Journal of Foresight and Health Governance*, 2(2), 15–32.
- Salminen-Tuomaala, M., & Seppälä, S. (2022). Nurses' ratings of compassionate nursing leadership during the COVID-19 pandemic. A descriptive cross-sectional study. *Journal of Nursing Management*, 30(6), 1974–1980. <https://doi.org/10.1111/jonm.13642> <https://doi.org/10.1111/jonm.13642>
- Salway, S., Mir, G., Turner, D., Ellison, G. T. H., Carter, L., & Gerrish, K. (2016). Obstacles to 'race equality' in the English National Health Service: Insights from the healthcare commissioning arena. *Social Science & Medicine*, 152, 102–110.
- Sandanasamy, S., McFarlane, P., Okamoto, Y., & Couper, A. L. (2024). Revolutionizing nursing: The impact of artificial intelligence on patient care and labor nursing pain management. *Journal of Nursing Reports in Clinical Practice*, 3(1), 110–112.
- Sanders, C., Roots, A., Hoot, T., Haggarty, D., Howell, M., Clyne, C., ... & Bell, A. (2025). *Nurse bridging education: Optimization, innovation, and sustainability*.
- Shafik, W. (2025). Ethical considerations in automated healthcare. In *Next-Generation Therapeutics Using Internet of Things and Machine Learning* (pp. 315–338). IGI Global.
- Shan, Z., & Wang, Y. (2024). Strategic talent development in the knowledge economy: A comparative analysis of global practices. *Journal of the Knowledge Economy*, 15(4), 19570–19596.
- Sigma Theta Tau International. (2021). *Position paper on the role of nurses in research and innovation*. <https://www.sigmanursing.org>
- Smith, M. H. J., Earl, J., & Dawson, L. (2023). The ethics of personal behaviors for preventing infectious diseases in a post-COVID-19 pandemic world. *Public Health Reports*, 138(5), 822–828. <https://doi.org/10.1177/00333549231184931> <https://doi.org/10.1177/00333549231184931>
- Smith, N. C. (2024). Innovation and nursing. *Nephrology Nursing Journal*, 51(2), 127–128.
- Smith, N. C. (2025). Inspiring nursing leaders. *Nephrology Nursing Journal*, 52(2), 111–111.
- Thomas, A., & Suresh, M. (2025). Factors influencing the enhancement of the new iron triangle in healthcare organisations. *Journal of Health Organization and Management*.
- Tiribelli, S., & Calvaresi, D. (2024). Rethinking health recommender systems for active aging: An autonomy-based ethical analysis. *Science and Engineering Ethics*, 30(3), 22.
- Titzer, J. L., Phillips, T., Tooley, S., Hall, N., & Shirey, M. R. (2013). Nurse manager succession planning: Synthesis of the evidence. *Journal of Nursing Management*, 21(7), 971–979.
- Topaz, M., & Pruinelli, L. (2017). Big data and nursing: Implications for practice, research, and education. *Nursing Outlook*, 65(3), 285–292. <https://doi.org/10.1016/j.outlook.2017.03.005>
- Topol, E. (2019). *Deep medicine: How artificial intelligence can make healthcare human again*. Basic Books.
- United Nations. (2020). *World Population Ageing 2020 Highlights*. Department of Economic and Social Affairs, Population Division.
- Varkey, B. (2021). Principles of clinical ethics and their application to practice. *Medical Principles and Practice*, 30(1), 17–28. <https://doi.org/10.1159/000509119> <https://doi.org/10.1159/000509119>
- Vo, M. T. H., & Fong, B. Y. F. (2025). Long-term care initiatives in Southeast Asian countries with emerging ageing population and the sustainability of health and social care systems. In *The Handbook of Public Health in the Asia-Pacific* (pp. 1–32). Springer Nature Singapore.
- World Health Organization. (2018). *Global strategy on people-centred and integrated health services 2016-2026*. Author.

- World Health Organization. (2018). *Noncommunicable diseases country profiles 2018*. <https://www.who.int/nmh/publications/ncd-profiles-2018/en/>
- World Health Organization. (2020). *State of the world's nursing 2020: Investing in education, jobs and leadership*. <https://www.who.int/publications-detail/9789240003279>
- World Health Organization. (2021). *Global strategic directions for nursing and midwifery 2021–2025*.
- World Health Organization. (2022). *Building a resilient nursing workforce for the future*. <https://www.who.int/publications>
- World Health Organization. (2023). *Global strategic directions for nursing and midwifery 2021–2025: Report on progress*. Author.
- Zayhowski, K., Roth, S., Westerfield, M. J., Martin, M. A., Blumen, K., Bland, H. T., & Mittendorf, K. F. (2025). Navigating sexual orientation and gender identity data privacy concerns in United States genetics practices. *Journal of Genetic Counseling*, 34(2), e70008.