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Navigating the Global Nursing Shortage: Implications for Basic Care Nursing Services

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Abstract

The global nursing workforce constitutes the backbone of healthcare delivery systems and plays a critical role in ensuring access to safe, effective, and patient-centered care. However, healthcare systems worldwide are currently facing an unprecedented shortage of nursing professionals, creating significant challenges for service delivery, workforce sustainability, and patient outcomes. Factors such as population aging, increasing prevalence of chronic diseases, workforce burnout, migration, inadequate educational capacity, and the long-term effects of the COVID-19 pandemic have contributed to persistent nursing shortages across both developed and developing nations. Basic care nursing services, which encompass essential patient care activities, health promotion, disease prevention, and support for vulnerable populations, have been particularly affected by workforce constraints. This review examines the global nursing shortage, explores its underlying causes, and evaluates its impact on basic care nursing services. Evidence suggests that inadequate nurse staffing is associated with increased patient morbidity, higher healthcare costs, reduced quality of care, and greater occupational stress among healthcare professionals. Furthermore, workforce shortages threaten healthcare equity and limit access to essential services in underserved regions. Various policy initiatives, workforce development strategies, educational reforms, and technological innovations have been proposed to address these challenges. Strengthening recruitment, retention, professional development, and international collaboration will be essential for building a resilient nursing workforce capable of meeting future healthcare demands. The review highlights the urgent need for coordinated global action to ensure sustainable nursing capacity and maintain high-quality basic care services.

Key words: Nursing shortage; Basic care nursing; Healthcare workforce; Workforce planning; Nursing retention; Global health; Healthcare policy; Nursing education.

Introduction

Nurses represent the largest professional group within the global healthcare workforce and are fundamental to the provision of comprehensive healthcare services. Their responsibilities extend beyond direct patient care to include health education, disease prevention, rehabilitation, care coordination, and advocacy. In virtually every healthcare setting, nurses serve as the primary point of contact between patients and healthcare systems. Consequently, the availability of an adequate nursing workforce is essential for maintaining healthcare quality, patient safety, and system efficiency [1].

Despite their importance, nursing shortages have emerged as a major challenge affecting healthcare systems across the world. International organizations, including the World Health Organization (WHO) and the International Council of Nurses (ICN), have repeatedly warned of significant workforce deficits that

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threaten healthcare delivery and population health outcomes. While nursing shortages are not a new phenomenon, recent demographic, economic, and healthcare developments have intensified workforce pressures in many regions [2].

One of the primary drivers of nursing shortages is the aging global population. Advances in medicine and public health have contributed to increased life expectancy, resulting in a growing number of older adults requiring healthcare services. Older populations often present with multiple chronic conditions, complex care needs, and higher rates of hospitalization [3]. Consequently, healthcare systems require larger nursing workforces to manage increasing patient volumes and care complexity. However, the growth in healthcare demand has frequently outpaced workforce expansion.

The COVID-19 pandemic further exposed vulnerabilities within healthcare labor markets. During the pandemic, nurses faced unprecedented workloads, heightened occupational risks, emotional distress, and prolonged periods of physical exhaustion. Many healthcare professionals experienced burnout, leading to increased turnover intentions and early retirement. In several countries, the pandemic accelerated workforce attrition and exacerbated pre-existing staffing shortages [4-7].

Migration patterns have also influenced global nursing workforce distribution. High-income countries often recruit nurses from lower-income nations to address domestic workforce shortages. While international recruitment may provide short-term relief for destination countries, it can contribute to workforce depletion in source countries that already face limited healthcare resources. This imbalance raises important ethical and policy considerations regarding global workforce sustainability [8].

Educational capacity represents another critical factor influencing workforce supply. Nursing schools in many regions face shortages of faculty members, limited clinical placement opportunities, and insufficient funding. These constraints restrict the number of students who can enter nursing programs despite growing demand for healthcare professionals. As a result, workforce shortages persist even when substantial interest exists among prospective nursing students [9].

Basic care nursing services are particularly vulnerable to staffing deficits. These services encompass fundamental aspects of patient care, including hygiene assistance, mobility support, medication administration, nutritional care, health monitoring, and emotional support. When staffing levels are inadequate, nurses may be forced to prioritize urgent clinical tasks at the expense of routine care activities. Such circumstances can negatively affect patient outcomes, satisfaction, and overall quality of care.

Research has consistently demonstrated associations between nurse staffing levels and patient outcomes [10]. Studies have reported higher rates of medication errors, hospital-acquired infections, patient falls, and mortality in settings characterized by inadequate staffing. Furthermore, excessive workloads can contribute to job dissatisfaction, burnout, and turnover among nurses, creating a cycle that further worsens workforce shortages.

The consequences of nursing shortages extend beyond hospitals. Community health services, long-term care facilities, primary care clinics, and home healthcare programs also rely heavily on nursing professionals. Workforce deficits in these sectors may reduce healthcare accessibility [11-16], delay treatment, and compromise continuity of care for vulnerable populations.

Addressing the global nursing shortage requires coordinated action across multiple domains. Workforce planning, educational investment, retention strategies, professional development opportunities, and supportive workplace environments are all critical components of sustainable solutions. Technological innovations, including telehealth and digital health platforms, may also help optimize nursing resources and improve service delivery [17].

Given the growing importance of workforce sustainability in healthcare policy, a comprehensive understanding of nursing shortages and their implications is essential. This review examines current evidence regarding global nursing workforce challenges and explores their impact on basic care nursing services. The article further discusses policy responses and future strategies aimed at strengthening nursing capacity and ensuring equitable access to quality healthcare worldwide [18,19].

Methodology of the Review

This review was conducted using a narrative literature review approach to examine the global nursing shortage and its implications for basic care nursing services. Relevant literature was identified through searches of major healthcare and scientific databases, including PubMed, Scopus, Web of Science, CINAHL, and Google Scholar. Publications focusing on nursing workforce trends, workforce shortages, healthcare staffing, nurse retention, nurse migration, burnout, healthcare policy, and basic nursing care were considered [20].

The search strategy incorporated combinations of keywords including "nursing shortage," "nursing workforce," "basic nursing care," "healthcare staffing," "nurse retention," "workforce planning," "nurse migration," "burnout," and "global health workforce." Priority was given to peer-reviewed articles, government reports, policy documents, and publications from international organizations such as the World Health Organization (WHO), International Council of Nurses (ICN), and Organisation for Economic Co-operation and Development (OECD) [21].

Studies published between 2010 and 2025 were primarily reviewed to capture contemporary workforce challenges and

policy developments. Additional landmark studies published before 2010 were included when they provided important historical or conceptual perspectives. Information extracted from the literature was organized into thematic categories, including workforce trends, causes of nursing shortages, effects on patient care, regional variations, and workforce development strategies [22].

Global Trends in the Nursing Workforce

The nursing workforce has experienced substantial changes over the past two decades. While many countries have increased nursing education capacity and recruitment efforts, workforce growth has generally failed to keep pace with increasing healthcare demands. According to international workforce estimates, nurses account for nearly 60% of healthcare professionals globally. Despite this substantial representation, shortages persist in both developed and developing healthcare systems [23].

Several demographic factors have contributed to workforce challenges. The global population is aging rapidly, resulting in increased demand for healthcare services. Older adults typically require more frequent healthcare interventions, chronic disease management, rehabilitation services, and long-term care. Consequently, healthcare systems require larger numbers of nurses to support growing patient populations [24-30].

At the same time, the nursing workforce itself is aging. In many countries, a significant proportion of practicing nurses are approaching retirement age. Large-scale retirements threaten workforce stability and create concerns regarding knowledge transfer, leadership succession, and staffing continuity. Healthcare organizations must therefore address both increasing service demands and declining workforce availability simultaneously.

Urbanization has also influenced workforce distribution. Healthcare professionals are often concentrated in urban centers, leaving rural and remote communities underserved. Geographic imbalances create disparities in healthcare access and place additional burdens on nurses working in resource-limited environments.

The COVID-19 pandemic further intensified workforce pressures. During the pandemic, nurses experienced increased workloads [31], prolonged working hours, staff shortages, and heightened psychological stress (Table 1). Many healthcare professionals reported symptoms of anxiety, depression, emotional exhaustion, and burnout. These experiences contributed to increased turnover intentions and workforce attrition in numerous healthcare systems.

Table 1: Major Drivers of Global Nursing Workforce Shortages.

Factor	Impact on Workforce
Population aging	Increased healthcare demand
Chronic disease burden	Greater care complexity
Nurse retirements	Reduced workforce supply
Burnout and stress	Higher turnover rates
International migration	Uneven workforce distribution
Educational limitations	Reduced graduate output
COVID-19 pandemic	Workforce exhaustion and attrition
Rural-urban disparities	Unequal workforce availability

Factors Contributing to the Global Nursing Shortage

Workforce Aging

One of the most significant contributors to nursing shortages is workforce aging. Many experienced nurses are approaching retirement, creating substantial workforce gaps. Replacing these professionals requires long-term investment in education, training, and mentorship programs. Workforce aging also creates challenges related to leadership succession and preservation of institutional knowledge.

Burnout and Occupational Stress

Nursing is widely recognized as a physically and emotionally demanding profession. Long shifts, heavy workloads, staffing shortages, workplace violence, and emotional exposure to patient suffering contribute to occupational stress. Burnout has emerged as a major concern across healthcare systems worldwide.

Burnout is characterized by emotional exhaustion, depersonalization, and reduced professional accomplishment. Numerous studies have linked burnout to decreased job satisfaction, increased absenteeism, reduced productivity, and higher turnover rates. During the COVID-19 pandemic, burnout levels increased substantially due to extraordinary clinical demands and concerns regarding personal safety [32].

Educational Capacity Constraints

Although interest in nursing careers remains relatively strong in many regions, educational institutions often face significant limitations. Nursing schools frequently report shortages of qualified faculty members, inadequate infrastructure, limited clinical placement opportunities, and financial constraints.

As a result, thousands of qualified applicants are unable to enter nursing programs each year despite growing workforce needs. Expanding educational capacity represents an essential component of long-term workforce planning strategies.

International Nurse Migration

Global migration has become a major factor influencing workforce distribution. Nurses frequently migrate from low- and middle-income countries to higher-income nations seeking improved salaries, career opportunities, and working conditions.

While migration may benefit individual professionals and destination countries, source countries often experience

workforce depletion. These losses can weaken healthcare systems already struggling with limited resources and healthcare personnel shortages [33].

Workplace Environment and Job Satisfaction

Working conditions significantly influence nurse retention. Factors associated with reduced job satisfaction include excessive workloads, inadequate staffing, limited professional autonomy, poor management support, and insufficient opportunities for career advancement.

Healthcare organizations that promote supportive workplace cultures generally demonstrate improved retention rates and greater workforce stability. Leadership practices, staff recognition, and professional development opportunities play important roles in maintaining workforce engagement [34].

Impact of Nursing Shortages on Basic Care Nursing Services

Basic care nursing services represent the foundation of patient-centered healthcare. These services include assistance with personal hygiene, mobility support, nutrition management, medication administration, patient education, symptom monitoring, and emotional support.

When staffing levels become inadequate, nurses are frequently required to prioritize urgent clinical interventions while postponing or omitting essential care activities. This phenomenon, commonly referred to as "missed nursing care," has become increasingly prevalent in understaffed healthcare settings.

Missed care may include delayed medication administration, inadequate patient monitoring, reduced patient education, limited emotional support, and insufficient assistance with daily activities. Such omissions can adversely affect patient safety, satisfaction, and health outcomes [35].

Research has consistently demonstrated associations between nurse staffing levels and patient outcomes. Facilities with inadequate staffing frequently report higher rates of medication errors, patient falls, pressure injuries, healthcare-associated infections, and mortality. These findings highlight the critical importance of maintaining sufficient nursing workforce capacity.

Nursing shortages also affect continuity of care. High staff turnover and reliance on temporary personnel can disrupt therapeutic relationships between patients and healthcare providers. Continuity is particularly important for individuals with chronic diseases, older adults, and patients requiring long-term support [36].

Furthermore, workforce shortages increase stress among remaining staff members. Excessive workloads can contribute to fatigue, reduced concentration, and diminished job satisfaction. Over time, these factors create a cycle in which staffing shortages contribute to burnout, and burnout contributes to further workforce losses (Table 2).

Table 2: Effects of Nursing Shortages on Basic Care Nursing Services.

Area of Care	Potential Consequences
Patient Monitoring	Delayed detection of deterioration
Medication Administration	Increased medication errors
Hygiene and Personal Care	Reduced patient comfort
Mobility Assistance	Higher fall risk
Patient Education	Reduced treatment adherence
Emotional Support	Increased patient anxiety
Chronic Disease Management	Poor disease control
Care Coordination	Fragmented healthcare delivery

The consequences of workforce shortages extend beyond individual patients. Healthcare systems may experience increased costs associated with complications, longer hospital stays, readmissions, and workforce recruitment efforts. Therefore, addressing nursing shortages represents not only a workforce issue but also a critical patient safety and healthcare quality priority.

Regional Perspectives on Nursing Workforce Challenges

The severity and characteristics of nursing shortages vary considerably across geographic regions. Differences in economic development, healthcare infrastructure, educational capacity, workforce policies, and population demographics contribute to distinct workforce challenges. Understanding regional variations is essential for developing targeted and sustainable workforce solutions.

North America

North America continues to face substantial nursing workforce pressures despite relatively high nurse-to-population ratios compared with many other regions. In the United States and Canada, increasing healthcare demand associated with population aging, chronic disease prevalence [37], and workforce retirements has intensified staffing challenges.

The COVID-19 pandemic accelerated workforce attrition through burnout, psychological stress, and early retirement. Healthcare organizations reported increased vacancy rates, reliance on temporary staffing agencies, and rising labor costs. Rural and remote communities have been particularly affected due to persistent recruitment and retention difficulties.

In response, governments and healthcare institutions have expanded nursing education programs, implemented retention incentives, and invested in workforce well-being initiatives. However, workforce shortages remain a significant concern for healthcare planners.

Europe

European countries face complex workforce challenges associated with demographic change and workforce mobility. Many nations report increasing demand for nursing services due to aging populations and expanding long-term care needs [38].

Migration within the European region has influenced workforce distribution. Higher-income countries frequently attract nurses from neighboring nations, creating staffing pressures in source countries. Workforce planning has therefore become an important policy priority across Europe.

Several European healthcare systems have implemented advanced workforce development strategies, including expanded nursing roles, leadership development programs, and investments in continuing professional education. Nevertheless, staffing shortages continue to affect hospitals, community healthcare services, and long-term care facilities [39-46].

Asia-Pacific Region

The Asia-Pacific region demonstrates considerable variation in nursing workforce capacity. Countries such as Japan, Australia, Singapore, and South Korea have relatively advanced healthcare systems but face workforce challenges related to population aging and increasing healthcare utilization.

In contrast, several low- and middle-income countries in the region continue to experience shortages related to limited educational capacity, resource constraints, and workforce migration. Urban-rural disparities remain a major concern, with healthcare professionals frequently concentrated in metropolitan areas.

Technological innovation and telehealth expansion have emerged as important strategies for improving healthcare accessibility and optimizing workforce utilization throughout the region.

Africa

Africa experiences some of the most severe nursing workforce shortages globally. Many countries face challenges related to limited educational infrastructure, inadequate healthcare funding, workforce migration, and high disease burdens [46-48].

Healthcare professionals frequently work under difficult conditions characterized by resource limitations, staff shortages, and high patient volumes. These factors contribute to workforce burnout and retention difficulties.

International partnerships, educational investments, and workforce strengthening initiatives have been implemented to improve nursing capacity (Table 3). However, significant workforce gaps remain, particularly in rural and underserved communities.

Table 3. Regional Nursing Workforce Challenges.

Region	Major Workforce Challenges
North America	Aging workforce, burnout, retirements
Europe	Workforce migration, aging population
Asia-Pacific	Urban-rural disparities, workforce distribution
Africa	Workforce shortages, migration, limited resources
Latin America	Educational limitations, funding constraints
Middle East	Dependence on expatriate workforce

Policy Responses and Workforce Development Strategies

Addressing the global nursing shortage requires coordinated action across educational institutions, healthcare organizations, professional bodies, and governments. Effective workforce policies must address both workforce supply and workforce retention [49,50].

Strengthening Nursing Education

Expanding educational capacity represents one of the most important long-term workforce solutions. Governments and educational institutions should invest in:

- Increasing nursing school enrollment capacity.
- Recruiting and retaining nursing faculty.
- Expanding clinical training opportunities.
- Providing scholarships and financial support.
- Enhancing simulation-based learning.

Improving educational infrastructure can increase the number of qualified graduates entering the workforce and help address future staffing needs.

Improving Workforce Retention

Retention strategies are equally important because recruitment alone cannot solve workforce shortages if large numbers of nurses continue leaving the profession.

Successful retention initiatives include:

- Competitive compensation.
- Flexible scheduling.
- Professional development opportunities.
- Career advancement pathways.
- Workplace wellness programs.
- Supportive leadership practices.

Organizations that invest in employee well-being often experience lower turnover rates and improved workforce stability.

Supporting Workforce Well-Being

Burnout prevention has become a major workforce priority. Healthcare organizations should implement comprehensive wellness programs addressing both physical and psychological health.

Examples include:

- Mental health counseling services.
- Peer support programs.
- Stress management training.
- Workload optimization initiatives.
- Occupational safety improvements.

Protecting workforce well-being contributes to improved job satisfaction, productivity, and retention.

Ethical International Recruitment

Given ongoing workforce shortages, international recruitment will likely remain part of global workforce strategies. However, recruitment practices should follow ethical principles that minimize negative effects on source countries [51].

International collaboration can support workforce sustainability through:

- Bilateral workforce agreements.
- Educational partnerships.
- Capacity-building initiatives.
- Knowledge-sharing programs.

Such approaches help balance workforce needs while promoting global health equity.

The future of nursing workforce planning will require innovative and evidence-based approaches capable of responding to evolving healthcare demands. Several emerging trends are likely to influence workforce development over the coming decades.

First, technological integration will continue transforming nursing practice. Artificial intelligence, telehealth platforms, electronic health records, wearable monitoring devices, and decision-support systems may improve efficiency and reduce administrative burdens. While technology cannot replace human caregiving, it can help optimize workforce utilization and support clinical decision-making [52].

Second, advanced nursing roles are expected to expand. Nurse practitioners, clinical nurse specialists, and advanced practice nurses can contribute significantly to healthcare delivery by increasing access to services and improving care coordination. Expanding scope-of-practice regulations may help address workforce shortages in certain settings.

Third, workforce planning models must become increasingly data driven. Predictive analytics and workforce forecasting tools can assist policymakers in identifying future staffing needs and developing proactive workforce strategies.

Fourth, greater emphasis should be placed on leadership development. Strong nursing leadership is essential for workforce advocacy, organizational improvement, and healthcare system transformation [53-57]. Preparing future nurse leaders will support workforce sustainability and professional advancement.

Finally, global collaboration will remain essential. Nursing shortages represent an international challenge requiring coordinated action among governments, healthcare organizations, educational institutions, and professional associations. Sharing best practices and policy innovations can strengthen workforce resilience across healthcare systems.

Conclusion

The global nursing shortage represents one of the most pressing healthcare workforce challenges of the twenty-first century. Increasing healthcare demands, population aging, workforce retirements, burnout, migration, and educational limitations have collectively contributed to persistent staffing deficits across many regions. These shortages have significant implications for basic care nursing services, patient outcomes, healthcare quality, and workforce well-being.

Evidence reviewed in this article demonstrates that inadequate nurse staffing affects essential care delivery, increases patient safety risks, and contributes to workforce instability. Basic care nursing services are particularly vulnerable because staffing constraints often result in missed care activities, reduced patient support, and increased workloads for remaining staff.

Addressing these challenges requires comprehensive and coordinated workforce strategies that prioritize education, recruitment, retention, workplace well-being, leadership development, and ethical international collaboration. Investments in nursing workforce capacity must be recognized as investments in healthcare quality, patient safety, and health system sustainability. As healthcare systems continue to confront evolving demographic and public health challenges, strengthening the nursing workforce will remain fundamental to ensuring equitable access to high-quality healthcare services worldwide.

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Declaration of Competing Interest

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Author Contributions

All authors contributed substantially to the conception, literature review, analysis, drafting, revision, and final approval of the manuscript. All authors have read and agreed to the published version of the manuscript.

Ethical Approval

As this study is a review article based exclusively on previously published literature, ethical approval and informed consent were not required.

Consent for Publication

Not applicable.

Declaration of Originality

The authors affirm that this manuscript is an original scholarly work and has not been published previously, nor is it under consideration for publication elsewhere. All sources used in the preparation of this review have been appropriately acknowledged and cited.

Conflict of Interest

The authors declare no conflict of interest regarding the publication of this article.

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