



Reframing cancer care equity: The expanding role of oncology nursing in low- and medium-HDI settings

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Abstract

Substantial inequities in cancer care persist across countries and population groups with lower levels of human development. Although very high- and high-Human Development Index (HDI) settings often report higher cancer incidence and comparatively lower mortality, low- and medium-HDI countries experience lower recorded incidence but disproportionately higher mortality-to-incidence ratios. This pattern reflects delayed diagnosis, restricted access to treatment, workforce shortages, and fragile health systems. This narrative policy paper examines how oncology nurses can contribute to reducing these inequities across the cancer care continuum in low- and medium-HDI settings. Drawing on evidence from nursing practice, health systems research, and cancer control initiatives, we emphasize the roles of oncology nurses in prevention, early detection, treatment, survivorship, and palliative care. Key contributions include health education, community-based screening, patient navigation, symptom management, psychosocial support, and culturally responsive end-of-life care. The paper also discusses innovative and scalable service-delivery models, including task-sharing approaches, nurse-led early detection initiatives, case management, telemedicine, and international capacity-building partnerships. Despite their strategic importance, oncology nurses remain constrained by limited access to specialized education, inadequate policy recognition, workforce shortages, burnout, and insufficient locally generated evidence. Addressing these barriers requires sustained investment in oncology nursing education, leadership development, research capacity, and supportive health policies. Strengthening oncology nursing is therefore a practical and potentially high-impact strategy for expanding access to care, improving service continuity, and advancing cancer care equity in resource-constrained settings.

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Highlights

What is current knowledge?

- Cancer care inequities remain substantial in low- and medium-HDI settings, where delayed diagnosis, limited treatment access, workforce shortages, and fragile health systems contribute to poorer cancer outcomes.
- Oncology nurses contribute across the cancer care continuum, including prevention, early detection, treatment support, survivorship care, and palliative care, but their role remains under-recognized in many resource-constrained settings.

What is new here?

- This narrative policy paper reframes oncology nursing as a practical and equity-oriented strategy for improving cancer care access, continuity, and quality in low- and medium-HDI settings.
- The study highlights scalable nursing-led models, including task-sharing, patient navigation, nurse-led early detection, telemedicine, tele-education, and international capacity-building partnerships.
- It identifies implementation priorities for strengthening oncology nursing education, leadership, workforce retention, research capacity, and supportive health policies.

Introduction

Cancer remains one of the most pressing public health, social, and economic challenges of the twenty-first century, accounting for nearly one in six deaths (16.8%) and almost one in four deaths (22.8%) attributable to non-communicable diseases (NCDs) worldwide (1). Despite substantial global progress in cancer prevention, diagnosis, and treatment, marked inequities persist in access to care, service quality, and health outcomes across countries with differing levels of human development (1). The Human Development Index (HDI) is a composite measure that incorporates life expectancy, educational attainment, and

gross national income per capita, classifying countries into four categories: very high, high, medium, and low human development. Although HDI classifications often overlap with low- and middle-income country (LMIC) groupings, the two frameworks are not equivalent. In this article, HDI is used as an analytical and contextual framework for examining the structural and systemic factors that shape cancer care equity (2). It is also important to distinguish health inequalities, which refer to measurable differences in health status between populations, from health inequities, which are systematic, avoidable, and inherently unjust disparities in health and healthcare (3).

The higher cancer incidence and lower mortality observed in very high- and high-HDI countries largely reflect stronger screening and diagnostic capacity, which increases case detection; more comprehensive treatment infrastructure; broader access to multimodal therapies; and more developed supportive and palliative care services. By contrast, low- and medium-HDI countries commonly face restricted diagnostic capacity, fewer specialized cancer centers and oncology professionals, constrained health financing, and fragile supply chains for essential medicines. These interrelated constraints reduce the likelihood of timely diagnosis and effective treatment and thereby contribute to higher mortality-to-incidence ratios (1).

This article addresses two interrelated but analytically distinct phenomena. First, it describes cross-national differences according to HDI, particularly the pattern of higher cancer incidence but lower mortality in very high- and high-HDI countries compared with lower recorded incidence but higher mortality-to-incidence ratios in low- and medium-HDI settings. Second, it examines inequities and disparities among population groups within low- and medium-HDI countries. These phenomena are closely connected because the structural and systemic constraints that generate disparities between countries also create conditions in which social determinants of health intensify inequities within countries. Thus, both dimensions of cancer care inequity are fundamentally linked.

These inequities are shaped by multiple social determinants of health, including health literacy, socioeconomic status, educational attainment, living conditions, access to healthcare services such as insurance coverage, and social and cultural support. Collectively, these determinants influence not only cancer risk but also the timing of diagnosis, access to treatment, and subsequent health outcomes (1).

In low- and medium-HDI settings, inequities among population groups are sustained by a constellation of interrelated structural and social determinants, including poverty and household financial constraints; geographic barriers such as long travel distances to diagnostic and treatment centers and inadequate transportation infrastructure; the unequal distribution of healthcare facilities and specialized personnel, often concentrated in urban areas; limited insurance coverage and high out-of-pocket expenditures; low levels of health literacy and formal education; restrictive gender and social norms that delay care-seeking; and discrimination or marginalization affecting ethnic minority groups, migrants, and rural populations (4). Together, these factors contribute to measurable disparities in stage at diagnosis, treatment initiation and completion, and survival outcomes within countries.

Because the same system-level constraints that drive cross-national disparities also intensify within-country inequities, oncology nurses are strategically positioned to reduce barriers to cancer care. Through task-sharing strategies, community-based interventions, patient navigation models, and nurse-led diagnostic and treatment initiatives, they can improve timely diagnosis, continuity of care, and treatment adherence among underserved populations (5).

Accordingly, this article offers a narrative policy perspective that uses HDI as a contextual framework to examine the equity-oriented roles of oncology nurses across the cancer care continuum and to propose pragmatic implementation priorities for low- and medium-HDI settings.

Methods

A narrative review methodology was used to develop a policy-focused synthesis of evidence on the contribution of oncology nursing to cancer care equity in low- and medium-Human Development Index (HDI) settings. Relevant literature was identified through a structured but non-systematic search of Google Scholar, PubMed, Scopus, and Web of Science for publications released between January 2016 and March 2026. Search strategies combined terms related to oncology nursing, cancer care equity, oncology nursing education, patient navigation, task-sharing, tele-oncology, and low- and medium-HDI contexts.

The review included peer-reviewed articles, policy reports, program evaluations, and other relevant documents published in English or Persian. Eligible sources addressed at least one of the following domains: oncology nursing practice, workforce development, nursing education, service-delivery innovations, or equity-related challenges in cancer care within resource-constrained environments. Publications focusing exclusively on high-HDI settings without clear relevance to lower-resource contexts were excluded, as were isolated clinical case reports and sources unavailable in English or Persian.

Two authors independently screened titles and abstracts to assess relevance to the review objectives. Full-text documents judged potentially eligible were then examined in detail, and final inclusion decisions were reached through discussion and consensus. Evidence was organized and synthesized thematically to identify key patterns related to oncology nurses' roles across the cancer care continuum, innovative service models, implementation challenges, and strategic priorities for education, leadership, workforce strengthening, and research.

Because this was a narrative review, the objective was not to provide exhaustive or systematic coverage of all available literature. Instead, the review integrated policy-relevant evidence, illustrative program experiences, and emerging practice models to offer a context-sensitive perspective on how oncology nursing can advance cancer care equity in low- and medium-HDI settings.

Oncology nursing contributions across the cancer care continuum

Oncology nurses have long contributed to cancer prevention and health promotion through health education, promotion of healthy lifestyles, community-based screening initiatives, and identification of

individuals at increased risk of cancer. They are often regarded as the backbone of prevention programs, particularly in communities where health literacy is limited and access to specialized physicians is constrained. In the early detection phase, oncology nurses can reduce diagnostic delays by recognizing warning signs, facilitating timely referrals, and addressing cultural barriers to healthcare utilization, functions that are especially important in rural and underserved settings (6).

Although many cancer care challenges stem from broader structural limitations within health systems (7), oncology nurses in resource-constrained environments often perform roles that extend well beyond routine clinical care. Through task-sharing and task-shifting strategies, community-oriented models of care, and patient navigation programs, they contribute meaningfully to reducing disparities in access, continuity, and quality across the cancer care continuum (8,9).

For example, in cervical cancer control, several countries have adopted low-cost and contextually appropriate early detection strategies in resource-constrained settings, including visual inspection with acetic acid (VIA) and screen-and-treat approaches. Real-world program experiences, including those implemented in Zambia, have shown that, when supported by structured training and standardized clinical protocols, these interventions can be delivered effectively by nurses and other trained healthcare providers and can substantially expand access to screening and treatment services (10,11). Similar initiatives in other low- and middle-income countries, including India, suggest that nurse-led and provider-led models, when embedded within quality assurance frameworks and effective referral pathways, offer practical and scalable approaches to cervical cancer control (11).

In breast cancer care, organized mammography screening programs are widely available in high-HDI countries; however, many resource-constrained settings have adopted a more pragmatic emphasis on early diagnosis. This approach includes education about warning signs, promotion of breast awareness, and clinical breast examination (CBE) performed by trained healthcare personnel as part of structured early detection and referral pathways (12). Evidence from countries such as the Philippines, Indonesia, and Malaysia indicates that CBE delivered by appropriately trained nurses or healthcare providers can be a feasible and sustainable strategy for early detection at the primary care level, particularly when linked to clearly defined referral mechanisms and diagnostic services (12,13). Consistent with evolving international recommendations, the role of oncology nurses in breast cancer early detection has also shifted. Rather than promoting routine breast self-examination (BSE) as a population-based screening strategy, nurses now play a central role in improving breast awareness and educating women to recognize early symptoms. They also contribute to clinical breast examinations and encourage timely clinical consultation. These interventions remain evidence-based and are recognized as important downstaging strategies where widespread access to mammography is limited (13).

During early diagnosis and follow-up care, oncology nurses can reduce harmful delays and strengthen continuity by recognizing warning signs among underserved populations, addressing stigma and culturally embedded misconceptions, and facilitating referral and patient navigation through often limited specialized services (6,8). Although these interventions alone cannot eliminate inequities, evidence suggests that they can improve access, expand service coverage, enhance patient safety, and strengthen overall care quality, thereby contributing to the reduction of structural inequities in cancer services (8).

Evidence from high-income countries also indicates that non-physician endoscopists, including appropriately trained nurses, can perform selected endoscopic procedures with acceptable safety and quality outcomes while maintaining high levels of patient satisfaction (14). These findings underscore the feasibility of task-delegation models and show that the scope of selected clinical services can be safely expanded when standardized training, appropriate supervision, and robust quality assurance systems are in place. However, the transferability of these models to low- and middle-income settings depends on regulatory frameworks governing professional scope of practice, educational capacity, healthcare infrastructure, and effective referral systems (8).

During treatment, oncology nurses play a critical role in reducing treatment abandonment by managing treatment-related toxicities,

continuously monitoring patients' clinical status, and supporting adherence to prescribed therapies. They often serve as key coordinators within multidisciplinary teams and contribute to high-quality care through patient education and psychosocial support for patients and families (5). In survivorship care, oncology nurses coordinate follow-up, promote psychological well-being, and facilitate reintegration into social and occupational roles (5). In palliative and end-of-life care, nurses are often among the most consistent providers of care and advocates for patient dignity. They provide symptom relief, emotional and spiritual support, and culturally sensitive home-based care while respecting the values and preferences of patients and families (15).

Structural and systemic constraints on oncology nursing capacity in low- and medium-HDI settings

Despite these important contributions, low- and medium-HDI countries continue to face substantial challenges that limit the development and effective utilization of the oncology nursing workforce. A major barrier is the limited availability of specialized educational programs in oncology nursing. The absence of standardized oncology content within undergraduate nursing curricula, insufficient opportunities for professional advancement, and shortages of qualified educators and mentors all constrain the preparation of a skilled oncology nursing workforce (16,17).

Shortages of human and financial resources, excessive workloads, workforce migration, inadequate remuneration, constrained economic growth, and persistent gender inequities further challenge health systems in low- and medium-HDI settings. Together, these factors contribute to workforce instability and undermine efforts to achieve equitable and sustainable cancer care delivery (18).

Previous studies indicate that nurse migration and workforce attrition in low- and middle-income countries are not simply consequences of inadequate remuneration; rather, they reflect a complex interaction of push and pull factors operating at individual, organizational, and systemic levels (19,20). At the individual level, better employment opportunities, higher salaries, improved quality of life, and clearer prospects for professional advancement may increase nurses' intentions to migrate (21,22). At the organizational and health-system levels, excessive workloads, shortages of human and material resources, limited opportunities for professional development, the absence of clearly defined career progression pathways, inadequate managerial support, job insecurity, workplace violence, political instability, and weak governance have all been identified as major push factors (19,22-24). Furthermore, active international recruitment by destination countries, together with the globalization of the health workforce market, has accelerated the migration of nurses and other health professionals from resource-constrained settings (25,26).

Within oncology nursing, these factors carry particular importance because cancer care involves substantial emotional demands, frequent exposure to patient suffering and death, complex treatment regimens, and the need for highly specialized clinical competencies (24). Consequently, structural weaknesses in health systems may contribute to burnout, reduced job satisfaction, increased turnover intentions, and migration among oncology nurses (27,28). The loss of experienced oncology nurses, in turn, further exacerbates workforce shortages, intensifies workload pressures, and widens inequities in access to cancer care services (25,28).

Accordingly, policy responses should adopt a multilevel approach that includes developing specialist career pathways and promotion opportunities, implementing workplace safety and anti-violence policies, investing in psychological support services and clinical supervision, and negotiating ethical international recruitment agreements with destination countries.

Insufficient attention to the psychological well-being of oncology nurses, together with continual exposure to patient suffering and death, places them at heightened risk of chronic stress, burnout, and workforce attrition (29).

Burnout in oncology nursing, however, should not be attributed solely to the emotional burden of repeated exposure to patient suffering and death. It is increasingly understood as the consequence of sustained workplace stress in environments where adequate organizational support is lacking (30). In oncology settings, heavy workloads, staffing shortages, the complexity of cancer care, insufficient professional and societal recognition, limited feedback and appreciation, conflicts

between professional values and organizational constraints, ineffective management practices, and poor leadership have all been identified as major contributors to burnout (13,31). In resource-constrained settings, these pressures are often compounded by shortages of essential equipment and supplies, lack of structured psychological support systems, and inadequate access to personal protective equipment during chemotherapy preparation and administration. Burnout should therefore be viewed as a systemic and organizational phenomenon rather than solely an individual challenge. If unaddressed, it can reduce job satisfaction, accelerate workforce attrition and migration, and further deplete the oncology nursing workforce (32). From the perspective of health workforce migration theory, this situation resembles a "leaky bucket," in which investments in education and recruitment alone cannot sustain workforce capacity. Without effective retention policies, safe working conditions, psychological support mechanisms, and opportunities for professional development and career advancement, trained nurses continue to leave the health system (33). This self-perpetuating cycle may further exacerbate inequities in access to cancer care across low- and medium-HDI settings (28).

Leadership and health policy: Strengthening the strategic position of nurses in decision-making

Achieving health equity requires more than investment in education and infrastructure; it also requires meaningful nursing engagement in health policy and decision-making. The Future of Nursing 2020-2030 report emphasizes that nurses should serve as influential leaders in shaping health systems and informing policy decisions (34). Strengthening nurses' roles in health governance, leadership, and policymaking therefore represents one of the most transformative strategies for advancing health equity (35).

Addressing research and evidence gaps in oncology nursing

Low- and medium-HDI countries continue to face major research gaps, particularly a shortage of locally generated and policy-relevant evidence (8). Much of the existing literature originates from high-income countries, which limits its applicability to resource-constrained settings. This evidence gap hinders evidence-informed policymaking, workforce planning, and service development in many low- and medium-HDI contexts (36). In particular, oncology nursing education pathways remain underexplored, and evidence on the effectiveness of contemporary educational approaches, including online learning and tele-education, remains limited. Comparative research on innovative oncology nursing models across settings is also scarce (16).

Moreover, few studies have systematically examined the transferability and contextual adaptation of educational and care-delivery models across settings with differing levels of human development (HDI). Existing analyses often overlook three critical dimensions: differences between specialized oncology nursing curricula and general nursing education; variations in clinical roles, scope-of-practice regulations, and task-sharing policies; and the structural, infrastructural, and operational feasibility of technology-enabled interventions (36,37). The absence of comprehensive comparative evidence limits the ability of the global oncology community to determine which components of successful models developed in high-income countries can be effectively transferred and which require cultural, organizational, or logistical adaptation in resource-constrained environments. Such evidence is essential for translating global cancer-control goals into practical, context-sensitive oncology nursing strategies capable of strengthening workforce capacity, standardizing competencies, improving access and safety, and ultimately reducing structural inequities in cancer care (8,38).

Advancing education and workforce capacity in oncology nursing

Developing equitable cancer care systems requires coordinated action across education, policy, workforce development, and research. Evidence indicates that investment in specialized oncology nursing education and the establishment of formal training pathways is among the most effective strategies for improving care quality and reducing inequities in cancer services (39). So et al. identified several key approaches for empowering oncology nurses in middle- and low-income countries, including integration of core oncology content into pre-registration nursing curricula, collaborative mechanisms for sharing educational resources and capacity-building programs between high-income and low- and middle-income countries, partnerships with

international cancer organizations, and sustainability of oncology nursing education through local ownership and interdisciplinary collaboration (17).

The practical implementation of collaborative capacity-building initiatives has produced promising results. One notable example is the long-standing "twinning and accompaniment" partnership between Rwanda's Ministry of Health and Partners in Health/Inshuti Mu Buzima in developing cancer services at the Butaro Cancer Center of Excellence (BCCOE), with the Dana-Farber Cancer Institute (DFCI) serving as a major partner in workforce development and specialized training (40,41). Within this model, shortages of specialized personnel were addressed through structured on-site training and continuous mentorship. Rwandan nurses assumed key responsibilities in chemotherapy delivery and received competency-based training and support from visiting oncology nurses and nursing fellows from DFCI, including instruction in safe chemotherapy preparation and administration, toxicity monitoring, and symptom management (42). Beyond strengthening clinical competencies, the partnership supported the institutionalization of clinical nurse educator roles and mentorship of local trainers, thereby promoting sustainable knowledge transfer and strengthening indigenous nursing leadership (43). As a result, local nurses progressively developed the capacity to deliver safe, standardized chemotherapy and supportive cancer care with decreasing reliance on external expertise (44).

These experiences show that sustainable oncology workforce development is achievable even where educational infrastructure and specialist faculty are limited. Remote mentorship, twinning partnerships, tele-education initiatives, and train-the-trainer models provide practical mechanisms for strengthening local expertise, leadership, and long-term workforce sustainability.

Similarly, global nursing initiatives led by St. Jude Children's Research Hospital (St. Jude Global Nursing) have established extensive collaborative networks across Latin America to standardize pediatric hematology-oncology nursing practice and strengthen specialized nursing education within partner institutions (45). In Guatemala, implementation of a nursing outreach program, including appointment of a full-time nurse educator, enhancement of workplace-based training, and emphasis on competency development, was associated with significant improvements in compliance with Joint Commission International (JCI) quality standards, reflecting measurable gains in nursing care quality (46). At the regional level, St. Jude collaborated with the Association of Pediatric Hematology/Oncology Nurses (APHON) to implement the standardized Chemotherapy/Biotherapy Provider and Instructor Program, including Spanish translation, contextual adaptation, and development of instructor networks. This initiative expanded access to standardized chemotherapy and biotherapy education throughout Latin America while enhancing sustainability through local trainer development (45,47,48). Collectively, these examples demonstrate that sustained, bidirectional international partnerships grounded in genuine capacity building and institutionalized education are practical and effective mechanisms for advancing equity in cancer care through workforce strengthening, competency development, and local leadership capacity (41,46,48).

Innovative nursing models to promote equity in cancer care

In response to severe shortages of oncology specialists and systemic bottlenecks that restrict equitable access to timely cancer care, many health systems have adopted task-sharing approaches (8). By positioning nurses as key coordinators across the cancer care continuum, these models can help overcome structural barriers, reduce pressure on specialist services, and improve continuity of care for vulnerable populations. One example is the Patient Navigator model (49).

Within this model, nurses accompany patients throughout the cancer journey, from initial presentation and diagnosis to treatment completion and follow-up care. Implementation of patient navigation programs in countries such as Malaysia has been associated with reduced diagnostic delays, improved treatment adherence, and stronger care coordination, demonstrating considerable potential for promoting health equity (50). Similarly, case management models, which emphasize multidisciplinary coordination, prevention of treatment abandonment, and improved communication between patients and healthcare providers, have produced positive clinical and organizational outcomes (51). Emerging educational technologies, including online learning platforms,

telemedicine, and tele-oncology programs, are also increasingly recognized as sustainable and scalable approaches for expanding access to specialist knowledge and supporting workforce development in resource-constrained settings (52).

Leveraging digital health, telemedicine, and tele-education to expand access and equity

Digital health technologies, particularly telemedicine and tele-education, offer promising opportunities to expand access to oncology services and professional training in resource-constrained settings. These approaches facilitate training and knowledge exchange without requiring extensive physical infrastructure or large-scale financial investment. For example, implementation of patient navigation programs in Malaysia has been associated with shorter diagnostic intervals and improved treatment adherence among patients with cancer (53). In the Philippines, oncology nurses have contributed to improved care quality and greater equity through culturally responsive education initiatives and active engagement in health policy development (54). Similarly, online oncology nursing education programs in Nigeria and tele-oncology initiatives across Latin America have demonstrated the potential of digital platforms to extend access to specialized knowledge and continuing professional development, particularly for nurses practicing far from major cancer centers (REF). Collectively, these innovations enhance access to essential evidence-based cancer services, improve health system efficiency, and reduce patient costs, making them increasingly important components of cancer control strategies in low- and medium-HDI settings (55).

Implementation and collaboration priorities:

Research partnerships, capacity strengthening, and mentorship

Collaborative and cross-regional research initiatives are critical for identifying, adapting, and disseminating contextually relevant solutions to cancer care challenges. Such partnerships facilitate locally applicable evidence generation and support strategies designed to reduce inequities across diverse health systems. Recent oncology nursing research agendas increasingly emphasize collaborative, implementation-focused, and policy-relevant research to address persistent gaps in cancer care delivery (56). In parallel, international partnerships and structured mentorship programs have been recognized as effective mechanisms for strengthening local capacity and supporting sustainable workforce development (57). Existing evidence suggests that mentoring relationships and structured cross-country knowledge-sharing networks can expand educational opportunities and professional support for nurses working in resource-constrained settings (16).

In many low- and medium-HDI countries, rapid expansion of the oncology nursing workforce may need to occur before fully accredited specialist training pathways are established. In such circumstances, phased implementation strategies, competency-based credentialing, and gradual expansion of scope of practice under appropriate supervision may offer pragmatic solutions to urgent workforce shortages. However, experiences from several task-sharing initiatives indicate that the absence of clear regulatory frameworks, standardized educational requirements, and robust supervisory systems may lead to role ambiguity, increased professional responsibility without adequate institutional support, and concerns regarding patient safety. The long-term sustainability of emerging nursing roles, including patient navigation, nurse-led follow-up, and symptom management services, also requires financing and reimbursement mechanisms that formally recognize and support these activities within national health insurance and payment systems.

Future research should examine how oncology nurses can more effectively integrate social determinants of health, including poverty, geographic inequities, racism, and homelessness, into clinical practice (35) and research activities. Greater attention should also be directed toward the mental health and well-being of oncology nurses. Research aimed at identifying effective strategies to reduce occupational stress, prevent burnout, and enhance workforce resilience will be essential for sustaining oncology nursing capacity in resource-constrained settings (58).

To support translation of these recommendations into practice, Table 1 summarizes key oncology nursing challenges in low- and medium-HDI settings, evidence-informed implementation strategies, and measurable indicators for monitoring progress.

Table 1. Practical approaches to address key oncology nursing challenges in low- and medium-HDI settings

Key challenge in low- and medium-HDI settings	Evidence-informed strategies and supporting evidence	Measurable indicators for monitoring progress
Shortage of specialized oncology nursing educators	Remote mentorship, tele-education, twinning partnerships, and train-the-trainer approaches have demonstrated feasibility and positive workforce development outcomes in programs such as those implemented in Rwanda and through St. Jude Global Nursing initiatives.	Number of oncology nurses trained; number of local nurse educators developed; training completion rates; retention of trained personnel
High workload, burnout, and workforce attrition	Organizational mental health support, workload redistribution, supportive leadership practices, and workforce retention strategies are supported by evidence from burnout and workforce sustainability research.	Burnout scores; turnover intention; nurse retention rates; frequency of sick leave
Delayed diagnosis and limited access to care in rural and underserved areas	Nurse-led early detection initiatives, task-sharing models, and patient navigation programs have improved access to care and strengthened referral continuity in LMIC settings.	Time to diagnosis; referral completion rates; screening coverage; stage at diagnosis
Limited access to continuing oncology education	Tele-oncology, online learning platforms, and international collaborative education networks improve access to specialized oncology knowledge in resource-constrained settings.	Participation rates in continuing education programs; competency assessment scores; geographic reach of educational programs
Fragmented continuity of cancer care	Nurse-led case management and patient navigation models enhance care coordination, treatment adherence, and continuity of follow-up.	Treatment completion rates; missed appointment rates; patient satisfaction scores; follow-up adherence
Unsafe chemotherapy handling and inadequate access to personal protective equipment (PPE)	Standardized chemotherapy safety education and implementation of occupational safety protocols improve safe handling practices.	PPE compliance rates; hazardous drug exposure incidents; safety audit outcomes
Weak nursing leadership and limited involvement in health policy	Leadership development initiatives and greater inclusion of nurses in governance and policy-making structures strengthen workforce advocacy and contribute to health system planning.	Number of nurses in leadership positions; participation in policy committees; implementation of nursing workforce policies

Conclusion

Cancer care inequities in low- and medium-HDI settings are shaped by persistent structural constraints, including limited diagnostic capacity, fragmented referral pathways, workforce shortages, and inadequate health financing. Together, these challenges contribute to delayed diagnosis, treatment interruptions, and poorer cancer outcomes. Throughout this paper, we have argued that oncology nurses can play a pivotal role in addressing these inequities across the cancer care continuum, including prevention, early detection, treatment, survivorship, and palliative care. However, realizing this potential requires moving beyond broad policy aspirations toward practical, context-sensitive implementation strategies that are feasible within existing resource constraints.

To translate evidence into action over the next five years, we propose three interrelated priorities. First, specialist oncology nursing education should be expanded through scalable capacity-building approaches, including tele-mentoring, remote case-based learning, twinning and accompaniment partnerships, and modular train-the-trainer programs supplemented by targeted face-to-face clinical skills workshops. These strategies can strengthen local educational capacity while reducing long-term dependence on external expertise. Progress may be monitored through indicators such as the number of locally trained educators, competency assessment outcomes, and increasing local ownership of educational activities.

Second, nurse-led service innovations should be implemented to reduce delays in care and improve retention throughout the cancer care continuum. Priority actions include piloting patient navigation programs and clearly defined task-sharing protocols for services such as visual inspection with acetic acid (VIA), clinical breast examination, chemotherapy symptom management, and selected clinical procedures in underserved or high-need settings. Initial implementation should focus on small-scale, rigorously evaluated pilot programs that use existing nursing personnel, standardized referral pathways, and pragmatic monitoring indicators, including time to diagnosis, treatment initiation and completion rates, and follow-up retention. Demonstrated improvements in these indicators can provide a strong evidence base for wider implementation and scale-up without requiring substantial upfront capital investment.

Third, workforce retention should be strengthened through pragmatic retention strategies and supportive workplace policies. This includes establishing transparent oncology career pathways and specialist recognition systems, implementing workplace safety and anti-violence policies, and providing accessible psychological support services and peer supervision for oncology nursing staff. Non-financial incentives, such as protected educational leave, professional recognition programs, and targeted hardship allowances, combined with mentorship opportunities and clearly defined promotion pathways, may also contribute substantially to reducing workforce attrition. Key indicators for monitoring progress include annual nursing turnover rates, validated burnout scores, and the proportion of nurses advancing to specialist oncology nursing roles.

These priorities are deliberately pragmatic and implementation-oriented. They combine low-cost, scalable educational approaches with targeted service innovations and workforce retention strategies that can be introduced rapidly, evaluated systematically, and refined over time. When implemented concurrently and in a coordinated manner, these interventions can generate a virtuous cycle: educational initiatives build local training capacity, nurse-led navigation and task-sharing models improve service efficiency and patient outcomes, and retention strategies preserve the skilled workforce needed to sustain these advances. Although strengthening oncology nursing alone cannot eliminate all cancer care inequities, it represents a feasible, high-impact, and cost-conscious strategy for addressing structural disparities in cancer care across low- and medium-HDI settings over the next five years.

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Conflicts of Interest

The authors declare no conflicts of interest.

Author Contributions

SSAT and HA contributed to the conception and design of the manuscript. HA prepared the initial draft. SSAT, MH, AY, and MR contributed to the literature synthesis, interpretation of evidence, and development of the policy perspective. AY and MR provided critical intellectual input and revised the manuscript for important scientific content. All authors reviewed, edited, and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

Data Availability Statement

All data generated or analyzed during this study are included in this published article.

Use of Artificial Intelligence

Not applicable.

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