



## Bridging the gap in palliative care education: Applying the ELNEC model to advance palliative care in Iran

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### Abstract

Palliative care (PC) has become essential for improving quality of life globally, yet Iran faces significant barriers, including limited policies, workforce shortages, and cultural misconceptions. Despite recent progress-such as establishing a national strategy and increasing medication access-service delivery remains limited, especially outside major cities. To address these gaps, the Student Scientific Research Center at Tehran University of Medical Sciences has initiated an international collaboration with the End-of-Life Nursing Education Consortium (ELNEC), in partnership with the American Association of Colleges of Nursing and the Center for Palliative and Supportive Care at the University of Alabama at Birmingham (UAB), to expand interprofessional palliative care education in Iran.



Palliative care (PC) has evolved from a niche concern to a fundamental component of equitable, person-centered healthcare systems worldwide. Defined by the World Health Organization (WHO) as "an approach that improves the quality of life of patients (Adults and children) and their families who are facing problems associated with life-threatening illness," PC addresses suffering holistically-physically, psychologically, socially, and spiritually (1). Its importance is underscored by staggering global need: an estimated 73.5 million people required palliative care in 2021, reflecting a 74% increase since 1990 (2). Alarming, only about 14% of those in need currently receive it, with access catastrophically low in low- and middle-income countries (LMICs) where 80% of the global need exists (1,2).

The drivers for integrating PC are compelling. Clinically, it significantly improves symptom burden (Notably pain and dyspnea), quality of life, and patient and family satisfaction (3,4). It supports patients across the continuum of serious illness, from diagnosis (Alongside curative treatment) through end-of-life care, fostering hope and dignity (5). Economically, early PC reduces unnecessary hospital admissions and intensive health service utilization, generating substantial cost savings for health systems (1,6). Socially and ethically, PC recognizes the family as the unit of care, provides crucial bereavement support, and upholds the human right to relief from preventable suffering (5). The global demographic shift toward aging populations and the rising burden of non-communicable diseases (NCDs) make PC integration not just desirable but an urgent public health necessity (7). Cardiovascular diseases (38.5%), cancer (34%), and chronic respiratory diseases (10.3%) collectively account for over 80% of adult PC needs globally (1,2). The 2014 World Health Assembly resolution explicitly recognized PC as part of universal health coverage, urging member states to integrate it into health systems at all levels, particularly primary care (1).

PC in Iran remains at an early stage of development, with services available only sporadically and largely confined to a few major cities

(8). Consequently, the vast majority of patients who could benefit from PC-particularly those outside metropolitan areas-receive no specialized support, and home-based services are virtually absent. Within the limited infrastructure that does exist, attention is directed predominantly toward patients with cancer, yet even they face substantial barriers to access (9,10). As a result, many Iranians with advanced illness spend their final days in hospitals or intensive care units undergoing aggressive interventions of questionable benefit. This hospital-centric pattern drives up healthcare costs, places additional burdens on families, and contributes to burnout among health professionals, underscoring the urgent need for a more comprehensive, community-based PC system.

PC in Iran faces several significant challenges which are as follows:

At the policy level, Iran lacks a comprehensive national palliative care strategy, with fragmented governance and inadequate data collection hindering effective policy development (8). Service delivery challenges include limited community and home-care options, insufficient insurance coverage, and restricted opioid access, complicating effective pain management (8,11,12). Sociocultural barriers, including cultural reluctance to discuss death and misconceptions about palliative care, delay timely referrals and hinder comprehensive care (9,10,13). Education and workforce gaps include minimal integration of palliative care training within healthcare curricula, resulting in graduates with insufficient knowledge and skills. Iran also experiences a severe shortage of trained palliative care specialists across disciplines, limiting the establishment of multidisciplinary care teams (8,14,15).

Encouragingly, by 2025, Iran has shown signs of progress with the establishment of a National Palliative Care Strategy and initial integration of specialized PC units into some hospitals. Essential palliative medicines, such as morphine, have been added to the national formulary to enhance availability. Additionally, stakeholders from the Ministry of Health, academia, and clinical sectors have collaborated, with WHO support, to develop a roadmap for expanding PC within universal health coverage (16).

Central to addressing the barriers described above is building a knowledgeable, skilled, and confident healthcare workforce through comprehensive palliative care education. Without appropriately trained professionals, efforts to implement national policies, overcome service delivery gaps, and change cultural misconceptions about palliative care will inevitably fall short. Hence, establishing robust palliative care education programs at all levels-undergraduate, postgraduate, and continuing education-is an urgent priority for Iran. Palliative care requires specialized skills and knowledge that extend far beyond basic clinical competencies. Healthcare providers must be adept at managing complex symptoms, facilitating difficult conversations, and supporting families through emotional and spiritual challenges. Such care is inherently multidisciplinary, requiring collaboration among nurses, physicians, pharmacists, social workers, psychologists, spiritual advisors, and others. Consequently, targeted educational programs are essential for equipping these diverse professionals with the necessary competencies and confidence.

In Iran, palliative care education remains minimal, sporadic, and inadequately integrated into medical and nursing curricula. Undergraduate medical and nursing students typically receive little to no formal training in palliative care, and postgraduate opportunities for specialization remain scarce. These educational deficits perpetuate workforce shortages and undermine quality patient care. Importantly, palliative care is universally relevant across healthcare settings-from neonatal intensive care to geriatric medicine-and essential for the comprehensive management of chronic, life-limiting illnesses such as heart failure, chronic respiratory diseases, neurological conditions, and pediatric conditions. Broadening education to reflect this universality ensures more comprehensive and equitable care. To effectively bridge these educational gaps and strengthen the palliative care workforce, Iran can draw upon internationally validated training models such as the End-of-Life Nursing Education Consortium (ELNEC) (18). This well-established model has demonstrated significant success globally in enhancing provider competencies, improving care outcomes, and fostering interprofessional collaboration.

ELNEC is an internationally recognized education initiative launched in 2000 by Dr. Betty Ferrell and her colleagues at the City of Hope Medical Center (USA) in partnership with the American Association of Colleges of Nursing. Celebrating its 25th anniversary in 2025, ELNEC has trained more than 55,000 clinicians from 116 countries, and through local dissemination, over 1.6 million nurses and other professionals have received ELNEC-based instruction. The core curriculum has been translated into twelve languages (e.g., Spanish, Japanese, Arabic), with specialty versions for pediatrics, geriatrics, Advanced Practice Registered Nursing, oncology, and veterans' health (17,18).

The ELNEC project was designed as a train-the-trainer program to improve end-of-life and palliative care knowledge among nurses and other professionals. At its core is a comprehensive, evidence-based curriculum covering the essential domains of palliative care. The original ELNEC-Core course consisted of eight modules that address key aspects of care for the seriously ill (19). ELNEC's educational strategy emphasizes interactive learning with case studies, role-playing, and discussion, equipping participants with both knowledge and practical skills in palliative care (20).

This model holds particular relevance for countries like Iran, where palliative care development hinges on building human capacity and changing attitudes.

In response to the urgent need for improved palliative care education in Iran, the Student Scientific Research Center (SSRC) at Tehran University of Medical Sciences (TUMS) has launched a new initiative under the guidance of the ELNEC. This initiative is overseen by Professor Betty Ferrell, the founder and lead investigator of ELNEC, and involves collaboration with the Center for Palliative and Supportive Care at the University of Alabama at Birmingham (UAB), under the supervision of Professor Marie Bakitas, Associate Director of the Center.

An enthusiastic interdisciplinary team from SSRC, TUMS, includes students and faculty members from various fields such as Nursing, Medicine, and Health Professions Education. This dedicated group is committed to enhancing palliative care education in Iran and is actively engaged in several important projects. Among our initial efforts, the

team has successfully completed the translation of ELNEC's core palliative care content into Farsi. Additionally, we are planning and implementing a range of significant projects aimed at increasing palliative care knowledge among medical sciences students and clinicians within an interprofessional context.

We invite colleagues from across Iran who are interested in contributing to the advancement of palliative care education to join us in this vital endeavor. Together, we can work towards improving the standards of palliative care education and ultimately enhance the quality of care provided to patients in need.

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## Conflicts of interest

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## Author contributions

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