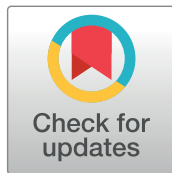


The contribution of Advanced Nursing Practice to quaternary prevention and universal health coverage

Contribución de la Práctica Avanzada en Enfermería en la prevención cuaternaria y la cobertura sanitaria universal.

Claudia Yaneth Rodríguez Triviño¹  Diana Marcela Rengifo^{1,2} 

1 Universidad del Valle, Facultad de Salud, Escuela de Enfermería, Grupo de Investigación en Promoción de la Salud PROMESA, Cali, Colombia, **2** Advanced Training Commission of the Colombian Association of Nursing Faculties (ACOFAEN), Bogota, Colombia.



Crossmark



OPEN ACCESS

Citation: Rodríguez TCJ, Rengifo DM **The contribution of Advanced Nursing Practice to quaternary prevention and universal health coverage.** Colomb Méd (Cali),2024; 55(3):e4006615. <http://doi.org/10.25100/cm.v55i3.6615>

Keywords:

Advanced Nursing Practice; universal health insurance; health education; primary health care; professional competence; nurse's role; advanced practice nursing; quaternary prevention; social responsibility.

Palabras clave:

Práctica Avanzada de Enfermería; aseguramiento universal en salud; educación en salud; atención primaria de salud; competencia profesional; papel de la enfermera; prevención cuaternaria; responsabilidad social.

Copyright: © 2024 Universidad del Valle



Abstract

Advanced Nursing Practice (ANP) is a key strategy for achieving universal health coverage as it focuses on the individual. Additionally, it is evidence-based, which improves health outcomes. This strategy contributes to achieving “Health for All,” an initiative led by the United Nations within the Sustainable Development Goals, by reducing costs and expanding care in underserved areas. Since its inception in the United States, ANP has taken on roles in diagnosis, prescription, and treatment coordination, becoming established in primary care and other clinical settings.

In this century, ANP has strengthened quaternary prevention by protecting individuals from overmedicalization through ethical and personalized care, enhancing the quality of life, and optimizing health system efficiency.

This paper will focus on the role of ANP in achieving “One Health,” promoted by the World Health Organization, and on how it will contribute to improving coverage and transforming the health system according to the population's needs while maintaining a preventive and holistic

Resumen

La Enfermería en Práctica Avanzada es una estrategia clave para lograr la cobertura sanitaria universal porque se enfoca en la persona. Además, está basada en la evidencia, lo que mejora los resultados de salud. Esta estrategia aporta a alcanzar “Salud para todos”, iniciativa liderada por la Organización de las Naciones Unidas en los Objetivos de Desarrollo Sostenible, dado que reduce costos y expande la atención en áreas desatendidas. Desde su origen en los Estados Unidos, la Enfermería en Práctica Avanzada ha asumido roles en el diagnóstico, la prescripción y la coordinación de tratamientos, consolidándose en atención primaria y otros contextos clínicos.

En este siglo, la Enfermería en Práctica Avanzada ha fortalecido la prevención cuaternaria, protegiendo a las personas de la sobremedicalización mediante cuidados éticos y personalizados, mejorando la calidad de vida y optimizando la eficiencia en los sistemas de salud.

Corresponding author:

Claudia Yaneth Rodríguez-Triviño,
School of Nursing, Faculty of Health,
Universidad del Valle. Email: claudia.yaneth.rodriguez@correounivalle.edu.co

Introduction

The World Health Organization (WHO) committed to promoting the “One Health” strategy to ensure healthy lives, promote well-being for all ages, and achieve universal health coverage^{1,2}. This concept refers to ensuring that all individuals have access to quality health services at the right time and place without financial hardship¹. To achieve this goal, current health systems require new strategies supported by diverse competencies among healthcare professionals. Two main obstacles are insufficient financial resources and a shortage of healthcare professionals with enough autonomy to solve problems, making advanced nursing practice a viable alternative to overcome these barriers¹.

Advanced Nursing Practice represents an opportunity with the potential to transform the global healthcare landscape. It is an evidence-based, person-centered approach to improve health outcomes and care experiences³. Advanced nursing practice integrates skills that enable it to prioritize health in alignment with the vital goals and cultural contexts of individuals, families, and communities under its care⁴. At the same time, it is designed to reduce healthcare costs, enhance collaboration among professionals involved in the care process, and create a work environment that fosters individual and team well-being⁵.

Viewpoint

The Impact of Advanced Nursing Practice in Reducing Health Access Gaps. Advanced nursing practice began to develop in the 1960s in the United States as a response to the growing demand for healthcare in rural or underserved areas and the shortage of physicians (Figure 1). This model emerged to expand nurses’ care competencies, allowing them to assume autonomous roles. Advanced nursing practice has gained recognition for its ability to diagnose, prescribe medications, and coordinate therapeutic guidelines while considering cultural contexts and individualizing patients’ needs⁶. This has established it as a cornerstone of the primary care healthcare system, particularly in underserved and remote regions where it has been successfully implemented³.

Advanced nursing practice can implement the care process even among service providers, aiming to conduct a comprehensive assessment of individuals by recognizing key domains of their life experience (health promotion, nutrition, elimination/exchange, activity/rest, perception/cognition, self-perception, role relationships, sexuality, coping/stress tolerance, life principles, safety/protection, comfort, and growth/development). These domains fully reflect the principles of prevention at all levels. Comprehensive care plans could drive transformations in settings where a traditional approach prevails, fostering a shift toward more holistic models. These models integrate healthcare, emotional well-being, social support, and health education to address individuals’ needs comprehensively⁷.

In the United States, access rates to essential services increased by 50% following the introduction of advanced nursing practice⁸. Reports indicate that advanced practice nurses can effectively address up to 80% of primary care needs, with patient satisfaction levels reaching up to 90%⁹. Additionally, their ability to diagnose, prescribe medications, and coordinate therapeutic guidelines has reduced hospital admissions by 30% and emergency visits by 25%, significantly contributing to the healthcare system’s efficiency^{9,10,11}.

Based on the cultural context and individuals’ specific needs, its adaptive approach has reduced health inequalities, particularly in vulnerable communities. Additionally, primary care costs under its leadership can be up to 20% lower than traditional models, reinforcing its economic viability¹². Certified registered nurse anesthetists (CRNAs) have reported excellent patient safety outcomes in clinical settings. Regarding obstetric nursing, an analysis conducted by the American College of Nurse-Midwives (2020) indicates that certified nurse-midwives (CNMs) can reduce cesarean delivery rates by 25% compared to traditional care¹³. This approach has

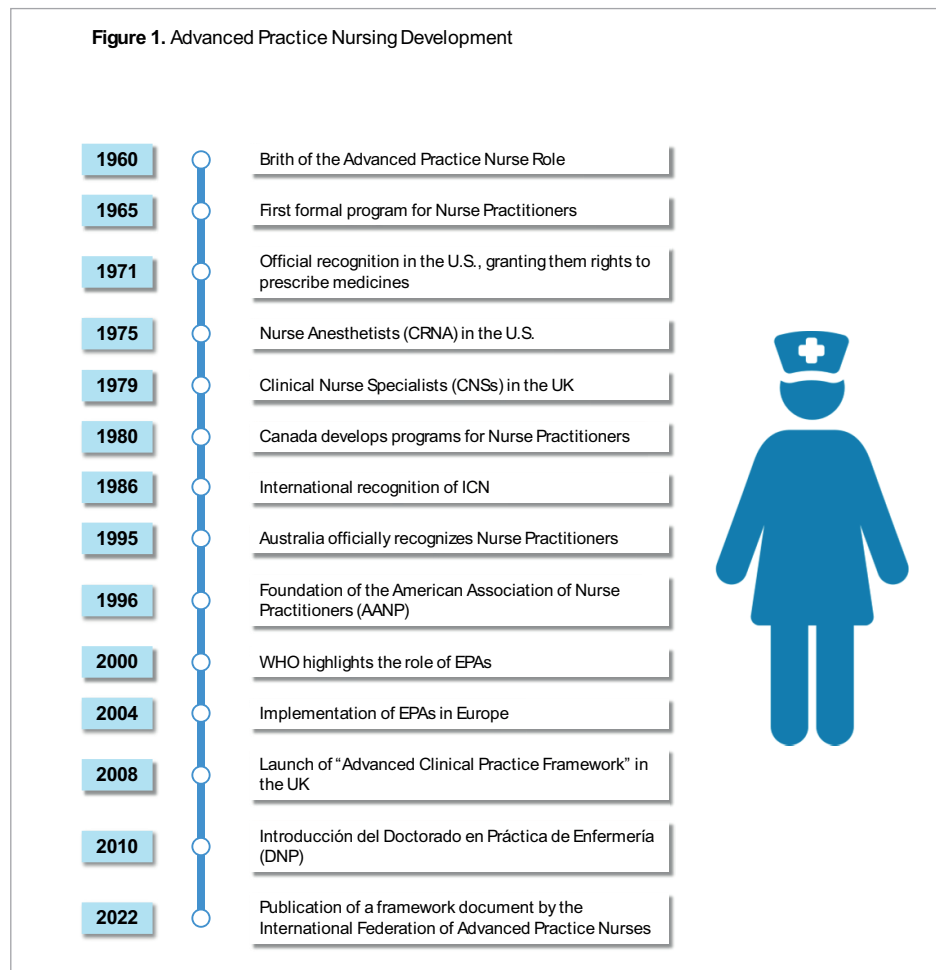


Figure 1. Advanced practice nursing development

also demonstrated a decrease in complication rates, such as postpartum hemorrhages, and improved family satisfaction, particularly in communities with limited access to high-quality prenatal care ^{13,14,15}.

Similar advanced nursing models have been implemented in the United Kingdom, Canada, and Australia with positive results. A report by the Canadian Nurses Association (2015) showed that nurse practitioners (NPs) are responsible for 25% of primary care in some provinces, with documented improvements in health indicators such as a 10% reduction in preventable hospitalizations and better management of chronic diseases ¹⁶. In rural areas of Australia, nurse practitioners reduced emergency visits by 40% due to early care provision, which also contributed to improved access to healthcare services ¹⁶.

Although the implementation of advanced nursing practice in Latin America is still emerging, some countries have begun reporting positive outcomes. In Chile, the development of postgraduate programs in areas such as oncology and critical care has shown promising results. The government now faces the challenge of introducing advanced nursing practice in primary care, working on policy adjustments to expand competencies and offering some postgraduate programs already recognized by state authorities ^{17,18}. In Brazil, there has been an increased demand for postgraduate programs in mental health and gerontology, reflecting the growing need for nurses with advanced training to address the country's demographic and social challenges ¹⁹.

Table 1. Cultural and social needs and the contribution of EPA roles.

Social/cultural/health need	EPA's role	Cultural impact
Aging population and chronic diseases.	Advanced Gerontological Nurses, Chronic Disease Management Nurses.	Focus on active and healthy aging.
Health equity and access to care in rural and marginalized areas.	Primary Care Nurse Practitioners (NP), Public Health Nurses.	Health as a right, reduction of gaps in access to care.
Pandemics and public health crises.	Advanced Critical Care Nurses, Disaster Management and Emergency Preparedness Nurses.	Emergency preparedness and clinical leadership during health crises.
Mental health and emotional well-being.	Mental Health and Emotional Wellness Nurses, Family and Community Nurse Practitioners.	Awareness of the importance of mental health and emotional well-being.
Technological advances and telemedicine.	Telemedicine Nurse Practitioners, EPAs in Health Innovation and Technology.	Convenience and accessibility in remote and digital care.
Climate change and environmental health.	Environmental Health Nurses, Natural Disaster Management Nurses.	Awareness of the relationship between health and the environment.
Focus on people-centered care.	Advanced Practice Nurses in Case Management, EPAs in Palliative Care.	Humanization of health care centered on people.

Postgraduate nursing education in Colombia is well developed; however, it is primarily characterized by specialized programs, master's degrees, or doctoral studies focused on research. Recently, initiatives have been proposed to train nursing professionals for more advanced roles with greater autonomy, aiming to improve system coverage²⁰. Nonetheless, a modernization of health policies is needed, incorporating specific strategies with a territorial focus and legal support for professional practice²⁰. This includes guidelines for prescribing diagnostic and therapeutic aids, integrating competencies into national regulations regarding institutional health service requirements, and creating a differential tariff manual. State mechanisms should also be considered to finance advanced academic training. The need to provide comprehensive care in remote areas far from specialized health centers is clear, given the evidence of improved clinical outcomes and culturally and socially responsive care in these regions (Figure 2)⁸.

Numerous positive outcomes have been documented with the formalization of Advanced Nursing Practice in primary care and clinical settings. These include increased patient and family satisfaction, improved quality of life-particularly regarding health education, answering health-related questions, and pain management⁶. Additionally, reductions have been observed in follow-up visits and emergency department visits, as well as shorter stays in emergency and critical care units when advanced practice nurses coordinated care. Furthermore, waiting times for patients seeking treatment for injuries decreased, and the initiation of pharmacological therapy, particularly analgesics, occurred within the first 30 minutes, compared to the 50-minute average in traditional emergency care²¹. This evidence demonstrates that Advanced Nursing Practice can contribute across all levels of care, driving transformations from primary to quaternary prevention.

The Contribution of Advanced Nursing Practice to Quaternary Prevention

Quaternary prevention is a comprehensive approach to avoiding excessive medical treatments, especially those that provide no tangible benefits to the individual or may cause unnecessary harm²². This concept seeks to protect individuals or groups from overmedicalization, a growing phenomenon driven by excessive diagnoses or unnecessary interventions. Quaternary prevention focuses on rationalizing diagnoses and therapies, carefully evaluating each intervention to ensure that it is genuinely beneficial and not merely a reactive response to a medical condition while considering individuals' preferences. Additionally, it emphasizes the safety, timeliness, and necessity of care, always prioritizing the interests and well-being of individuals^{22,23,24}.

One of the core concepts of quaternary prevention is individual autonomy. This means that each person makes decisions about their health, ensuring they fully understand the implications of any treatment or diagnosis and actively participate in their care²³. Advanced Nursing Practice serves as a bridge between the scientific and clinical components and the understanding of individual health and illness, dignifying personal experiences and unique needs. Through motivational and educational strategies, it strengthens patients' ability to make informed decisions, thus preventing unnecessary treatments and improving quality of life²⁴.

The rationalization of treatment is another key concept within quaternary prevention. This principle emphasizes the need to discuss health interventions and avoid unnecessary or unwarranted invasive procedures. It also focuses on preventing the medicalization of physiological processes—that is, recognizing conditions that, although they may be labeled as diseases, do not require medical intervention²⁴.

Healthcare systems and models are in crisis, particularly in Latin America, highlighting the need for guidelines that promote equity, sustainability, and sustainable development. The concepts of “One Health” and quaternary prevention, developed in the 21st century, can balance health needs, environmental concerns, and available resources. Implementing these changes requires professionals with comprehensive capabilities, and expanding the nursing role into advanced practice is seen as an opportunity to apply these directives within healthcare models and systems²⁵.

In Latin America, this expansion represents an opportunity to enrich nursing postgraduate curricula with the principles of the quaternary prevention model and the “One Health” strategy. It is essential to include conceptual elements for interdisciplinary work and the development of cutting-edge knowledge while also strengthening training on how and when to avoid unnecessary interventions. Additionally, fostering communication, motivational, and advocacy skills is crucial to enhancing the effectiveness of advanced nursing practice²⁰.

The most significant contribution of advanced nursing practice to quaternary prevention and the achievement of universal health coverage, as well as to the “One Health” strategy, will be transforming and redefining the concept of health in the 21st century. This has implications for the right to health and care, and how both will influence health models designed to protect future generations. Health systems in Latin America must adapt to cultural changes and the evolving health needs of a constantly transforming population.

References

1. United Nations (ONU). Health. Desarrollo Sostenible. ONU; 2015. Accessed: November 21, 2024. <https://www.un.org/sustainabledevelopment/es/health/>
2. World Health Organization (WHO). One health; 2023. Accessed December 13, 2024. https://www.who.int/health-topics/one-health#tab=tab_1
3. Dowling M, Beauchesne M, Farrelly F, Murphy K. Advanced practice nursing: a concept analysis. *Int J Nurs Pract.* 2013;19(2):131-140. doi:10.1111/ijn.12050
4. Newhouse RP, Stanik-Hutt J, White KM, et al. Advanced practice nurse outcomes 1990-2008: a systematic review. *Nurs Econ.* 2011;29(5):230-250.
5. Prescott PA, Driscoll L. Evaluating nurse practitioner performance. *Nurse Pract.* 1980;5(4):28-29.
6. Woo BFY, Lee JXY, Tam WWS. The impact of the advanced practice nursing role on quality of care, clinical outcomes, patient satisfaction, and cost in the emergency and critical care settings: a systematic review. *Hum Resour Health.* 2017; 15: 63. doi:10.1186/s12960-017-0237-9
7. Wheeler KJ, Miller M, Pulcini J, Gray D, Ladd E, Rayens MK. Advanced practice nursing roles, regulation, education, and practice: a global study. *Ann Glob Health.* 2022;88(1):42. doi:10.5334/aogh.3698

8. Kurtzman ET, Barnow BS. A comparison of nurse practitioners, physician assistants, and primary care physicians' patterns of practice and quality of care in health centers. *Med Care*. 2017;55(6):615-622. doi:10.1097/MLR.0000000000000689
9. Swan M, Ferguson S, Chang A, Larson E, Saldone A. Quality of primary care by advanced practice nurses: a systematic review. *Int J Qual Health Care*. 2015;27(5):396-404. doi:10.1093/intqhc/
10. Gracias VH, Sicoutris CP, Stawicki SP, et al. Critical care nurse practitioners improve compliance with clinical practice guidelines in "semiclosed" surgical intensive care unit. *J Nurs Care Qual*. 2008;23(4):338-344. doi:10.1097/01.NCQ.0000323286.56397.8c
11. Liu CF, Hebert PL, Douglas JH, et al. Outcomes of primary care delivery by nurse practitioners: Utilization, cost, and quality of care. *Health Serv Res*. 2020;55(2):178-189. doi:10.1111/1475-6773.13246
12. Mafi JN, Wee CC, Davis RB, Landon BE. Comparing use of low-value health care services among u.s. advanced practice clinicians and physicians. *Ann Intern Med*. 2016;165(4):237-244. doi:10.7326/M15-2152
13. Brown SA, Grimes DE. A meta-analysis of nurse practitioners and nurse midwives in primary care. *Nurs Res*. 1995;44(6):332-339.
14. Bakerjian D. Care of nursing home residents by advanced practice nurses. A review of the literature. *Res Gerontol Nurs*. 2008;1(3):177-185. doi:10.3928/19404921-20080701-04
15. Landsperger JS, Semler MW, Wang L, Byrne DW, Wheeler AP. Outcomes of nurse practitioner-delivered critical care: a prospective cohort study. *Chest*. 2016;149(5):1146-1154. doi:10.1016/j.chest.2015.12.015
16. Schober M. Development of advanced practice nursing: The international context. *Enfermeria Clin Engl Ed*. 2019;29(2):63-66. doi:10.1016/j.enfcli.2018.08.002
17. Quiroz PAE, Araya CAG, Acosta EAC. Primera graduada del Magister en Enfermería de práctica avanzada en oncología en Chile. *Rev Bras Enferm*. 2023;76:e76suppl401.
18. Aguirre-Boza F. Enfermería de práctica avanzada en la atención primaria: Ahora es el momento. Centro de Estudios Públicos. Puntos de referencias No 447; 2016. https://static.cepchile.cl/uploads/cepchile/2022/09/pder447_faguirre.pdf
19. Andriola IC, Sonenberg A, Lira A. Comprender la enfermería de práctica avanzada como un paso hacia su aplicación en Brasil. *Rev Panam Salud Publica*. 2020; 44: e115-e115.
20. Varela LE. Necesidad de legislación para la regulación de enfermería de práctica avanzada en Colombia. *Cult Cuid*. 2016;13(1):60-69. doi: 10.18041/1794-5232/cultrua.2016v13n1.2138
21. Devereaux MK, Remington R, Abdallah P, Gautam R, James LA, Van Etten D, et al. Comparison of nurse practitioner and physician practice models in nursing facilities. *Ann Long-Term Care*. 2015;23(12).
22. Lovo J. Prevención cuaternaria: hacia un nuevo paradigma. *Aten Fam*. 2020;27(4):212-215. doi:10.22201/fm.14058871p.2020.4.76900
23. Martins C, Godycki-Cwirko M, Heleno B, Brodersen J. Quaternary prevention: reviewing the concept: Quaternary prevention aims to protect patients from medical harm. *Eur J Gen Pract*. 2018;24(1):106-111. doi:10.1080/13814788.2017.1422177
24. Andino DM, de Medeiros GJM, Almeida FN. Quaternary prevention: a concept relevant to public health? A bibliometric and descriptive content analysis. *Cad Saúde Pública*. 2020; 36(7): e00231819. doi: 10.1590/0102-311X0023181925. Bryant-Lukosius D, Valaitis R, Martin-Misener R, Donald F, Peña LM, Brousseau L. Advanced practice nursing: a strategy for achieving universal health coverage and universal access to health. *Rev Lat Am Enfermagem*. 2017;25:e2826. doi:10.1590/1518-8345.1677.2826.