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Review Article

Development and Implementation of the Advanced Practice Nurse Worldwide With an Interest in Geriatric Care

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A B S T R A C T

Many countries are seeking to improve health care delivery by reviewing the roles of health professionals, including nurses. Developing new and more advanced roles for nurses could improve access to care in the face of a limited or diminishing supply of doctors and growing health care demand. The development of new nursing roles varies greatly from country to country. The United States and Canada established "nurse practitioners" (NPs) in the mid-1960s. The United Kingdom and Finland also have a long experience in using different forms of collaboration between doctors and nurses. In other countries, such as Australia, NPs were endorsed more recently in 2000. In France, Belgium, or Singapore, the formal recognition of advanced practice nurses is still in its infancy, whereas in other countries, such as Japan or China, advanced practice nurses are not licensed titles. The aims of this article were to define precisely what is meant by the term "advanced practice nurse (APN)," describe the state of development of APN roles, and review the main factors motivating the implementation of APN in different countries. Then, we examine the main factors that have hindered the development of APN roles. Finally, we explain the need for advanced practice roles in geriatrics.

Many countries are looking at ways to improve efficiency in health care delivery by reviewing the roles and responsibilities of different health professionals, including nurses. Discussions on the scope of practice of nurses often take place in the context of broader efforts to reorganize different parts of health care systems, particularly the reorganization of primary care. The aims of this article were to define precisely what is meant by the term "advanced practice nurse (APN)," describe the state of development of APN roles, and review the main factors motivating the implementation of APN in different countries. Then, we examine the main factors that have hindered the development of APN roles. Finally, we explain the need for advanced practice roles in geriatrics.

Defining Advanced Practice Nurse

The term "advanced practice nursing" first appeared in the nursing literature in the 1980s[1]; however, there remain difficulties in providing a concise and clear definition of "advanced practice(s)," stemming from the fact that they encompass a wide (and growing) variety of competencies and practices. At the international level, achieving a broad consensus on the definition of "advanced practice nursing" is even more difficult, as countries are at different stages in

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implementing these advanced roles. The International Council of Nurses has proposed the following broad definition of advanced practice nursing: "*A Nurse Practitioner/Advanced Practice Nurse (APN) is a registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice. A Master's degree is recommended for entry level.*"[2] An international review identified no fewer than 13 different titles that APNs may have in various countries, such as "nurse practitioner," "advanced nurse practitioner," "nurse consultant," "clinical nurse specialist," and others.[3]

State of Development of APN Across Countries

Among English-speaking countries, 2 main categories of APNs can be found: (advanced) nurse practitioners (NPs), and clinical nurse specialists (CNSs). In addition to NPs and CNSs, there are actually 2 other categories of APNs in the United States: certified registered nurse anesthetists (CRNA) and certified nurse-midwives (CNM). According to the American Association of Colleges of Nursing, CRNAs administer more than 65% of all anesthetics given in the United States each year.[4] In most countries in which the NP category exists, NPs generally carry out a range of activities that may otherwise be performed by physicians, including diagnostics, screenings, prescriptions of pharmaceuticals or medical tests, activities in the fields of prevention and health education, the monitoring of patients with chronic illnesses, and a general role in care coordination (alone or together with doctors). NPs practice in the primary care and hospital sectors. The roles of CNSs include clinical practice, education, research, and leadership. They work mainly (but not exclusively) in hospitals, in which their more advanced skills and competencies enable them to provide consultation to patients, nurses, and others in complex situations; promote and improve quality of care through the support of evidence-based practice; and facilitate system change.

Countries are at very different stages in implementing new APN roles. Some countries, including the United States, the United Kingdom, and Canada, have been experimenting and implementing new APN roles for many decades. In the United States, the introduction of NPs, responsible for delivering a wide range of services with a high level of autonomy, dates back to the mid-1960s. In Australia the first NP was endorsed in 2000 and new NP standards guide practice and endorsement.[5,6] Since 2009, NPs are licensed under the Health Practitioner Regulation National Law Act in Australia.[7] However, the NP service model in Australia is currently still under development, and evaluation of the NP role is needed to demonstrate the value of such a role in practice.[6] Most new NP projects focus on specialization, including mental health[6,8] and oncology.[9] In other countries, the development of APN roles is still in its infancy, although some countries, such as France, have recently launched a series of pilot projects to test new models of teamwork between doctors and nurses in primary care and chronic disease management. There are 1694 Certified Nurse Specialists in Japan, making approximately 0.15% of approximately 1.1 million registered nurses.[10] Japan introduced NPs in 2010 and in a pilot program in nursing homes, NP care resulted in improved health status and decreased hospitalization.[11] The number of nurses in advanced practice roles still represents a small proportion of all nurses even in those countries that have the longest experience in using them. In the United States, NPs and CNSs represented, respectively, 6.8% (205,000)[12] and 2.5% (78,000) of the total number of registered nurses (3,131,003 in January 2016).[13] In Canada, they accounted for a much smaller share, NPs representing only 0.6% and CNSs 0.9% of all registered nurses in 2008, although their numbers have increased in recent years. On the other hand, after more than a decade, in Australia the number of NPs (1287) is relatively small.[14] In China, APN development was introduced only in recent years. The Outline of Development Plan for Nursing in China (2011–2015) issued by the Ministry of Health articulated a plan to develop different specialties of nursing.[15] In Hong Kong, a special administrative region of China where the development of APNs started in 1994,[16] there are 2700 APNs[17]: approximately 7.8% of the total number of registered nurses in the city. A historically matched controlled study found that patients under the care of nurse consultants in Hong Kong had more favorable health and service outcomes than those who were not.[18] APNs in Hong Kong, similar to many Asian countries, such as Japan and the Philippines, do not have formal legislative status like that of a registered nurse. The title of an APN, however, is regulated in Singapore and can be used only by individuals certified by the Singapore Nursing Board. Among 24,530 registered nurses in 2014 in Singapore, fewer than 1% were APNs.[19] Since 2000, NPs, but not CNSs, are licensed in Taiwan.[20]

The educational requirement to become an APN varies to some extent across countries. In most countries, a graduate degree in nursing (eg, a Master's degree) is now recommended or required. This is the educational requirement that has been established in Australia, as new education programs for APNs are being set up. In the United States and Canada, there has been a gradual increase in educational requirements, with a Master's degree now becoming the norm to become an APN. In 2004, the American Association of Colleges of Nursing published a position paper recommending that by 2015 the terminal degree for advanced practice nursing change from a Master's degree in Nursing to a Doctor of Nursing Practice (DNP). Although the doctoral programs are gaining in popularity in the United States, no state boards of nursing have made the move to adopt the DNP as the new educational requirement.[21] In the United Kingdom, a first-level university degree (eg, a Bachelor's degree) is sufficient to become an APN, with relevant work experience playing an important role in determining qualifications for more advanced posts.

Reasons Motivating the Implementation of APN

A number of reasons may explain the growing interest in the implementation of advanced roles for nurses, with these reasons possibly varying according to each country's circumstances. However, in most countries, the main reasons for developing APN roles are to improve access to care in a context of growing demand for different types of health services and a limited supply of doctors. In several countries, discussions on how best to respond to growing demand for care are also taking place in a context of tight government budgetary constraints and discussions on how to control the growth in health spending.

Responding to Shortages of Doctors

APN roles (in particular, NPs) tend to be more developed in those countries in which there are a relatively low number of doctors, a relatively high number of nurses, and thus a high nurse-to-doctor ratio. This is the case in Finland, the United States, Canada, and the United Kingdom. In these countries, the much greater number of nurses compared with doctors may be both a cause for the development of advanced practitioner roles and a consequence of this development.

It is important to look not only at the current composition of the workforce, but also at future trends. In countries like France, discussions about extending the roles of nurses are taking place in a context of a projected decline in the number of doctors per capita, and in particular a reduction of general practitioners (GPs).[22] Hence, the development of APN roles is considered as a possible way to respond to a reduced supply of doctors while at the same time providing incentives to increase the recruitment and the retention of nurses. In some geographically large countries, the uneven distribution of doctors across different regions has also reinforced the interest in