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## Development of advanced nursing practice in China: Act local and think global

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## ABSTRACT

This paper discusses the development of advanced nursing practice in China in the context of global development. The scope of nursing is evolving over time, with increasing demands for the management of complex healthcare situations at individual, community and system levels. These demands are aggravated by the specialization of medical practice, with advanced treatment plans and patients requiring care in focused areas. The qualifications and competencies of the initial entrants into nursing practice are not adequate to deal with these demands. Advanced nursing practice (ANP) developed first in response to service demands, and education programs were introduced to prepare nurses for practicing at a higher level. This paper will first review the historical development of ANP in China, followed by a discussion of the differentiation of competence levels in nursing practice and the classification of specializations. It concludes by exploring how education in combination with experience protected by regulation of practice can support nurses to gradually evolve from registered nurse, specialty nurse to advanced practiced nurse.

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## 1. Background

Nurses occupy the largest group in the provision of healthcare services, but the impact of nursing on human health and the healthcare system is not in proportion with the number of nurses. The entry into nursing varies from diploma to degree level. The intake of students at diploma level in preparation for nursing is usually driven by demand. Programs with a shorter training duration and lower academic admission requirements provide opportunities to allow more young people to join the workforce. During the course of their career development, there are nurses who aspire to reach a higher goal, and these will engage in higher education and specialty training. From the perspective of human resource management, if advanced practice nurse (APN) positions are integrated in a clearly articulated career pathway, these nursing talents can be retained in the pool of human resources. The use of nurses can be optimized to their fullest extent in accordance with their scope of practice and the skills with which they are equipped [1–3]. The extension and expansion of nursing practice at an advanced level usually emerges as a result of service demand. Education and regulation of ANP often comes at the latest stage [3]. This paper will

explore the historical development of ANP in China in recent decades, followed by a discussion of the issues facing its future development in the context of national needs and the global context. At the end, recommendations for development, impacts and specialty categorization will be made to build advanced practicing nurses in China in support of a stronger healthcare workforce.

## 2. Advanced nursing practice development in China

The ICN Nurse Practitioner/Advanced Practice Nursing Network [4] defines an advanced practice nurse (APN) as ‘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 level degree is recommended for entry level.’ This definition acknowledges that the APN must build on basic nursing practice and be equipped with knowledge, skills, and relevant educational preparation.

The need to develop specialty nursing in China was first mentioned in the Chinese Nursing Career Development Plan (2005–2010) issued by the Ministry of Health of the People's Republic of China on 20 July, 2005 [5]. Subsequent strategic plans made explicit statements on the areas of specialty to be developed. The 2011–2015 strategic plan stated that a total of 25,000 specialty nurses should be developed in the areas of critical care, emergency, blood purification,

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oncology, and operation room nursing [6]. It included a plan to formulate education programs with specific content and standards, and an urge to strengthen the training sites [5]. The recent 13th Five-Year Plan included an assertion of the need to educate a critical mass of clinical specialists so as to enhance the standards of the overall nursing team [7]. The specialization of nursing aims to support the government plan to build a healthy China and provide accessible medical care for all residents living in rural areas.

Before the issuing of the government policy, some professional organizations and universities were already taking the initiative to deliver specialty courses, particularly with the support of Hong Kong. In 2001, the Chinese Nurses Association partnered with Hong Kong to provide a short-term ICU course [8]. In 2003, Beijing and the Jiangsu area started ICU and diabetes training courses, and established specialty training sites [9]. In 2004, Nanfang Medical University invited the Hong Kong Polytechnic University to provide a specialty course preparing nurses to work in 4 specialties: the ICU, infection control, geriatrics and diabetes [10]. Then in 2007, the Guangdong Ministry of Health signed contracts with the Hong Kong Hospital Authority to prepare 614 advanced practice nurses (APNs) in 14 different specialties over 4 years [11]. These nurses came from 150 hospitals in the Guangdong area. The issuing of the national strategic plan and documents have provided a clear direction for many places to take measures and initiate efforts to develop ANP.

In the process of developing advanced practice in specialty areas, there is much confusion between specialty nursing and advanced practice nursing. The development from a novice to expert is a process that takes time and the accumulation of experience. Benner [12] described five stages, commencing with the novice stage, where neophytes mainly follow a routine to complete tasks. The next level is that of advanced beginners, who have some knowledge enabling them to make modifications to routine based on situations that arise. After around 3 years of accumulating such experience, a nurse may reach a level of competence at which s/he can manage day-to-day situations. The emergence of expert practice is at level 4, a level of proficiency at which the practitioner has mastery of the overall situation and can make clinical judgments to modify routines in specific circumstances. The true expert level is level 5. Nurses at this stage can have a strong sense of the total environment and are able to make analytical judgments in new or unfamiliar environments. Specialty nurses are probably those who function at level 3 or 4, who can deal with situations in a specific area of practice. Advanced practice nurses will be at level 5; they not only perform proficiently and possess specialized knowledge, but also have original thinking, innovation and the ability to analyze complex situations in delivering services and leading changes. Another skill level model to which one can refer is Skills for Health [13], proposed by the National Health Service in the United Kingdom. APNs are at the frontier of their field and at the top of the clinical ladder [13]. This model classifies nurses practicing with the indicative titles of specialists, advanced practitioners and consultants as levels 6, 7 and 8 respectively. Those at level 8 have built on levels 6 and 7, and surpass the other two groups at advanced practice by being at the frontier of knowledge, possessing original thinking in solving complex problems, leading service to make change and having the vision to drive initiatives and passion for the discipline to lead a group of people working towards the same goal [13]. In terms of role capacity, these nurses are care providers at an advanced level, consultants to nurses and other members of the healthcare team, clinical leaders of the specific specialty area, innovators of new services based on evidence, educators for patients, and mentors to other nurses [9,14].

In China, the differentiation between specialty nursing and ANP in a specialty area is gradually being recognized. Though there is no proper titling of ANP in work settings, there is a gradual

understanding that nurses with mere specialty technical training does not suffice to practice at advanced level. The launch of clinical master's programs in some universities in 2010 is an important move in this direction, acknowledging the value of integrating service and education in the preparation of clinical leaders, and substantiating this with a research and theory background. Currently, there are 85 clinical master's programs [9]. Together with the initiative to educate two nurse practitioners at Beijing University in 2017, these are important landmarks of ANP education and development in China [15]. These developments raise a few issues that warrant further discussion, including the categories of specialization, standardized education, and regulation of practice.

### 3. Classification of nursing specialties

In China, there is no specific means to classify nursing specialty areas. There are specialty groups formed under nursing associations at national and provincial levels, including nursing administration, internal medical, surgical, obstetrics, pediatric, outpatient, emergency, intensive care, oncology, orthopedic, operating room, disinfection supply center, ophthalmology and otolaryngology, psychiatric, infectious diseases, intravenous infusion, hemodialysis, stoma, wound, incontinence, diabetes, TCM, integrated Chinese and Western medicine, hospital infection, disaster, geriatric, community and rehabilitation [16]. Some professional associations and universities provide training in specific aspects of nursing care, such as the peripherally inserted central catheter (PICC), and dysphagia. It is clear that there are demands in these service areas, but whether each of these specific care topics can form a specialty in nursing in its own right warrants further discussion.

There have been suggestions for the classification of nursing specialties. Some have suggested using medical specialization for nursing classification. The differentiations between medical, nursing, pediatrics, obstetrics and the like are clear in medical practice. However, medicine has now developed many sub-specialties, such as those in cardiac, renal, respiratory and the like. Nursing practice is based less on organs and more on management of symptoms, specific conditions, and the whole person. Some of the nursing specialties, such as palliative care and wound management, actually cut across various medical specialties. The International Council of Nurses suggested the use of 4 aspects for nursing categories: health condition (e.g. stoma, diabetes), specific population (e.g. older persons, patients with chronic disease), settings (e.g. ICU, neonatal), public health (school, home), and so on [9]. In China, there is no recognized list of specialties. The Chinese Nurses Association has 26 specialized committees forming a number of specialty groups [16] that may reflect the foci of various nursing interests.

The National Nursing and Nursing Education Taskforce of the Australian Health Ministers' Advisory Council [17] has proposed a set of criteria that can help assess the appropriateness of a national specialty. These include: (1) the specialty is national in its geographic scope, (2) the specialty defines itself and subscribes to the overall purpose, functions and ethical standards of nursing and/or midwifery, (3) the specialty is a distinct and defined area of nursing and/or midwifery practice, which requires an application of specialty, focused knowledge and skill sets, (4) there is both a demand and a need for the specialty service from the community, (5) the specialty practice is based on a core body of nursing and/or midwifery knowledge which is being continually expanded and defined, and (6) specialty expertise is gained through various combinations of experience, formal and informal education programs. With reference to the above criteria, there are reservations regarding the naming of specific procedures or tasks as nursing specialties. Though there may be a demand or need that subscribes to these specific aspects of nursing care, the components may not be broad enough to be

sustainable as a nursing specialty in their own right. The Taskforce recommends that these elements of the specialty practice be named 'practice strands', referring to the fact that the area of practice meets some but not all of the criteria. The Australian national framework names a total of 18 specialties, including critical care, community health, education and research, emergency care, family health, gastroenterology, gerontologic health, health care planning and management, mental health, midwifery, neonatal care, neurological care, oncology/hematology care, pediatric care, palliative care, peri-operative care, rehabilitation and renal care.

#### 4. Educational preparation of APNs

In response to the strategic document issued for 2005–2010, the Ministry of Health [18] has issued a training outline with specific target groups, including the ICU, operation room nursing, emergency nursing, organ transplant nursing, and oncology nursing. The training objectives seem to be mainly focused on the mastery of technical and interpersonal skills. The required nursing experience for trainees is generally two years. The training period varied from 2 to 3 months, with 160 required theoretical and clinical hours, except for ICU nurses, who require 320 clinical hours. As discussed above, the curriculum outline would probably only be adequate to prepare nurses to a proficient level of performance in a specialty area. To attain the advanced nursing practice level, the curriculum content needs to be more substantial in terms of its breadth and depth, and should include more pre-training experience, since the competence of APNs needs to be attained through a combination of experience and education.

The global expectation of APN education is at the master's level [3]. The curriculum is usually composed of three components: generic, ANP- and specialty-related. The generic part includes subjects such as research, management and policy, ethical/legal issues and the healthcare delivery system, designed to equip the nurse with a broad base of knowledge in preparation for scholarly practice. The APN-related core consists of subjects that are applicable to all APNs, including advanced health assessment, pharmacology, pathophysiology, concepts of advanced nursing practice, etc. The specialty-related core is the content that is specific to specialty practice, such as cancer care, orthopedics care, geriatric care and the like [10]. The curriculum objectives are designed in such a way as to prepare graduates to attain the specified competence [9]. The Hong Kong Academy of Nursing [19] has outlined 7 main competence areas, including managing clients with complex health conditions, enhancing therapeutic nurse-client relationships, demonstrating effective leadership and team work, enhancing quality assurance and improvement, managing and negotiating innovative and effective approaches to care delivery, enhancing professional attributes of general and advanced practice, and enhancing personal attributes. The Hong Kong Academy of Nursing stipulates that 500 h in theory and 500 h in practice are required, in alignment with APN education requirements in the United States and Australia. The accumulated years of clinical experience required to enter into APN education vary, with no specified years in the US to the required 6 years in Australia [20] and Hong Kong [19].

In China, there are many initiatives at the provincial level to test out models for preparing APNs and establishing a governance framework to regulate the standards of practice. These efforts are initiated mainly at the professional association level, with the support of government officials. For instance, in Guangdong, the Health and Family Planning Commission of Guangdong Province has proposed a draft to prepare APNs with specific knowledge on the admission requirements, theoretical and practical components, and their objectives, content and assessment components. The academic requirement is at master's level, and the candidates must have at least 5 years of post-registration experience. There is also a stipulated set

of criteria for the clinical training sites. The sponsoring hospitals have to commit to financial support for the education of these nurses at APN level. In return, the nurses are expected to contribute to the development of clinical services in the area upon completion of the program [9]. This kind of model facilitates the integration of education and service, and retains talent in the workforce.

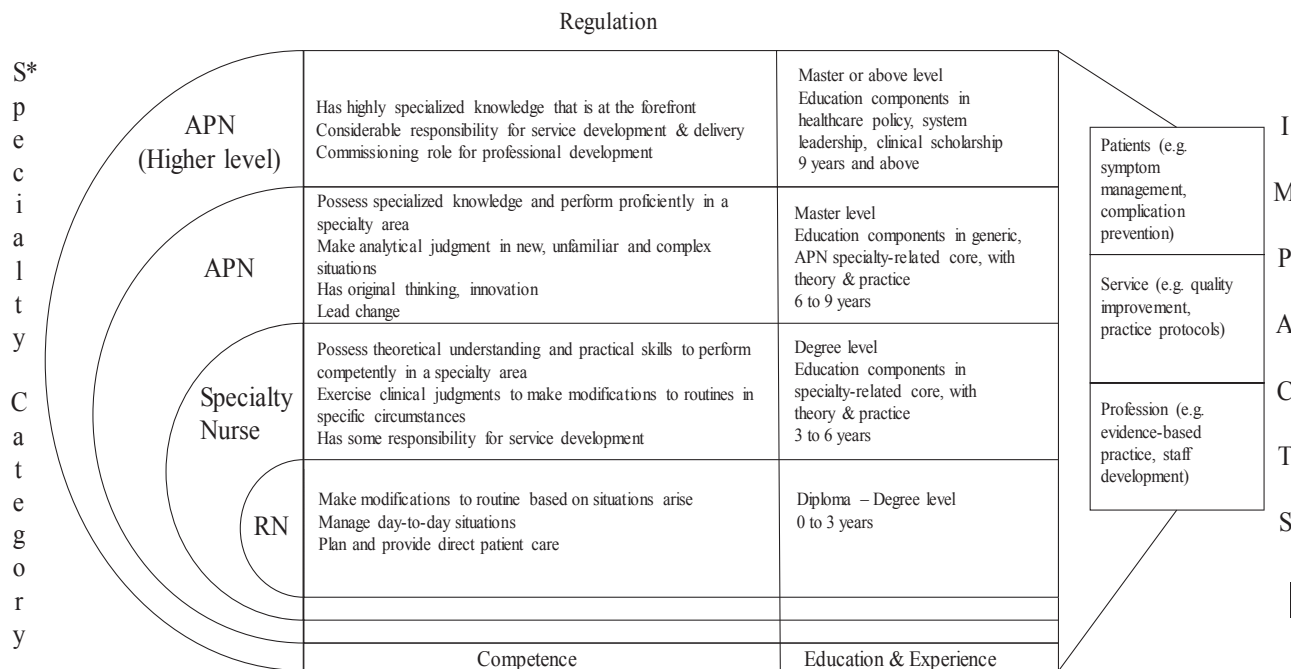
#### 5. Regulating the practice of APNs

Education of APNs is provided to meet healthcare service needs. In the process, nursing practice is expanded and extended. This scope is not endorsed in the initial registration when the nurse is first admitted into the profession. Regulation of advanced practice is usually the most difficult part and comes after a long time, when APN services and the education provision are already in place. Certification ensures that individuals reach a prescribed standard; it is also a process that ensures succession and a skill transfer from one generation to another. The optimal regulation mechanism for protecting both the public and the profession, is through licensure. Licensure usually involves the introduction of new laws or amending of existing laws for professional practice, which usually takes a long time. In meeting demand for the provision of expanded services, the granting of institutional rights or practice privileges can be used as an interim measure. Nurses can be provided with the right to practice, to extend their roles to provide more accessibility and availability of their services to clients, but they need to be equipped with the required competence and certified to ensure that they are safe to practice in their extended and expanded role.

#### 6. Conclusion

Nursing in China is in a stage of continuous development. As of 2015, there was a total number of 3.241 million nurses in China, with a ratio of 2.36 nurses to 1000 population. Nurses with a college degree or above accounted for 62.5%, and among them 14.6% had a bachelor's degree [7]. In 2011, nursing was classified as a first-level discipline. Since then, graduate education has been advancing quickly in China. At the same time, in line with the rapidly growing demand for clinical service, many universities have collaborated with their clinical partners to develop clinical master's programs. By the end of March 2015, the total number of clinical master's programs in nursing was at 84 in China [9]. With the tremendous educational efforts put in the building of nursing strength in China, strategies are needed to optimize the use so that nurses can practice in full extent of their education and competence. This paper endeavors to chart this pathway and differentiate the competencies, education and experience level in China taking into account of the global context. The figure depicts diagrammatically what has been discussed and proposed. (see Fig. 1)

The crux of the figure is that the competence of an advanced practicing nurse is built over time and these developmental stages are accumulative. Each level is attained through a combination of experience and education. The journey starts with a neophyte registered nurse who possesses the essential professional competence to provide direct patient care and manage day-to-day situations. As the nurse has accrued experience in the first few years, s/he may settle with one specialty area of practice and begin to take courses to prepare himself/herself to become a specialty nurse. At this stage, s/he would have some responsibility for service development and perform competently in the specialty area. The education level at this stage is recommended at degree level. As the nurse embarks upon the APN level, s/he would have acquired a minimum of 6 years of experience. The education level is usually at master level with curriculum inputs not only in specialty-related areas but the generic components that equip the nurse with a broader knowledge base and analytical



\*Categorized by health condition, specific population, settings; aligns with overall nursing purpose and functions; substantiated with nursing knowledge and research

**Fig. 1.** Description of advanced practising nurse development, impacts and specialty category.

thinking. S/he gradually emerges to be a leader who demonstrates original thinking and brings change. As the APN matures in his/her role acquiring specialized knowledge that is at the forefront of the specialty, s/he would move on to a higher level assuming leadership to shape service development and delivery. Educationally, the higher level APN needs to be educated at master level or above, views issues at the system level and assume leadership role in service development and clinical scholarship. Wong et al. [14] captured the contribution of APNs in three aspects: the patient-, service- and profession-related aspects. In the patient aspect, APNs are clinical leaders who can manage complex cases and contribute to improved outcomes related to symptom management, complication prevention, and health enhancement. At the service level, APNs can increase patients' access to care, reduce waiting times, and provide evidence-based practice to improve patient health and recovery. At the professional level, APNs act as mentors and build specialty areas to provide better services to clients. The categories of nursing specialty can be based on health condition, specific population or settings but most importantly need to be substantiated with nursing knowledge and research, in alignment with the overall purpose of nursing function.

The development of advanced practice nurses in China is a key to contribute to promoting health in the country. Nurses' value is not only in the sheer volume of large quantities that can and are easily accessible by clients, but also in their quality in providing expert care at an advanced level. The optimal use of these nursing talents is for the benefit and well-being of the people being served. China occupies one-fourth of the world population. The maintenance of a healthy China contributes to global health and nurses have a key role to play.

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