

# International collaboration for developing graduate education in China

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**The rapid expansion of China's influence on the world stage underscores the significance of nursing education and practice development. From collaborative models with other universities, nursing leaders in China are moving towards development of their own models that merge the uniqueness of Eastern philosophy with elements of Western models. Qualified nurse leaders are increasingly replacing physicians as faculty while nursing comes of age in a time of change and advancing knowledge. This article describes the outcomes of 2 projects to develop graduate nursing education in China, launched by the China Medical Board within the context of early Chinese nursing education history. The 2 programs produced a total of 88 new Masters of Science in Nursing, signaling a new generation of Chinese nursing leadership and posing a model for international partnership.**

The history of nursing in the People's Republic of China (PRC) is one of early accomplishment, interruption, and, now, rapid development and growth. The earliest roots emerged with establishment of the first nursing education program in 1888 and the first baccalaureate program in 1922. Nursing education remained primarily at a technical level in secondary nursing programs, further entrenched by the closure of higher education nursing programs from 1952–1984. In the 1980's, national reform and the interest of the China Medical Board (CMB) stimulated a new era in nursing education based on scientific and human behavior knowledge. The new openness allowed the CMB to initiate strategic support for creative, inter-institutional, international partnerships to encourage indigenous development for graduate education in nursing. These strategies to advance nursing education and policy are

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enabling nursing to emerge as a force impacting health-care in the world's most populous country. The purpose of this article is to establish the historical record of 2 programs critical to the development of graduate nursing education in the People's Republic of China that have not been described in nursing literature, showcase the diverse partnerships driving the change, and examine the outcomes of a model international collaboration.

## HISTORICAL INFLUENCE ON DEVELOPMENT

Much of the early history of nursing in China is well-documented by Chang<sup>1</sup> and Dirschel,<sup>2</sup> beginning in Fuzhou when Western missionaries introduced modern nursing to China<sup>3</sup> with the opening of a 3-year hospital based program in 1888.<sup>4</sup> In 1920, the USA's Rockefeller Foundation developed the first baccalaureate nursing program at Peking Union Medical College (PUMC).<sup>5</sup> It remained the only 5-year post-high school program for decades. There were no graduate nursing programs in China in this era.

In 1952, a new Chinese government closed higher education programs, both the 3-year higher diploma and the 5-year baccalaureate, leaving only secondary training that primarily enrolled junior high school graduates. Most enrollees were those not selected for university studies and were assigned to nursing. Professional development was stymied by low status propelled by the lack of career motivation and the absence of government support, further evidenced by destruction of textbooks.<sup>2</sup> The new era was launched in 1984 with the reemergence of higher education with the first 5-year baccalaureate opening 100 years after the first. The 32-year cessation of higher nursing education left a dearth of qualified nursing teachers, administrators, leaders, and role models as older nurses retired, weakening the infrastructure<sup>6</sup> even as programs were expanding.

Even through the 1990's the national emphasis continued to be on the 700 secondary nursing programs and the 3-year higher education diploma programs.<sup>1</sup> The 3-year higher diploma and the 5-year baccalaureate both enrolled graduates of senior high school, who were older and more likely to have chosen nursing as a career and were interested in education advancement. Bacca-

laureate equivalency could also be attained through a combination of advanced self-study and experience.<sup>7,8</sup>

With the limited educational opportunities for nurses, the majority of deans and faculty in baccalaureate programs were physicians. The national curriculum followed a medical model, with teaching primarily by physicians and hospital staff nurses, most graduates of 3-year higher diploma programs. There was no graduate nursing education at the onset of the 1990s. Most Chinese nurses had only technical education; undergraduate baccalaureate education was sparse; and the lack of an infrastructure for master's education in China, key to baccalaureate development, limited further advancement of the profession.

## NEW PARTNERSHIPS TO ADVANCE NURSING EDUCATION

As the borders to China increasingly opened to exchange, the China Medical Board (CMB) of New York became a driving force in advancing nursing education. The CMB evolved from the Rockefeller Foundation to improve health care in the Far East by supporting medical education.<sup>9</sup> Realizing nursing must be developed commensurate with medicine to change health care outcomes, the CMB added funding to previous grants for medical education to support nursing in the 8 top-ranked Chinese medical universities.<sup>10</sup>

In 1987, the CMB president convened the presidents of the 8 major national, medical universities to systematically build a foundation for improving nursing education. These institutions, scattered around China's vast geographic area, included:

- Beijing Medical University, Beijing (now Peking University Health Science Center)
- China Medical University, Shenyang
- Hunan Medical University, Changsha (now Central South University, Xiang Ya School of Medicine)
- Peking Union Medical College, Beijing
- Shanghai Medical University, Shanghai (now Medical Center of Fudan University)
- SunYat Sen Medical University, Guangzhou (now Sun Yat Sen University of Medical Sciences)
- West China Medical University, Chengdu (now Sichuan University—West China Center of Medical Sciences)
- Xi'an Medical University, Xi'an (now Xi'an Jiao Tong University, School of Medicine)

These presidents boldly committed to advance the education of their nursing faculty by working with an international consortium to build an infrastructure for graduate nursing education. Two major initiatives, the Committee on Graduate Nursing Education (COGNE) (1988–1992) followed by the Program on Higher Nursing Education Development (POHNED) (1993–2001), helped establish a solid foundation for a new era for nursing in China. This article explains the 2 programs

and explores their outcomes. The authors had active roles in both programs.

### *Committee on Graduate Nursing Education (COGNE)*

In 1988, the President of CMB, William Sawyer, MD, worked with the deans of 6 schools of nursing in the USA with track records for innovation and scholarly achievements to design an educational initiative that overcame barriers posed by international education:

- Catholic University, Washington, DC
- George Mason University, Fairfax, Virginia
- The University of Tennessee in Memphis, Memphis, Tennessee
- The University of Texas Health Science Center at Houston School of Nursing, Houston, Texas
- University of California in San Francisco, San Francisco, California
- University of Virginia, Charlottesville, Virginia

The Committee on Graduate Nursing Education (COGNE) was formed to prepare a cadre of master's-prepared nurses to upgrade faculty in China's emerging baccalaureate nursing programs. Sixteen nurse faculty were selected from the 8 major medical universities in China in 1989 to spend a year upgrading their English skills and preparing for graduate study in 1 of the 6 USA schools of nursing, with which they were then matched by clinical area. Enrollment criteria included a baccalaureate equivalent in nursing, recommendation by their respective university's president, and satisfactory scores on GRE and TOEFL.

Fifteen participants began the 2-year program in summer 1990 (one was unable to participate due to personal reasons) with orientation to Western culture, computer skills, and nursing philosophy at the University of Tennessee at Memphis. In summer 1991, an enrichment program at George Mason University, which was near the nation's capitol, offered experience in health policy and exposure to nursing professional organizations.

A coordinator at each of the 6 schools assisted the students' progress. Because students were exempted from state licensure requirements to encourage their return to China upon graduation, clinical experiences consisted of observation-only working with a preceptor, consistent with legal requirements. Most enrolled in an education-role focus to prepare them for teaching a clinical specialty upon their return to China, and which did not require experience in clinical intervention.

Each of the 15 participants graduated in 1992 with a Master of Science in Nursing degree from their respective schools. However, only 4 are known to have returned to China; the others dropped contact with the CMB and the coordinators, thus their reasons for not returning to China are unknown. It is assumed that as they assimilated into their new culture over the 2 years, it became difficult to return. Three of the 4 returnees

hold faculty positions while the other is working in a hospital leadership position and serves as clinical faculty in the school of nursing. Two were subsequently awarded scholarships for doctoral studies in the USA. One has graduated and returned to China, the first native Chinese nurse doctorate to return, a true pioneer.

The students' success confirmed the readiness and capability of Chinese nurses for rigorous graduate study at the international level, spurring efforts to continue nursing education development in China and capturing governmental attention. As a result of the disappointing return rate, however, the COGNE program was discontinued. Collaboration continued among the 8 Chinese medical universities to create another education innovation, the Program on Higher Education Degrees in China, to address the continuing need for masters-prepared faculty.

### *Program on Higher Education Degrees (POHNED)*

The CMB and the Chinese presidents of the national medical universities moved to develop an internal program with international assistance to capture the same aim as COGNE, to build a cadre of competent nursing faculty and leaders, but with a higher retention rate. Thirty Chinese nursing leaders and faculty from the baccalaureate nursing programs in the 8 national medical universities convened in Guanzhou, China, in late 1993 to work with 5 international nursing consultants (2 from the USA, 1 from Hong Kong, and 2 from Thailand) to design the Program on Higher Nursing Education Degree (POHNED). The first graduate nursing program from a nursing perspective for China was developed in cooperation with Chiang Mai University in Thailand, who would grant the degree as a separate program within their own graduate nursing program. By expanding the capacity of master's-prepared faculty to fulfill the need for baccalaureate education, the goal was to start a shift away from the dominance by secondary programs and the medical model.

CMB provided computers, lab equipment, and other educational materials. Admission requirements included completion of a bachelor's degree in nursing, 2 years experience, and recommendation from their university administration. The 2-year program covered nursing courses in theory, research, education, clinical specialty, and concepts central to Chinese culture, such as Traditional Chinese Medicine.

The POHNED program was housed in the nursing department at Xi'an Medical University (XMU) in Xi'an, China. Faculty from Chiang Mai University were the primary faculty and mentored returning graduates of the COGNE program. Practical learning experiences related to clinical, teaching, and research were in the student's home university. Students spent 1 semester at Chiang Mai University to concentrate on community health and gerontology with experienced

faculty, an expertise not available at that time in China, and to gain a broader worldview.

Five classes were admitted with 16 participants per year, 2 from each participating university plus the addition of a ninth university from Wuhan in the third year. Between 1994–2001, the program graduated 84 new master's-prepared nurses offering a pool of qualified faculty for baccalaureate programs. The indigenous location helped insure that graduates remained engaged in the nursing work force in China, sparking a significant change in nursing.

## **SURVEY OF THE INFLUENCE OF THE TWO PROGRAMS**

The COGNE and POHNED programs are a critical part of nursing's rich history in China. Though there were 5 master in nursing programs in China by 1998,<sup>11</sup> none have produced the number of graduates to compare with these 2 historical programs that gave impetus to further growth. Graduates are employed throughout China in schools and hospitals, helping change the profession and warranting examination of the impact on their careers. A survey was distributed to participants using convenience sampling with the purpose to describe the impact of participation in the COGNE or POHNED programs on their careers, as well as on the profession, and to identify their future nursing goals. Respondents completed 3 open-ended questions with data compiled for each program.

- How did participation in either the COGNE or POHNED program influence your career in nursing?
- How has this program influenced nursing development in China?
- What are your future goals in nursing?

### *COGNE responses*

Three of the 4 COGNE graduates who returned to China following program completion returned surveys. All are female and married with an average age of 40 years. Graduates described increased potential for leadership positions and the opportunity to influence nursing development as having major impact on their nursing career. One stated, "When I was 18 years old, I went into the library and found there are a lot of books but most are written in English. I wished that I could translate some of them to provide the information of foreign nursing for Chinese nurses. Now my dream comes true. I did it. I translated some English nursing books into Chinese as textbooks." Graduates recognized their contribution to nursing's legacy in China, "In fact, I did a lot for China's nursing after I completed this program."

These graduates described the influence of the COGNE program on nursing development in China, primarily on nursing education with the provision of qualified faculty for higher education. The infusion of new ideas and knowledge spurred advancements, in-

spiring a new generation of students. Further, “Those faculty became key members in helping China develop a joint nursing master’s program (the POHNED). . .and that set up a foundation for building nursing faculty.” One called it a ripple effect.

Future goals in nursing for these 3 graduates were to acquire research skills needed for knowledge development, advance nursing as a more visible profession, and continue publications in the Chinese language. One stated, “I realize that I could not teach all the nursing students in China, but I could provide nursing information of developed countries for them by publishing books and articles to let them know what has been happening in other countries.”

### *POHNED results*

Surveys were sent to 25 POHNED graduates as a convenience sample. Thirteen of the 25 surveys distributed were returned. All respondents were female, married and employed in academic or practice leadership positions in China’s major health care universities and affiliated hospitals.

POHNED graduates reported the program was “helpful and meaningful in my career” as they gained many skills, including critical thinking and problem-solving, that they have used to promote and advance the nursing profession in China. With CMU faculty as role models, they increased their capacity for research, teaching, administration, and leadership. Graduates reported they gained self-confidence as well as pride and understanding of their profession: “POHNED taught me to be a good teacher, . . .and gave me self-confidence in exploring work.” Community health nursing, change theory, curriculum, pedagogy, and nursing theory were new knowledge areas which helped advance the science base of nursing. Students responded more positively to the new graduates’ teaching strategies, skills in research utilization helped design interventions to improve nursing outcomes, and the career growth stimulated upward professional status. One simply stated, “It opened my eyes.”

Graduates credited the POHNED program with influencing nursing development in China, helping with the foundation for nursing education advancement that can spur development of a Chinese nursing model: “. . .as we see the value of maintaining our culture in blending Eastern medicine with acute care from the West. We do not need just to adopt others’ models but need to have an approach that matches our lifestyles, diet, and exercise if we are to have relevant health care.” Another participant stated, “This program improved Chinese nurses’ educational level and established a model with a foundation for developing future nursing education in China. POHNED graduates are playing important roles in nursing education, research and administration . . . and are becoming leaders in their field.”

Graduates believed the large number of graduates in a very short time infused the profession with leaders in nursing education, research, and administration. It helped relieve the shortage of qualified faculty, provided well-educated hospital and academic administrators, and introduced new ways of doing things. “The teachers trained in POHNED have been devoting themselves to nursing education, inspired by the spirit of POHNED, using what they have learned.” They were described as sharing what they learned with students and other nurses. “What the POHNED did is valuable to nursing development in China,” further elaborated a respondent, “They will become pioneers in promoting development of the nursing profession in China.”

The POHNED graduates described their future goals, most saying they want to study more to gain new knowledge and study for a doctoral degree. Graduates want to become “good at their nursing role” whether as a faculty, manager, or clinical instructor, to help advance nursing, stating, “I want to do my best for Chinese nursing education and clinical.” Others stated their desire to “provide the best care for all people.” Their contributions to the profession will “help nursing towards maturity.” They aspire to “do much in nurses’ education and encourage nurses to increase participation in nursing development.” They identified the desire to achieve specialized knowledge as well, mentioning pain management, nursing management, community nursing, and research. One respondent stated, “I learned in POHNED that continuous improvement is necessary.”

## **DISCUSSION**

Examination of the impact of the COGNE program is limited by the small number of graduates who returned to China. Participants in the COGNE program traveled to the USA, leaving behind family and friends. Their success was somewhat dependent on their ability to adapt to a new country and a new way of life with freedom of movement in an era when China carefully regulated travel. The socialization may have unwittingly contributed to the low return rate. There were unconfirmed reports that some stayed in the USA for additional education with the assumption that if they returned to China they would not be granted future opportunities.

Participants experienced less disruption in the POHNED program, spending most holidays and breaks from school with their families. The majority of the program was held in Xi’an with selected experiences in their home university, so they remained in China except for one semester of international experience in Thailand, a setting more similar to their homeland than the USA. Further, they studied as a cohort of 16 in both Xi’an and Chiang Mai, forming their own support system. Consistent with reports from other geographically remote areas, access to education locally is a key

factor in retention, and the enhanced image of a well-educated work force is a stimulus to attract the best students.<sup>12,13</sup> By remaining more closely connected to their home institutions with less disruption on daily life and their families, the program had a nearly perfect implementation rate with all graduates initially returning to their home institutions.

The chance to be away from their home university offered new opportunities for participants in both programs to be exposed to new ideas, teaching strategies, nursing care delivery, cultural diversity, and ways to collaborate. All participants studied in English, thus able to access nursing literature from other countries. For many, this was the first time to travel, particularly beyond China's borders. The opportunity to spend time with nurses from other regions in China opened opportunities to inform and explore issues confronting nursing from different perspectives, as well as form networks for exchange and collaboration.

Both programs modeled collaboration and partnerships not only for international initiatives but also for their own personal application. For the POHNED students, studying as a cohort not only provided new images and models of nursing but also increased their capacity for cooperation. They encouraged each other during the times they were in Xi'an and Chiang Mai, away from their families. Study groups and shared learning were new experiences in breaking traditional patterns of isolation and self-sufficiency. Two COGNE participants were assigned to each USA school with less peer group influence, so were more likely to either withdraw or assimilate.

Participants in both programs were mentored by experienced faculty who were important role models in shaping new world views of nursing and demonstrating expanded roles in clinical practice and research.<sup>14</sup> They were able to visit clinical sites, observe research in action, and participate in additional seminars and conferences in their locale.

A common theme between the 2 very different programs is the expanding influence these graduates have in helping develop unique models of nursing education and practice for China. A number of graduates have been selected to help write new nursing textbooks in Chinese. They are the forerunners of continuing reform as they set the stage for wider cooperation in educating the new generation of nurses. The influx of qualified faculty is spurring advances in baccalaureate education. This, in turn, will stimulate interest and production of emerging models of graduate education in nursing that will truly bring new approaches to nursing and care of patients. New approaches in clinical leadership will advance practice perspectives and staff positions that will improve patient care. Still, much remains for nursing education and practice in China to be consistent with other developed countries and to meet health care needs in China.

## IMPLICATIONS

To achieve the goals of the profession, there are issues related to access, structure, and levels of nursing education programs in China. First, developing accessible higher nursing education programs with flexible schedules is essential to provide upward mobility of working staff nurses through updated knowledge and higher degrees. Most nurses in staff positions are graduates of secondary schools and face unprecedented challenges in attaining continuing education. Secondly, masters in nursing programs are increasing throughout China, many strengthened by recent mergers with nearby general education universities, as reflected in the name changes of the 8 major medical universities. Development of education standards within an accreditation process will insure educational quality that can provide career ladders. Qualified faculty to lead graduate education will be critical to program quality. Lastly, accessible doctoral nursing programs are the next frontier of Chinese nursing and likely will evolve in collaborative multinational models. Reports are that there are currently 5 nurses in China with doctoral degrees and, while others are in process of obtaining degrees, a core of doctorally prepared nurses is essential for research-focused graduate programs.

There are other critical issues. While the shortage of qualified nursing faculty for all collegiate programs will continue for another decade, the infusion of graduate nurses from COGNE and POHNED will contribute to educational advancement throughout the profession in a ripple effect. Faculty will continue to need preparation in contemporary teaching strategies to meet educational and learning needs of 21st century learners with the shifting social fabric of globalization. Textbooks and learning materials written by Chinese nurses from a nursing orientation are essential to fill gaps in learning resources and to avoid reliance on Western models that may not fit Chinese cultural needs. To develop scholarship, nursing faculty require research skills to produce evidence-based clinical care, determine appropriate educational models and strategies, and address health care needs of specific populations. Exploding development in technology and informatics now provides global links and will filter into nursing practice to manage information.

The need for higher education is staggering in this vast country. The Chinese government has acknowledged the need to upgrade nursing education in China with new policies affecting future trends. In Beijing, China's capital, the secondary technical nursing programs stopped enrolling students in 1999. It is expected that 80% of nurses will have earned the higher diploma by the year 2006. In 2001, there were still about 388 secondary technical schools and 192 higher diploma programs contrasted with 91 baccalaureate and 15 master's programs in China in 2002.<sup>8</sup> Additionally,

nurses may participate in either part-time or full-time self-study to earn a higher nursing degree. These educational opportunities are a beacon to attract the best. As nursing has advanced, and as the Chinese government has increased the capacity to travel across borders, Chinese students are more likely to return after studying abroad to contribute to this new era of Chinese nursing. Local access, however, remains the most effective strategy.

## CONCLUSIONS

The change sweeping through China's nursing education programs matches swift social and economic shifts evident throughout this rapidly developing country. The COGNE and POHNED programs are significant events in the history of nursing in China with a pyramid effect on nursing care delivery and, ultimately, the well-being of the people as nurses have increasingly prominent roles in the health care delivery system and increased visibility, tightening the gap with nursing development around the world.

The COGNE and POHNED programs demonstrate a unique model of international collaboration between developed and developing countries to meet the challenges of nursing education yet retain indigenous culture and control. These pioneering partnerships in graduate nursing education crossed international boundaries, required partnerships of faculty and administrators at multiple universities, and mandated students study in dissimilar cultures and languages. Graduates have set the stage for wider cooperation in educating tomorrow's leaders. They are driving forces in changing the nursing landscape through important roles in nursing higher education, sparking a new generation of qualified nurses. Nurses need models that inspire creative partnerships not only in China but also around the world to carve a critical role in producing needed change in health care.

Outcomes of these collaborations are changing the paradigm of nursing in China to one based on scientific knowledge and evolving social theory. Blending an-

cient traditions and knowledge of the unity of mind and body evokes complementary models that merge Eastern and Western philosophies. Nurses are gaining a new image based on professional respect derived from increased education and knowledge that is sensitive to indigenous culture and philosophy.

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