

Potential of China in Global Nurse Migration

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Objective. The purpose of this paper is to examine what is known about the nurse workforce and nursing education in China in order to assess the likely potential for nurse migration from China in the future.

Principle Findings. There is a severe shortage of nurses in China (only one nurse per thousand in population), but at the same time there is a very high level of unemployment and underemployment of nurses. China's nursing education system is huge in size (about 500,000 nursing students in 2005), but weak in quality and career development.

Conclusions. As a result of lack of limited job opportunities, low salary, and low job satisfaction, many talented Chinese nurses intend to switch occupation or work outside China. Commercial recruiters have expressed a strong interest in recruitment of nurses in China, but to date there are few examples of successful ventures. Even if the Chinese government were to implement health care financing reforms that led to an increase in nursing jobs and improved work conditions, some level of surplus will remain. As such, it is likely that China will become an important source of nurses for developed nations in the coming years.

Key Words. China, nursing, migration, case studies

China has a population of 1.3 billion people and represents one of the world's largest reservoirs of human resources. Because of the relative isolation from global commercial activities until the last two decades, its potential for supplying labor for global markets is only now beginning to emerge. The purpose of this paper is to examine what is known about the nurse workforce and nursing education in China, in order to assess the likely potential for nurse migration from China in the future.

There are over 18,000 hospitals, 2 million physicians, and 1.3 million working registered nurses in China (Jiang, Shen, and Yan 2004), i.e., one nurse for every thousand people. As a comparison, the United States has one nurse for every hundred people. Further, there are 0.4 registered nurses per hospital bed in China (Mao 2004), and only 0.68 nurses for each physician in

Table 1: Key Statistics of Chinese Nursing

	2001	2004
Total registered nurses	1,286,900	1,307,814
Working nurses	/	1,289,797
Average number of nurses per 1,000 population	0.993	1.03
Nurses–bed ratio	0.4:1	0.4:1
Physician–nurse ratio	1:0.61	/

Source: Study Group MOH Report (2003); Jiang, Shen, and Yan (2004); Mao (2004).

the hospitals (Jiang, Shen, and Yan 2004). The Chinese Ministry of Health set the standard at two nurses per physician, but few hospital budgets can meet this standard (Study Group [MOH] for Nursing Demand 2003; Nie, Li, and Jia 2004). Key Statistics of Chinese Nursing offer a summary of the workforce statistics (Table 1).

However, despite the shortage, China has not invested enough funding in health care to employ the nurses that have been educated. Many Chinese nurses either cannot find a job or are concerned with losing their jobs (Wu and Zhang 2000). A large number of new nursing graduates struggle to find jobs even at a salary level as low as U.S.\$3,000 per year. And frequently, nurses older than 50 years of age start to lose their positions to younger competitors, despite their greater experience (Liu and Sun 2003). Thus China currently appears to have a surplus of nurses, but only in terms of budgeted positions.

Overall, China has under invested in nurses relative to the size of its population and health care needs and in terms of the supply of physicians, which contrary to WHO recommendations, exceeds the number of nurses. If more funds were invested in health services, the country would require more nurses. The extent of a nurse surplus in China will depend upon the extent to which the health care system is expanded to better meet domestic needs.

EMPLOYMENT ISSUES AND MIGRATION OF CHINESE NURSES

The current level of unemployment among nurses has created an interest in migration motivated both by individual choice and government policies to

maximize remittance income. Nurses themselves express concerns over low wages, working conditions, and lack of job security.

Surveys indicate that only 58 percent of Chinese RNs feel “relatively satisfied” or “satisfied” with their jobs (Sun and Yan 2001). Nursing as an occupation falls in the “below-average” salary category in China. In most regions and cities in China, the average salary for a nurse with 3–10 years working experience is only around U.S.\$200 per month. With more than 15 years of experience, the average is about U.S.\$300 per month. In the coastal areas, Shanghai for instance, salaries can be slightly better, but come with a higher cost of living. Compared with nurses, Chinese physicians have more revenues of income beside basic salary, and can easily earn three to five times more.

In addition, nurses in China have to carry a very heavy workload (Wu and Zhang 2000; Wang and Dai 2004; Zhang and Ren 2004). Compared with U.S. nurses, employed Chinese nurses are faced with 10 times the population responsibility. Hospital demand is for younger nurses (Peng 2004), as they are paid less and can handle more physically demanding work loads. As a result, age discrimination is also a problem and it is not unusual to find hospitals dismissing most nurses older than 45 years of age.

International migration of nurses began about 15 years ago where the Chinese government began organizing groups of English-speaking nurses to work in Singapore and Saudi Arabia. Hundreds of Chinese nurses leave China to work in these countries every year, under a government arranged contract. The Chinese government charges 10–15 percent of their annual salary as the “handling fee” for such an arrangement. These contracts usually last about 2–3 years, and most nurses return to work in their original hospitals. In many cases, the “returning” is required and clearly stated in their contracts.

Over the past 5 years, there has been a similar increase in the number of nurses who migrate to Australia and England, especially after these countries lowered entry requirements. Most of these migrations are arranged by private companies, instead of government agencies. Because these operations are “for profit,” the nurses are usually required to pay a significant amount of money to the company in exchange for the service. These “fees” vary anywhere from U.S.\$4,000–15,000, equal to the sum of a Chinese nurse’s salary over many years. The majority of nurses are not able to afford the fees, even if they are qualified in English and clinical skills. For many, the only option is to borrow money from family and friends, counting on a career future with 10–20 times higher income. In the United States, there has been a significant increase in the level of interest in recruitment from the Chinese market from a variety of

sources including hospitals, staffing agents, educational institutes, and private head hunters, but the numbers remain small.

CHINESE NURSING EDUCATION SYSTEM

There are several levels of nurse education programs in China, mid-associate degrees, associate degrees, bachelor degrees, and graduate degrees (Xu, Xu, and Zhang 2002; Watt 2004).

Mid-Associate Degree Programs

Mid-associate degree programs are equivalent to secondary education in China. Typically, this type of program requires 3 years of study and students enter the program around 15–16 years of age. Nurses with this type of education currently make up 85–95 percent of the current workforce, with approximately 70 percent of all new recruits to nursing schools enrolling in this type of program (Study Group [MOH] for Nursing Demand 2003). Students with this degree are not qualified to apply for the Commission on Graduates of Foreign Nursing Schools (CGFNS) or NCLEX in order to pursue RN employment in the United States. Mid-associate degree graduates can attend continuing education programs in order to obtain an independent senior secondary education degree besides nursing. In these cases, the nurses are qualified to apply for CGFNS exam.

Associate Degree Programs

Associate degree programs are equivalent to postsecondary education. They require 3 years of study and students enter the program at the age of 18. Nurses with associate degrees currently make up 4–8 percent of the current workforce and represent approximately 23 percent of all new recruits to nursing schools. Students who receive associate degrees are qualified to apply for the CGFNS in order to gain employment in the United States. There are some nursing schools that offer a 5-year program, which combines the mid-associate and associate programs. Students enter the program at 15–16 years of age and graduate with both a senior secondary high school degree and an associate degree of nursing. These students are usually qualified to apply for the CGFNS and NCLEX.

Bachelor Degree Programs

Bachelor degree programs are equivalent to postsecondary education and require 4–5 years of study. Students generally enter the program at 18 years old. Nurses with bachelor degrees currently make up 1 percent of the workforce and represent 6 percent of new recruits to nursing schools (Study Group [MOH] for Nursing Demand 2003). Students who earn a bachelor degree are qualified to apply for the CGFNS to seek employment in the United States.

Masters Degree and Doctorate Degree Programs

There are graduate-level nursing programs available for students who want to pursue advanced career paths. The majority of students who obtain masters or doctoral degrees plan to serve as faculty for nursing programs. These programs follow a curriculum similar to that of nursing schools in the United States. In short, while the education infrastructure is large in terms of number of schools and students, the number of available nurses qualified to work outside of China is relatively small. Based on current statistics, 85–95 percent of the nurse workforce in China would not meet the requirements to work as nurses in developed countries because their education is not at the postsecondary level. In order to obtain the requisite secondary education credentials to work outside of China, most nurses must obtain a minimum of 2 years of continuing education.

For working in United States in particular, the CGFNS require Chinese nurses to have independent secondary education beside their nursing programs, and effective nursing license in China which generally requires over 2 years of clinical work experiences.

Occupation Selection and Switch

In China, every citizen has the freedom to choose his or her career and residence. Only in some popular big cities, like Beijing and Shanghai, may the local government set rules to limit the benefits for “nonresidents,” but these rules do not preclude people from working in these cities.

The most powerful tool that the Chinese government uses to influence the occupational distribution is the “National Exam for College Education,” similar in nature to the SAT in the United States, but with much stricter consequences for scoring. As most colleges are State owned, the Chinese government sets strict rules and admission criteria. Students must score higher to go to higher categorized schools. The tuitions of most State-owned schools

Table 2: New Recruits to Chinese Nursing Schools in 2001–2002

<i>Degrees</i>	<i>2001</i>		<i>2002</i>	
	<i>Numbers</i>	<i>%</i>	<i>Numbers</i>	<i>%</i>
Mid-associate	75,000	70	102,397	72
Associate	25,000	23	31,095	22
Bachelor	6,500	6	7,793	5.5
Total	106,500	100	141,285	100

Source: Study Group MOH Report (2003).

are relatively low, and there is not much difference in tuition between a top-tier school and a fifth-tier school. Therefore, many students would follow the government's influence to enter different occupations to gain admission to better schools (Study Group [MOH] for Nursing Demand 2003). In other words, the government controls occupation distribution by controlling the college admission. Furthermore, it is very difficult for a Chinese student to try to change his/her major(s) once admitted to the certain department (including nursing) in a school. This may be a contributing factor to the high rate in loss of nurses to other occupations after graduation (Sun and Yan 2001). Many Chinese nursing students choose to finish their degree in nursing, but pursue graduate education in other occupations such as law or business.

Trends in Education: Increasing Recruitment of Advanced Nursing Programs

In 2002, there were 1,287 nursing programs/schools in China that registered for nursing license exams for their students (Study Group [MOH] for Nursing Demand 2003). By the end of 2003, there were 133 bachelor degree nursing programs (B.S.N. eqt.), and 30 masters degree programs. There were also two doctorate nursing degree programs that were started in 2004 (Xu, Xu, and Zhang 2002). The total number of new students entering nursing programs annually has grown rapidly in the past 6 years, from 59,000 in 1996 to 140,000 in 2002 (Study Group [MOH] for Nursing Demand 2003). New Recruits to Chinese Nursing Schools in 2001–2002 illustrates the total number of new students entering their first year of a nursing program, by degree type (Table 2). By the end of 2002, there were a total of 540,010 students currently attending nursing schools in China (Study Group [MOH] for Nursing Demand 2003). Total number of students in Chinese Nursing Schools in year 2002 illustrates the total number of students enrolled in each of the degree

Table 3: Total Number of Students in Chinese Nursing Schools in Year 2002

	<i>Number</i>	<i>%</i>	<i>Accu. %</i>
Master	128	0.02	0.02
Bachelor	22,457	4.2	4.22
Associate	68,566	12.7	16.9
Mid-associate	282,400	52.3	69.2
Others—continuing education	166,459	30.8	100
Total students	540,010	100	

Source: Study Group MOH Report (2003).

program types (Table 3). Future trends in education show an increase in overall enrolments, particularly in those types of programs that are more likely to qualify for work outside of China. Projection of Chinese Nursing School Recruitment 2001–2010 illustrates the increase in recruitment by degree type (Table 4).

CURRENT CHINESE POLICY INITIATIVES

Most national studies on nursing are organized by the Ministry of Health, or Ministry of Education, or as a joint effort of these two key government authorities. Although there are no studies that focus directly on nurse migration data, there are some studies on related issues, such as education systems, career satisfaction, and strategic development of nursing. These studies can provide important indications to the causes and costs of nurse outflow to other careers and other countries.

Among these national studies, one of particular note is the “2002–2003 Study of Chinese Nursing Human Resource Status and Suggestions on

Table 4: Projection of Chinese Nursing School Recruitment, 2001–2010

<i>Degrees</i>	<i>2001</i>		<i>2005</i>		<i>2010</i>	
	<i>Numbers</i>	<i>%</i>	<i>Numbers</i>	<i>%</i>	<i>Numbers</i>	<i>%</i>
Mid-associate	75,000	71	88,000	62	82,200	50
Associate	25,000	23	38,200	27	49,200	30
Bachelor	6,500	6	15,100	11	33,000	20
Total	106,500	100	141,300	100	164,300	100

Source: Study Group MOH Report (2003).

Strengthening Training Programs for Nursing Professionals in Short ” (Study Group [MOH] for Nursing Demand 2003), Chinese title: <http://www.tech.net.cn/y-jxgg/zysd/6238.shtml>. This study was organized by the Ministry of Health and examined data on Chinese health professionals over the past 17 years from 1985 to 2001, and provided recommendations to the government agencies for the national demand of nursing human resources. The report suggested that China needs to establish a health human resource allocation close to the level of global averages. They recommend that the government start to develop the numbers of nurses based on this goal, i.e., by 2015, the total numbers of physicians and nurses should both reach 2,323,000, thus the physician to nurse ratio should reach 1:1. The population to nurse ratio should then be increased to 1.5 nurses for every 1,000 people. Given the total of 1.29 million nurses in 2001, the goal is to increase the number by adding 1.04 million new nurses by 2015, which leads to an increase of 115,000 nurses per year.

Further, considering the ever growing aging population and the planned expansion of community health service, these researchers projected that the actual need for nurses would be 25 percent higher than the general projection. As the result, the research suggested that the Chinese Ministry of Education should expand the recruitment of nursing schools to the level of approximately 150,000 new students each year from 2003 to 2010. As shown in Tables 2–4, the government, primarily the Ministry of Education, has made significant progress toward this goal, with the new recruitment to nursing schools reaching over 140,000 in 2002.

Finally, through national surveys and discussions with expert groups, the Ministry concluded that by 2010, the recruitment of different degree programs should be adjusted to the following ratio: 50 percent mid-associate degree; 30 percent associate degree; and 20 percent bachelor or higher degrees. In this way, the total number of mid-associate degree graduates will remain at the same level, while the ratio is decreased gradually, therefore improving the overall qualification structure of the nursing professionals in China.

Another important policy trend related to nursing is the proposed national development of “*Community Health Service*” (Study Group [MOH] for Nursing Demand 2003). In 1997, the Prime Ministry announced the national health care development strategy as “Reform the Urban Health Systems; and Aggressively Expand the Community Service Facilities.” In 1999, the central government had decided on a clear goal, the comprehensive community health service system should be accomplished by 2010 across China. This

expansion in community-based care would further increase opportunities for nurse employment.

CONCLUSIONS

China has a severe shortage of nurses based on its population, but also has a surplus of nurses because of the lack of job opportunities and limited budgets of government-owned health facilities. Even for the 1.3 million working nurses, salary and job satisfaction are very low. As a result, many talented nurses, especially those with bachelor degrees, intend to switch occupations or work outside China.

To address the shortage, the Chinese government has expanded free nursing education to 150,000 annual new recruits. However, unless the health service industry can generate enough funded positions, the surplus of nurses is only going to get worse in the short term. The demand for nurses will increase at least slightly if the promised Community Health Service is implemented, but to date there has been little debate about how to increase funding for nurses at the hospital level. Rather, the Chinese government has been organizing overseas employment activities, especially with Singapore and Saudi Arabia.

At this time, it is not known whether the government and state-owned hospitals will take a more active role in profiting from contracts with recruiters as in the Singapore example or whether the government will be satisfied to gain through remittances sent home. But it is clear that Chinese government wishes to promote international nurse placement programs with developed countries to grow the domestic talent pool and to increase the career potentials for Chinese nursing graduates.

Commercial recruiters have expressed a strong interest in recruitment of nurses in China, but to date there are few examples of successful ventures. Chinese nurses face real difficulties in paying the high expenses for international migration including legal fees, testing fees, travel, etc. Further, there is a sense among government officials that some compensation should be provided as the Chinese government has contributed significant resources into the public education system with minimum tuitions for nursing students. As a result, it is common for local government education agencies to require either the nurses or their foreign recruiters to compensate the government when the nurses plan to leave the country.

Under the current economic situation and the state of the health system in China it is hard to hold any specific group responsible for the underfunding

of nurse positions. Moreover, increased health care costs are in the process of being transferred to the community. Nevertheless, as the MOH report reflects, there is an interest among researchers and legislator in working together to raise awareness of the importance of nurses for quality and patient safety. There is also difficult work ahead identifying financing for new nursing positions, identifying ways to improve work conditions, and establishing laws to protect against age discrimination. Even with progress on these fronts, however, it is likely that the surplus of nurses in China will continue. As such, China will become an increasingly important source of nursing talents for developed countries in the coming years.

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