

Review

China's foreign aid on human resources for health: Experience and implications

Wang Xiaolin^{1*}, Zhu Jiming² and Zhang Deliang¹

¹International Poverty Reduction Center in China, Beijing, 100028, China.

²Department of Public Health, University of Oxford, Oxford, OX3 7LF, United Kingdom.

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China's foreign aid in terms of Human Resources for Health (HRH) is an important part of the country's foreign assistance and reflects the basic philosophy and innovative mechanism of China's foreign aid, as well as being a typical mode of South-South cooperation. This paper systematically reviews the three types of China's HRH aid: Foreign-aid medical teams; Chinese government scholarships for supporting students from developing countries to study in China; and holding seminars on health for officials, conducting technical training and providing internship opportunities in China. Through the review and summary, we establish the reasons behind China's HRH success in the past half century. China has used its comparative advantages, paid attention to selecting appropriate technologies, fully affirmed traditional Chinese medicine, focused on establishing relevant primary health care systems and attached great importance to internationalism as a means of enhancing cohesion and preventing recipients' medical brain drain. At present, a three-pronged Chinese foreign-aid framework for HRH has been formed, covering medical officials (focusing on health systems and policy), medical students (focusing on the future, nurturing the elites) and medical teams (responding to emergencies and meeting current demand). The model of China's foreign assistance in this sphere is a method for enhancing the effectiveness of international development assistance, improving the assistance framework, and enriching and innovating in terms of the assistance framework in other fields.

Key words: Aid, health, human resources, China.

INTRODUCTION

In recent years, as developing countries are having an increasingly prominent role in the world economy, South-South cooperation has attracted more attention. In particular, as an emerging economy, China is playing a more substantial role in this South-South cooperation. By 2010, through offering non-reimbursable assistance, interest-free loans and preferential loans, the Chinese government had provided assistance to more than 160 countries in Africa, Asia, Europe, Latin America, the Caribbean and Oceania.

The basic principle underpinning Chinese foreign aid is "Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime". China always

aims to assist recipient countries in improving their capacity for independent development and, in order to do this, recipient countries depend on technologies and talents. Therefore, China attaches great importance to assistance in human resource development. China's foreign assistance in terms of HRH for many developing countries has enhanced the capability of the recipient countries, promoted health development, improved the health of people in the recipient countries and also enriched the form and content of international development assistance. In-depth analysis of China's experience in offering foreign aid on HRH will not only enhance the efficiency of the assistance and improve its architecture

*Corresponding author. E-mail: wangxl@iprcc.org.cn.

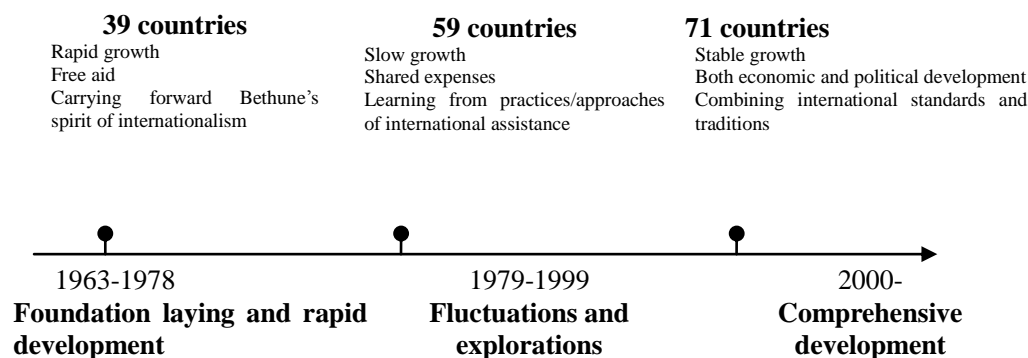


Figure 1. Development Stages of China's Foreign-Aid Medical Teams. Source: author.

and the approaches of the international community, but will also optimize these aspects of foreign aid by the Chinese government. The literature in Chinese and foreign languages on China's development assistance, however, mainly focuses on China's investment in infrastructure, energy development and other economic development fields, with few systematic reviews of China's HRH-focused foreign aid. This paper attempts to fill this gap in the existing research.

China's HRH foreign aid is mainly of three types: foreign-aid medical teams; Chinese government scholarships for supporting students from developing countries to study in China; and holding seminars on health for officials, conducting technical training and arranging intern training in China. This paper analyses the three foreign assistance modes one by one and finally summarizes the experiences and implications.

Foreign-aid medical teams

Foreign-aid medical teams are one of the main forms of South-South cooperation and a major mode of China's foreign aid in the field of HRH. Chinese medical teams not only offer medical services abroad, but conduct training through on-site teaching (Ren, 2003). Since China sent its first medical team to Algeria in 1963, the country had sent medical teams and conducted 21,000 medical personnel visits to 69 developing countries by the year of 2010, offering diagnosis and treatment services for 260 million people in the recipient countries.¹

¹ There is a slight deviation in the specific statistical data regarding the number of China's foreign-aid medical teams offered by different scholars and sectors, but they are extremely close. According to the data provided by the Ministry of Commerce, China has sent medical teams to 69 countries. The figure given by Li Anshan's article (2009), however, is 71. That is mainly because China planned to send medical teams to Angola and Ghana in 2007 and 2008 respectively, but the plan was delayed due to certain restraints. These two countries, however, were covered in the statistics produced by Li Anshan (2009).

Brief history

The history of China's medical team assistance can be divided into three periods (Figure 1):

1963-1978, the period of foundation laying and rapid development

During this period, with a weak economic foundation, China placed great importance on the spirit of internationalism, utilized huge human and material resources and sent a large number of medical teams to African and other developing countries. As for the medical teams in this period, we can learn from what Premier Zhou Enlai said when he met with the first foreign medical team: "You should work better, take the health of the Algerian people as that of Chinese people... you should learn Bethune's Spirit." As China's medical teams carried forward 'the spirit of Bethune'² that came out of the Anti-Japanese War in China, they won a high reputation in the African countries and started a new direction in China's diplomacy in the combined threats of the US and the USSR.

1979-2000, the period of fluctuations and explorations

After the ordeal of the Cultural Revolution, the Chinese

² Norman Bethune (1890-1939), a member of Communist Party of Canada, is a well-known thoracic surgeon. In response to the rise of German and Italian fascists in Spain in 1936, he went to the frontline to serve in the anti-fascist brigades in the Spanish Civil War. After China's Anti-Japanese War broke out in 1937, he led the Canadian and American medical teams to China in early 1938 and arrived in Yan'an at the end of March. Soon after that, he went to the Jinchaji Border Area, where he worked for more than one year. He set a good example in spirit of sacrifice, dedication and a high sense of responsibility. He became infected whilst undertaking emergency surgery on a wounded person, dying in Tang County, Hebei Province on 12 November 1939. China's founding leader Mao Zedong specially wrote "In Memory of Norman Bethune", which was selected as a part of the Chinese textbooks. His story is well known in China and has affected subsequent generations.

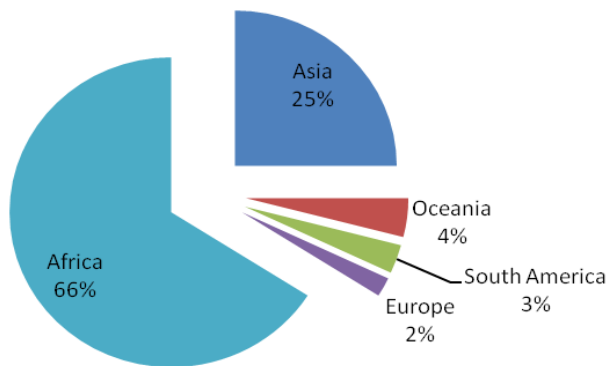


Figure 2. Distribution Map of China's Foreign-Aid Medical Teams. (Asia: 25%; Oceania: 4%; South America: 3%; Europe: 2%; Africa: 66%). Source: data from Li Anshan's article (2009).

economy was shattered and the guideline changed from taking class struggle as the central task to focusing on economic growth. China's own economic and political development and the changes in the international environment during this period, including the end of the Cold War and political instability in some African countries, resulted in fluctuations in development and adjustments to China's foreign aid through medical teams. Against this background, China gradually adopted the international practices and methods of medical assistance. During this period, there was a significant reduction in new medical teams sent abroad. From 1988 to 1995, China did not send any medical teams to African countries. Meanwhile, foreign medical aid was no longer provided for free, and the expenses were shared by both sides.

Since 2000, the period of comprehensive development

The China-Africa Cooperation Forum in 2000 and the promulgation of the Beijing Declaration marked the establishment of a new comprehensive partnership between China and Africa and the beginning of a new era in China's foreign aid. China's foreign-aid medical teams underwent stable development. During this period, while taking political and economic factors into account and learning from international practices and methods, China's foreign aid through medical teams paid more attention to maintenance of their traditions and characteristics. The increase in medical teams sent abroad was not as pronounced as that in the 1970s, but the foreign-aid approaches became richer. For example, in the past, the HRH training was mainly conducted by medical teams in Africa. Now, thanks to the rapid economic growth of China, systematic training for a large number of people from the recipient countries can be conducted in local areas of China. This will be discussed in detail later

in this paper.

Distribution

Chinese foreign-aid medical teams mainly go to Africa. The Chinese medical teams sent to Africa account for two-thirds of the total sent by the Chinese government, those sent to Asia accounts for one-quarter, and those sent to Oceania, the Americas and Europe account for less than 10% (Figure 2).

Characteristics of HRH training by foreign-aid medical teams

With more than half a century of development behind them, China's foreign-aid medical teams and their HRH training now have many distinctive features:

Capacity-building-oriented approach: Among the eight principles of China's foreign aid, Article IV says, "the Chinese government's foreign aid is not intended to result in the recipient countries' dependence on China, but to help recipient countries gradually become self-reliant and economically independent". Article VII states that, "the Chinese government promises to make relevant people of recipient countries master the technology while providing any technological aid". This has been the case right from the beginning. In June 1965, when he met with the medical team in his visit to Zanzibar, Premier Zhou Enlai pointed out that, "the Chinese medical team will leave sooner rather than later. We need to train medical personnel in Zanzibar so that they can work independently". The aim therefore was to create "a medical team that will never leave". After that, "a permanent medical team" became the guideline of China's foreign-aid medical teams. The medical teams always trained medical personnel in the recipient countries as an important part of their work. From the very beginning, therefore, it was one of the priorities of the medical teams' work to build the recipient countries' own capacities. China's foreign-aid medical teams taught them about new technologies and trained local doctors, gradually guiding them to practice surgery independently.

Chinese diplomacy: Foreign aid to any country is affected by domestic politics and the international situation. China's foreign-aid medical teams have successfully promoted South-South cooperation and played a positive role in promoting China's entry into the UN, also safeguarding national sovereignty in regard to the Taiwan issue.

Promotion of traditional Chinese medical science: Traditional Chinese medical science has a unique advantage for underserved recipient countries. Acupuncture is a good example. China built an acupuncture centre in the

Table 1. Chinese government scholarships.

No	Student type	Duration of the major studies	Duration of Chinese learning	Duration of scholarships
1	Undergraduate	4-5 yrs	1-2 yr(s)	5-7 yrs
2	Graduate	2-3 yrs	1-2 yr(s)	3-5 yrs
3	Doctoral	3 yrs	1-2 yr(s)	4-5 yrs
4	Chinese language students	1-2 yr(s)		No longer than 2 yrs
5	General scholars	1-2 yr(s)	1 yr	No longer than 2 yrs
6	Senior scholars	1-2 yr(s)	1 yr	No longer than 2 yrs

capital of Tunisia in 1994 as required by the Tunisian government. Taking advantage of traditional Chinese medicines, medical teams have promoted traditional Chinese medical science and took Chinese herbal medicines into African countries.

Carrying forward the spirit of internationalism: From the first aid teams, Premier Zhou Enlai set the spiritual tone of “carrying forward the spirit of Bethune”. Compared to western doctors, Chinese doctors took very little salary, but they always worked hard to fully serve the local people and won a good reputation. They also set a good moral example in terms of HRH training and enhanced the cultivation of medical ethics and cohesion.

Helping recipient countries improve the health system: China’s foreign-aid medical teams helped recipient countries to establish new departments in hospitals and new disciplines at universities. Meanwhile, China exported to Africa its rural primary health care, which was based on the “barefoot doctor”³ experience (or at least the concept or idea) seen in China in the 1960s and 1970s. For example, China’s mobile medical teams seriously implemented the basic policy of focusing disease prevention and medical care in rural areas.

Chinese government scholarships

In order to enhance the understanding and friendship between the Chinese people and peoples from other countries, as well as develop exchanges and cooperation between China and other countries in politics, economics, culture, health and trade, the Chinese government set up a series of scholarship programmes in the 1980s to provide assistance for foreign students, teachers and scholars to study and research in Chinese universities.

³ **Barefoot doctors** (chijiào yīshēng) are farmers who received minimal basic medical and paramedical training and worked in rural villages in the People’s Republic of China. Their purpose was to bring health care to rural areas where urban-trained doctors would not settle. They promoted basic hygiene, preventive health care, and family planning and treated common illnesses. The name comes from southern farmers, who would often work barefoot in the rice paddies.

Moreover, the Chinese government’s scholarships are one of the forms of China’s human resources assistance to developing countries.

Implementation mechanism

The Ministry of Education is responsible for providing Chinese government scholarships and entrusts the China Scholarship Council to take charge of student enrollment and management of day-to-day affairs. Foreign students who were awarded Chinese government scholarships have studied in 164 universities. In these universities, foreign students study more than 300 disciplines. There are six kinds of Chinese government scholarships for foreign students: undergraduate, graduate, doctoral scholarships for learning the Chinese language, general scholars and senior scholars.⁴ The duration of the major study and scholarships for various types of students are shown in Table 1.

From 2001 to 2008, the Chinese government scholarships covered 171 countries and the number of the students who received the scholarships witnessed a rapid growth, from 5,841 in 2001 to 13,516 in 2008. The proportion of international students from African countries increased from 21% in 2001 to 27.6% in 2008, and the proportion of medical students also showed an upward trend. It is estimated that the proportion in 2001 was about 8.9%, but by 2008 this had risen to 12.8% (Table 2). Growth in the absolute number and the relative proportion at the same time fully reflects the increasingly important role of Chinese government scholarships in

⁴ According to the “Notice on Adjustment of the Standards for Living Expenses Covered by Scholarships for Foreign Students” (2008) jointly issued by the Ministry of Education and Ministry of Finance, since 1 January 2008, the standards for living expenses of foreign students who enjoy Chinese government scholarship were adjusted to: 1,400 Yuan per person per month for undergraduates and Chinese language students, 1,700 Yuan per person per month for graduates and general scholars, and 2000 Yuan per person per month for doctoral students and senior scholars. Students enrolled after this date have been given a one-off relocation payment of 1,500 Yuan in the first month after one year’s study in China, and those who stayed in China for less than one academic year get a one-off relocation payment of 1,000 Yuan in the first month. All the Chinese government scholarships are provided by the central government.

Table 2. International students under Chinese Government scholarship programmes.

Year	Countries and regions	International Students	#Asia	#Africa	#Europe	#America	Oceania	Medicine*
2001	155	5841	2946	1224	1371	256	44	520
2002	153	6074	3049	1256	1429	281	59	475
2003	153	6153	3076	1244	1442	305	86	569
2004	154	6715	3347	1317	1580	394	77	665
2005	159	7218	3501	1367	1761	506	83	1255
2006	165	8484	3965	1861	1858	661	139	1504
2007	168	10151	4171	2733	2107	954	186	1328
2008	171	13516	5628	3735	2628	1221	304	1733

Source: Based on the materials in the 'Overseas Study' column of the China Education Yearbook, 2002-2009. * Figures for medical courses are estimated: medical students' proportion in the total foreign students that year multiplied by the number of international students in the Chinese government scholarship programme that year.

foreign-aid HRH training.

Unlike with the foreign-aid medical teams, Chinese government scholarships are mainly provided for students from Asian countries because geographical proximity and a similar culture make it easier for Asian countries' students to study in China. In recent years, however, the proportion of European students has grown rapidly.

Special role of scholarships in HRH training

Systematic training of high-quality HRH for other developing countries to adapt to new requirements of recipient countries: In 2004, the Outline for Educational Development 2003-2007, promulgated by the Ministry of Education, set the working principles for foreign people to study in China: "Expand the Scale, Improve the Level, Guarantee the Quality and Standardize the Management". After that, the number of overseas students in China witnessed a rapid growth. In 2007, 65% of the Chinese government scholarship students had different degrees of education, and this proportion is much higher for the proportion of degree students in the total overseas students in China at 34.9%. In 2007, the proportions of doctoral and graduate students under scholarship programmes increased by 105 and 85% respectively over 2003 (Jianhua and Yi, 2008). The proportion of degree students in the medical field also showed an upward trend.

When the above proportions increased, the quality improved significantly. This is because international students were mainly placed in universities with good teaching conditions, standard management systems and a high quality of education. There were 137 universities and colleges receiving scholarship students in 2008.

The foreign students from recipient countries who study in the best universities in China will have better foundations, especially medical students who can receive

a Chinese government scholarship for up to seven years and will possibly become internationally competitive health care personnel. Compared with the temporary training conducted by China's foreign-aid medical teams, these foreign students will undoubtedly have more solid professional skills, and their long-time residence in China will lead to a better understanding of Chinese medical systems and traditional culture, especially in terms of students who major in traditional Chinese medicine. We can say that the Chinese government scholarship is the most important means to train future medical professionals for recipient countries, particularly African ones. With the development of Africa, these talents will play an increasingly important role.

In order to meet this future demand for higher qualified personnel, in accordance with the work plan of the Ministry of Education for overseas students' study in China, the Chinese government is aiming to raise the total number of foreign students in China to 500,000 by 2020. The Ministry of Education requires universities and colleges to include foreign students' study in China in their overall development planning.

Giving significant importance to the advantages of the universities of traditional Chinese medicine: The medical students with Chinese government scholarships are mainly at Beijing University, Beijing University of Chinese Medicine, Guangzhou University of Chinese Medicine, Southern Medical University, Sun Yat-sen University, Guangxi Medical University, Nanjing University of Traditional Chinese Medicine, Dalian Medical University, China Medical University, Shanghai Medical University, Tianjin Medical University, Tianjin University of Traditional Chinese Medicine and Xinjiang Medical University. Some overseas students studying at a comprehensive university may also major in traditional Chinese medicine. Such arrangements emphasize the significant role of traditional Chinese medicine teaching in

Table 3. Human resources assistance to Africa.

Year	Event	Assistance to Africa
2000	1 st Ministerial Conference of Forum on China-Africa Cooperation	Establish the Africa Human Resources Development Fund to help African countries train professional talents
2003	2 nd Ministerial Conference of Forum on China-Africa Cooperation	Train 10,000 African talents within 3 years
2006	Beijing Summit and the Third Ministerial Conference	Train 15,000 African talents within 3 years
2009	4 th Ministerial Conference of Forum on China-Africa Cooperation	Train 20,000 African talents within 3 years; Train 3,000 African health care workers

Sources: Yearbook of Forum on China-Africa Cooperation.

China's HRH-focused foreign aid, take full advantage of China's comparative advantages and meet the needs of recipient countries.

OFFICIAL SEMINARS AND TECHNICAL TRAINING IN HEALTH FIELDS

Brief history

The scale of China's technical training courses in the health sector for recipient countries and the practical arrangements for interns in China was very small at the beginning. Instead, as required by the governments of recipient countries, foreign doctors who received training abroad from China's foreign-aid medical teams came to China to undertake training to further enhance their skills. In 1973, for instance, the Ministry of Foreign Economic Liaison held a work forum on China's training on foreign interns in Nanjing and formulated the "Provisional Regulations on the Training of Foreign Interns". Later, in 1975, Jiangsu Province received 14 scholars from Zanzibar (Ningjun, 2009). From the very beginning, the Chinese government focused on the needs of recipient countries in giving foreign interns technical training in the medical field.

China launched large-scale official seminars and technical training programmes in the medical field in the late 1990s and early 2000s, which were an important part of China's large-scale human resources training in Africa. The establishment of the African Human Resources Development Fund in 2000 was a landmark in China's large-scale human resources training in Africa. After that, China's training in Africa involved more than 150 disciplines in over 20 fields, including economics, trade, agriculture, health, diplomacy, education, public administration, culture, technology, environmental protection, transportation, non-governmental organizations etc. It could be said that the training now covers almost all the fields pertinent to national social and economic development. Since 2000, China has promised to train

45,000 African talents (Africa Magazine, 2010).

Table 3 reviews China's specific commitments to creating African talents after the fund was established in 2000. Although no detailed figures on medical personnel for official seminars and technical training are provided, medical human resources training is undoubtedly an important part of the commitment to train 45,000 African talents. At the 2009 Ministerial Conference of the Forum on China-African Cooperation, the Chinese government clearly presented its commitment to train 3,000 health care workers in Africa.

Training Programme Implementation Mechanisms

The Ministry of Commerce is responsible for arranging official seminars, technical training and intern training in China. The provincial, municipal and regional health departments implement the programmes under the coordination of the Ministry of Health. All China's training programmes have clear themes and trainees, which are determined by the Ministry of Commerce according to the needs of recipient countries and China's specific conditions. There are a complete set of procedures and strict rules for student selection. First, official recommendations from recipient countries' relevant departments are needed. After preliminary examination by the Economic and Commercial Counselor's Office of the Embassy of China, training is confirmed by the Training Centre of the Ministry of Commerce, which helps with ticket reservations and other related procedures. Most students are division/department-level middle or high-grade officials and management personnel, also including ministry-level officials and general technicians as well (Africa Magazine, 2010).

Case study of Shanxi Province

The International Exchange Centre of Shanxi Province Health Department is the implementing organization for official seminars, technical training and intern training in

the medical field. It began to undertake the task of foreign-aid HRH training for the Ministry of Health in 1998. Over the past 12 years, it has undertaken 29 courses on acupuncture, integrative medicine for the treatment of rheumatology, massage and rural health insurance. So far, 895 medical technicians and officials from 119 countries have received the training.

It can be observed that the training programmes focus on traditional medical sciences that China has particular expertise in, as well as integrative medicines and primary health care in rural areas. Curriculum design highlights the disciplinary advantage of the local area and China as a whole and takes the needs of many developing countries into account, especially African countries. At the beginning of the training, the centre periodically adjusts training contents according to feedback from the trainees. The training programmes are interspersed with various seminars and in-depth field surveys in different provinces, municipalities, counties and villages.

The most recent course was the 2010 Training on Clinical Application of Acupuncture and Massage Skills for Developing Countries, which also highlighted traditional Chinese medical science. A total of 32 people from 14 countries received the training, including people from Nepal, Thailand, Burundi, Ghana, Mali, Uganda, Seychelles, Sierra Leone, Palestine, Benin, Tanzania, Nigeria, Pakistan and Eritrea. Most of the trainees were from the African countries.

Teaching contents included the definition, origin, development and present situation of acupuncture; the basic theories of traditional Chinese medicine (yin and yang, five elements, organs, blood, seven emotions and six carnal desires, four clinics and eight principal syndromes), circulation, distribution and functions of meridians and collaterals, the positioning, indications, acupuncture, moxibustion of acupoints, cupping and massage overview, basic skills, massage methods for common children diseases, acupuncture and practice skills. In addition, the centre added clinical practice to meet the requirements of those trainees with experience in the field of acupuncture and massage.

The trainees made positive comments on the training process. According to the middle/late-term questionnaire survey, more than 90% of the trainees were satisfied with the training contents, methods and demonstration classes, 95% of the trainees were satisfied with the nursing teaching, 100% of the trainees were satisfied with the accommodation and 90% of them were satisfied with the catering services. An event which happened during the training process provides more persuasive evidence to show that China attaches importance to moral education and the spirit of internationalism in foreign-aid human resource training. At 20:58 on 5 June 2010, a 4.6-magnitude earthquake occurred in Yangqu County, Taiyuan, which was felt strongly in the training base Taiyuan City. Although it was not a strong earthquake, most of the trainees had emotional instability. The centre

adopted a series of measures to comfort the trainees and the deputy director was on duty in the student residences. The staff told the foreign trainees that everyone was an international family and would face these events together. This greatly eased the participants' fear and anxiety: "At this special moment, you chose to stay with us instead of your own families. We have nothing to fear. Thank you." This trainee's words encouraged all the participants that day.

EXPERIENCE AND IMPLICATIONS

At the 2010 Global South-South Development Expo held in Geneva, Switzerland, the UNDP Special Unit for South-South cooperation awarded the Ministry of Health the Honour Medal for Health Development in South-South cooperation for China's outstanding contribution to the medical field. Clearly then, through the above three approaches, China has provided organic three-dimensional HRH assistance to recipient countries and a clear division of functions has been achieved. Medical teams are sent mainly for short-term and immediate assistance, with most of the trained medical personnel having practical skills and assisting and gradually independently undertaking the task of medical service, as well as carrying forward the spirit of Bethune internationalism as well. Secondly, Chinese government scholarships are provided mainly for systematic training of high-level officials of other countries in the medical field, giving them the skills to aid the development of recipient countries. Such scholarships have a long-term strategic function in the development of health human resources. Finally, seminars for officials focus on training management personnel in medical treatment techniques and public health as well as health policies, improving recipient countries' medical treatment to enhance the recipient countries' health care level from a system and policy perspective.

Based on the analysis of Chinese foreign assistance in HRH, combined with the present situation of international development assistance and related problems, this paper will review the experiences and implications of China's foreign aid of health human resources in the following paragraphs, and will focus on China's unique and innovative characteristics in providing foreign aid in terms of HRH. As for the generally accepted experiences and implications (such as attaching importance to capacity building and avoiding aid dependence), detailed systematic demonstration and analysis can be found in much of the Chinese and foreign literature, so we do not repeat such matters here.

Giving Importance to the Role of China's Comparative Advantages and Taking Full Advantage of Traditional Medical Science

Many recipient countries have relatively underdeveloped

economies and imperfect medical facilities, also lacking medicines. Modern western medical diagnosis and treatment, however, are largely dependent on complex medical equipment and expensive drugs. To encourage innovation, many western medicines have long-term intellectual property protection and a large number of western multinational pharmaceutical companies have strong market power. Moreover, the measure of including drugs in the scope of patent protection is a major development of the global intellectual property system, which has greatly encouraged technological innovation in the pharmaceutical industry and promoted the rapid growth of corporate profits. This is a serious impediment to access to the benefits of medicine and technological innovation for poor people in developing countries and seriously affects the health rights of the majority of poor people. As a result, these factors have increased the burden of recipient countries in developing their health industries.

Compared to the western medicine and pharmaceutical field, China has a long way to go to reach the level of developed countries, and this is still true today, not to mention in the 1960s and 1970s when China first started its foreign aid programmes. However, there is no doubt that China has competencies and competitiveness in the field of traditional medicine. Chinese herbal medicines used for thousands of years in China have low costs and less technical barriers, whilst the materials can be collected locally. Meanwhile, Chinese medical diagnosis and treatment do not always need complicated expensive equipment. For example, acupuncture is simple, convenient, inexpensive and effective. Simple devices can have magical effects. For treatment of malaria, AIDS and other refractory diseases, traditional Chinese medicines have also had a good effect and been welcomed by the African people. Although there are still some disputes regarding traditional Chinese medicines in the medical aspect, traditional Chinese medicine has certainly played a positive role of linkage in China's HRH-focused foreign aid. Most of China's medical teams contain traditional Chinese medicine doctors, and sometimes all the team members are such doctors. A large proportion of the foreign students from recipient countries are also learning traditional Chinese medical sciences. It can be said that, through giving full play to its core competencies and competitiveness in the field of traditional Chinese medicine, according to the recipient countries' actual situations and the features of inexpensiveness, effectiveness and low technical barriers, China's assistance has greatly improved the health status of the recipient countries and enhanced the spread and influence of traditional Chinese medicine.

Carrying forward the spirit of medical assistance and preventing brain drain

The outflow of human resources is a serious problem for

health care systems in many African countries. The 2006 World Health Report compared the HRH of 10 sub-Saharan African countries (Angola, Cameroon, Ethiopia, Ghana, Mozambique, Nigeria, South Africa, Uganda, Tanzania and Zimbabwe) and discovered that doctors who emigrated to eight OECD countries (Australia, Canada, Finland, France, Germany, Portugal, the UK and the US) on average accounted for 23% of the total doctors in the countries. The highest proportion was found in South Africa, which reached 37%. Such a high proportion of brain drain will have a fatal effect on the existing fragile medical systems of many African countries.

China's foreign aid in HRH, on the other hand, causes little brain drain. The main reason is the language barrier. Many African countries had been colonies of the UK, France and other countries and the linguistic similarities therefore make it easier for well-trained doctors and nurses to emigrate to developed countries. Language is a natural barrier preventing the brain drain of recipient countries in the Chinese context. Furthermore, China attaches great importance to the cultivation of ethics and dedication in the assistance of HRH. The reasons behind China's emphasis in this aspect are, on one hand, its traditional culture and, on the other, western humanitarian aid. Canadian doctor Norman Bethune is a well-known person in China and received widespread praise. Bethune insisted on rescuing the wounded and civilians in the dangerous battlefield of Anti-Japanese War and finally died in China because of surgical infection. This spirit of internationalism influenced the spirit of all Chinese medical teams to some extent, especially in the 1960s and 1970s. With such a spirit, China's foreign-aid medical teams went to Africa, overcame the difficult conditions, cultural differences, climate differences and many other difficulties, and conducted hands-on training of medical personnel in Africa to offer assistance for patients there. Such example, such internationalism and patriotism are themselves a part of China's foreign aid of HRH and play an effective role in enhancing the cohesion of the recipient countries' medical personnel and in preventing brain drain.

The importance of primary health care

Compared with developed countries, developing countries have a larger demand for health care but less health care access, equity and human resources. With underdeveloped economies and limited medical financing capacities, it is an effective way of improving the public's health depending on primary medical care. Although there is no detailed data to support this, three-quarters of medical problems can usually be solved by community doctors with assistance of trained family members.

In the past, China was seriously short of resources but saw greatly improved public health through the development of primary health care. China's model of the

“barefoot doctor” was a good example of primary health care. China has brought such a tradition of attaching importance to primary health care to its foreign aid in developing HRH and China’s foreign-aid medical teams provide medical assistance through combining on-site and mobile services. This mobile medical service is similar to community medical care. It is mainly provided in rural areas and plays a positive role in expanding access to medical care for the public in poverty-stricken areas with inconvenient traffic, spreading knowledge of disease prevention and health care and building the basis for HRH development. Apart from shortage of devices, medicines and medical personnel, another important factor restricting the improvement of medical services in African countries is the shortage of a functioning medical system to deliver relevant medical services. China’s mobile medical service is the transmission of an effective mechanism for relevant health care. Such a mode of attaching importance to primary health care can be regarded as a wide medical human resources training for the people including professional medical personnel.

Use of appropriate technologies

Restricted by the slow economic development, it is unrealistic for African countries to be expected to widely use most advanced technologies, equipment and drugs. At the same time, the rapid development of medicine and the market will sometimes cause excessive use of some medical resources, creating unnecessary waste. China is also a developing country and has rich experience in this field. China selects appropriate technologies and high cost-efficiency fields in providing assistance for HRH, and thus the effect is significant.

It should be noted that the above four aspects are not isolated, but are closely related to each other in China’s HRH-focused foreign aid. Use of appropriate technology and inexpensive effective Chinese herbal medicines is based on the basic state of China and the recipient countries and China’s comparative advantages. The relevant health service system focuses on primary health care. Meanwhile, the spirit of medical assistance helps to give full strength to the role of HRH in communities, rural

areas and poverty-stricken regions without transport infrastructure. In this way, the spirit and the primary health care promote each other. China’s three-dimensional integrated experience, covering the positioning of comparative advantages, selection of appropriate technologies, efficient matching system and medical ethics, is an important and enduring facet of China’s foreign aid over the past half century. It has opened up a unique way for South-South cooperation and provided a typical example for enhancing the effectiveness of and innovation in international development assistance.

REFERENCES

- “China’s Aid in Africa Pays More Attention to Teaching Fishing” (2010) African magazine, site accessed: January 2011. http://www.africa518.com/html/2010-12/2379_2.html.
- “Premier Wen Jiabao Puts Forward Eight Measures to Promote China-Africa Cooperation” (2009). Xinhua Net, site accessed: January 2011. http://news.xinhuanet.com/world/2009-11/08/content_12411492_1.htm.
- “Yearbook of Forum on China-Africa Cooperation” (2009), official site of Forum on China-Africa Cooperation, site accessed: January 2011. <http://www.focac.org/chn/ltada/ttjj/t584467.htm>.
- Foreign Aid Division of the Ministry of Commerce (2010). “Providing Sincere and Selfless Assistance to Promote the Construction of A Harmonious World”, China Econ. Trade Herald p.15.
- Jianhua X, Yi Z (2008). “Conscientiously practice the scientific concept of development for good and fast development of international students’ study in China - Interview with Deputy Director-General Liu Baoli of International Cooperation and Communication Department of the Ministry of Education” World Educ. Inform. 6:12-14.
- Ningjun W (2009). “China’s Foreign-Aid Medical Research (1963-2003) - Jiangsu-oriented”, Master’s Thesis at Huazhong Normal University, 2009
- Ren M (2003). “China’s Foreign-Aid Medical Team Becomes A Model of Cooperation with Third World Countries”, China reports, site accessed: January 2011 <http://www.cctv.com/lm/522/41/85901.html>.
- Zhang C (2010). “Medical Diplomacy and Soft Power Building - An example of a Chinese Medical Team in Africa” Modern Int. Relat. 3:49-53.