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Strengthening Health Security in APEC through Rural Health Workforce Management, Attraction and Retention Skills Training

Project final report

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I. The Symposium

"International Symposium for Rural Health Human Resource Development in Asia-Pacific Region" has been successfully convened and the proposed objectives have been successfully met in the City of Meishan, Sichuan Province on September 8to 9, 2012. Totally 180 participants attended the symposium, including international participants and experts from Australia; Canada; Hong Kong, China; Malaysia; Mexico; The Republic of the Philippines; Chinese Taipei; Thailand; United States; Viet Nam and domestic officials and experts from health human resource administrative departments of local governments of China. The symposium agenda included one day and a half indoor meeting a half day's onsite visit. There were a total of 15 Chinese domestic and international experts making topical presentations covering issues pertaining to rural health human resource management and development in Asia-Pacific Region and the status quo, and development trend of the healthcare information system establishment and communication. The speakers also interacted with the other participants in the manner of questions and answers; besides, there were 5 officials on DG level from HHRDC, MOH, the Health Departments of Ningxia Hui Autonomous Region and Hubei Province of China taking turns to moderate the symposium and each of them shared their working experience about the management and development of rural health human recourses. Evidently, the symposium has successfully made a platform and an opportunity for APEC economies to discuss and share the advanced knowledge, practice and experience in strengthening their rural health development and enhanced the capacity building of the workforce of rural health development in this region. Based on the survey for participants' satisfaction, over 90% of Chinese domestic participants and all of the international participants considered the symposium fully met their needs.

At the preparation stage, a need assessment survey for the symposium was conducted to identify the most desired topics to be covered in the symposium agenda. 9 member economies submitted their questionnaires. The consultant employed for the project analyzed these feedbacks and identified the topics to discuss at the symposium, which includes financial and non-financial incentives for the retention of rural HRH, participation of multi-stakeholders to support the management and development of rural HRH, such as private sector and NGOs and experience in development of HRH management and projections tools and kits etc.

During the symposium, an evaluation survey on the symposium was conducted by the expert from BWW. The survey found that 87.2% of the domestic participants and all of the international participants considered this symposium as suitable, or very suitable to their

needs. Domestic participants considered it as an opportunity to broaden academic perspectives and learn new trends of health human resource management and information about building the healthcare information system; On the other hand, international participants viewed the information about building the healthcare information system and the new friends made and the new trends learned about health human resource management as major achievements of the symposium.

15 speakers made brilliant speeches at the symposium：

Dr. SHEN Ji, Director General of the Health Department of Sichuan Province. The topic of his speech is Highlight on Priorities and Difficulties--Multiple Measures to Accelerate Development of Health Workers in Rural Areas.

Mr. XU Peihai, Director of the General Office, the Department of General Administration, Ministry of Health, China. The topic of his speech is Current Situation and Developing Trend of Health Information System in China.

Dr. Kim Webber, Health Strategy Consultant, Australia. The topic of her speech is Recruitment and Retention of a Rural Health Workforce

Dr. Felix Li，Minister Counselor, Canada Embassy in China. The topic of his speech is Rural Health Human Resources Development in Canada Rural Health Human Resources Development in Canada.

Dr. Christine Joan R.CO，Team Leader of the International HRH Affairs, Planning and Standards Division，Health Human Resource Development Bureau, Department of

Health, Philippines The topic of his speech is Rural Deployment Programs as a Philippine HRH Management Strategy

Dr. Krisada SAWAENGDEE, Researcher of International Health Policy Program, Thailand. The topic of her speech is HRH Development in Thailand and Experiences in Rural HRH management.

Dr. NGUYEN Lan Huon, Principal Expert on HRH, Ministry of Health, Vietnam. The topic of her speech is Current Situation and Policies to Develop Health Workforce for Mountainous/Hardship Areas.

Mrs. Su-Wen Teng, Director of the Bureau of Nursing and Health Services Development, Department of Health, Chinese Taipei. The topic of her speech is Health and Medical Care in the Remote Area and Off-Shore Island in Chinese Taipei

WANG Guojing, Deputy Director-General of the Health Department of Zhejiang Province. The topic of his speech is To Enhance the Development of Rural Health Workforce with Innovative Approaches

Mr. WANG Shufeng, Director of the Research Center of the Health Human Resource Development Center, MOH, China. The topic of his speech is The Current Situation and Policies of the Rural Health Workforce Management, Attraction & Retention in China

HE Qiong, Deputy Director of the Project Demonstration Standing Office for the Healthcare Information in Counties. The topic of her speech is Regional Digital Healthcare Pilot County Project.

Dr. CHANG Wen-Hsin, Vice President of Mackay Memorial Hospital, Chinese Taipei. The topic of his speech is Hospital Digitalization: Experience Sharing.

Dr. HUNG Kei-Ching Kevin，Clinical Assistant Professor，The Chinese University of Hong Kong the topic of his speech is Retention of Rural Health Workforce and Building-up of a Supportive Working Condition.

Fany Selene Azcorra Aguilar, Coordinator of Health Caravans Program in the Yucatan State, Mexico. The topic of her speech is Health Caravans: Mexican Government's Strategy for Achieving Universal Coverage.

Mr. QIN Biao, Governor of the People’s Government of Renshou County. The topic of his speech is To Actively Enhance the Construction of the Health Information System and Realize the Resources Sharing in the Health Field.

The symposium has two important findings, the first attention paid by participants towards the status quo and the development trend of healthcare information system. According to the evaluation survey in the symposium, both domestic and international participants considered healthcare information system building as one of the key areas of capacity building for the rural health human resource in the Asia-Pacific region. Mr. Peihai

XU, Director of the General Office, the Department of General Administration, Ministry of Health, China, presented the Current Situation and Developing Trend of Health Information System in China. Besides, experts and leaders from Chinese Taipei and Renshou County presented specific cases for the practice of regional healthcare information system in the rural areas. The on site visit has also further strengthened participants' impression about the training system for rural health workforce and the development of healthcare information system in the rural area. The second desire for networking and partnership on rural health human resource management and development. According to the evaluation survey in the symposium, 57.1% of the international attendees viewed the new friends they made as one of their major gains from the symposium. This to great extent demonstrated the symposium's effectiveness in networking and partnership between economies on rural health human resource management and development.

It is suggested that the International Symposium for Rural Health Human Resource Development in Asia-Pacific Region be organized in successive turns by different economies. According to the evaluation survey for the symposium, 48.7% of the domestic participants and 50% of the international participants considered it appropriate for the symposium to be held once a year and 60.2% of the domestic participants and 61% of the international participants considered it appropriate to last for 2-3 days. The project overseer is seeking chances to continue to apply for the support from APEC to undertake such kind of symposium for the capacity building in rural health human resource management and development in Asia-Pacific Region.

It is suggested that APEC play the role of financial supporter to this activity. It is also proposed that the secretariat widen up the range of project fund utilization in the future, which could extend the impact of the activities supported by APEC. For example, if APEC could provide the financial support to simultaneous interpretation for the conference or allowance for the workforce, it is believed that the impact of such activities will be enlarged in the host economies and in the region as a whole.

The outputs of this activity includes: Report of the symposium, Symposium agenda, Participant list, Participant manuals, Symposium presentation slides assembly list, (If the hard copies of files is needed, we can mail paper documents) Invoice and detail, Onsite visit summary reports.

II The project to conduct two important researches and to share the results at the symposium

Research 1 Research on the Policy Literature for the Attraction and Retention of Rural Health Workforce

In order to guide reasonable flow of health personnel, optimize the allocation of health human resources and alleviate the shortage of health personnel in rural area, communities, western area and remote area with hard life, the Chinese government has successively announced a series of policies to encourage personnel to go to places mentioned above. According to the policy framework of "Increasing access to health workers in remote and rural areas through improved retention" announced by WHO, related policies about China's health personnel attraction and retention will be integrated from four aspects of "Education, Regulatory interventions, Financial incentives and Personal and professional support".

"Implementation Suggestions on Custom Made and Directional Free Training of Medical Students for Rural Areas" issued in 2010 pointed out that since 2010, free training of medical students would be conducted in higher medical universities and colleges for three successive years, and the key was to train health personnel with general practice ability for hospitals in townships as well as medical health organizations of lower level. The project's main features include:

(1) Custom made training. The health department, human resources and social security department and financial department determine directional organizations and number of posts and work out the number of different kinds of medical students needed for free training according to the health team construction development planning and demand of local rural areas; the education administrative department discuss with the health department and development and reform department to determine schools where free training of medical students will be conducted; the health administrative department and education administrative department work together to sign contract on free training of medical students with the school;

(2) Most of the students come from rural areas. Medical students are recruited in rural areas for the free training program. Students whose native place is the place where the directional organization is located will be given priority. Students who participate in the college entrance examination will choose schools separately with separate standard for admission.

(3) Directional employment and contractual service period. Before getting admission notice, medical students for free training must sign a directional employment contract

with the training school and local county-level health administrative department and promise to work in medical health organizations at the grass root level for 6 years after graduation. After graduation, medical students for free training should return to their native place and report to county-level health administrative department according to the directional employment contract signed before they were admitted to the school. Medical health organizations at the basic level sign labor contracts with them according to related regulations, and go through related procedures and manage them according to the contract. Medical students for free training can transfer among health organizations at the basic level and the provincial (autonomous region and municipality) or rural areas during the contractual service period. Medical students for free training who fail to obey the contract and work in health organizations at the basic level after graduation should return tuition fees and pay the penal sum according to regulations, and meanwhile their breach of the contract will be recorded into personal honest file;

(4) They are entitled to favorable cost policy during their study. Medical students for free training are exempted from tuition fee, accommodation fee, and meanwhile enjoy subsidiary for living expenses. Tuition fee and accommodation fee are charged according to the standard made by local commodity price department; subsidiary for living expenses is determined by combining different conditions in different provinces. Theoretically speaking, it should be no less than the state grant standard. Expenses needed will be recorded by provincial financial department in the medical health expenses. The economy has one clinical medical undergraduate with five-year education in general practice trained for each hospital in the town of central and western part in three years (5,000 medical students for free training were recruited in 2010). Central financial department grants each student RMB 6,000 every year which is preferably used for the living expense subsidiary of medical students with free training.

Clinical rotations in rural areas during studies “Implementation Suggestions on Outstanding Doctor Education Training Plan” announced by Ministry of Education and Ministry of Health in 2012 pointed out that the economy should conduct pilot personnel training reform of general medical practitioners in rural area: we should determine a number of pilot colleges and universities where a three-year professional clinical medicine education training is conducted, and explore the “3+2” (three years of professional medical training plus two years of general practitioner training) training model of general medical practitioner assistant according to the actual demand of rural medical health service; in accordance with the requirement of “prevention, health preservation, diagnosis, treatment, rehabilitation and healthy management” of the rural medical health service, we should optimize and adjust teaching content and class

schedule, allow students to have earlier and more clinical practices, give them more opportunities for practicing in community health service centers, hospitals in townships and other medical health organizations at the grassroot level, enhance their ability of diagnosis and treatment of common disease, frequently-occurring disease, infectious disease and endemic disease as well as the ability of grass root health services, and train a number of general medical practitioners for rural area who can actually serve at the grassroot level with pertinent skills and can be retained in rural area.

Continuous professional development for rural health workers. In order to improve the ability and qualities of health worker in rural area and increase the service level of medical health organization at the basic level, the economy has successively announced some policy paper such as "Provisional Regulations on Training of Technical Personnel of Hospitals in townships" and "Basic Requirements for in-Service Training of Country Doctors" which stipulate:

1. When medical graduates from colleges, universities and secondary schools are newly allocated to hospitals in townships for clinical practice, they need to receive one-year clinical training in county-level (or above) medical health organizations or qualified hospitals in towns (townships) so that they can reach the level of licensed physician assistant (or above);

2. Health technical personnel with intermediate skills (or above) and professional skills of hospitals in townships should participate in and receive further medical education to keep updating knowledge and improving skills according to the requirements of "Regulations on Further Medical Education (Trial Implementation)" issued by Ministry of Health and Ministry of Personnel;

3. Health technical personnel of hospitals in townships should have further study for at least three months in a superior medical health organization once at least every five years. The focus is on improvement of clinical ability, disease prevention and control ability and special technical level. A credit system is applied for in-service training of health technical personnel of hospitals in townships. Each of them should get 20 credits every year;

4. Improve the lifelong learning system of economies' doctors, train doctors in terms of medical ethics and businesses and propose a registration assessment system of in-service training of doctors. The name, form, class hour, date and assessment results of doctors' in-service training activities will be registered. The training which doctors participate in should be no less than 100 class hours every two years.

In China, the mandatory policy of serving in rural medical health organizations is usually related to title promotion. “Decision of Further Strengthening Rural Health Work by the Central Committee of the Communist Party of China and the State Council” announced in 2002 stipulated “Urban doctors should serve in rural area for one year before being promoted to physician-in-charge or associate chief physician”. In 2004, Ministry of Health and Ministry of Personnel had “Regulations on Regular Rural Service of New Employees in Urban Medical Health Organizations after Obtaining Physician License” printed and released in which stated that new employees with physician license in urban secondary and tertiary hospitals (army hospitals excluded) and disease prevention and control organizations established by the government should work in rural areas for one year which can be regarded as the time in rural area required for urban doctors before being promoted to physician-in-charge.

In addition, it is an important method of having urban medical health organizations pertinently support rural health work. In 2005, Ministry of Health, Ministry of Finance and State Administration of Traditional Chinese Medicine issued, “Notice of Implementing the Project of ‘Ten Thousand Doctors Supporting Rural Health Work”, and decided to organize and carry out the project of “Ten Thousand Doctors Supporting Rural Health Work”. They planned to choose 10,000 urban doctors in three years and asked them to conduct medical health service and technical training in county hospitals and hospitals in townships with a system being formed three years later; gradually strengthen rural health personnel training, improve management level of hospitals at the basic level, try to achieve the goal of sending out a team, guiding a hospital in the right way, serving rural masses and training a group of medical personnel. According to the principle of pilot, summary and expansion, the project first has pilot work in domestic poverty alleviation development key economies and some hospitals in townships of Gansu and then gradually expands to poverty-stricken areas in central, western and eastern areas. Subsidies needed are jointly borne by the central, provincial and municipal finance departments and listed in the health expenditure budget. Every year, the central finance department provides RMB 24,000 for each stationed doctor in central and western areas. In the east area, subsidiaries needed are arranged by provincial finance departments according to local conditions. In central and western areas, every year, tertiary hospitals in the province send 5 (3 for hospitals of traditional Chinese medicine) associate chief physicians or senior physicians-in-charge to domestic hospitals which are located at poverty alleviation key development couties. One nurse can be sent if necessary. Stationed workers can have rotations after working continuously there for one year.

Financial incentives and personal and professional support. In 2002, Ministry of Health, Ministry of Education, Ministry of Finance, Ministry of Personnel and Ministry of Agriculture issued "Suggestions on Strengthening Rural Health Personnel Training and Team Construction" and formulated a series of policies which encouraged and promoted health personnel to work in rural area: graduates from different colleges, universities and technical schools who offer to work in remote areas with hard life and health organizations in townships (or lower level) can have earlier salary grading which can be higher than personnel of the same profession by 1 to 2 grades; health professional technical personnel who work in townships (or lower level) for a long time should be favored by the policy of provinces, autonomous regions and municipalities and paid according to the standard for science and technology workers in the front line of agriculture and forestry; health technical personnel who work in rural area for a long time should be favored by promotion policy; graduates from higher colleges and universities are encouraged to serve in rural area, remote area and poverty-stricken area, etc.

In 2009, the Central Committee of the Communist Party of China and the State Council put forward in "Suggestions on Deepening Medical Health System Reform" (Zhongfa [2009] No.6) that favorable policy should be made to encourage excellent health personnel to serve in rural area, urban community and central and western areas. Health technical personnel who work in townships for a long time should be appropriately favored by policies of promotion, business training and treatment.

In December, 2009, "Suggestions on Strengthening Health Personnel Team Construction" (Weirenfa [2009] No.131) stated that as of 2009, the tuition fee (student loan) of medial graduates of colleges and universities who volunteer to work in hospitals in townships of central and western areas for more than three years will be paid (compensated) by the government. Health technical personnel who work in rural health organizations should be appropriately encouraged and favored by title promotion policy; health technical personnel who work in townships (or lower level) for a long time should be favored by treatment policy. Graduates from higher medical colleges and universities should be encouraged to work in community health service organizations. Physicians and nurses who work in urban community health service organizations can take health professional skill intermediate examinations one year ahead. Different places can make favorable policies for health technical personnel working in communities in terms of title promotion and other aspects based on their actual conditions.

In March, 2010, in the paper of "Notice of Printing and Releasing Medical Health Team Construction Plan at the Basic Level with General Medical Practitioners as the Key" (Fagaishehui [2010] No. 561), details were explained about the encouragement and

guidance of graduates from colleges and universities to work in medical health organizations in towns: medical graduates from junior colleges (or above) who work in medical health service organizations in towns are given priority for standard training of resident physicians; as to graduates from colleges and universities who volunteer to work in medical health organizations in counties (or lower level) of central, western and remote areas with hard life and work for more than three years in succession, the economy will provide corresponding compensations for tuition fees and student loans according to government regulations and the affiliation system of colleges and universities, give them registered permanent residence of the county (city) and help solve the problems of spouse employment and schooling of children. Graduates from junior colleges and technical secondary schools or above who work in health organizations of remote area with hard life and domestic poverty alleviation key development counties and townships (or lower level) will be favored by salary policy according to related government regulations; actively guide resident physicians who pass the standard training to work at the basic level and they should be preferred by medical health organizations at the basic level; the problem of urban registered permanent residence will be solved for personnel who work in urban community health service organizations; personnel who pass the standard training of general medical practitioners and work at the basic level can apply for general physician-in-charge qualification. Personnel who pass the transfer training of general medical practitioners or become a registered general physician can be promoted one year ahead. According to related government regulations, the requirement for foreign language can be adjusted; research papers are not the necessity; the promotion will be mainly made according to factors such as the number of patients they treat and people's satisfaction degree; graduates from colleges and universities with work experience at the basic level will be preferred in the admission of postgraduates and in the employment of medical health organizations compared with other applicants with the same qualification.

Licensed physician employment project of hospitals in townships. In May of 2008, Ministry of Health and Ministry of Finance jointly released "Guidance Suggestions on Conducting Pilot Employment of Licensed Physicians in Hospitals in Townships" (Weirenfa [2008] No.26) and stated that as of 2007, the economy will spend 5 years in conducting pilot employment of hospitals in townships and employing licensed physicians for hospitals in townships of poverty-stricken area, without licensed physicians and with job vacancies. Central finance department set up special funds to provide RMB 20,000 for each employed physician every year and gradually make each hospital in townships has at least one licensed physician. Hired physicians are expected to

serve for five years and encouraged to keep working in hospitals in townships after the termination of the employment term.

National Development and Reform Commission, Ministry of Health and other four ministries announced "Notice of Printing and Releasing Medical Health Team Construction Plan at the Basic Level with General Medical Practitioners as the Key" (Fagaishehui [2010] No.561) , which encouraged and guided excellent medical personnel to work in medical health organizations in towns which could apply for the set up of special position for excellent professional technical personnel according to related regulations. As of 2010, general medical practitioners or current medical graduates who work in hospitals in townships and community health service centers (stations) can be assigned to special position of general medical practitioner according to related government regulations. China's unified salary system and standard are followed for personnel in special position during the employment period. Doctors in special position are encouraged to permanently work in medical health organizations in towns; general medical practitioners should be preferred for vacancies or further medical education arranged by provincial health administrative department. Meanwhile, when county medical organizations or urban hospitals recruit new employees, personnel with work experience of general medical practitioner in special position should be preferred compared with other applicants with the same qualification

Research 2 Overview of Licensed Physician Employment Project of Hospitals in Townships and Status Analysis

Since 2008 when the project was launched, a recruitment quota of 3,500 has been allocated to 20 provinces in four batches. By the end of 2010, about 2,500 licensed physicians had been employed. 1,470 (a quota of 1,500 is allocated according to the plan including 30 in Qinghai, but due to various reasons, Qinghai failed to conduct timely employment) licensed physicians in the first and second batch have worked for one year in about 1,200 hospitals in townships of 14 provinces (autonomous regions and municipalities) in the economy. Based on two facts that the employment of the third and fourth batch hasn't been finished yet and that licensed physicians only work for a short time in hospitals in townships, survey statistics of this intermediate assessment is mainly about 1,470 licensed physicians of the first and second batch.

Basic Information on Hired Licensed Physicians.48% of hired licensed physicians come from private medical organizations, including 15% from private hospitals and 28% from private clinics. 40% of licensed physicians come from medical organizations which are organized by the government, including 22% from comprehensive hospitals (most of

them are temporarily employed), 8% from hospitals in townships, 3% from infirmaries of industrial and mining enterprises, 3% from specialized hospitals, 3% from community service centers and 2% from village clinics. 11% of the licensed physicians are retirees, 4% are jobless before being employed and 2% are from other industries.

Most of hired licensed physicians are male, accounting for 76% of the total personnel; female licensed physicians account for 24% of the total personnel.

The age structure of licensed physicians is relatively reasonable. Most of them are young and middle-aged physicians aging from 30 to 39, accounting for 54% of the total personnel; then there are licensed physicians aging 30 or below, accounting for 17% of the total personnel; licensed physicians aging from 40 to 49 occupy 15%. Surely, life in some areas is hard and it is difficult to hire doctors so some licensed physicians aging 50 or above and even more than 60 are hired (mainly in Hubei, Sichuan and Xinjiang).

Most of hired licensed physicians graduate from junior colleges, accounting for 52%; then it's technical secondary schools, accounting for 30%; undergraduates occupy 17%. Junior high school graduates or graduates below junior high school who account for less than 1% are mainly hired in Sichuan.

Most of hired licensed physicians have primary title, accounting for 85.5%; physicians with intermediate title occupy for 10.6%; 15 physicians with senior title are hired in Hubei, 23 in Sichuan and 4 in Jiangxi.

Most of hired licensed physicians are mainly engaged in clinical medicine and traditional Chinese medicine, respectively accounting for 54% and 35%. There are relatively few physicians engaged in oral cavity and public health, respectively accounting for 2% and 9%.

Licensed physicians perform multiple functions in different departments. Most of licensed physicians are mainly engaged in clinical medicine in hospitals in townships with internal medicine as the core (49.6%), second to which is paediatrics (24.5%), surgery (22.8%), traditional Chinese medicine (21.0%), oral cavity (2.7%) and epidemic prevention station (3.9%). In addition, some licensed physicians are engaged in B ultrasound, nursing, five sense organs, emergency treatment and anesthesia, etc. 99.3% of licensed physicians are engaged in clinical medicine. On average, they work for 25.6 days every month, diagnose and treat 12.8 patients every day, conduct 14.5 operations every month, inoculate 87.5 people every month, conduct health and welfare for 24.6 infants every month, conduct 19.6 maternal health care cases, manage 55.4 patients with chronic disease every month, participate in 62.9 times of health education every month, train rural doctors for 1.7 days every month and conduct health check-up for 103.5 people every month. Besides, 18 licensed physicians have participated in and even take charge of

hospital management, including 3 in Gansu, 6 in Jiangxi and 9 in Hunan (one is appointed as the president of the hospital and one vice president).

The average monthly income of licensed physicians in Jiangxi (salary+bonus) is the highest; it is RMB 2,352.2. The average monthly income of licensed physicians in Gansu is the lowest; it's RMB 1,529.6. It can be seen from the minimum value, maximum value and standard deviation that different provinces have relatively great difference in average income of licensed physicians so it is with licensed physicians in each province. However, generally speaking, the salary standard of licensed physicians is well implemented in Jiangxi, Yunnan, Inner Mongolia, Chongqing and Guizhou, etc.

Performance Bonus Allocation for Licensed Physicians in Hospitals in Townships. Among 486 licensed physicians in the survey, 209 (43.0%) licensed physicians are able to participate in the performance bonus allocation of hospitals in townships. The participation rate in Hubei and Guizhou is relatively high, respectively 66.7% and 63.9% while the participation rate in Jiangxi and Xinjiang is low, both 23.1%.

Among 486 licensed physicians in the survey, 460 (94.7%) licensed physicians know that the government gives RMB 20,000 to licensed physicians as subsidiary every year. 383 (78.7%) licensed physicians can be paid in time. Provinces which do well in the payment are Anhui, Jiangxi, Hubei and Sichuan, and provinces with lower rate of timely payment are Inner Mongolia, Guizhou, Yunnan, Gansu and Xinjiang. Compared with the telephone survey result of 2009, the timely payment rate of Hubei, Sichuan, Anhui and Gansu was increased while the timely payment rate of Jiangxi, Hunan and Chongqing decreased.

51.9% of licensed physicians obtained one or more insurances purchased by health municipal and county bureaus or hospitals in townships. 80.6% licensed physicians in Jiangxi obtained insurance; the insurance coverage ratio is relatively low for licensed physicians in Chongqing, Gansu and Xinjiang.

In order to solve troubles back at home for licensed physicians and make sure they can work without any worry, various pilot places try to win favorable welfare treatment for licensed physicians including free meals, free housing, traveling allowance, paid vacation, spouse employment and children's schooling. The favorable treatment coverage is relatively high in Yunnan, Hunan and Hebei.

Among 486 licensed physicians in the telephone survey, 203 (41.8%) licensed physicians have had further study in superior hospitals or participated in short-term training class organized by superior departments. 169 licensed physicians have had further study in superior hospitals: 23 in provincial hospitals with an average further study period of 56 days; 69 in municipal hospitals with an average further study period of

92 days; 96 in county hospitals with an average further study period of 98 days; 40 in short-term training class with an average further study period of 26 days. There are more training opportunities in Hubei, Chongqing and Sichuan (Xinjiang has a greater proportion due to small number of people) while there are fewer training opportunities in Jiangxi and Guizhou, respectively 22.2% and 25.0%. Besides, there are more opportunities for having further study in superior hospitals in Hubei and having short-term training in Chongqing. Whether licensed physicians can get equal training and further study opportunities with other colleagues influences their work satisfaction and enthusiasm. The survey shows that 72.8% of licensed physicians are able to get equal and even more training opportunities than other colleagues in the same hospital do. 44.4% of licensed physicians in Guizhou tell that they gain more training opportunities than other colleagues in the same hospital do. 76.9% of licensed physicians in Hunan say that they have fewer training opportunities than other colleagues have. Assessment Incentive 73.2% of hospitals in townships take assessment (3 times a year on average) measures to assess licensed physicians. The assessment is quite comprehensive including attendance, amount of work, prescription and medical record writing, knowledge and skills, and service attitude. In addition, some hospitals in townships include medical ethics, medical tangle, learning notes, ideological and political front, and English in the assessment scope. 89% of licensed physicians think the assessment is fair and 10% of them think assessment is just a kind of formality while 1% of them say the assessment is overly strict.

18.7% of licensed physicians say that performance assessment is related to rewards and punishment system. 9.5% of them win honorable titles after assessment; 6.0% get bonus, 2.3% get promotion opportunities, 0.4% obtain training and further study opportunities and 0.5% have other forms of award.

Personnel Shortage in Hospitals in Townships Alleviated 74.6% of hospitals in townships say that the project has alleviated the personnel shortage at the basic level; 31.2% of hospitals in townships think licensed physicians have facilitated the improvement of colleagues' business level. Some colleagues of licensed physicians comment that licensed physicians have solid theoretical foundation and strong operation ability, and they are able to help colleagues with puzzling problems. Licensed physicians train colleagues of the hospital for 1.3 days on average every month.

Licensed physicians do a lot of work in different departments of hospitals in townships. On average every month, the amount of outpatients is 312.3, 1.96 times greater than that of the other colleagues; manage 25 inpatients, 1.34 times greater than that of colleagues; train domestic doctors for 1.9 days, 2.11 times greater than that of

colleagues. In addition, some licensed physicians can make simple surgeries after they arrive at hospitals in townships. The number of surgeries is 14 on average every month.

Service Ability of Hospitals in Townships Enhanced From 2007 to 2009, monthly number of outpatients, inpatients and surgeries of hospitals in townships had been obviously increased. With the year of 2007 as the base line, their base growth rate are respectively 31.28%, 71.96% and 51.93%. See table 11. The utilization rate of hospital beds, diagnosis consistency rate before hospitalization and after discharge, diagnosis consistency rate before and after the surgery, curative ratio and recovery rate of hospitals in townships are improved to some extent.

Service Projects and Business Scope of Hospitals in Townships Expanded after licensed physicians arrive at hospitals, 24.0% of hospitals in townships have bought new equipment; 41.0% of hospitals in townships have conducted new medical service projects and 41.6% of hospitals have set up characteristic specialized subjects. Most of the purchased equipment are B ultrasound, electrocardiograph and physical therapy device and then X-ray machine, glucose meter and bio-chemical analyzer; most of new service projects are free check-up, three regular check-ups, traditional Chinese medicine acupuncture, manipulation and therapy; most of specialized subjects are traditional Chinese medicine, and then surgery, paediatrics and gynaecology.

Management of Hospitals in Townships Standardized and Good Social Benefits Achieved 49.7% of hospitals in townships say that licensed physicians assist in improving system construction of hospitals and increasing management level; 27.7% of hospitals in townships remark that licensed physicians help with the standard writing of medical record.

55.8% of hospitals in townships think the arrival of licensed physicians has helped to improve the reputation of hospitals in townships and attract more patients who are quite satisfied with technical level, service attitude, disease explanation and charge of licensed physicians.

Presidents of hospitals in townships are relatively satisfied with work ability, work attitude, communication and coordination ability of licensed physicians.

Colleagues of licensed physicians comment that compared with most of doctors in the same department or hospital, licensed physicians have higher technical level, better service attitude and larger amount of work, and get well along with other colleagues. Some colleagues say that solid theoretical knowledge and strong operation ability of licensed physicians have facilitated the improvement of the entire technical level of hospitals in townships.

Economic Benefit of Pilot Hospitals in Townships Improved According to field survey and general survey of hospitals in townships, hospitals in townships which participate in the employment project have different degrees of improvement in economic benefits. From 2007 to 2009, the average annual total income of the first batch of pilot hospitals in townships was increased to RMB 1,420,900 from RMB 1,029,800, a growth rate of 37.98%; average annual business income was increased to RMB 1,116,900 from RMB 760,300, a growth rate of 46.10%. Refer to table 16.

The subsidiary of RMB 20,000 per person every year is relatively low at present, which is not attractive enough to licensed physicians. The telephone survey on licensed physicians' work satisfaction degree shows that most of them are unsatisfied with salary and welfare treatment which are far lower than that of original personnel of hospitals in townships. Even if some pilot provinces (autonomous regions and municipalities) provide RMB 5,000 to 10,000 subsidiary for licensed physicians, 52% of them still think their salary and welfare treatment are too low to reduce their enthusiasm in keeping working at the basic level.

Some provincial and county health administrative departments fall short of management in the treatment, training and manning quota of licensed physicians. Licensed physicians are faced with many difficulties in work and life at the basic level such as low salary and welfare treatment, poor working condition and troubles back at home, etc. Some places don't show enough appreciation for licensed physicians and enough care for their work and life, which affects the stability of the licensed physician team to some extent. Besides, the insufficient supervision of the project, some places fail to keep their promise of salary and welfare treatment for licensed physicians. The survey finds that 3% of licensed physicians have a monthly salary of less than RMB 1,000; 20% of them can't get paid in time; 56.5% are not able to participate in the performance bonus allocation of hospitals in townships.

Some hospitals in townships only know how to use personnel but don't know how to train them. Some licensed physicians complain that they don't have equal training and further study opportunities with original physicians of hospitals in townships. In the survey, 54.9% of licensed physicians say "there are few opportunities for study and training", which is the major difficulty mentioned most according to difficulties listed by licensed physicians.

Currently, licensed physicians in most of the provinces (autonomous regions and municipalities) cannot be included into the formal team of hospitals. Some places stipulate in the paper that "licensed physicians can be included into the formal team if they pass the assessment after five years and there are vacancies in hospitals in

townships". Most of licensed physicians indicate that five years is quite long and they are worried and confused about their future once the project is over.

In addition, in the survey on licensed physicians, they proposed their difficulties and expectation in term of training, treatment and manning quota. The main difficulties listed by licensed physicians are respectively: (1) few opportunities for study and training (54.9%); (2) low salary and poor welfare treatment (52.3%); (3) worried about future after the project is over (whether they can join in the formal team) (37.7%); (4) poor work conditions (31.1%); (5) others (30.9%) such as far away from home, separation from spouse, poor accommodation condition, too much work, no insurance and delay in payment. 45.0% of licensed physicians in Gansu mention that the work place is far away from home, which brings about great difficulty in work and life.

29.4% of licensed physicians hope that management can be strengthened such as more attention from leaders; timely handout of subsidiary, investment increase, timely implementation of policies of the superior department, strict assessment, improvement of work environment and establishment of an exchange platform for licensed physicians; 28.0% of licensed physicians want treatment improvement including salary increase, participation into performance allocation, subsidiary increase, insurance coverage and free meals and accommodation, etc; 23.0% of licensed physicians want participation into the formal team and solution after five years; 19.3% of licensed physicians desire for more training and further study opportunities; 10.1% of them think that basic equipment in hospitals in townships is backward, human resources are in shortage and hospitals need to introduce new personnel and medical equipment; 4.3% of them want to work in hospitals in townships which are near home.

The outputs of this activity includes Report of the "Chinese Rural Health Workforce Management, Attraction and Retention, and Policy Research", Invoice and detail.

III Onsite visit summary

September 9, 2012 , More than 100 participants attended the visit activities, Field visit regional health information system construction, including county hospital, township health center at Renshou County of Sichuan

The aim of the visit is to learn the experience of rural health information system construction, and enhanced capacity building of the workforce in rural health development. During the visit, the hospitals presented the participants the situation and information development, and exchanged experiences with foreign delegates. The visit main content includes Overview of the Hospital Information System Construction in domestic hospital and Overview of the Hospital Information System Construction in township health center

Experience and Reference. Through the regional health information system management platform construction of the county, the hospital connected network systems such as public health system, new village cooperative medical treatment system, Medicare system for employees in towns and the county, financial management system and county medical and health institutions. Besides, office work became paperless, convenient, cost-effective and more efficient. This also cuts down the workload of the health workers and made effective use of human resources. The information system management is now being developed toward scientific management, standardized norms and procedures, precise charge, smooth operation, integration and will achieve good social and economic benefits.

IV Project materials translation and dissemination to larger number of audiences.

The following materials were prepared and translated into both Chinese and English language, which include: Symposium presentation slides, background reading materials and Onsite visit summary reports.

The outputs of this activity include: Background reading materials, Symposium presentation slides assembly list, Participant manuals, Onsite visit summary reports.