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Research on residency doctors' training and management.

Yunxia Hong[1], Xiaojuan Chen[2], Kewen Jiang[3*]

[1]Department of Science and Education, the Children's Hospital Zhejiang University School of Medicine, Hangzhou, PR China

[2]Department of Electroencephalogram, the Children's Hospital Zhejiang University School of Medicine, Hangzhou, PR China

[3]Department of Pediatric Neuroscience Lab, Neurology, the Children's Hospital Zhejiang University School of Medicine, Hangzhou, PR China

Abstract

This paper mainly through residency training and management of the United States as the representative of the Medical developed regions, China's residency training and managing, these two parts investigate residency training management developed regions and developing countries. In the United States, developed areas of medical residency training management, I focused on the history and achievements of the United States residency training system, from various departments, resident work hours, residents of the assessment, the United States resident income, the US specialist examination, other aspects discussed. In the second part, we discusses China's residency training and in terms of management training management training management system and content. In the last part, summed up the first two parts, namely the Sino-US residency training management research, presented positive significance China residency training management implementation. This is the main idea of this paper.

Keywords: Hospital doctors, Training, Management, Medical developed areas, China.

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The Training of Doctors and Hospital Management In the United States Health Care in Developed Regions

From 1893 onwards, Johns Hopkins University School of Medicine began residency training system, this entry system in the United States to quickly implement the system, and followed so far. In the United States to become a doctor, graduating from medical school in the future, you have to go through a national exam and match (i.e. medical students and hospital application interviews, match-Editor's note) to obtain residency (residency) opportunity to enter a period of four years of residency training phase, after the end of hospitalization, through licensing exam before he can become a qualified physician. Hospitalization is not a permanent job after graduation career prospects faced three choices, you can go to medical institutions to find a job, you can open your own, you can also enter to 2-5 y of professional physicians (fellowship) training system, to one professional for further studies, and truly become experts in a particular field [1].

In the United States, whether residency training or professional training of doctors, the ultimate goal is to let the doctor after graduation to become an independent physician, so clear during the training requirements to obstetrics and gynecology, for example, requires four years when the end of the residency, as well as some of the work can be carried out similar to obstetric hysterectomy surgery such independence. Nationwide physician training follow the same training standards for gynecologists, ACOG basically provides standard guidelines for the various training centers need to achieve. Such training system, continue to enter the United States as a whole relatively uniform quality medical service personnel, throughout the United States, specializing in gynecological urology 30 or so training centers, each center each year to recruit a fellow, in the country, probably More than 200 specialist gynecological urology physicians for physicians across the country to provide gynecological urology expert services [2].

In the United States, apply for medical school candidates generally complete four years of undergraduate study in science and engineering (it was mainly science and engineering, now also gradually increase the proportion of the humanities), which must be completed to learn that lesson, and then through the MCAT, enter medical colleges enrolled, the school system for four years, two years before the foundation two years after the clinic. Currently the United States a total of more than 120 medical colleges, the total size of its annual enrolment of about 16,000. Students at the end of sophomore year are required to attend the first step in the nation's qualification examination test (step 1), pass a test to enter high

school learning a second step test (step 2) before graduation. Through the first two exams, students can combine their hobby and apply relevant academic disciplines or universities Medical College Hospital Medical Center performed residency training according to their interests. The final step in the qualifying examination (step 3) need to be at the end of residency training. Only three steps above the nation's qualification examination in order to be eligible to become physician (i.e. physician actual meaning), and apply for their interest in the independent hospital clinical work.

Residency training is an important part of medical education after graduation, at this stage, according to the training program, residents under the guidance of senior doctors in clinical practice, through standardized requirements and strict examination, thus learning to recognized medical specialties in the field of qualified doctor's necessary knowledge, skills and attitudes.

In the United States, residency training locations for multi-selection in the conditional major hospitals in the nation's 1,700 hospitals receiving residency training. Residency training program, every year in May convened by the Joint Committee on Medical Education after graduation meeting, approved by the Medical Board of Education, decided to residency training programs nationwide next year, compiled into a residency training program guide (Directory of Residency training Programs), to National and foreign medical school graduates to provide training positions. Choice of training positions taken under graduates volunteer voluntary filing system, then decide whether to grant job interview hospital, this step is called MATCH program [3]. To determine the preferred second choice of profession and professional, each would like to apply for a graduate average in 26 hospitals. Preferred for professional, receiving an average of 10 hospital interview, obtained from application to interview the probability is 63% of the preferred specialty hospitals refused to give interviews probability is 20%, according to the scope of the professional level of competition it's different. As of 1997 orthopedic surgery, neurosurgery and otolaryngology residency positions per a respectively 89, 68 and 67 applicants. Can a school graduate to compete in the famous hospital residency seats and how many places to competition is an important indicator of the quality of medical school education.

US residency training with a wider base and not to advocate premature specialization, almost all medical graduates must undergo at least three years of residency training, some professional for eight years [4].

First year intern, after completing the first year to participate in educational license exam, get a doctor's license and state governments began to practice (in fact, there are only eligible to practice medicine, there are some prescription right), and thereafter according to my wishes professional needs to continue residency training, professional culture life as follows:

Internal medicine, family physicians, pediatrics, physical therapy, anesthesiology, radiology specialist 3 y

Dermatology, neurology, ophthalmology, psychiatry department+1 y, 3 y specialist

ENT Surgery+1 y, 3 y specialist

Pediatrics and internal medicine branches (such as heart, blood, digestion, etc.) 3 y+2 y

General Surgery 4-5 year's specialist

Orthopedics, neurosurgery, urology 1-2 y+3 y of general surgery specialist

Plastic surgery, thoracic surgery, colon surgery 5 y+3 y specialists in General

(Specific professional life, perhaps a little small difference between each state hospital)

Resident working hours:

Has no 24 h hospital system, the first year of residency on duty once every 1-2 days, residents watch a high qualification, chief resident values of the second shift every 2 to 3 d. Working longer residency from 10 h to 14 h responsibility, not Saturday and Sunday, holiday duty to implement the system, the usual rest time is usually from morning to evening 7:30-10:30. Day residency with internship and trainee doctors rounds, rounds physician the next day, at noon or in the afternoon were a variety of academic activities, night rounds the chief resident, a small lecture on Saturday, and Sunday duty system. (State hospitals may be small differences, are basically the same).

(In the role of chief resident HOUSE, GA appeared much, I have the impression that there is always laughing GA residency in DANNY Memorial Clinic to tell the Nazis sister next year to compete with her chief resident position) [5].

Before a surgical resident work 110 h a week is usually equivalent to one week seven days, working 15 h a day. Dean of the University of Washington School of Medicine last lecture to the hospital when he gave us that when residents when the work week is 100-110 h.

In 1989, the New York State Department of Health was the first to implement strict regulations in the US restrict resident work hours, the "405 rule", in order to protect residents have adequate rest periods. This rule defines residency weekly working time is not more than 80 hours, continuous work each time not more than 12 h apart, at least 8 h between each class, once a week at least 24 h of continuous rest. In the past few years, the New York State Department of Health to monitor the implementation of this provision, we have taken various effective measures, such as checking the hospital without prior notice, to encourage residents adhere to record working hours per day, once every six months bearer the survey.

Meanwhile, in the United States, as residents of long working hours, medical errors caused by fatigue situation also caused widespread concern. To ensure that residents get the necessary rest to provide patients with safe medical services and supervision of a physician trained graduates of American Medical Education Accreditation Council ACGME presented with the "405 rule" very similar provisions, and in July 1, 2003

since, in all of the country's teaching hospitals started. Proposed regulations, residents cannot work over 80 h a week, and then on duty must rest for 10 h [6].

Residents in fact, were a student, in addition to complete clinical work, where they have a professional study program (i.e. training programs). Because GA in those hotties surgical residency, with regard to general surgery residency, for example, five years, probably introduce training processes.

Intern (the first year of residency) (intern)

The first week of school is into the hospital, mainly on clinical considerations, familiar with the situation of hospitals. Then fill in forms, do physical examination, but also through the first part of BLS (Basic Life Support) training is to teach residents how to do heart massage, artificial respiration, endotracheal intubation skills; but also through the second part of the ACLS (advanced life support) training, learning to save the patient's standardized methods, must be performed in sequence, after the hospital emergency must also be met in accordance with the specifications and standardized methods to do so into the clinical residency after treatment or to save the patient will know What is the first step, the second step what to do [7]. Surgeons also through ATLS exam later encountered serious injuries, let residents know when the rescue, when not to rescue, or open the chest in the emergency room and when to give the patient the like, know how to save the patient by a standardized method . The second week of clinical training, led by the chief resident. Intern main task is to manage the patient, time on duty in the ward, not to go on duty operating room, have to go to the clinic for 1-2 d a week, must be modified to look over attending outpatient reading. He finished the first year of residency, by the third part of the United States Medical Licensing Examination, doctors would issue a license, you can open your own clinic, but can only look at the most simple disease, cannot manage the patient in the hospital.

Second-year residency training and basic first year almost, but more difficult than the first year of work has increased, while the residents work to improve the efficiency of many, dealing with patients self-confidence. In addition to the ICU, and some major wards (pediatric surgery, trauma surgery, transplantation, plastic surgery burns, thoracic surgery, etc.) rotation.

Third grade hospital doctors began doing emergency work consultation, the patient into the hospital, the emergency room doctor first by all the history, physical examination, and other special examination after the diagnosis of the patient to do first, and then decided by the third year of residency in emergency surgery into the patient is room or into the ward, the beginning is difficult to grasp. Also to be above average surgeon surgery such as cholecystectomy, mastectomy and the like. Surgical inpatient beds not particularly tube, but to manage the patient consultation [8].

Fourth grade hospital doctors began doing the chief resident (chief resident), including four months to do trauma surgery chief resident, do four months of vascular surgery chief resident, in addition to some hospitals may choose to do four months of pediatric surgery in hospital chief medical officer, or general surgery chief resident, or thoracic surgery chief resident, a senior chief resident is mainly to prepare for the chief resident five-year general surgery. The fourth year the chief resident without first five years of general surgery chief resident hospitalized big powers.

The first five years, must be done in general surgery chief resident, including platoon on duty, volleyball surgery, rounds, surgeon larger surgery, any surgery as long as the chief resident wants to can participate, while also managing low of residents, look responsible for their patients, patient selection for teaching rounds, in charge of the work and discuss the deaths and other complications [9].

Part of surgical training

Surgery is the most important part of the training of the surgeon during surgery residency surgeon to achieve a certain number of surgical residency requirements surgeon reached 500 cases, each operation must also reach a certain number. Completed more than 50% is considered a surgical procedure the surgeon. Attending let you do much trust in the process of surgery is attending to residents, the residents want to know the patient medical history, and other surgical indications, the attending physician will ask why surgery and other issues, if not answer, you cannot do surgeon. Good residency surgical procedure, the patient tube well, the surgeon will have more opportunities. Residents also will be attending the surgical records do recording, print it out, so that the attending physician to modify. During the chief resident surgeon surgery at least 150 cases. Surgeons in the United States not only to emphasize operational skills, but also know how to deal residency basic medical knowledge, clinical knowledge, intensive care, surgical indications, preoperative preparation, postoperative treatment and complications like.

Resident assessment

Residency training after the end of the most important is to pass the specialist examination. During the training every year to participate in a national examination and oral simulation to prepare for college exams. Simulate oral from year to year, the first year is relatively simple, fourth, fifth must ask is how to do every step of the operation, including the anatomical structure and so Examination. This study is to check the residency annually, but also to check the quality of teaching hospital indicators. Residency test well will be eliminated, and their training will be warned hospitals, such as warnings will be disqualified with invalid residency. Therefore, the hospital residency training very seriously [10].

Teaching rounds

The hospital has a half-day a week teaching rounds and case discussions, generally the first step is to discuss deaths and complications discussed, must be done by 1-2 h before. Then the attending physician for teaching rounds, first chief resident select educational cases, the specific question asked many

rounds, starting with the first year of residency in general began to answer, not answer to a higher-level physicians answer. When teaching rounds except the doctor on duty outside all the other doctors should participate, to turn off all cell phones and pagers. In all cases by the chief resident began to introduce participants can ask questions, the general in charge of this case do not speak out the name of the attending physician, chief resident must know all the medical records, if raised the issue of the total resident cannot answer, will be notified next week for discussion [11].

US resident income

In the United States, a teaching hospital residency, the government annually to teaching hospitals $100,000. It is used to send part of the resident's salary, salary per year residency in general 3-40000 US dollars in the first year at $30,000, $40,000 total residents annually. Another part of the money is used to buy health insurance residents pay the cost of training, such as making annual residency out of meeting expenses and so on. Some hospitals allow residents work outside the home, but the surgeon has little time to work out. Annual income of 30000-40000 US dollars in the United States is a very basic wages, but also taxes, during the residency at a monthly salary of about $2,000, basically to maintain life. General internist or family doctor each year hundreds of thousands of dollars, general surgery residency training after the end of the first year of the basic annual salary of about $200,000 there. Specialist salary slightly higher.

Work after general surgery residency training ends

General surgery residency after graduation, you can choose to go to a better first profession or work unit, but must go to some of the well-known school or hospital for two years, some good learning experience outside the school. Secondly, we can also directly in private practice, do not need additional training, wages slightly higher. You can also enter specialist training, first training in general surgery, general surgery specialist examination by then, chief resident in general surgery done, in order to enter specialist training. After completion of training in general surgery you can choose to do thoracic surgery, plastic surgery, vascular surgery, hand surgery, anorectal surgery, trauma and critical care specialist.

American specialist exam

In the United States, if not by specialist examination, basically you cannot find work. First to hold state license to practice, which is the third part through the United States Medical Licensing Examination, through residency training, to achieve the required number surgeon surgery specialist examination in order to participate, including the written exam to test specialist four hours, a total of 350 choice, through three groups of examiners oral exam, each with 2-3 topics. Internal medicine specialist examination is not the same, only written, basically 500-600 exam questions. To become a cardiac surgery specialist, through basic medicine, clinical skills, doctor's license, general surgery specialist written examination, general surgery specialist oral, written cardiac surgery, cardiac surgery a total of seven oral exam [12].

China's Residency Training and Management Research

For a long time, China's non-standardized residency training system, students graduating from medical colleges, two subjects without training, assigned to the hospital directly engaged in clinical work, depending on the conditions at the hospital where after a considerable extent on the ability and level, serious Effect of improving the overall quality of the medical team. Beginning in the 1980s, he returned to the hospital where many pilot training. After 10 y of practice, a more complete residency standardized training system and model has been identified and improved.

In 1993, the Ministry of Health issued "Notice on the implementation of standardized training of resident doctors pilot scheme", after which the country gradually carry out different sizes, pre explore different levels of residency standardized training.

Since 1992, Jiangsu Province pilot, developed a "clinical residency training in the health system in Jiangsu Province Interim Measures" in 1995 formulated the "above the level of the hospital, county hospital residency training program," the initial establishment of the province unified training systems and training standards. In 2007, for the full implementation of the urban and rural grass-roots general practitioner standardized training. In 2010, explicitly stipulates that "Since 2010, new entrants Jiangsu province health care institutions engaged in clinical work of undergraduate and above medical graduates must accept residency standardized training." Standardized Training of Residents in Jiangsu Province ranked first in number.

The basic approach

1. In clinical practice, professional courses, public courses as the main content of the training courses, residency requirements in two stages, respectively, to obtain the corresponding course credit by examination.

2. Methods of training: clinical practice in job training mainly from the collective guidance department. Foreign language and professional courses, mainly through self-study is completed, some public courses run classes and elective courses through face to face amateur accomplished either through self-study, to participate in the class level test to obtain credit.

3. Work for five years, credits meet the requirements, the clinical skills assessment qualified, issued a certificate of residency training, as a declaration of intermediate professional and technical positions qualification prerequisites. Apply for the necessary degree in clinical medicine as part of in-service clinicians engaged in clinical work for more than three years to complete the first phase of residency standardized training and pass the examination, could issue a "certificate of residency standardized training."

In the implementation of resident standardization training should be based on "knowledge wide, thick basic" requirements, pay attention to ethics training, to emphasize three basic training, the first after special wide, step by step, to strengthen clinical practice to the principle of linking theory with practice. System Note: 1. Training-assessment-promotion combining training in order to facilitate the mobilization of enthusiasm; 2. implemented based on practice, skill-based, self-study, amateur-based job training, in order to facilitate the practice of changing the light tendency; 3. to the reasonable knowledge structure, focusing on health care, medical research combined to lay a solid foundation.

Training phase

In recent years, according to the Ministry of Health promulgated the "clinical residency standardized training pilot scheme," the training in two stages. 2009 release of "residency standardized training standards (Trial)" clearly stated standardized training for 3 y.

The first stage

Three years in the secondary range of subjects, to participate in the rotation of the main sections of the discipline clinical work, clinical work systematically basic training.

Second stage

Two years to complete further rotation, and gradually to three subjects based professional training, in-depth study and master the theoretical knowledge and clinical skills, final year should arrange a certain time as the corresponding total hospital or hospital management.

Examination and evaluation

Assessment residency training must be standardized, and gradually achieve standardization requirements. Examination usually divided in different ways and stages of evaluation test, evaluation and self-organization of each hospital provincial organizations City Colleges unified theory test, computer examinations.

Evaluation by department

Each department rotation end, the evaluation team organized by the director of personnel, by secret ballot method residency medical ethics, clinical skills, teaching ability to make a comprehensive evaluation credited manual rotation. Content of medical ethics include: 1. work sense of responsibility, evaluation service attitude, discipline, labor discipline; 2. medical assessment style; 3. whether an error, accident; 4. solidarity, the overall situation, the cardinal's performance. Rated excellent or good by qualified, unqualified person such as medical ethics, the year of the clinical practice not rotate Credit. The clinical history taking skills such as ability, comprehensive ability examination, operation and surgical skills, face to face assessment approach taken, and credits required to achieve specified.

English level

The English version of choice Klinefelter surgery and internal medicine Hippocrates content. Proficiency test held once a year, residents can participate in the second phase entered from the foreign language proficiency test, in the form of English translation, requiring up to 2 h completing the translation capacity of 4,000 printed symbols.

Professional theory

The end of the second phase of training of residents must participate in the unified organization of professional theoretical examination. In order to meet the basic requirements of the professional junior attending physician.

Clinical competence

Including both technical and clinical decision-making capacity in terms of both former resident experts on history taking, physical ability, medical skills, face-operative skills assessment; while the latter are in the first stage and the end of the first phase of training get on. The method can be face to face examination of the case analysis, computer-aided examination system can also be used for testing, testing the ability to make clinical decisions more scientific direction. In order to strengthen and consolidate the interrogation and clinical skills in medical residency training, but also the introduction of standardized patient assessment methods.

Follow the principle of training in six areas

Residency training from scratch is to gradually standardize the process, to carry out this training hospitals follow the principles in the management of the six areas, namely: 1. insisted: "Red" and "special" principle binding; 2. theory practice and practice-oriented principles; 3. adhere to the combination of self and counseling and self-oriented principles; 4. adhere to the combination of work and study, to work-based principles; 5. adhere to the "strict style, a solid foundation, broad knowledge "Note ability principle; 6. adhere to training, assessment, use the principle of integration. The only way to really train for the socialist health needs of medical professionals and medical usefulness of high-level experts.

Yunnan Province in July 2006, to the Second Affiliated Hospital of Kunming Medical College Hospital as a pilot, began the 3+2, a total of five years of residency standardized culture.

From September 2009 began as a pilot in Tianjin hospital, began a three-year standardization.

January 16, 2014, the National Health and Family Planning Commission and other seven departments jointly issued the "Guidance on the establishment of resident standardization training system," which called in 2015, the provinces (autonomous regions and municipalities) shall be started residency standardized training; By 2020, the basic set up residency standardized training system, all new medical post

degree or above clinicians, accept all resident standardization training.

February 13, 2014, the establishment of national residency standardized training system work conference held in Shanghai, marking the standardized training system was officially launched construction of residency.

The Importance of China Residency Training and Management

Saw the outside world, I realize that in fact lead to a core problem of the gap between China and the US is our physician training system. In fact, the United States and Europe in the early 20th century physician training system has been established, look around the world, may be only a few countries such as China did not establish a mature residency and specialist training system.

Although the 2008 Shanghai first began to try to rotate residency training health authorities deployed under the then Beijing, Guangdong, Hunan and other places have also started, but we have to see the current issue of residency rotation from now, three years the work did not cultivate their ability to work independently, would hardly learned to write medical records, open laboratory, retractors and simple minor surgery, so that even if returned to the hospital, nor substantially improve their future workplace health Level [12]. Large domestic top three hospitals similar to Concord, has formed around such an "expert" turn mode of operation, how to break this pattern of interests, the interests of the patient to re-establish the country's residency training system do?

Personal I propose the following:

First, with reference to rest of the world, to establish a national system of residency training, learn to approval by the respective specialist residency training base, whether regular assessment residency training base to train qualified physicians as your destination. After graduating medical students do not sign the contract and units, the completion of residency training before looking for work. The end result is different from previous residency training base for the training of doctors do not pay attention to the final physician trained to work independently as a base for the assessment objectives.

Open more practicing physicians currently in the teaching hospitals have formed these "expert" level doctors vested interests, to promote these experts change the concept of education as the top priority to public hospitals, shifting the emphasis to the training of qualified physicians up . At the same time, to allow these experts set up their own private hospitals or clinics inside more practice, let the experts in the second and third practice point to achieve personal values in accordance with the law of the market, in public hospitals will have to do good job training. Accordingly, I also agree to special medical spun off from public hospitals, all private hospitals to operate [13].

Cancel hospital accreditation level, the current level of hospital accreditation in fact induce patient desire for quality medical resources, many countries should learn, so well-known experts to be found in the street inside the clinic, so the patient does not need to have to We went to places like Concord came experts.

Finally, the abolition of restrictions surgery level classification system of hospital development, the system was originally established to protect the health safety may be, but look abroad, as long as after a certain amount of training, qualification certificate of physicians, which does not exist in what not to do like surgical problems, as long as the hospital conditions and qualified physicians secure, it should allow private hospitals or community hospitals to carry out some delicate operation, as in community hospitals Chattanooga I can see the world's top experts in surgery as.

Reform is the redistribution of interests, Concord As the founder of modern medicine and witnesses, to the time for a change, should consider to set up a hospital can be a model for the rest of the country a model of medical training institutions, to think about how after our hospital residency training, and graduate training physicians to have the ability to work independently in the future, we can only continue for the country's medical market output of qualified personnel, and only then can change the status of the people difficult medical fundamentally [14].

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The authors declare that there is no conflict of interest.

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*Correspondence to

Kewen Jiang

Department of Pediatric Neuroscience Lab

Neurology

The Children's Hospital Zhejiang University School of Medicine

PR China