

# Research and Practice of Constructing Stage Comprehensive Examination in Our Hospital Based on the Reform of National Licensing Physician Qualification Examination

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**Abstract.** In order to meet the state practicing doctors' qualifications examination reform, causes the student to adapt to the new practice mode of examination of doctors' qualifications as soon as possible, and at the same time in order to deepen our reform of examination work, to promote learning, to promote the teaching, cut and the gap at the top colleges, continuously improve the quality of the hospital personnel training, based on the examination reform in stages for establishing scientific evaluation system of comprehensive, real and effective. By taking part in the national phased examination, the real level of our college's education and teaching is tested, which reflects the teaching gap with other colleges and universities, and also provides new ideas and methods for our college's examination work. To improve our education quality of teaching has an obvious role in promoting, is advantageous to the school reform and national examination method of practicing doctors' qualifications examination mode reform effectively, improve the basic and clinical medical students operation ability, trains the student to pay attention to independent thinking, the correct application of clinical knowledge, practical ability to solve problems, to promote students' active learning in various stages, autonomous learning, to improve students' practicing doctors pass rate, and improve our talent training quality.

## Brief Introduction to the Phased Examination of National Medical Practitioners

The national medical qualification examination for practicing physicians is the examination for industry admittance, which is used to evaluate whether the applicants for medical qualification have the necessary professional knowledge and skills to engage in medical work. The state has always attached great importance to the examination of medical practitioners, constantly reforming the examination contents and methods, and promoting the reform of medical education through the coordination of medical education and teaching, so as to comprehensively, objectively and truly reflect the clinical diagnosis and treatment ability of the examiners.

In order to improve the quality of medical personnel training, the national medical examination center carried out an empirical study on "doctor qualification examination in stages", and the conclusion suggested that the doctor qualification examination should adopt the two-stage examination. The empirical study is divided into two stages. The first stage of the empirical study is the examination of students majoring in clinical medicine before their internship (at the end of their senior year). To explore a two-part test to organize the implementation of viable path, national medical examination center began in 2015 to the five-year undergraduate clinical medicine professional clinical practitioners as empirical research object of the two sections of the test the empirical research, and in the test design, proposition, examination to organize the implementation, the evaluation made a series of important data and experience. In the first stage of empirical study, 14 medical colleges and universities participated in the study, 33 medical colleges and universities participated in 2016, 46 medical colleges and universities participated in 2017, and 47 medical colleges and universities participated in 2018 [1]. Our hospital has participated in this empirical

research since 2016, and has participated in the empirical research for three years, and its performance has been improving year by year.

### **Design and Implementation of "Three-Stage" Comprehensive Examination in Our Hospital**

With state practicing doctors' qualifications examination reform, causes the student to adapt to the new practice mode of examination of doctors' qualifications as soon as possible, and at the same time in order to deepen our exam reform, to promote learning, to promote the teaching, cut and the gap at the top colleges, continuously improve the quality of the hospital personnel training, based on the examination reform in stages for establishing scientific evaluation system of comprehensive, real and effective. Through investigation and research, combined with the national spirit of practicing doctors' qualifications examination reform, phased examination content and form as reference, in our hospital under the guidance of "three orientation" training mode constructs the comprehensive examination system of "three stages", both: basic medical stage comprehensive examination, clinical stage comprehensive examination, the graduation practice stage comprehensive examination, and in examination contents and form reference test content and mode in stages. Each stage of examination is clearly listed in the training program, and the corresponding results are recorded in the students' graduation transcripts. After each stage of examination, summary and feedback work should be carried out, requiring students to pass each stage of examination before proceeding to the next stage of clinical professional courses.

#### **Comprehensive Examination of Basic Medicine**

Basic medical stage comprehensive exam at the end of the students at the university of grade three, mainly in biochemistry, physiology, pathology, pharmacology, microbiology, immunology, medical ethics, psychology, health legal subject is given priority to, topic topic quantity reference examination of medical practitioners, examination through the rear can entered the stage of clinical professional course learning.

#### **Comprehensive Examination of Clinical Medicine**

The comprehensive examination of clinical medicine is conducted at the end of the fourth year in the university, which mainly focuses on clinical medicine disciplines such as diagnostics, medical imaging, internal medicine, surgery, obstetrics and gynecology, pediatrics, etc. The examination questions refer to the examination of medical practitioners, and students who pass the examination can enter the graduation practice stage.

#### **Comprehensive Examination for Graduation Practice**

The graduation practice stage comprehensive examination is divided into the practice examination and the graduation examination two contents, including the graduation examination theory examination and the skill examination. The graduation practice stage comprehensive examination mainly inspects the student to graduate the practice stage the study condition, only then the examination all qualified rear may graduate.

**Academic Assessment.** The examination includes theory examination and practical skill examination. In accordance with the requirements of the teaching program, the theory assessment of academic attendance aims to cultivate students' comprehensive clinical thinking ability. Starting from the assessment of medical practitioners, the paper conducts theoretical written tests on internal medicine, surgery, obstetrics and gynecology, pediatrics, neurology and other courses, and adopts multiple-choice questions.

**Examination of Admission Practice.** Practice assessment includes bedside assessment, such as: inquiry, medical examination around the case, clinical thinking ability test (ask questions around the case, ask at least three questions); Specialized skills assessment, including internal medicine, surgery, obstetrics and gynecology, pediatrics, emergency treatment and other operational tests; Auxiliary examination and test as well as the number and quality of medical record writing.

**Graduation Theory Examination.** The graduation theory examination adopts the written examination theory test, the content consults the practicing doctor examination outline content. The examination questions mainly focus on A1, A2 and B1 type single choice multiple choice questions to examine students' mastery of theoretical knowledge.

**Graduation Skills Examination.** The graduation skills examination adopts objective structured clinical skills examination (OSCE), which mainly includes standardized patient assessment, clinical skills operation assessment, clinical data testing and clinical case diagnosis and treatment ability testing.

Standardized patient assessment USES standardized patients to assess students' consultation, key physical examination and clinical thinking ability with typical cases. Students' clinical diagnosis and treatment ability is evaluated through the dialogue, communication, examination and diagnosis between students and standardized patients.

The assessment of clinical skill operation mainly assesses the basic skills of internal medicine, surgery, basic nursing operation, emergency treatment and other operations. The operating requirements and scoring standards are all based on the examination standards of medical practitioners.

Clinical data test and clinical case diagnosis and treatment ability test mainly assess students' ability to analyze and diagnose auxiliary examination results, including X-ray, electrocardiogram and blood routine, hepatitis series, biochemical examination and other medical examination reports. In addition, the virtual human-computer interaction system is used to provide students with a clinical case, test their clinical diagnosis and treatment ability, and assess their thinking and treatment ability of clinical actual cases through virtual diagnosis, differential diagnosis, auxiliary examination, physical examination and treatment measures.

### **The "Three-Stage" Comprehensive Examination in Our Hospital Is Organically Integrated with the National Phased Examination**

For easing the burden on students' exam, but also to improve the enthusiasm of students to participate in national examination by stages, the emphasis on the connotation and significance of the examination by stages, our hospital will replace school organization national examination results in stages of comprehensive examination and clinical medicine basic medical stage stage comprehensive examination, students as long as through the national examination by stages, can need not to participate in school organization of basic and clinical medicine stage comprehensive examination or make-up examination.

### **Comparison of Passing Rates of Phased Examination and Medical Qualification Examination over the Years in Our Hospital**

Chi-Square  $\chi^2=102.0012$ ,  $P<0.0001$ , It can be seen from the statistics that the passing rate of our hospital in 2018 is significantly higher than that in 2017, which is of statistical significance.

A comparison of pass rates between 2017 and 2018 phase-in exams

years	Number of participants in the theory examination	The number of people who have passed the theory exam	Pass rate of theory test	Number of people taking the skills test	The number of people who have passed the skills test	Pass rate of skill test
2017	1148	544	47.39%	1129	1105	97.87%
2018	894	632	70.70%	896	884	98.66%

According to the national statistical data, in 2017, the passing rate of clinical medicine professional practitioner examination in our hospital increased by 30.84 percentage points compared with 2013.

## **Discussion on "Three Stages" Comprehensive Examination**

### **Deepen Examination Reform in Our Hospital**

Our "three stages" comprehensive test is the content of the reference state in stages of examination of doctors' qualifications examination and the establishment of the model, is with the national qualification examination of the unity of the concept and connotation, by joining the phased examination of medical practitioners, guided by national exam reform work, abandon the traditional graduation summative examination mode, excluding the students failed the exam for again and again, the deficiencies of the backlog of make-up examination, also to eliminate the delay make-up exam, students graduated from the ideas of the make-up exam, achieve "Duan Qing" results.

### **Cultivate Students' Independent Learning Ability**

By "three stages" comprehensive examination, compulsory for students in each stage to meet the corresponding requirements, for students to create a certain pressure, supervise and urge the student active learning, improve the enthusiasm of the students' autonomous learning, so as to gradually cultivate the students good learning attitude and the ability of autonomic learning, in the future to insist on lifelong learning lays the foundation for the students.

### **Improve the Quality of Education and Teaching in Our College**

Practice stage comprehensive examination system in recent years, causes the student to understand and adapt to the national examination of medical practitioners in advance mode, through the "three stages" comprehensive examination to phased examination students in each stage of the study effect, more comprehensive, objective, authentic assessment of students throughout the learning process, and through the test, summary, analysis, feedback after each stage of the test conditions to give teaching units, students, teaching management departments, from each teaching link to find problem and the reason of low-performing, timely rectification, and guide future education teaching work, The passing rate of the clinical medicine professional qualification examination of our hospital has been continuously improved year by year, narrowing the gap with the national average passing rate, so as to continuously improve the teaching quality of our hospital.

### **Existing Problems and Solutions**

After the examination results analysis by stages in recent years, found that the students lack part in basic medical knowledge is more, we found through the analysis of the research basic knowledge learned before the university three grade after the test is rarely in the system of review, to this end, we plan to revising the three phase exam content, in clinical stage comprehensive exam content, add basic medical course knowledge, and planned in the fourth grade students in basic medical subject systematic review review. In addition, we plan to integrate the idea and mode of phased examination into the clinical main course examination, and implement the examination method combining theory examination and skill examination, so as to systematically and comprehensively grasp the learning effect of students, and promote the improvement of teaching quality through analysis and feedback.

Due to the three phase test title by college library and college affiliated hospital teacher skills when the examiner, hard to avoid can lose objectivity, lead to performance is generally on the high side, to this, we will have reference external quality test used to test theories, and choose teachers as clinical skills outside the examiner, undertake to the student of the real, objective evaluation.

## **Summary**

By taking part in the national phased examination, the real level of our college's education and teaching is tested, which reflects the teaching gap with other colleges and universities, and also provides new ideas and methods for our college's examination work. Based on national medical practitioners examination reform design shall practise a system of "three stages" comprehensive examination, examination or countries practicing doctors found both school grades have different degrees of ascension, we achieved a certain result of research and practice, it also shows that in stages to improve our education quality of teaching has an obvious role in promoting, is advantageous to the school reform and national examination method of practicing doctors' qualifications examination mode reform effectively, improve the basic and clinical medical students operation ability, trains the student to pay attention to independent thinking, the correct application of clinical knowledge, practical ability to solve problems, It can promote students' active learning and independent learning at all stages, improve the passing rate of students' medical practitioners, and further improve the quality of talent cultivation in our hospital. Our hospital will keep up with the pace of the reform of national medical qualification examination, and seriously and realistically participate in the phased examination work. On this basis, we will continuously deepen the reform of our hospital's examination, and truly focus on this and promote the four regression.

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