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The 454th International Symposium on Therapy

The 454th International Symposium on Therapy was held by the Zoom Webinar on May 19, 2022. Dr. Ikuo Taniguchi, Director of the International Medical Society of Japan (IMSJ), presided over the meeting.

The publicization of public exams for medical students (CBT and OSCE)

Introductory Message from the Chair

Ikuo Taniguchi, MD, PhD
Director, IMSJ

We have taken up the theme of medical education, which has not been covered very often in the past. In recent years, medical education in Japan has undergone significant changes with international accreditation in mind. In order to raise the level of physician training, clinical clerkships in which students actually perform medical procedures have been introduced. In addition, since 2005, students have been taking the CBT (Computer Based Test) and the OSCE (Object Structured Clinical Examination) prior to clinical clerkship to be objectively evaluated and conducting clinical training as Student Doctors (certified by Association of Japan Medical Colleges-AJMC). In 2020, the Medical Ethics Council's Subcommittee on Medical Practice reported that the OSCE would be made officially nationwide by 2025, and that the OSCE would also be conducted after completion of practical training to qualify for the national examination. Takako Shimizu MD, PhD, a member of the Medical Ethics Council and a director of Common Achievement Tests Organization talked to us, and Vice President Nobuhiko Saito

MD, PhD, who has been involved with this Common Achievement Tests Organization for many years, gave a concrete talk about the current status of the Common Achievement Tests and also explained about the future publicization. I believe that the actual implementation will be very difficult due to the differences in viewing things differently among universities and the problems with the authorities in charge, but it is a big turning point in medical education, and we pray for further success toward the operation in 2025.

Lecture I

Publicization of pre-clinical OSCE from the viewpoint of consistency of physician training

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Adviser
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The post-graduate clinical training system for physicians, which has been mandatory since 2004, specifies the goals to be achieved at the end of clinical training. Medical schools have also established a model core to be achieved upon graduation, as described below. Both are reviewed periodically, but in February 2017, during the course of the last revision, a joint meeting was held to discuss both, and some of the goals were unified. From the perspective of consistency in the physician training process, this was a milestone. Medical education in Japan has often focused on knowledge-based education in the classroom, clinical training was mainly observation-based,

and practicing medicine for the first time after graduation. Although problems inherent with this knowledge-based curriculum were pointed out early on, specific studies on how to deal with these issues only began at the end of the 20th century.

An "Advisory Committee on Medicine and Medical Care in the 21st Century," which was organized by the former Ministry of Education from 1996 to 1999, recommended the "creation of a model core curriculum" and the "active introduction of participatory clinical clerkships". In the fourth report, it was also pointed out that "a certain standard should be ensured nationwide for the evaluation of the ability and aptitude of students starting clinical training" and "consideration should be given to creating a common evaluation system for accreditation of progression". These reports were the starting point for the creation of the model core curriculum for medical schools, which was subsequently introduced, and for the implementation of shared examinations.

In March 2001, the "Committee for Research and Development of Educational Programs in Medicine" proposed a model core curriculum. The Model Core Curriculum systematically presents as a "model" the "core" areas that should be commonly addressed by all universities. Each university formulates its curriculum with reference to the Model Core Curriculum for approximately 2/3 of its study hours, while the remaining 1/3 is unique to each university.

In order to improve the existing clinical training, medical students must be able to participate as members of the medical team rather than as strictly observers. For this to be realized it was necessary to prevent the illegality of performing medical treatment that only doctors are allowed to perform. In the final report issued in 1991 by the former Ministry of Health and Welfare's Clinical Practice Review Committee (chaired by Tadashi Maekawa), the following conditions were proposed as conditions under which medical practice by medical students could be interpreted as not being illegal in order to prevent "medical students' participation in actual medical treatment and medical practice from violating the Medical Practitioners Act".

- (1) Limited to certain non-invasive procedures.
- (2) Under the careful guidance and supervision of a supervising physician.
- (3) Evaluation of medical students is conducted in advance.
- (4) Obtain consent from the patient.

In response to (3) above, the CBT (Computer Based Testing) and OSCE (Objective Structured

Clinical Examination) were established in 2003 as preclinical training qualification examinations for medical students and are now administered by the Common Achievement Tests Organization (CATO). Regarding the medical practices that medical students are allowed to perform, the final report of the Clinical Practice Review Committee, as mentioned above, includes examples of basic medical practices that are acceptable under certain conditions ("Maekawa Report"). The "Monden Report" was issued in 2018.

In May 2021, a partial revision of the Medical Practitioners Act was promulgated, allowing medical students who have passed the common use examination (CBT and pre-clinical clerkship OSCE) to practice medicine, excluding the writing of orders or prescriptions, under the guidance and supervision of a physician during clinical practice from April 1, 2023. After April 1, 2025, passing the common use examination will be a requirement for eligibility to sit for the national medical examination.

This new legal framework will allow for comprehensive and participatory clinical training which will ensure consistency from pre-graduation to residency. Working closely with an experienced medical team should foster a culture of professionalism and train physicians who can truly contribute to the community in which they work and society as a whole.

Lecture II

The Common Achievement Tests for Medical Students

Nobuhiko Saito MD.PhD
Vice President

Common Achievement Tests Organization

Introduction

In medical schools and medical colleges, students in their senior year are required to participate in clinical training at university hospitals and regional medical institutions. Clinical clerkship is a training program in which medical students are required to participate in a clinical trial in a university hospital or a local medical institution. It is an on-the-job training in which students are involved in actual medical practice as a member of the medical team under the guidance and supervision of a supervising physician.

However, it is against the Medical Practitioners Law for medical students who are not yet physicians to engage in actual medical practice. In order

to prevent this illegality, students are required to pass the Common Achievement Test (CAT) which consists of two strict examinations, Computer Based Testing (CBT) and the Objective Structured Clinical Examination (OSCE).

The Common Achievement Test Organization (CATO) was established 17 years ago with the participation of all medical schools to administer the CAT. Questions created by each university are pooled and shared among the universities.

Presently, each university is responsible for evaluating the results of these examinations, but in 2021 the Medical Practitioners Law was revised, and from 2023 both examinations will become public examinations, with uniform passing standards applied throughout the country.

CBT

CBT is an examination that measures the acquisition of knowledge. 320 MCQ questions are divided into six blocks on a PC screen. The sixth block, in particular, consists of a series of four questions on a case. The first question asks about the medical history, the second question asks about the physical examination findings, and the third question asks about the examination results, each in a five-choice format, while the fourth question asks about the basic medical knowledge of the case.

The questions are randomly selected from a pool of questions whose difficulty and discriminatory power are known through prior trials, based on a test theory called item response theory (IRT). This system makes it possible to conduct the same evaluation even if the test is administered on different days at different universities and to have different students take the test.

OSCE

Before starting a clinical clerkship, the candidate must have acquired sufficient skills in patient care, information gathering, and examination procedures. The OSCE, a simulation test, is used to evaluate these skills.

The following is an example of an OSCE currently being conducted by CATO.

Several small rooms are prepared, and in each room there is an evaluator who has undergone evaluation training in advance. When the examinee enters the first small room, he or she is asked to "conduct a medical interview," and a mock patient is waiting outside. The candidate then invites the mock patient in and asks about the

reason for the visit and the history of the patient. The mock patient answers according to the scenario taught in advance. When time is up, the examinee moves to the next room, where another simulated patient (or a simulator, depending on the task) is present, and is asked to "perform a chest examination," so the examinee examines the simulated patient's chest. When they move to the next room again, they are asked to "examine the abdomen," and another simulator is present. In this way, the examinees perform the tasks presented in each small room, such as head and neck examination, neurological examination, infection control, and first aid, on the simulated patients and simulators. The evaluator in each room observes the students' performance of the tasks and enters it in the evaluation form. When the students have visited all the rooms, they are evaluated as to whether they have acquired all the necessary skills at the beginning of their clinical practice. Internationally, it is recommended that the appropriate number of examination tasks (number of small rooms) be 12 or more, but considering the current situation in medical schools in Japan, we believe that at least 10 tasks should be conducted.

Tabulation of results and pass/fail decisions

The results of both examinations are tabulated and statistically processed by CATO. The minimum standardized passing scores for the CBT and OSCE are determined in advance by the Bookmark method and the modified Angoff method, respectively, and the draft pass/fail decisions are made based on the results. The details of the subsequent review by the MHLW have not yet been determined.

Pre-Clinical Examination for COVID-19 pandemic

However, there are still some unresolved issues, such as measures to increase the burden on each university to administer the examination and to train standardized mock patients, and the schedule may be changed depending on the SARS-CoV-2 situation. In FY2023, the CBT may be implemented as originally planned, but transitional measures may be necessary for the OSCE, such as starting with 8 tasks and increasing to 10 tasks in FY2025.

OSCE after clinical practice

The current National Medical Examination for Medical Examiners (NMEED) can evaluate the level of knowledge acquired at the time of graduation from medical school, but fails to evaluate clinical skill and attitude.

It would be best if evaluators could be dispatched to practice sites to conduct workplace-based assessments, but this is not possible on a nationwide scale. Therefore, in order to measure the degree to which clinical skills and techniques were acquired during the clinical clerkship, we have been conducting a series of trials since last year using a scenario-based OSCE assignment as a post-clinical training OSCE. These are continually being evaluated and refined and we are hoping to make them official in 2025.

Discourse

Introduction of the speaker of discourse

Ikuo Taniguchi, MD, PhD
Director, IMSJ

Kazuo Futagawa dedicated to the labor and welfare field ever since he joined the Ministry of Health, Labour and Welfare and retired as Administrative Vice Minister of the MHLW in 2017, but his talk conveyed his passion for the MHLW even today. He has always been familiar with the healthcare field and is also well versed in the field site. Japan has become an elderly society, and the needs for medical and nursing care are increasing, and social security costs are steadily increasing. However, what is important is to improve the quality of social security, and to encourage the elderly to play an active role. In order to do so, he said that it is necessary to focus on motivation to work and preventive medicine, increase productivity by using ICT, and secure human resources. Now that he is in a position where he can express his opinions relatively freely, we are sure that his future opinions will attract a lot of attention. Thank you very much for the lecture.

Discourse: Current Status and Issues of the Ministry of Health, Labour and Welfare and Social Security in Japan

Kazuo Futagawa
Member of the Board, Toray Industries, Inc.
Senior researcher, Health care policy,
Industrial investigation laboratory,
Japan Healthcare General Institute, Inc.

I. Japan's Ministry of Health, Labour and Welfare (MHLW) is in charge of the social security sector within the government. The expenditure budget for the social security sector accounts for about one-third of the total government budget and, in effect, a majority of general expenditures, making it the

largest expenditure sector in the government. In addition, looking at the growth of the budget over the past 20 years or so, social security has more than doubled, a more prominent growth than other spending areas. The fact that budget expenditures are high is a clear indication that the workload is also high. In terms of the number of answers given by ministers and others in the Diet, the Ministry of Health, Labor, and Welfare (MHLW) stands out from other ministries in terms of the number of answers given. This is not because of the COVID-19, but is a trend that has continued since before the disaster. The Ministry of Health, Labor, and Welfare (MHLW) is an organization that often faces criticism in various areas, including its response to the new coronavirus. In this way, the Ministry of Health, Labor and Welfare has a large amount of work, but the number of staff members of the Ministry proper is small, and the burden on the staff is extremely large.

Some of the Liberal Democratic Party (LDP) proposed a split in the Ministry of Health, Labour and Welfare (MHLW) or two ministers in the MHLW some time ago. Incidentally, looking at other countries, the number of countries that have a single organization in charge of social security policy and labor policy is basically nowhere to be found. How the organization should be is a difficult issue, but ensuring that it can accurately meet the needs of the public is considered an important task for the future.

II This section discusses issues from the policy perspective of the social security system. The magnitude of needs for social security benefits such as pensions, medical care, and nursing care can be easily understood by looking at population trends. In particular, medical and nursing care needs are closely related to the volume of the population aged 75 and over. Although the total population is expected to decline significantly, the population of the 75+ age group is expected to increase significantly until 2025, reaching around 2.2 million, and then will not decline until around 2065. In other words, this means that the population will continue to increase by 40% compared to 16.3 million in 2015, and by 20% compared to 2020. In addition, the later the population is aged 75 and over, the greater the weight of the older age groups, such as those aged 80 and over and 85 and over. This suggests that the need for nursing care will increase significantly more than the need for medical care.

The future projection of social security benefit costs (2040) shows a slight decrease in pensions as a percentage of GDP, but a large increase in medical care and nursing care. Comparing 2018 and 2040,

medical care will increase by approximately 20%, from 7.0% to 8.4-8.7%, and nursing care from 1.9% to 3.3%, an increase of 70-80%. In order to cover these medical and nursing care needs, insurance premiums and taxes could be increased, but this is not considered easy in the real political process. In order to maintain the universal health insurance and nursing care insurance systems in the future, it is considered essential to review the contents of benefits along with health promotion and nursing care prevention.

In addition, in order to meet the future needs of medical and nursing care services, it will be even more important to secure the human resources, including medical and nursing care staff, who will be involved in providing medical and nursing care services. Since the total population is declining, it is clear that it will not be possible to simply bring in new young people into the medical and nursing care fields as has been done in the past. Active participation of elderly people who are willing to work (In Japan, there are more elderly people who are willing to work than in Western countries, so there are great expectations. Extending healthy life expectancy is also important in this regard.), active participation of women in the child-rearing generation (The so-called M-shaped curve is improving, but there is still room for improvement.), and the utilization of foreign workers through the EPA and technical training schemes. What is even more important are reform efforts aimed at improving the productivity of medical and nursing care services through the use of machines, IT, and other means that are not bound by conventional thinking. The following is an example from the nursing care sector of Zenkoukai in Ota Ward, Tokyo, which is considered to be an excellent example of such efforts.