

Medical Education of United States: A Fulbright US-ASEAN Visiting Scholar Experience

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Introduction

Fulbright US-ASEAN Visiting Scholar program provided me with the opportunity to experience the Medical Education system in the United States. I was hosted by the office of medical education, University of Maryland, School of Medicine, for four months and I was privileged to learn the host country's medical education system through visits to institution's campus life, class rooms, office of medical education, office of student's admission and assessment unit.

Journey to become a doctor in United States

Unlike my country, the United States Medical education system requires a comparatively longer journey to become a physician: after finishing high school education (at about 17 or 18 years of age) it requires completion of a four-year Bachelor degree either in Science or in Arts. The educational program of Medical schools in U.S is essentially a graduate program rather than an undergraduate program. Admission requirements for medical schools include: overall performance in the undergraduate years (Grade Point Average, GPA), scores on the Medical College Admission Test (MCAT), application essays, letters of recommendation (from the undergraduate institutions) and multi mini interviews. The MCAT is developed, administered and revised periodically by the American Association of Medical Colleges (AAMC). The questions are created to assess the background knowledge of natural sciences, social and behavioural science and the concept of critical thinking and problem-solving skill. The new version of MCAT was updated by balancing the assessment of critical thinking and reasoning skill based on the knowledge and competency required for Biological and Biochemical foundations, Chemical and Physical foundations, Psychological and social foundations of living system.¹

The Admission Process: Since medical universities in my country are aiming to have a selection process in the near future, I was keenly interested to study more in depth about the selection process of the Medical schools in the United States. The Office of Student Admission allowed me to observe the admission interview procedures and view their AMCAS (American Medical College Application Service) summary reports. The Admission Office selects the applicants with high levels of academic achievement (i.e., the cumulative undergraduate GPA and MCAT total scores) for multi mini interview. In the acceptance decision, preference is given for non-academic performance such as scores of interview,

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letters of recommendation and applicant's previous experiential credentials. That means acceptance is not guaranteed on the basis of excellent grades and MCAT scores only. The multi mini interview focuses to assess the applicant's personal characteristics, the interview package requires to assess core competencies such as critical thinking (by giving some problematic issues either social or ethical), interpersonal competencies (like service minded, social awareness), cultural competence (if student can show attitude of appreciation and respect for diversity), team working experiences (which demonstrate applicant's attitude of working collaboratively with others), communication skills (listens well and effectively conveys information by using spoken words) and intrapersonal competencies (such as strong motivation to give health care service), adherence of ethical principles (how student follow rules and procedures), reliability, dependability, resilience and adaptability (which applicant can demonstrate tolerance of stressful situations in his or her life). The office of admission has interviewer guidelines in which the process of interview, rules (dos and don'ts) for the interviewers and the admission policies were comprehensively described. One week prior to interview the interviewers must read the interviewer guidelines and send back the signed agreement to the admission office. Interviewers have to write interview summary report after the process. I found that good credits for acceptance were given to applicants with relevant life experiences and personal statements with reflection on how the applicant was motivated for his/her career in medicine.

Medical school Program: Most of the medical school programs in the United States are 4 year MD programs. The detail curriculum structures are different from school to school but the entire educational program has to adhere with the accreditation standards of LCME (Liaison Committee on Medical Education). Mostly the curriculum is semester based integrated blocks, mainly divided into pre-clerkship and clerkship programs with coordination of basic medical sciences and clinical science departments. The Office of Medical education evaluates and monitors all the educational programs.

National Board of Medical Examiners (NBME) and USMLE: Upon completion of medical school, the student gains the title of doctor and the degree of M.D, but cannot practice independently until completing internship and Step 3 of the USMLE. The USMLE (United States Medical Licensing Examination) is developed and managed by National Board of Medical Examiners (NBME), founded since 1915; it is an independent and non-profit organization. The passing score of the USMLE was accepted by all medical boards of United States and it is recognized that an applicant who passes the exam has acquired core competencies to practice medicine.² **USMLE STEP - 1** mainly assesses the understanding and application of basic science principles to the practice of medicine, especially emphasize on principles and mechanisms underlying health, disease and therapeutics. It comprises 8-hour testing duration, divided into seven 60-minute blocks, as multiple choice questions. **USMLE STEP - 2** assesses the examinee's Clinical Skills (CS)

and application of medical knowledge (CK) with emphasis on understanding of clinical science essential for the provision of patient care and disease prevention. It has two parts: multiple-choice questions and clinical skills examination by using standardized patients. **USMLE STEP - 3** assesses the understanding and applications of medical, biomedical and clinical science essential for the unsupervised practice of medicine which emphasizes on the patient management in ambulatory settings. It is two day test, i.e. test for foundations of independent practice (FIP) in multiple-choice questions and test for advanced clinical medicine (ACM) by using multiple-choice questions as well as computer-based simulations.³ Most of the medical students in MD programs sit for USMLE step 1 after year 2 of their MD program, step 2 in Year 4, and step 3 in their internship training.

Medical internship training and residency program: In their final year of MD program, medical students in United States apply for postgraduate internships in a preferred field of specialization. Medical internship training is the first year of residency program. Students have to propose Rank Order Lists (ROL), based on true preferences of residency programs, after finding out the available programs, geographic location of the hospitals and medical centres in the whole of United States and they have to prepare for the application portfolio, which includes curriculum vitae, letters of recommendation, personal statement, Medical school transcripts, Medical Student Performance Evaluation (MSPE) and licensing exam transcripts. The Electronic Residency Application Service (ERAS) is one of the AAMC service programs which streamlines the residency application and documents distribution process. Matching of an applicant's preferences with availability of programs often takes many months before they can be accepted.⁴ Completion of an internship program is a minimum requirement for a general license to practice. However, the majority of physicians complete specialty track "resident training" for several more years to practice independently in respective specialty. The duration of training differs with specialties and training institutions. To become a specialist in a particular field, the resident doctor needs to complete a fellowship program. The Fellowship training is full-time training program which focuses on a particular area of specialty, with requirements beyond the related residency. For example, the fellowship training in cardiology, endocrinology and oncology must be taken after residency training in internal medicine; fellowship in cardiothoracic anaesthesiology after anaesthesiology; fellowship in cardiothoracic surgery, paediatric surgery, surgical oncology can be taken after general surgery etc; doctors need to sit for exam to become accredited by the Board of their specialty. The assessments include multiple choice questions, oral examinations or evaluation of patient charts or operation notes. In some surgical specialties the final board exam cannot be taken until the doctor has completed a certain number and variety of surgical procedures.⁵ The licensure process differed by individual state by state. Doctors need to pass through the licensure process in which they want to practice.

Accreditation: all the medical schools program leading to M.D degree has to be accredited by LCME, jointly administered by the Association of American Medical Colleges (AAMC) and the American Medical Association (AMA). The accreditation process occurs every eight years and the medical schools have to be prepared and completed their self-assessment process before the LCME visit. The graduate medical education programs (residency and fellowship) are also accredited by the Accreditation Council for Graduate Medical Education (ACGME). Its accreditation provides assurance that the training institution has met the quality standards of a specialty or subspecialty practices. For continuing medical education (CME) programs, all CME providers/organizations need to be accredited by ACCME (Accreditation Council for Continuing Medical Education), to assure their practice of CME is in compliance with the ACCME accreditation requirements: aimed for fostering life-long learning, supporting quality patient care and the continuum of medical education for medical professionals.⁶ Physicians or fellow of the specialties are required to document certain amount of credits to be obtained in each year of the cycle. All accredited CME providers have to submit their programs/activities and learner data in electronic data base, Program and Activity Reporting system (PARS). ACCME collaborates with certifying boards of medical specialties and ensure that CME programs meet the requirements for Maintenance of Certification, and streamline the process for accredited CME providers and physicians.⁷

Reflections on the experience relating to my own country: Compared to Myanmar, becoming a medical doctor in United States is a great investment in time, effort and money for an individual, because of expensive tuition fees and various admission requirements. Unlike Myanmar students, the medical students from United States have better maturity with stronger commitment to become a medical doctor. Teaching-learning methodology in the host University is also quite different from Myanmar, they practicing flip classroom in which the students are introduced to the learning materials through online learning platform before the class. In the classroom delivery tool is mainly by discussion even in didactic lecture. Lecturer frequently raise questions or issues to discuss with students, so students learn critical thinking rather than factual knowledge in the classroom. Teachers are facilitating the course rather than lecturing. I was told by a medical student that most student don't like if lecturer doesn't give them a chance for discussion. He added that he can learn passively from lecture Power Points and video at home, for him coming to the school is for learning through discussions with teachers and peers.

I was impressed by their teaching learning methods which can foster adult learning style and gives foundation for lifelong learning skills in ever changing medical science. On my visit to the assessment unit of the medical education office, they explained to me the roles and responsibilities. Question banking, item analysis are managed by the IT experts. After every course, the course director has to send proposed questions to the assessment unit, allocates the question items and sends to several specialists/clinicians for vetting.

I was motivated to reform Myanmar medical school's curriculum from what I learnt in the United States. Some might argue that, adult way of learning and student centred teaching will be difficult in Myanmar due to differences in the student's characteristics. It may be partly true, but students in both societies are of the generation in the digital age who are interested to explore and learn new knowledge and skills using this technology and media. My point of view is to align and upgrade the educational program with the new technologies in the age of knowledge explosion. Teachers also need to know how to foster adult learning style i.e. knowing about students' nature and how to facilitate in critical thinking application of knowledge for the real practice.

There is also another important area to be considered for success of Myanmar medical education, which is student selection process. It is vital that students must be really committed to become a medical professional. They also need to be well informed about teaching programs and assessment system of the Medical Schools. In the United States, admission process of medical school is very well structured. Apart from securing good scores in MCAT, the students have to sit for multi mini interview and showing many evidences of humility, the students have to be prepared for so many obstacles which need perseverance. My impression is students need to prove their willingness and commitment even before their entry to the medical school. In Myanmar, selection process for Medical University is by the scores of matriculation only. My key point is those who score highest may not be the smartest nor those who will have all the attributes of becoming a good medical doctor. All the substantial investments (time, money and material) of the Nation and his/her family is wasted when a medical graduate chooses to pursue a career unrelated to medical profession. I came to know that some medical schools of the United States have special pathway program, which is designed for students from socially or economically disadvantaged backgrounds and who are from area underserved in health professions. Myanmar needs to implement the special pathway program for the country's rural retention problem.

Conclusion: As Medical Education was changing dynamically, Myanmar also needs to change in accordance with international standards. Medical education reform must be aligned with the national education transformation process. The transformational shifts of the Myanmar national education strategic plan (2016 - 2021) included all students to develop knowledge, skills, attitudes and competencies that are relevant to their career and the socio-economic development needs of 21st century Myanmar.⁸ Unlike the other countries, all the medical universities of Myanmar are under the one governance i.e. the Ministry of Health and Sports which will be a good opportunity for transformational shift. With a strong commitment and leadership, Myanmar can develop and implement a new medical education program which will navigate and lead students to become efficient doctors who can effectively serve to fulfil the health care needs of the country.

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