'Modernizing' the Basic Sciences MD program at XUSOM, Aruba

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My opinion

Abstract:
Xavier University School of Medicine is a private medical school in Aruba, Dutch Caribbean mainly admitting students from the United States and Canada to the undergraduate medical (MD) course. Recently the school is in the process of modifying its curriculum in line with its objective of creating leaders in primary care medicine. Among the changes are shifting to an integrated, organ system-based curriculum, using standardized patients for learning and assessment, introducing a medical humanities module, starting problem-based learning sessions, introducing early clinical exposure, conducting family health visits, and teaching students to use essential medicines rationally. In this manuscript the authors briefly describe these initiatives.

Aruba, Caribbean medical school, curriculum, innovations, teaching-learning

‘Off shore’ medical schools in the Caribbean mainly admit students from the United States (US) and Canada to the undergraduate medical (MD) course. Student pursue their pre-clinical study in the Caribbean and then return to the US for their clinical study. A recent article had described considerable variation in the academic programs and performance of students in Caribbean medical schools. In the Caribbean the thrust of the schools and the graduates is on obtaining a good score in the United States Medical Licensing Exam (USMLE) step 1 exams and starting the clinical phase of their study. The pass rates of students in the step 1 exams varies significantly between medical schools. The teaching program primarily focuses on preparing students for the step 1 exams and multiple choice questions (MCQs) in the USMLE pattern is the major method of assessment.

Xavier University School of Medicine (XUSOM) is a private medical school in Aruba, Dutch Caribbean admitting students mainly from the US and Canada to the undergraduate medical (MD) program. There are also a few students from Nigeria and India. In addition to the MD program the school also runs a pre-medical program.

Shifting to an integrated curriculum: Recently however the school’s academic leadership driven by a variety of reasons felt an urgent need to further develop and enrich the MD program. The school has the vision of creating leaders in primary care medicine and has recently (from the January 2013 semester) shifted to an integrated, organ system-based curriculum for the new student intakes. The subjects of anatomy, physiology, biochemistry, neuroscience and epidemiology will be covered during the first two semesters dealing with the normal human while pathology, microbiology, and pharmacology will be studied during semesters 3 and 4 dealing with the abnormal human. The fifth semester of the program was shifted to the campus at Aruba and the primary focus of the semester is on reviewing the basic science subjects with the objective of helping student perform well in the step 1 exams and also strengthen their clinical skills.

Standardized patients (SPs) have been widely used in medical student education and assessment. XUSOM has started training standardized patients who will provide a general history and a history of a particular simulated condition like chest pain, fever to students during the spring 2013 (January-April) semester. SPs have been used for student assessment during objective structured clinical examinations (OSCE). We plan to extend the use of SPs to other areas soon.

Medical humanities (MH) is being widely used in the education of medical students and has a number of advantages in the education of future doctors. A MH module was offered to all first semester (MD1) students during the spring 2013 semester. The small group activity-based sessions used case scenarios, role-plays, facilitator and student presentations, interpretation of paintings to explore different aspects of MH. Eight sessions were conducted and student feedback has been positive. The sessions were conducted on Tuesdays from 3 to 5 pm. The module will be further improved based on feedback from students and other faculty members and will be offered to all MD 1 students during the coming semesters.

Problem-based learning (PBL) has been widely used in medical education and many studies report a favorable outcome on student learning and
preparation for practice. Self-directed learning (SDL) strategies are becoming increasingly important in medical education and practice and the curriculum should develop SDL skills among students. During the spring semester a few PBL sessions were conducted for the MD 1 students. During the summer 2013 (May-August) semester the school is planning to conduct weekly sessions for MD1 and MD 2 students. The PBL sessions will primarily focus on learning objectives from anatomy, physiology, biochemistry, history taking and social issues during the first two semesters and on pathology, microbiology, pharmacology, clinical examination skills, social issues and diagnosis during the next two. Student performance during the PBL sessions will be assessed using a standardized instrument.

Early clinical exposure (ECE) is become increasingly common in medical schools and has the advantage of developing students’ history taking and clinical examination skills and highlighting the clinical importance of the basic science subjects. XUSOM is in the process of signing an agreement with two general practitioners in Aruba to use their facilities for early clinical exposure. SPs will also be used during the program. The emphasis will be on history taking skills during the first two semesters and physical examination skills during the MD3 and 4 semesters.

Family health visits are being used in student learning. XUSOM is planning to introduce family health visits which will be done in small groups. A group of six students will follow up three families over a six month period. A minimum of three visits is being proposed. During the first visit students will obtain demographic, economic and health characteristics of the family and during subsequent visits changes in these characteristics if any will be studied.

Critical appraisal is the process of assessing and interpreting evidence by considering its validity, results and relevance to an individual’s work. Critical appraisal of scientific literature is widely taught in medical schools. XUSOM is introducing activity-based learning of critical appraisal skills from the next semester. Students will learn about objective sources of health information, assessing the quality of health information on the internet, critically appraising clinical trials, meta-analysis and systematic reviews and dealing with information obtained from the pharmaceutical industry.

Learning to use essential medicines rationally is an important skill for doctors. In a medical school in Nepal ten basic competencies for undergraduate pharmacology education were defined. At XUSOM small group sessions addressing this topic had been introduced during the spring semester and will be further expanded during the coming summer semester. During the sessions students will learn to select personal (P) drugs for a particular disease condition, verify its suitability for a particular patient, write a prescription, counsel a patient regarding drug and non-drug management of his/her condition, understand and respond to pharmaceutical promotion and evaluate drug use in healthcare facilities.

The assessment method is being modified to include formative assessments, assessment of student performance during PBL sessions, small group sessions, and family health visits, OSCEs, and assessment of attitudes in addition to the traditional assessment of knowledge using MCQs.

Conclusion

We are confident these changes will further improve student learning at XUSOM and lead to a greater synergy with its objective of creating leaders in primary care medicine.

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