Curriculum Trends in Medical Education in Mauritius

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Abstract

Medical education began in Mauritius with the establishment of Sir Seewoosagur Ramgoolam (SSR) Medical college in 1999 followed by a breakthrough in field of medicine with opening of Anna Medical College and Research Center (AMCRC) in 2010 and Padhamshree DY PatilMedical College in 2013.Though it was an appreciable beginning of medical education in Mauritius, medical schools are currently experiencing hardships in delivering right medical exposure to health care professionals. Mauritian medical schools now need to review their current teaching methodology and present curriculum to keep pace with global standards. Integrated curriculum which is now gaining popularity world-wide is to be introduced and strongly implemented in medical schools in Mauritius. This curriculum would breach barriers and improve integration between pre-clinical and clinical sciences thus facilitating long-term retention of knowledge in medical schools and develop a professionally sound approach towards management of health care. Horizontal curriculum can be replaced by vertical and spiral integration. For this major change, faculty engaged in medical profession are to be acquainted about innovative strategies and emerging trends in medical education. Thus this article aims to highlight the current scenario of medical education in Mauritius and also offer suggestions about possible future strategies to be implemented in medical colleges.

Keywords: MEDICAL EDUCATION, CURRICULUM, CHALLENGES

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Introduction

Mauritius is an island located in Indian Ocean covering a total area of 2040 km^2. Mauritius is a multi-nationality island and people here are of Indian, African, European (mostly French) and Chinese descent. It remained an un-inhabited island before Portuguese visited it followed by Dutch , French East India Company, and British.

The University of Mauritius (UOM) and the University of Technology, Mauritius (UTM) are the institutions that offer degree in the country. Sir Seewoosagur Ramgoolam (SSR) Medical College affiliated to University of Mauritius is the first medical college of Mauritius established in 1999, situated in Belle Rive near the central town of Curepipe. It offers Bachelor of Medicine and Bachelor of Surgery (MBBS) degree and has preclinical, para-clinical and clinical departments. The college also attracts international students from India, South Africa, United Arab Emirates (UAE). The faculty working in SSR medical college is mostly from India and Mauritius. SSR medical college follows the curriculum based on guidelines laid down by Medical Council of India with additional features like teaching Information Technology to medical students as per guidelines given by General Medical council of the UK. The duration of MBBS course is 5 years divided into 10 semesters of 6 months each. It is followed by 1 year compulsory rotatory internship posting. The students are provided clinical training in Jawahar Lal Nehru (JLN) and Victoria hospitals in Mauritius.

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Anna Medical College & Research Centre (AMCRC) is affiliated to University of Technology (UTM), Mauritius. It entered into agreement with University of Technology, Mauritius in 2010 to award degree according to the curriculum given by the Medical Council of India. The teaching hospital for medical students is situated at Flacq. The college enrolls students from India, Mauritius, Sri Lanka, Bangladesh and the Middle-East thereby providing students a rich multi-cultural community to grow with. Total curriculum is for a duration of 4 and a half year. It includes basic sciences and clinical sciences to make students competent enough to health care and develop a professional and compassionate approach towards analysis and management of health care in Mauritius.

Padhmashree Dr DY Patil Medical College started in 2013 in Altima building at the cybercity campus of Ebene in Mauritius by DY Patil Worldwide Ltd. Their curriculum has been developed on the basis of regulations set by the Medical Council of India. It offers a sound academic training and basic skills to medical students to make them enter the medical field as excellent professionals thereby contributing to overall healthy development of the society.

Framework for medical education in Mauritius: The Framework for medical education in Mauritius has been made and approved by Tertiary Education Commission (TEC Board) at a meeting held on 31st July 2008. This framework has been developed to provide a comprehensive picture of the requirements and criteria that any Medical College wishing to offer a MBBS course will have to fulfill. This framework for Medical Education in Mauritius has been divided into two components, non-clinical and clinical. The non-clinical component comprises of the minimum standard requirements such as staff, infrastructure, and equipment that the Medical College must satisfy for the non-clinical part of the MBBS Program. The clinical component indicates the guidelines and minimum requirements for Clinical Training at the teaching hospital.

Existing curriculum of medical schools in Mauritius: MBBS students study pre-clinical subjects of Anatomy, Physiology, and Biochemistry in the first year followed by para-clinical subjects such as Pathology, Microbiology, Pharmacology and Forensic Medicine in the second year. The clinical subjects of Ophthalmology, ENT, and Community Medicine are taught in the final part 1 followed by Medicine, Surgery, Pediatrics, Obstetrics and Gynecology in final part 2. The mode of teaching is via lectures, tutorials, seminars, and practical training. Student assessment techniques consist of written tests having essays type and multiple choice questions, viva-voce, Objective structured clinical examination (OSCE). Integrated medical teaching is not followed and encouraged in the present curriculum in most of medical schools in Mauritius.

Challenges faced by medical education in Mauritius: Medical education in Africa faces numerous challenges such as lack of adequate physical infrastructure, poor accreditation systems, problems in student selection and faculty retention (1), and Mauritius is not an exception. Unfortunately, Mauritian medical schools still follow traditional curriculum in which students are merely passive listeners. Modern techniques such as active self-directed learning and problem-based learning are not observed among medical schools. Postgraduate medical courses have not yet started in medical schools of Mauritius. Thus leading to enhanced migration of doctors (brain drain) to other countries for pursuing postgraduate courses, in want of better standard of living and attractive salary (2).

Newer teaching strategies to reform medical education in Mauritius: Faculty training in the form of workshops should be conducted frequently so that the medical faculty remains abreast of the latest advancements in medical education. Further, it should be ensured that these techniques are incorporated actively

in the present curriculum to foster active learning among students. There is a dire need to improve upon methods of measurement of clinical skills competence of medical students. Assessment of student's performance if done meticulously can serve as an essential tool for improving quality of education in island of Mauritius.

Self-directed learning can be encouraged in medical schools. It includes problem-based learning (PBL) and task-based learning (TBL). PBL was first introduced by Mc Master Medical School in Canada in 1969. In fact, many medical schools of America, Canada, Europe, and Australia have adopted it completely or partly (3). PBL is a student (learner)-centered method of education where the teacher serves the role of a facilitator. A small group of medical students solve a problem on paper and discuss it with their facilitator. Another similar strategy is TBL where learners are expected to perform actual tasks as a medical professional. Self-directed learning is quite an effective educational strategy as it breaches barriers in medical education that has been invariably created by traditional curriculum, enhances problem-solving, and research skills in students and creates a motivating and interactive environment.

Modern medical education techniques such as Team-based Learning and Work Place-based Assessment (WPBA) can be introduced in the present curriculum to assess performance of medical students. Team-based Learning (TBL) is an effective strategy implemented in some medical colleges in the United States and in Duke-National University of Singapore. Students are divided into teams of 5-7 students who will carry this study together for an extended duration of time. It has three-phases: 1.Preparation phase in which student are expected to go through an assignment given by faculty in advance,2. Readiness assurance phase where students demonstrate knowledge through individual readiness assessment tests (IRAT) and Team readiness assessment tests (TRATs),and 3.Application phase, when students apply course concepts to solve exercises framed by faculty and it is then thoroughly analyzed by teams (4).Teachers serve as facilitator in this type of study and students actively participate in curriculum.

Work Place-based Assessment (WPBA) on the other hand, refers to on-the-spot observation of medical students' performance at their workplace (5). Various WPBA tools such as Mini-clinical evaluation exercise (Mini-CEX), Direct observation of procedural skills (DOPS), Chart- stimulated recall (CSR) skills can be used to assess professional skills of students in real scenario and a feedback is provided at the end of session to the trainee to improve their performance in the future. There are certain guidelines that can be followed to achieve good cooperation from students in a class-room. First, a faculty in a medical college should be transparent about the intention and process of putting a question. Secondly, there should be a cordial environment where students can give an incorrect answer without fear of being mocked at. Thirdly, the teacher should give equal time to students to analyze questions and answer accordingly

Integrated Curriculum is gaining popularity in medical colleges. Integration in modern curriculum aims to breach the barriers between various pre-clinical and clinical subject areas in order to provide students with better knowledge. There are three models of Integration: horizontal integration, vertical integration, and spiral integration.

Horizontal integration encompasses integration across disciplines but within a definite time period. For example: Teaching Central Nervous System (CNS) simultaneously in anatomy and physiology classes. On the other hand, vertical integration means integration across time (for example progressive introduction to clinical practice while maintaining basic science component throughout all years of the curriculum). But so far, spiral integration is regarded as the most ideal form of integration as it unites horizontal and vertical integration across time and disciplines. Multi-disciplinary

integration is followed by some medical colleges. Courses may be integrated vertically whereas topics may be integrated horizontally. Such a holistic approach is found to be more effective for catering the students' educational needs related to career in medicine.

Introduction of integration in the present curriculum will ensure that significance of basic sciences is not undermined. Further, it obliterates the gap between basic sciences and clinical subjects leading to long-term retention of facts and knowledge by students. Moreover, learning facts alone does not guarantee students would solve clinical problems as well (6).

Medical curriculum ought to be reviewed periodically to avoid stagnation and improve quality of education. Resources such as free online journals, equipped medical labs, incentives to faculty can be provided to encourage more research publications in medical schools. Medical Education Unit can be started which will cater to faculty development. More medical schools can be opened to educate more students and reduce burden on existing medical schools in Mauritius.

Future plan to develop a high quality medical school in Mauritius: University of Mauritius is now planning to develop a medical school in mutual agreement with the Ministry of Health and Quality of Life and University of Geneva (UNIGE), to improve the quality of medical training in Mauritius. This program will be a full time medical undergraduate teaching program;3 years' full-time course for Bachelor of Medicine followed by 3 years course for the Master of Medicine.

This type of medical curriculum is similar to program offered by UNIGE. On successful completion of Bachelor of Medicine course, students can register themselves for Master of Medicine part of the medical program. Students who pass in the written and oral examination held at the end of course will be awarded a MD (Doctor of Medicine) degree by University of Mauritius which will make them eligible to practice as registered medical practitioners. Students can further do post-graduation or pursue a career in biomedical research as per their choice.

Conclusion

Education rightly said can reform and transform society. Mauritius needs consistent efforts to improve the present status of medical schools to transform it into knowledge hub. Implementation of modern medical education techniques is required to keep pace with global standards which demand dedication and commitment from educators and makers of curriculum.

Conflict of Interest

The author declares no conflict of interest.

References

1. Burdick W. Challenges and issues in health professions education in Africa. Med Teach. 2007; 29(9):882-6.
2. Dodani S, Ronald E. Brain drain from developing countries: how can brain drain be converted into wisdom gain? J R Soc Med. 2005; 98(11): 487–91.
3. Gukas I. Global paradigm shift in medical education: issues of concern for Africa. Med Teach. 2007; 29(9):887-92.
4. GulloC, Cam Ha T, Cook S. Twelve tips for facilitating team -based learning. Med Teach. 2015; 37(9):819-24.
5. Singh T, Sood R. Workplace - based assessment: measuring and shaping clinical learning. Natl Med J India. 2013; 26(1):42-6.
6. Badyal DK, Singh T.Teaching of the basic sciences in medicine: Changing trends. Natl Med J India. 2015; 28(3):137-40.