

**Editorial****Undergraduate Medical Education in Bahrain**

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Medical education in Bahrain has started in 1982, after the establishment of College of Medicine and Medical Sciences (CMMS) at Arabian Gulf University (AGU); it was followed by AMA International University Bahrain (AMA-IUB), College of Medicine in 2002 and finally the official opening of The Royal College of Surgeons in Ireland-Medical University of Bahrain (RCSI-MUB) in October 2004<sup>1</sup>. The AMA-IUB had stopped intake for the College of Medicine for the last 2 years following the visit by the higher education review unit of Quality Assurance Authority for Education and Training (QAAET) in November 2010, which found significant deficiencies and recommended improvement in preclinical and clinical education in terms of resources<sup>2</sup>. RCSI-MUB was also visited by QAAET in May 2011 and it approved the facilities for medical school though there was some concern regarding delay in finalization of agreement by RCSI for managing King Hamad University Hospital (KHUH) as originally planned<sup>3</sup>. RCSI-MUB had successfully graduated two cohorts of medical students.

The idea of Arabian Gulf University was contemplated in late 1970's by the leaders of the Gulf States, Saudi Arabia, United Arab Emirates, Kuwait, Oman, Qatar, Bahrain and Iraq (Iraq withdrew after the Gulf War in 1992) to promote higher education, research in Gulf region and serve the developmental needs of the region<sup>4</sup>. Each Gulf country has an allocated quota of students that is based on the country's population, needs and on its contribution to the university budget. Special agreement with Saudi Arabia and Kuwait allow for higher number of students admitted from those countries than their allocated quota. The intake of students from Qatar stopped after opening of Weill Cornell Medical College (WCMC-Q) 10 years ago.

Bahrain's students had to compete for limited seats. The large number of Bahraini doctors had graduated from foreign universities mostly KSA, Egypt, Ireland, India, Pakistan, USSR, Czech republic and more recently from Ukraine and China.

The College of Health Sciences was established by Ministry of Health in 1976 for training nurses and medical technologist but no plan was made for training medical students to cater for the need of rapidly growing population in Bahrain.

There is a need for opening a medical school by Ministry of Health at the College of Health Science once CMMS is moved to King Abdullah Medical City site at Durrat Al-Bahrain as envisaged in the AGU master plan. It could train most Bahraini doctors, prevent travelling abroad

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and reduce the cost of medical education. It could remove the dichotomy of working with dual contract under two organizations, SMC and AGU, each year. CMMS started in 1982 with intake of 33 students. The number was gradually increased to 150-160 per year without proportionate increase in faculty and resources. Two-thirds of students are females.

CMMS had so far graduated 1,509 student till now (23 cohorts) 469 from Bahrain, 313 from KSA, 263 from Kuwait, 178 from Qatar, 125 from Oman, 121 from UAE, 16 from Palestine, 7 from Sudan, 6 from Syria, 5 from Jordan, 2 from Yemen and one each from Algeria, Lebanon, Egypt and Iraq<sup>5</sup>.

CMMS has adopted the innovative educational model of SPICES (Student-centered, Problem based, Integrated, Community-based, Elective & Systemic) since its inception in 1982<sup>6</sup>. The SPICES model leads to six educational strategies: (i) Teacher-centered to student-centered. (ii) Information gathering to problem learning. (iii) Disciplined-based to integrated learning. (iv) Community-based/hospital-based. (v) Uniform to having elective in addition to a core curriculum. (vi) Apprenticeship-based to a systemic approach in curriculum planning and delivery. In addition to the paradigm shift to a student-centered, problem-based and integrated curriculum, the SPICES model for curriculum planning also include shift from hospital to community-based, from a uniform course program to offering of electives, to further encourage self-directed learning and from rigid to a more systematic approach in designing and planning the curriculum<sup>7</sup>.

CMMS, in contrast to many medical schools, has relatively small full time faculty mainly in basic medical sciences of physiology, anatomy, microbiology, pathology etc. CMMS depends on the clinical teaching of the part-time faculty in major clinical departments of medicine, surgery, pediatrics, obstetrics/gynecology, etc<sup>4</sup>. CMMS has no teaching hospital of its own and depends on Salmaniya Medical Complex (SMC) and Primary Health Centers and Bahrain Defense Force Hospital (BDF) for clinical training. A few full-time senior faculties in major clinical departments had part-time contracts with these two major hospitals. The procurement of part-time contract with teaching hospitals involved lengthy delay resulting in difficulty in recruitment and retention of clinical faculty in major specialties.

The department of medicine is without full-time chairman for longtime. The weakness of teaching and training in CMMS is predominantly in the clinical clerkship phase, which recently had become more acute due to arrival of medical students from RCSI-MUB and AMA-IUB for clinical bedside teaching at the two teaching hospitals. The retirement of senior doctors in other clinical departments would put an arduous task on human resource department to replace them with qualified staff due to unattractive salary scale compared to other institutes and lucrative private practice. However, with the announcement of King Abdullah bin Abdul Aziz to build SR one billion (\$266 million) medical city, the need for AGU own teaching hospital would be resolved, which would greatly improve clinical teaching and research. AGU had already signed a cooperation agreement with US HURON Consulting group INC (HURN:US) on 27/6/2011 and His Majesty King Hamad bin Isa AlKhalifa had allocated a land covering one million square meters at Durrat Al-Bahrain. The work on landmark medical city is expected to be completed by 2014. In the meantime, a deal was signed between AGU and Dr. Sulaiman Al Habib Group to design, build and operate 51 clinics at the AGU Princess Al Jawhara Centre providing ambulatory

treatment, state of art laboratory and X-ray facility with day care surgery. The work on the clinics is nearly complete and opening is planned in April 2012. The clinics would become part of King Abdullah Medical City when it is operational.

AGU has a program evaluation committee, which evaluates comprehensively the undergraduate program from its planning stage to career tracking of its graduates. The evaluation is also done by external examiners who visit the college and participate in final MD examinations each year. AGU had recently invited national commission for assessment and accreditation (NCAA)<sup>8</sup>. NCAA is an academic arm of the ministry of higher education, KSA and has very rigorous criteria for assessment and accreditation. It is hoped that accreditation would rectify the deficiencies in the resources needed for CMMS to compete with other medical schools in the region and internationally. CMMS is also planning to collaborate with IFOM (international foundation of medicine) for conducting clinical science examination for international benchmark<sup>9</sup>. The IFOM was developed in collaboration with NBME (national board of medical examiners) and FAIMER (foundation for advancement of international medical education and research) and North American faculties. It is designed to measure the core knowledge internationally expected of students at critical points in undergraduate medical education<sup>10</sup>. WCMC-Qatar had already started IFOM examination for final year medical students as prerequisite for admission to residency program in Qatar.

In 2006, Arabian Gulf University won the prestigious award of Sheikh Hamdan Rashid Al Maktoum for “Best Medical College in the Arab World”. It is hoped by involving external organizations for monitoring the quality of medical education, establishment of King Abdullah medical city and revitalizing the department of medical education, Arabian Gulf University would maintain the prestigious position in the Arab world and internationally.

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