

EDITORIAL

The Evolving Role of Physiology and Its Teaching in Undergraduate Medical Curriculum

Arif Siddiqui

Department of Physiology, Riphah International University, Islamabad, Pakistan

Healthcare services, education of medical students and leadership in patient care has genuinely being expected to match tremendous advancement made within last 20 years in all aspects of academic medicine. Regulatory bodies for undergraduate professional education in medicine in South Asia however are often under criticism that graduates being produced are not well equipped to tackle the health care needs of the community. Legislators regularly emphasize the importance of teaching about primary health care, alternative and complementary medicine or whatever. Generally, the mounting hindrances to scholastic and community oriented medicine in South Asia are the challenging financial, political, consumer and technology trends that are regarded as real concerns on the ground. Efforts in standardizing medical education at global level have created greater challenge to the undergraduate curriculum planners for reshaping the curriculum in the context of changing needs and relevance to the society.

Prime position that physiology is endowed in undergraduate medical curriculum has given the opportunity to curriculum planners to be more innovative by attempting different modes of its teaching. However, surprisingly in most South Asian countries, the importance of the subject is not reflected in the number of courses, credits both in terms of teaching hours and laboratory sessions and teaching resources made available to physiology.

Physiology is chronically suffering a public relations problem. An important weakness is the perception of physiology as a static subject taught primarily to future healthcare professionals. A disconnect exist between the existing science done in research laboratories and what the clinicians think we teach. The in-built association that physiology has with medicine instead of being beneficial to physiology on which the foundation of a medic is built has rather seem to suffer because of indifferent attitude of the latter.

The subject is not less important for the students of life sciences, pharmacy and veterinary medicine. It is a pre-requisite for continuing education in para-clinical disciplines such as pharmacology, pathology and all the clinical branches of human and veterinary medicine. Even, the study of biochemistry, molecular biology and genetics is regarded complementary and enriched by knowledge of the physiological mechanisms by which single molecular and cellular mechanisms are integrated in a unified organism.

This is complimented by better understanding of how the genome alters function. It thus becomes critical for present-day medical students to understand the principles of physiology and patho-physiology so as to explore the new therapeutic approaches.

Like other basic science disciplines physiologists in the South Asia also are not well organized professionally. Working in silos departments offer extremely limited opportunities for faculty development and collaboration. They are generally handicapped as compared to their peers in more developed countries. Physiological societies, relevant professional and regulating bodies must be organized on progressive lines so as to play effective role in curriculum development and professional development of their fellow physiologists and other basic medical scientists. Discussion prompted by Naftalin (2011) 'The Decline of Physiology' and lately by Silverthorn (2011) 'Physiology is Evolving' further emphasize that stake holders in South Asia also change gears to assume their responsibilities as per changing needs of the time.

About the author: Prof. Arif Siddiqui is the Secretary General of South Asian Association of Physiologists and a well known medical educationist. He is also an Associate Editor of *Advances in Physiology Education* (Published by The American Physiological Society).