

Editorial**TEACHING THE NEXT GENERATION OF AFRICAN MEDICAL STUDENTS****Willie Vörster***Department of Anatomy, School of Medicine, Faculty of Health Sciences, University of Namibia, Windhoek, Namibia*

Worldwide Anatomy teaching has gone through a lot of substantial changes, innovations and adaptations over the last 30 years or so. At this time there were many clinicians who went into teaching of the basic subjects of medical and associated medical courses. For various reasons many doctors, surgeons and other specialists, trained in other disciplines moved to Anatomy and Physiology to teach the medical students in Anatomy and Physiology in its widest sense. They were able to use their clinical backgrounds to teach the students, emphasizing the clinical importance of Anatomy and the term –“ Applied Anatomy” was born.

At this time while the teaching of Gross Anatomy was handled by the clinicians the other aspects of Anatomy, such as Histology, Embryology and Neuro (Sciences) Anatomy was taught by the ‘researchers’ in these fields. These were PhD or other Science degree holders. With this a decline in the latter fields of Anatomy as far as teaching of the whole Anatomy picture occurred.

Dissection or obtaining surgical skills from the expert clinicians formed the basis of this Applied Anatomy curriculum.

Then all the different new and innovative teaching methods were introduced and adaptations to the ‘old’ way of teaching Anatomy and the whole medical curriculum that was changed to clinical orientated, or clinical oriented or over the last 15 years to problem based learning (PBL). This was based on new education methods and educational research and quickly spread to most corners of the world. With many institutions and educationalists feeling that this was the ultimate teaching method, especially when adopted for medical teaching.

It became evident that the students struggled in their later years of study, due to a lack of the fundamentals presented in the ‘basic subjects’. Hence the realization set in to go back to concentrate on the basic knowledge (subjects) to secure a solid foundation for the medical and clinical subjects later in the course. At this time team based learning (TBL) was the new buzz word in medical education. Although for many years the ‘old’ way of Anatomy teaching was done very successfully around a cadaver through this method of 4-6 students dissecting and thus experience ‘problem solving’ and applied anatomy. It was however not called TBL at that time yet. Embryology and Histology became integrated in the new systems based curricula with input by clinicians during the first year or year and a half of the medical course. These dissections and clinical inputs were aided by various methods of clinical case presentations to

make the students aware of the importance of clinical oriented anatomy.

What is then expected from the next generation of medical doctors and how should they approach Anatomy? With the present trends in non-invasive (sonar and MRI) and many minimal-invasive techniques (endoscopic and arthroscopic clinical examinations), it is evident that a more 'living Anatomy' approach should be brought into Anatomy teaching. What does the Anatomy of the shoulder joint look like on an arthroscopic image and how do the ovaries (white) and ureters (peristalsis) look on an endoscopic image? An even more detailed knowledge of anatomy is needed when interpreting the narrow fielded view presented by the endoscope. Knowledge derived from macroscopic dissection is essential to reach an acceptable level of the identification and understanding of three dimensional structures as presented by these modern imaging techniques.

New trends and directions for medical education have now become apparent – especially in African countries where a great need for medical doctors has always been prominent. Governments have realized that good medical care has now become an undisputed necessity for the people of Africa. It has always been a problem to import doctors and more so to retain them in the African countries.

With more funding and other resources being allocated to medical care, it was soon realized that probably the best way would be to start medical schools and medical training locally and apply them in the rural communities for better health care for all. In doing so quite a few new medical schools have sprung up in Southern Africa over the last 3-5 years. South Africa itself raised their numbers of medical students per intake 3-4 fold to cover their own needs and shortages.

So new medical schools had to be established in the surrounding countries like the University of Namibia (Windhoek, Namibia), the Copperbelt University (Ndola, Zambia), Lurio University (Nampula, Mozambique), University of Botswana School of Medicine (Gaborone, Botswana) and Lesotho National University (Lesotho) to cater for their own and unique medical needs.

This immediately placed a heavy burden on the number of medical educators available to teach the students. It was soon realized that there were not enough lecturers available either in their own or surrounding countries, or other African and even overseas countries to serve the needs of

the new medical schools. It was then that collaborators from Europe and the USA were willing to assist in setting up programs for exchanging staff and most importantly train some of the new lecturers. Thus a Consortium was initialized with the assistance of Oulu University (Finland) and Vanderbilt University (Nashville, USA) called the Consortium of New Southern African Medical Schools (CONSAMS). The main objectives set out for CONSAMS were to facilitate full capacitation of Africa-centric medical education through the development of appropriate competency based curricula, setting up postgraduate programs and Faculty development, exchanges and further training of the trainers. Funding for these programs was forthcoming from the government of Finland and the Medical Education Partnership Initiative (MEPI).

This led to the establishment of exchange programs where the lecturers from the CONSAMS members are used as external examiners at the other schools, making sure that standards and outcomes are retained and that the curricula are indeed aimed at the specific needs and situations in Southern Africa. All the member's curricula are strongly based on a proper knowledge of the basic medical subjects, but the emphasis is placed on community and rural based training, which takes place throughout almost all of the study years.

One of the main problems facing Africa and most other developing countries worldwide is that it is very difficult to retain these professionals in their countries of training after qualification. In order to stem this exodus of locally trained medical doctors, a policy was adopted to select students from both the rural and city regions. During their first two years they rotate through the local training hospitals, but thereafter they go twice a year for training and deliver community service at the rural hospitals and clinics in the regions where they originally come from. Hopefully this will encourage them to go back to their own regions and communities to serve the medical needs of those communities. Students are also encouraged to become involved in research projects from their second to fifth years in the special medical needs of the local communities where they originate from.

The training of medical specialists will mostly rely on an international route. Thus the basic training should also prepare the students to fill their position in the global medical field and supply them with the necessary international accepted skills and knowledge.