

REVIEW ARTICLE

Development of a Core Curriculum for Anatomy in Sri Lanka

Chenthuran T¹¹Department of Anatomy, Faculty of Medicine, University of Jaffna**Running Title:** Core Curriculum for Anatomy

Doctors without anatomy are similar to moles: they work in the dark and their daily tasks are mole hills Tiedemann: Heidelberg¹ (1781-1861)

Establishment of the Colombo Medical School in 1870¹ can be regarded as a milestone in the allopathic medical education in Sri Lanka. At present there are ten medical faculties - each of which is attached to a state university - undertake medical education in the country under the governance of university grants commission (UGC) of Sri Lanka. The UGC of Sri Lanka which is overseen by the Ministry of Higher Education, Technology and Innovation, regulates the admission of students to the state universities². The UGC has decided to commence the eleventh medical faculty in the current year in order to expand the medical education in the country³.

The state universities in Sri Lanka develop their anatomy curriculum as part of their own medical curriculum in accordance with the Subject Benchmark Statement in Medicine of the UGC, Sri Lanka⁴ and the approved standards for Undergraduate Medical Education in Sri Lanka by the Sri Lanka Medical Council (SLMC), Sri

Lanka⁵. In addition, universities should comply with other guidelines and standards prescribed by the UGC [such as Codes of Practice by the Quality Assurance Council (QAAC)]² and its line Ministry [e.g. Sri Lanka Qualifications Framework (SLQF)]⁶. Further, medical course should adhere to other reference points such as the learning outcomes, standards, by-laws and guidelines pertaining to the respective institution. Upon approval of the Senate of the relevant institutions, the medical curriculum is implemented. These guidelines / regulations establish an association between academic and professional accreditation and ensures maintenance of optimal standard of medical education throughout the country while permitting the universities to decide on their own type of curriculum (i.e. traditional discipline based, module based, problem based or mixed), teaching / learning and assessment methods.

Anatomy is a basic medical science and an integral component of medical education. A comprehensive knowledge in anatomy is key to safe and effective practice of medicine. The medical degrees offered by all state universities are similarly valued in terms of academic merits and on its recognition by the SLMC for professional registration of medical graduates.



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Hence, any inconsistencies in the type of curriculum, overall contents, teaching and assessment methods among medical faculties often confuse the undergraduate medical students about the approach and extent of learning Anatomy. A short review on the content and dedicated hours for anatomy in the curricula of medical faculties of three selected universities was performed mainly based on the information available on the website of the respective institutions. There was a remarkable difference in the overall student contact hours for teaching anatomy between the two similar aged medical faculties established approximately four decades ago [483 hours⁷ and 516 hours⁸] and one of the two youngest functioning medical faculties (733 hours⁹). In addition, time allocated for teaching main contents / sections, as an example microscopic anatomy showed considerable differences between one older (48 hours)⁷ and recently established (90 hours)⁹ medical faculties where the other older medical faculty occupied a position in between (78 hours)⁸ these two institutions. Variation in the teaching / learning methods for the above section was also evident between the selected universities. It is noteworthy that the recent curriculum revision of one of the older Universities resulted in 25.5% reduction of anatomy curriculum from 659.5 hours (older curriculum)¹⁰ to 491 hours (following curricular revision)⁷. These observations clearly indicate that in the absence of an empirically scrutinized - generally agreed - core curriculum for anatomy along with well-defined goals,

considerable differences in anatomy education between medical faculties, is inevitable. The observations presented above are merely for highlighting the variations between existing curricula in the country and, not for suggesting or endorsing student contact hours for any institution or section which is beyond the scope of this manuscript.

The Anatomical Society¹¹ (previously known as “Anatomical Society of Great Britain and Ireland”) has proposed a revised core syllabus in 2015 / 2016 for anatomy for undergraduate medical education. It encompasses a series of 156 learning outcomes that should be achieved by a medical student at the time of his / her graduation. However, this core curriculum does not include the learning outcomes for certain sections such as the microscopic anatomy and embryology^{12,13}. In addition, the International Federation of Associations of Anatomists (IFAA), an organization consisting of twenty seven national and multinational anatomical associations, has initiated a core syllabus project for developing such curriculum for teaching anatomy in medicine and allied health programs¹⁴. During this process, the core syllabus for head and neck, neuroanatomy and musculoskeletal anatomy has been finalized and published. However, curriculum of medical schools should be viewed along with the differences in the entry criteria to the medical course between Sri Lanka and certain countries which prerequisite a pre-med degree for admission of students¹⁵. Preparation of core curriculum for clinical subjects by the UGC, Sri Lanka

is on progress and will be implemented nationally upon its approval. However, development of a core syllabus for anatomy was not fruitful despite of efforts taken in the past.

The proposed core curriculum should serve as a national guideline which can be adapted into individual curriculum of state universities irrespective of type of curriculum followed which itself determined by many factors including the practical availability of academic staff in the Faculty of Medicine. The intended core syllabus for anatomy should incorporate important contents while addressing the global concerns related to reduction in the anatomy teaching hours and expectation of more clinical oriented teaching. The contents of core curriculum is debatable and to be determined by the subject experts by consensus. However following areas could be considered for inclusion or at least as a framework to initiate a meaningful discussion in the development of a core curriculum for teaching anatomy for undergraduate medical students:

1. Main contents / sections in teaching anatomy (e.g. general anatomy, gross anatomy, microscopic anatomy, embryology, radiology, genetics etc.)
2. An overview and, prescribed student contact hours for each main content / section (Preferably in a range)
3. Learning outcomes for each section and subsections (e.g. gross anatomy can be further categorized into body regions such as upper limb, thorax, abdomen etc.)

4. Methods of assessment for all types of curriculum followed in the country separately

In addition, core curriculum may suggest the teaching / learning methods for each main contents / section (e.g. learning gross anatomy through complete dissection by students or prosection or teaching using prosected specimens or three dimensional computer programmes or combination of more than one methods etc.) that could be considered in the periodical revision of curriculum of individual universities.

In conclusion, development of a core curriculum for anatomy will be a corner stone in the medical education in Sri Lanka. It will enable the anatomy educators, clinicians and other stake holders to recommend an appropriate anatomy curriculum for their respective institution based on the core syllabus accepted nationally. It will overcome the inconsistencies in anatomy education between universities and ensures that the students obtain almost equal and sufficient knowledge and skills and, avoid any unnecessary burden imposed on them.

Conflict of interest

The author declares no conflict of interest.

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Correspondence

Dr. T Chenthuran,
Department of Anatomy,
Faculty of Medicine,
University of Jaffna,
Adiyapatham Road,
Kokuvil West, Kokuvil,
Jaffna, Sri Lanka.

E-mail: chen.educ@gmail.com

Tel: +94 21 2222073 (Office)
+94 71 6666337 (Mobile)

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