ASE-15-0203

Letter to Editor

**A New Core Gross Anatomy Syllabus for Medicine**

**Claire F. Smith\*1, Gabrielle M. Finn2, Jane Stewart3, Thomas Clive Lee4, Thomas H. Gillingwater5, Stephen McHanwell3.**

1Department of Anatomy, Brighton and Sussex Medical School, University of Sussex, Brighton, United Kingdom

2Centre for Education Development, Hull York Medical School, University of York, York, United Kingdom

3School of Medical Education, Newcastle University, Newcastle upon Tyne, United Kingdom

4Department of Anatomy, Royal College of Surgeons in Ireland, Dublin, Ireland

5Edinburgh Medical School; Biomedical Sciences (Anatomy), University of Edinburgh, Scotland, United Kingdom

Running title: New Core Syllabus

Correspondence to: Dr. Claire F Smith, Brighton and Sussex Medical School, University of Sussex, Brighton, United Kingdom, BN1 9PX. E-mail: c.smith@bsms.ac.uk

To the Editors, *Anatomical Sciences Education*:

We wish to inform the readership of Anatomical Sciences Education about recent important developments in the Anatomical Society’s core syllabus in gross anatomy for medicine. The questions of what students studying medicine need to know and when they need to know it are important for curriculum planners, anatomy educators and their students. They have been considered many times (Bergman et al., 2014, Drake, 2014, Pawlina and Drake, 2014), as our ever-expanding knowledge about health and disease and the need to accommodate changes of emphasis in medical treatment, such as the increased focus on prevention and care delivered in primary settings, the emergence of newer disciplines and a greater understanding of how students learn (Smith and Mathias, 2010; Smith et al., 2014), all influence students’ needs.

In debates about anatomy’s position and role within the broader medical curriculum, it has often been the basic science content of medical courses that has been subjected to the most intense scrutiny in order to create space for clinical and communication skills and a wider range of disciplines. Yet applying an appropriate level of anatomical knowledge is the foundation of safe and effective clinical practice, not least because of concerns over the possibility of malpractice (Ellis, 2002; Older, 2004).

In medicine, the manner in which the content of a course will be delivered (the curriculum) can vary widely between institutions, ranging from a traditional, didactic approach through to problem-based learning (Findlater et al., 2012). Despite this wide variation in curricular structure, it is the case that the syllabus, the content of that curriculum, remains more consistent between institutions and between countries. However, this tacit knowledge of course content is seldom made explicit. This is particularly true for anatomy.

In 2007 the Education Committee of the Anatomical Society of Great Britain and Ireland (known since 2010 as the Anatomical Society), published a core syllabus in gross anatomy for medicine (McHanwell et al., 2007). Subsequently, work has been undertaken to further define syllabi for specific anatomical regions and systems e.g., the head and neck (Tubbs et al., 2014). The Anatomical Society core syllabus was originally developed through a relatively informal consensus process. However, given the time since its first publication and the changing needs of medicine and healthcare education, it was felt that the syllabus would benefit from a robust analysis and re-review, employing a more rigorous research process which would capture views from a wider group of medical practitioners and anatomy educators.

The method chosen was a Delphi process (a form of consensus survey) as the means to access the tacit, collegial knowledge about what anatomy a medical doctor should know upon first graduation (Keeney et al., 2011, Moxham et al.,2014). The authors are pleased to write to Anatomical Sciences Education to inform them that the results of that Delphi analysis have recently been published (Smith et al., 2016a, b). A three-stage Delphi process was performed on the 2007 core syllabus (McHanwell et al., 2007). An expert panel of 51 participants were asked in two stages to ‘accept’, ‘reject’ or for the first stage only, ‘modify’ each of the original 163 learning outcomes in the gross anatomy components of the 2007 syllabus. The third stage involved refinement of the style, but not the content, of learning outcomes by research. The new syllabus that is presented now (Smith et al., 2016a) contains 156 learning outcomes grouped by body region. In the process 133 of those 156 learning outcomes were modified to a greater or lesser extent, representing a significant refinement of the 2007 document. The remaining 23 learning outcomes in the revised 2016 syllabus were unchanged - further details can be found in Smith et al., 2016b.

This new syllabus (Smith et al., 2016a) is intended to be useful to a wide range of groups and individuals including curriculum planners, teachers and students. We emphasize that a syllabus is essential in establishing the coherence of teaching to support student learning and can be implemented in the best way appropriate for whatever form the curriculum takes within a given institution. We would also hope that despite the syllabus being devised for medical students, it could also inform the teaching of anatomy in paramedical courses.

**Claire Smith, B.Sc. (Hon.), P.G.C.E., Ph.D., F.H.E.A.,**

**F.A.S.**

*Department of Anatomy*

*Brighton and Sussex Medical School*

*University of Sussex, Brighton, United Kingdom*

**Gabrielle Finn, B.Sc. (Hon.), Ph.D., P.G.Cert.T.L.H.E., F.H.E.A., F.A.S.**

*Centre for Education Development*

*Hull York Medical School,*

*University of York, Heslington, York, United Kingdom*

**Jane Stewart**, **Ph.D., M.Sc, Cert.Ed**

*School of Medical Education*

*Newcastle University,*

*Newcastle. United Kingdom*

**Thomas Clive Lee**, **Ph.D., M.D., Sc.D. (Dubl.), F.R.C.S.I., F.R.C.S.Ed., F.A.S., C.Eng., F.I.E.I., H.R.H.A., Hon.F.T.C.D.**

*Department of Anatomy*

*Faculty of Medicine and Health Sciences*

*Royal College Surgeons in Ireland*

*Dublin, Ireland*

**Thomas Gillingwater, B.Sc., M.B.A., Ph.D., F.A.S.**

*Edinburgh Medical School: Biomedical Sciences*

*College of Medicine and Veterinary Medicine*

*University of Edinburgh, Edinburgh, United Kingdom*

**Stephen McHanwell, B.Sc. (Hons.), Ph.D. (Bristol), C.Biol., F.S.B., N.T.F., F.H.E.A., F.L.S.**

*School of Medical Education*

*Newcastle University,*

*Newcastle upon Tyne, United Kingdom*

LITERATURE CITED

Bergman EM, Verheijen IW, Scherpbier AJ, Van der Vleuten CP, De Bruin AB. 2014. Inﬂuences on anatomical knowledge: The complete arguments. Clin Anat 27:296–303.

Drake RL. 2014. A retrospective and prospective look at medical education in the United States: Trends shaping anatomical sciences education. J Anat 224:256–260.

Ellis H. 2002. Medico-legal litigation and its links with surgical anatomy. Surgery 20:i–ii.

Findlater GS, Kristmundsdottir F, Parson SH, Gillingwater TH. 2012. Development of a supported self-directed learning approach for anatomy education. Anat Sci Educ 5:114–121.

Keeney S, Hasson F, McKenna H. 2011. The Delphi Technique in Nursing and Health Care.1st Ed. Chichester, West Sussex, UK: John Wiley & Sons Ltd. 208 p.

Lee C. 2016. Editorial. J Anat 228:1.

McHanwell S, Atkinson M, Davies DC, Dyball R, Morris J, Ockleford C, Parkin I, Standring S, Whiten S, Wilton J. 2007. A core syllabus in anatomy for medical students—Adding common sense to need to know. Eur J Anat 11:S3–S18.

Moxham BJ, Plaisant O, Smith CF, Pawlina W, McHanwell S. 2014. An approach towards the development of core syllabuses for the anatomical sciences. Anat Sci Educ 7:302–311.

Older J. 2004. Anatomy: A must for teaching the next generation. Surgeon 2:79–90.

Pawlina W, Drake R. 2014. What do electrical outlets and Google maps have in common with core anatomy curricula? Perspectives from anatomists, clinicians and educationalists. Anat Sci Educ 7:249–250.

Smith CF, Finn GM, Stewart J, Atkinson MA, Davies DC, Dyball R, Morris J, Ockleford C, Parkin I, Standring S, Whiten S, Wilton J, McHanwell S. 2016b. The Anatomical Society core regional anatomy syllabus for undergraduate medicine. (in press; doi.10.1111.joa12405).

Smith CF, Finn GM, Stewart J, McHanwell S. 2016a. Anatomical Society core regional anatomy syllabus for undergraduate medicine: The Delphi process. J Anat (in press; doi.10.1111joa.12402).

Smith CF, Martinez-Álvarez C, McHanwell S. 2014. The context of learning anatomy: Does it make a difference? J Anat 224:270–278.

Smith CF, Mathias H. 2010. What impact does anatomy education have on clinical practice? Clin Anat 24:113–119.

Tubbs RS, Sorenson EP, Sharma A, Benninger B, Norton N, Loukas M, Moxham BJ. 2014. The development of a core syllabus for the teaching of head and neck anatomy to medical students. Clin Anat 27:321–330.