

## Assessment of anatomy for medical students at Cardiff University

Tracey Wilkinson and Bernard Moxham

The learning of anatomy by medical students is important not only for the attainment of essential, clinically-based knowledge but also for the achievement of a range of skills otherwise difficult to obtain. The medical curriculum at Cardiff University has a solid clinical emphasis in the basic medical sciences. Mixed anatomical assessments aim to test not only knowledge gained, but also its application. They also creatively assess students' attitudes to some of the more meaningful experiences of the dissecting room, such as dealing directly with death.

Medical students at Cardiff University begin the study of anatomy in their first year with an integrated foundation studies course which includes microanatomy. In addition, a Human Structure course is undertaken as an independent subject in the first two years of the curriculum, with thorax, limbs, back, abdomen and pelvis covered in the first semester of the first year. Classes are student-centred, consisting largely of practical dissection with very few lectures and a strong clinical orientation. The students also complete a Medical Humanities project, where they write poetry or prose to explore some of the more philosophical aspects of their experience (e.g. life and death). The student selected component (SSC) sees students working both independently and as members of a team to be introduced to morbid anatomy/pathology by describing an abnormality, variation or clinical condition found in their cadaver. Another area where applied and clinical anatomy may be assessed is through clinical, integrated tests, of which there are two in Year 1. Students are sent a clinical case a week before the test, at which they then answer questions designed to gauge their comprehension.

Assessment in the early years at Cardiff is carried out in the following four areas: knowledge and understanding, skills and competencies, attitude and conduct and an SSC. Assessment with anatomical components in Year 1 falls across these categories, as indicated in Table 1.

Area	Assessment	Component	Marking
Knowledge and understanding	Practical spot examination	Specimens	(50%)
		PowerPoint presentation	(50%)
		<b>Total</b>	<b>100%</b>
	Project assignments in dissecting room	Individual write-up	satisfactory completion
	Clinically integrated tests	Written comprehension	25% (of integrated assessment)
Skills and competencies	Use of surgical instrumentation		satisfactory completion
Attitude and conduct	Medical Humanities project	Poetry, prose, dialogue	satisfactory completion
SSC	Anatomy project	Individual write-up	satisfactory completion
		Group oral presentation	satisfactory completion

**Table 1:** First year assessments where anatomical components are included.

For Year 2, students complete the study of the human body (head, neck and neuroscience). Due to a shortage of suitable human material at this stage, prosections were used for the first time in the academic year 2009/10. Successful completion of the Human Structure course in Year 2

requires passing a spot test similar to that of Year 1, and satisfactory completion of the dissecting room clinical assignments.

The assessment of our students is therefore not only concerned with attaining a good knowledge of anatomical structure, but also is concerned with the ability to apply this in a clinical context. This is achieved by constant, and immediate, application of new knowledge through writing up the dissection assignments.

It is often mentioned that learning anatomy in the dissecting room has many more aspects to it than simply learning the names of structures. Cardiff is one of the few medical schools which, through assessment, strongly encourages students to consider the deeper meaning of dissection by contemplating the donor's (and thus their own) mortality.