Medical Ethics and Law

A practical guide to the assessment of the core content of learning

A report from the Education Steering Group of the Institute of Medical Ethics

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Published by
Institute of Medical Ethics
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January 2013

The report may be downloaded free from our website.

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Web references throughout this report were accessed and correct in January 2013

Typesetting by: Mach 3 Solutions Ltd | 01453 886817

Printed in the UK by:

LEOPARDPRESS.com Ltd
Boundary Court
Selsley Common
Gloucestershire
GL5 5PL
Tel: 01453 872123

The Institute of Medical Ethics is a company limited by guarantee, registered in England & Wales number 985158 and registered charity number 261876.

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Foreword

In 1984 the Institute of Medical Ethics (IME) convened a working party to consider the teaching of medical ethics in UK medical schools. The working party reviewed current practice in teaching, discussed alternative teaching options, academic standards and made recommendations. The 'Pond Report', named after its Chair, Sir Desmond Pond was the outcome of the work of the working party.[*] In the 1993 version of Tomorrow's Doctors, the General Medical Council (GMC) outlined its requirement that all medical schools should include teaching of medical ethics and law as part of the core curriculum.

In 1998, the IME published its 1998 Consensus Statement detailing the key broad content areas that should be included.[†] After setting up an Education Steering Group in 2006, and consulting widely through annual conferences with students and teachers of medical ethics and law and with other stakeholders, the IME revised the consensus based on core learning outcomes in medical ethics and law.[‡] The Education Steering Group convened an Assessment Working Group to look at how best to support teachers in assessing students' learning in medical ethics and law. This report is the outcome of the work of the group and aims to act as a starting point for teachers. We hope that this support will continuously be built upon by the IME community and up-dated its website: http://www.instituteofmedicalethics.org

Professor Gordon Stirrat

Chair: IME Education Steering Group

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* Institute of Medical Ethics. The Pond Report: Report of a working party on the teaching of medical ethics. London: IME Publications. 1987.

† Consensus statement by teachers of medical ethics and law in UK medical schools. Teaching medical ethics and law within medical education: a model for the UK core curriculum. *Journal of Medical Ethics* 1998; 24:188–92

‡ Stirrat, GM, Johnston C, Gillon R & Boyd K. Medical ethics and law for doctors of tomorrow: the 1998 Consensus Statement updated. *Journal of Medical Ethics*, (2010); 36(1): 55–60.

Summary

This report aims to provide a practical guide for teachers involved in planning, designing and implementing assessment tools for medical ethics and law (MEL) in medical schools in the UK. Participants at the IME annual conferences have consistently indicated a need for accessible material, which does not require an in-depth understanding of the educational literature, to help them assess the MEL learning outcomes articulated in the core content of learning (3).

The guidance contained in this report is not intended to be all encompassing; rather it aims to give an overview of the key areas to consider when making decisions about assessment. It contains examples of methods of assessment and provides some pointers for deciding what methods might be appropriate for particular learning outcomes. The three broad areas covered are:

- Aligning teaching, learning and assessment
- Deciding on a rationale for making decisions about what, how and when to assess students' learning
- The benefits/drawbacks of different assessment methods

An on-line version of this document is available on the IME website (http://www.instituteofmedicalethics.org) where further examples of teaching, learning and assessment methods/approaches can be found.

Acknowledgements

The authors would like to thank Al Dowie (University of Glasgow) for his insightful review of this guide and helpful suggestions for improvement and Jenny Field (University of Southampton) for her useful comments and feedback on an earlier draft.

1

Introduction

Tomorrow's Doctors

In the latest version of Tomorrow's Doctors (2009) the GMC sets out its current requirements for medical ethics and law teaching in the undergraduate medical curriculum (1). See Box 1.

Box 1 Tomorrow's Doctors 2009 (1)

The graduate will be able to behave according to ethical and legal principles. The graduate will be able to:

(a) Know about and keep to the GMC's ethical guidance and standards including *Good Medical Practice*, the 'Duties of a doctor registered with the GMC' and supplementary ethical guidance which describe what is expected of all doctors registered with the GMC.

(b) Demonstrate awareness of the clinical responsibilities and role of the doctor, making the care of the patient the first concern. Recognise the principles of patient-centred care, including self-care, and deal with patients' healthcare needs in consultation with them and, where appropriate, their relatives or carers.

(c) Be polite, considerate, trustworthy and honest, act with integrity, maintain confidentiality, respect patients' dignity and privacy, and understand the importance of appropriate consent.

(d) Respect all patients, colleagues and others regardless of their age, colour, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sex, sexual orientation, or social or economic status. Graduates will respect patients' right to hold religious or other beliefs, and take these into account when relevant to treatment options.

(e) Recognise the rights and the equal value of all people and how opportunities for some people may be restricted by others' perceptions.

(f) Understand and accept the legal, moral and ethical responsibilities involved in protecting and promoting the health of individual patients, their dependants and the public – including vulnerable groups such as children, older people, people with learning disabilities and people with mental illnesses.

(g) Demonstrate knowledge of laws, and systems of professional regulation through the GMC and others, relevant to medical practice, including the ability to complete relevant certificates and legal documents and liaise with the coroner or procurator fiscal where appropriate.

In the introduction to this document the GMC recognises that "medicine involves personal interaction with people, as well as the application of science and technical skills". This necessitates that medical schools equip medical students not only with the scientific background and technical skills they need for practice, but, as importantly, "they must enable new graduates to both understand and commit to high personal and professional values". In the context of the doctor as a professional the GMC requires that "the graduate will be able to behave according to ethical and legal principles"(para 20).

Medical ethics and law (MEL) core content of learning

In 1998 a group of teachers of ethics and law within UK medical schools produced the Consensus Statement, a document which put flesh onto the bones of the Tomorrow's Doctors' requirement that ethics and law be a part of the undergraduate curriculum (2). It identified a core list of topics to be covered in the curriculum, including: Informed Consent and Refusal of Treatment, Human Reproduction, Medical Research and 'New Genetics'. In 2009 the IME's 3rd Conference on Medical Ethics and Law supported the idea that the Consensus Statement needed to be updated. Following a process of consultation with key stakeholders, the new core content of learning was published in 2010(3). This comprises 11 key topics (Box 2) and detailed themes, expressed as learning outcomes. It is intended to expand the GMC requirements and to provide more guidance for teachers, students and key stakeholders on what is considered to be the core learning outcomes in medical ethics and law that are appropriate, indeed necessary, to equip doctors in the future. Professionalism has been explicitly included to encompass the GMC's Good Medical Practice guidelines (4). Over recent years appropriate professional behaviour has been increasingly considered an integral part of the role of the doctor and aspects of professionalism form part of the framework of medical ethics and law.

Box 2 Core content: key topic areas (3)

- Professionalism: 'Good Medical Practice'
- Patients: their values, narratives, rights and responsibilities
- Informed decision making and valid consent/refusal
- Capacity and incapacity
- Confidentiality
- Justice and public health
- Children and young people
- Mental health
- Beginning of life
- Towards the end of life
- Medical research and audit

It is expected that the 11 topics will be integrated horizontally (within years) and vertically (across the years) within the undergraduate curriculum. In the development of the MEL core content of learning it was recognised that, as students progress through their undergraduate education, they will move from an ability to recognise and understand ethical and legal issues to an ability to reflect upon and integrate ethical analysis into their clinical encounters. The aim is

that "teaching and learning should be attuned to the learners' needs appropriate to both their particular stage of training and relevant specialty-specific ethical issues" (3).

The MEL core content of learning has been endorsed by both the GMC and the BMA.

Foundation years and beyond

The UK Foundation Programme Curriculum (2012) sets out the framework for educational progression that will support the first two years of professional development after graduation from medical school.

One of the 12 topics in the foundation programme relates to ethics and law, (see Box 3). Other topics also cover aspects of ethics and law; for example 'Relationship and Communication with Patients' includes issues of patient autonomy, dignity and consent. Undergraduate students who have covered the learning outcomes in the core content of learning will be well placed to develop their critical thinking and analytical skills after qualification.

Box 3 UK Foundation Programme (5)

Section 4: Ethical and legal issues:

- Medical ethical principles and confidentiality
- Legal Framework of Medical Practice
- Comprehension of relevance of outside bodies to professional life

Box 4 gives some information about medical ethics and law curricula in other countries.

The following sections of this report aim to provide practical guidance on the assessment of students' learning in medical ethics and law.

Box 4 A brief look elsewhere

In 1999 the World Medical Association strongly recommended to medical schools world-wide that the teaching of Medical Ethics and Human Rights be included as an obligatory course in their curricula (6)

North America

The Association of American Medical Colleges (AAMC) represents accredited US and Canadian Medical schools. In its 1998 report 'Learning Objectives for Medical Student Education Guidelines for Medical Schools' it states that medical schools "must ensure that before graduation a student will have demonstrated … knowledge of the theories and principles that govern ethical decision making, and of the major ethical dilemmas in medicine." (7)

In 2004 Lehmann et al found that although in the past few decades the number of U.S. and Canadian medical schools requiring medical ethics education increased, "nevertheless, significant variation in the content, method, and timing of ethics education suggests consensus about curricular content and pedagogic methods remains lacking." (8)

Australia and New Zealand

In 2001 a Working Group, on behalf of the Association of Teachers of Ethics and Law in Australian and New Zealand Medical Schools argued for the importance of a core curriculum in medical ethics (9). This should address both the foundations of ethics and specific topics in ethics, including determining capacity, consent to and refusal of treatment and compliance and adherence to treatment. This position statement acknowledges that ethics teaching incorporates knowledge as well as skills and attitudes.

Europe

In 2006 Claudot et al conducted a study of randomly selected medical schools in the European Union to overview the teaching of ethics. The study found that at least one ethics module existed in 21 of the 25 medical schools included in the study. The study concluded that although ethics has now an established place within the medical curriculum, "there is a notable disparity among schools of medicine in their programmes as well as in the number of hours and in the different categories of teachers."(10)

2

Learning, Teaching and Assessment

Teaching ethics and law

In 2006 Karen Mattick and John Bligh published the results of a survey conducted with teachers of ethics and law in UK medical schools (11). Completed responses were received from 22 of the then 28 medical schools. A majority of medical schools stated that their aim of ethics teaching was to instil ethical behaviour in medical students for their future roles as medical professionals and the majority of schools considered that their aims for MEL teaching were being achieved. In 15 medical schools a shortfall in ethics core competencies did not preclude graduation. The most successful aspects of MEL courses were perceived to be their integrated nature and small group teaching; weaknesses were described as a need for still greater integration and the heavily theoretical aspects of ethics. The major concerns about how ethics would be taught in the future related to staffing and staff development. Whilst the IME has strongly recommended that there should be one full time equivalent person to teach ethics and law in each medical school, this has yet to be realised.

Effective teaching and barriers to learning

Negative effects of the hidden curriculum can impact on medical students' perception of what are acceptable attitudes and behaviours. Teaching and learning ethics can increase students' moral reasoning skills and go some way to undo the impact of the hidden curriculum in order to encourage independent and critically reflective thinking (12). The work of Sheehan and colleagues has shown a positive relationship between higher level moral reasoning and good clinical performance as a doctor (13).

Although medical ethics and law are core they are often seen by students as marginal to their undergraduate medical studies: "Medical students find themselves prioritising the basic science subjects over perceived 'fluffy' topics, such as professionalism, ethics, and the social context of medicine"(14). Appropriate assessment of medical ethics and law should signal to students the importance of these subjects to clinical practice and to their future careers. Failure to include questions relating to ethics and law in assessments is likely to discourage students from focusing on this area of their curriculum: if it's not assessed, it can't be important.

Curriculum alignment

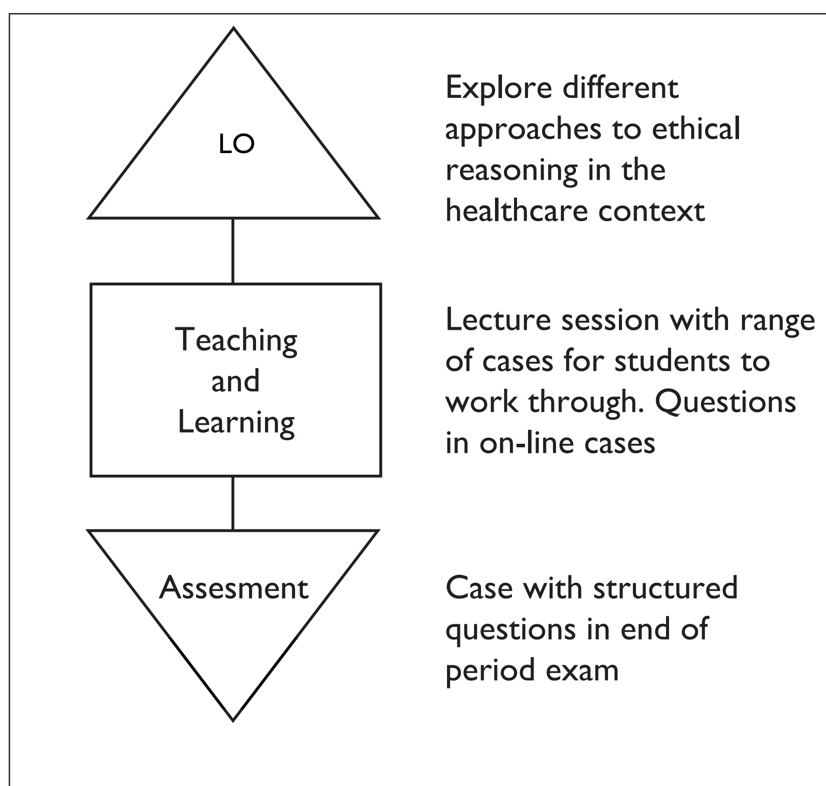
A key principle for any curriculum design is that of curriculum alignment. This put simply, means ensuring that teaching and assessments reflect the learning outcomes. Actual teaching may not cover all the learning required; however, if students know what the learning outcomes are they will be clear what they need to learn and on what they can expect to be assessed. Assessing learning outcomes also means using methods which are appropriate to the assessment of

the learning outcomes, otherwise the assessment may actually be assessing something else. An unaligned curriculum would be one where teaching does not match learning outcomes or assessment does not match the learning outcomes outlined to students. See diagram 1 for an example of curriculum alignment.

Mapping and linking throughout the curriculum

Medical ethics and law are as much part of any clinical encounter and intervention as the biological sciences; each and every clinical specialty raises generic or more specific ethical and legal issues. This gives MEL teachers scope to identify possible areas for teaching and learning throughout the undergraduate curriculum and to identify people who may contribute specifically to ethics and law aspects of the curriculum in a wide range of specialties. In many UK medical schools there will be one or more individuals who constitute the core teachers of ethics and law. These people tend to co-ordinate the overall teaching, learning and assessment of MEL components of the overall programme. However, there will be many other people in different clinical attachments who can help with students learning in a variety of ways. By clearly highlighting different scenarios where ethical and legal principles apply, it is possible to help students to engage with areas of interest to them and to understand the application of ethics and law in different clinical settings. For example, an exploration of the value of, and problems with, utilitarianism can be undertaken in many settings from drug prescription to withdrawal of treatment and students' understanding and analysis can be built upon and developed. One way to conceptualize this would be to 'map' ethics and law topics and learning outcomes to other areas in the curriculum. Appendix A gives an example in relation to the topic area of 'Towards the end of life'.

Diagram 1
Aligning the curriculum: example learning outcome (LO) from core content



3

Making Assessment Decisions

Overall approach to assessment

Within each medical school, decisions need to be made about incorporating the MEL core content learning outcomes into the medical curriculum drawing on already established activities as outlined in the previous section. The co-ordinator/s can take an overview of the teaching, learning and assessment of ethics and law so there is one consistent strategy. This will be dependent on a range of factors; for example:

- structure of the curriculum;
- overall assessment strategy in the school;
- resources – eg time, staffing – available;
- amount of curriculum space allocated to ethics and law;
- role of the co-ordinator/s and the power they have to influence decisions, facilitate change.

A 'one size fits all' approach is not appropriate and must be guarded against.

In developing an overall approach or strategy for MEL, a number of areas might need to be considered: the underpinning principles for the teaching, learning and assessment of ethics and law; who makes what decisions and how; current and future plans for teaching, learning and assessment; staff development needs; and resources available/required. As well as providing a structure on which to make decisions, articulating an overview of ethics and law can also serve as a useful driver for change.

Consideration will need to be given to: what aspects of learning should be formally assessed; what methods can be used; and when assessments will take place.

Why assess students' learning?

Before designing a particular assessment activity it is helpful to clarify the purpose of the assessment. This could cover a range of things, for example to:

- motivate students to learn
- provide students with feedback on their progress
- assess their learning and/or competence for internal/external purposes

Assessments which are mostly focused on feedback to students to improve learning are often referred to as 'formative'; whilst those concerned with end of period exams, which generate marks or grades, are termed 'summative'. In reality many assessments aim to do a bit of both

but ascertaining what the focus is for each will enable judgements to be make about the effectiveness of the assessment.

The following questions may provide a helpful focus:

- What activities will generate the information you need?
- Will the information generated enable you to say something meaningful about students' learning?
- Will the assessment activity itself encourage students to learn?

Students are motivated by assessments and capitalising on this is a useful strategy.

What to assess

It is not possible – nor is it necessary – to assess whether students have understood all the ethics and law learning outcomes in the curriculum; assessment should be seen as a sampling exercise. Choices need to be made about which learning outcomes to include in a particular assessment timeframe; for example in a year/across all the years.

Given that the aim is to assess a sample of each student's learning it is important to consider what learning outcomes should *always* be assessed (because all students must know/understand this area) and which ones should change from year to year (to motivate students to learn more than a limited set of learning outcomes).

When making decisions about which learning outcomes (LOs) to assess in any one academic year, consider:

- What is appropriate at different stages in the curriculum
- What LOs students have been enabled to experience/learn/practice and get feedback on and at what level
- What is achievable within the institutional context

How to assess

Once decisions have been made about LOs, consideration of how to assess whether students have achieved them or what progress they have made towards achieving them will be necessary. The LOs that are chosen may also be dependent on the assessment methods available at different stages in the curriculum. In essence, however, the method needs to be appropriate to the learning that is being assessed; for example, assessing students' reasoning about a complex issue through the use of an Multiple Choice Question (MCQ) type of question is unlikely to be appropriate. Unfortunately, there is anecdotal but persistent evidence that MCQ type questions are seen as more objective (or reliable) as well as being efficient at reducing staff time. However it is important to be clear that issues of validity and reliability need to be discussed in the context of the MEL learning outcomes that are being assessed, when strategic decisions are being made about assessment methods (see section 4).

When thinking about appropriate assessment methods keep in mind that adopting a range of different methods is likely to be the best approach in terms of obtaining a meaningful picture of students' learning as:

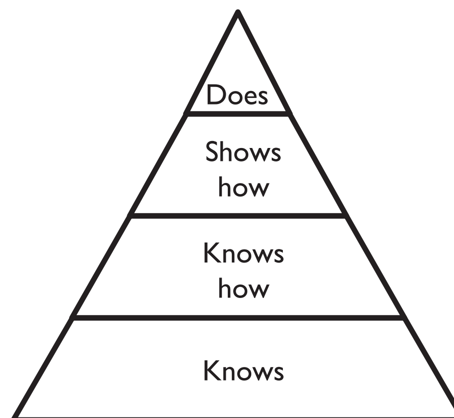
- Some methods will be better at assessing particular LOs than others
- Different students will prefer different methods
- **ALL** methods will have their limitations

Section 4 explores different assessment methods in more detail.

Assessing 'in practice' learning outcomes

A number of the core content LOs indicate that students should be able to demonstrate something 'in practice' or can demonstrate practical skills (3). One way of thinking through how to approach the assessment of these kinds of LOs is through reference to Miller's Framework for Clinical Assessment – often referred to as Miller's Pyramid – a framework proposed for the assessment of clinical competence but which can also be helpful in wider practice-orientated contexts. See diagram 3.

Diagram 3
Miller's Pyramid (15)



The pyramid represents different levels at which an assessment might be targeted and essentially proposes that in order to assess whether a student can perform a practical skill, we should use methods which enable us to assess students actually undertaking that particular skill rather than, for example, writing about undertaking the practical skill. The 'lowest' or least valid level proposed is, therefore, that of knowledge, as knowing something does not mean being able to perform it in practice. At the tip of the pyramid 'does' indicates that this is the level at which practical skill assessments are at their most authentic and these are the ones most likely to provide the most meaningful information about what students can do 'in practice'. Attempting to find ways of assessing students' learning in this way is also important given that evidence suggests that whilst students' moral reasoning ability may increase in the earlier years of the curriculum it then decreases in later years. Furthermore, the ability to argue/reason through a case is not necessarily an indicator for actual ethical behaviour (16) although there is some evidence for

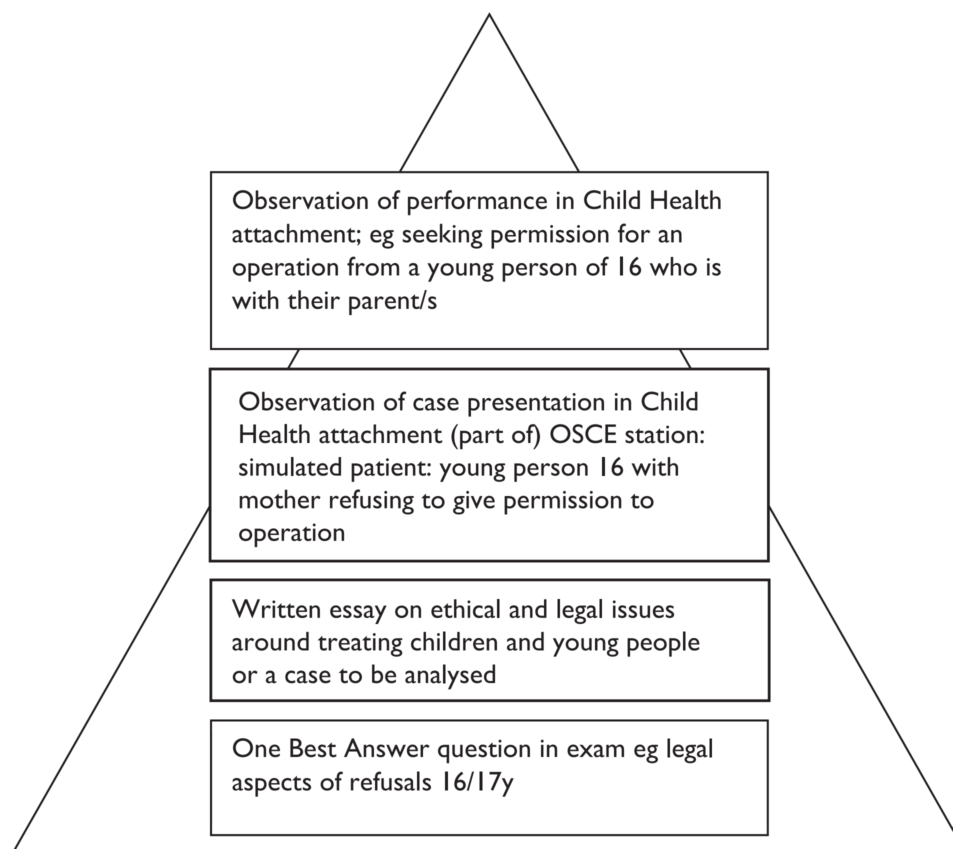
this being the case (13). An example of a method of assessment which would address these issues would be through the observation of students on the wards/in general practice etc. – for example seeking consent from a patient – in which a range of appropriate people could be assessors or contribute to the assessment of a student's learning.

Undertaking assessments of the 'in practice' LOs at the 'does' level is unlikely, to always be possible within local constraints; some compromise is often needed. Underpinning the principles of Miller's Pyramid is a recognition that if it is not possible to assess students' ability to undertake a practical skill when they are undertaking that skill in the context in which it will be used, then assessing at the next level down would be the next best approach. An example of this might be: shows how: performs the skill for example in an OSCE.* See Box 5 for an example using core content learning outcomes.

Box 5 Example: children and consent within Miller's pyramid

Demonstrate in practice an understanding of:

- The legal and ethical aspects of the capacity of young people to consent to and refuse treatment
- The respective roles of parents/guardians, healthcare professionals and the courts in decisions about the treatment of children



* OSCE: Objective Structured Clinical Assessment, see Section 4

When to assess

Decisions about when to assess what learning outcome/s are likely to be dependent on a range of factors such as: what choices are available; the appropriate timing in relation to the teaching and learning that takes place; possible assessment slots in the curriculum; and the methods available.

Other issues to consider when thinking about when to assess which LO include whether you are able to (and would want to) assess progression in a particular area; for example knowledge in one area in the earlier years; understanding and clinical application of the same area in later years.

With a mind to motivating students to learn about ethics and law, it is helpful to think about the contribution that the assessment of students' learning in these areas makes to students' progression through their course: the higher the contribution the more students will be motivated to learn. Being part of a 'high stakes' assessment within the curriculum, eg intermediate or finals examinations or a stand-alone ethics component which must be passed, sends clear messages such as: these areas are important for medical practice; the School believes this to be the case; and that not focussing learning in the areas can lead to a failure to progress or even to qualify. On the other hand, if there were only ever two questions on a MCQ paper of 100 questions in a high stakes exam this will only signal low importance and that few consequences arise from ignoring MEL altogether.

Constructing an assessment 'blueprint'

Keeping track of what you are assessing and when is important both in ensuring that the sample of LOs changes over time and that you are covering the key areas you want to cover in any year or part of a year. This can be done in the form of a table (sometimes called 'blueprints') and included is an extract from an annual one. Collating the information in such a way gives the co-ordinator and others (eg. assessment committees) the ability to see at a glance what is and is not being assessed in any particular timeframe. Diagram 4 shows an extract from an annual blueprint. Such documents can record what students in different cohort years have been assessed on so that as they progress any important gaps can be highlighted and addressed.

Diagram 4
Assessment blueprint example

	Academic year 2012/3				
LO/area	*Year 1 Semester 2*	*Year 3 Attachments*	*Year 3 OSCE*	*Year 3 Written exam*	*Final year essay paper*
Ethical reasoning					x
Informed consent	x				
Trust, integrity honesty in prof relationships		x			
Confidentiality	x			x	
Withholding and withdrawing					x
Euthanasia and assisted suicide					

Peer assessment

Peer assessment of student learning is often used as a means of providing feedback (formative assessment) but can also be used in formal assessments. A peer assessment activity might include, for example, students giving each other a grade/feedback from a group piece of work which are then collated for the individual student; students providing feedback on each other's presentations. Involving students in the assessment process enables them to be involved in assessment activities and may contribute to their learning as they think through and critically analyse the strengths and weaknesses of the learning that they are assessing.

Box 6 Potential advantages and disadvantages of peer assessment

Advantages:

- Students gain a greater understanding of what the assessment means and can provide feedback on where these are not clear or easy to interpret
- Students receive a range of feedback (and may help where students' responses indicate that they don't get enough feedback on their learning)
- Reducing the marking workload for academic staff
- The use of a model that is more closely aligned to professional judgements later in students' medical careers.

Disadvantages:

- Students may dislike peer assessment if it feels that they are disadvantaging others (especially their friends) or that they are contributing to others failing an assessment in some way
- Anonymous marking may be difficult to achieve
- They may see it as being unfair and lacking credibility
- They may not take the activity itself very seriously

Students may be more willing to be engaged with peer assessment systems that are formative, anonymous and where the environment is conducive to the process; for example, where there are positive relationships between students and between students and staff (17). See Box 6 for potential advantages and disadvantages.

As with tutor graded assessments, where peer assessments form part of the formal assessment system, it is important to consider what moderating procedures are needed and who undertakes the moderating process. The contribution that the assessment activity makes to a student's progression should also take into account the advantages and disadvantages outlined above.

Self-assessment

Many of the same issues apply to self-assessment as with peer assessment. One concern often expressed is the extent to which students can accurately assess their own work or performance.

There is some evidence to show that students with higher tutor grades tend to underestimate their grades whilst the opposite is true for those with lower grades (18). Perhaps, unsurprisingly, overestimates may be more likely if the assessment contributes to the formal assessment process. Tutor assessments and student self- assessments appear to be more likely to correlate if students are given guidance on how to assess their own learning; if students have higher levels of understanding of the subject/content area; and when they are aware that their grades will be compared with tutor grades or peer assessments (19).

Judging the quality of assessments

A judgement about the quality of an assessment will depend on its purpose; for example, a primarily formative assessment is likely to be successful if the feedback to students is sufficient to them to develop their thinking etc. The extent or depth of the process of judging the assessment will also depend on the purpose. There are various sets of criteria for more formally evaluating whether assessments are of 'good quality'. The two issues most often cited are that an assessment needs to be both reliable (the assessment produces results which are consistent and reproducible) and valid (the assessment measures what it intends to measure). Others relate to issues such as needing to make a positive contribution to students' learning; cost effectiveness; and acceptability both within and outside of the school. See Box 7 for one such set of criteria.

Box 7 Criteria for quality assessment (20)

- Reliability
- Validity
- Educational impact
- Cost effectiveness
- Acceptability to staff/students/external organisations

Such lists of criteria are aimed primarily to assess overall assessment strategies within a school rather than one small aspect of the curriculum, such as ethics and law. Whilst external bodies are interested in this wider picture of assessment within a school, they may also ask you to justify the assessment choices you make.

Reliability is often achieved by combining assessments; ensuring there are a large number of stations in, for example, an OSCE; and increasing the assessment time. If an OSCE station is focussed on ethics and law then this station by itself will not be a reliable judgement of a student's abilities; rather reliability can be achieved by ensuring certain measures are taken for the examination as a whole. Ensuring that the chosen assessment methods assess what is required to be assessed will help to ensure assessments are valid.

Trade-offs between criteria are acceptable as long as they can be justified. For example, essays are often criticised for being an unreliable means of assessment as different markers give different grades to the same essay but they may be considered to be valid tools for assessing students' reasoning skills and that a loss in reliability (that could be achieved through the use of MCQs) is acceptable precisely because of this. Putting in mechanisms to improve the reliability

of essay marks might be the next step through, for example, double marking and staff development. Assessing substantive components of LOs rather than trivial aspects is more likely to encourage students to take ethics and law seriously, motivate them to learn and, therefore, provide a positive contribution to their learning.

An assessment method which was unreliable and revealed little meaningful information about students' learning is unlikely to be justifiable and would be a waste of resources as well as being unfair to students.

4

Putting it into practice

This section looks at the relative merits of different assessment methods: from the assessment of students' basic knowledge to those that aim to assess integrated and applied learning. Examples of how these assessments can be embedded into the assessment of the broader curriculum, using learning outcomes as defined in the MEL core content, are included.

Methods for assessing basic knowledge

a) Computer marked knowledge and applied knowledge tests

Many medical schools include computer marked knowledge and applied knowledge tests in their assessments and there has been a push to increase the number of these types of assessments to both save marking time and as part of a drive to use assessment methods considered to be 'objective'. These tests are commonly referred to as MCQs – Multiple Choice Questions – and include a range of types of tests; for example:

- Single best answer questions: a stem question to which there is one best answer
- Multiple best answer questions: a stem question with more than one best answer
- Extended matching questions: a number of stems to which an answer or match must be chosen from a large selection of possible answers to reduce cueing
- Algorithm and table questions: partially completed algorithms or tables with blank sections that need to be filled from a selection of possible answers

Situational judgment tests use MCQ type questions with for example a stem question with answers that require ordering from best to worst.*

Such tests are difficult to write and require time to devise particularly for ethics where there is seldom a 'right' or 'wrong' answer. However, once they are developed they can be banked, adapted and used again reducing the load on MEL teachers in successive years. They can be useful for testing basic knowledge and understanding which may be suitable at early stages to ascertain whether students have grasped some basic knowledge before this is built on and applied; teachers are also able to quickly get feedback on how many students passed their different questions. See Box 8. Such tests can also be integrated into existing exams at different points in the curriculum and may serve as a useful reminder to students that ethics and law is important throughout their undergraduate programme.

* These tests (SJTs) will be mandatory for medical students from 2013 as part of their application to be a foundation doctor. All medical students will sit the same test.

Box 8 Computer marked knowledge tests: Potential topics from MEL core content of learning

- **Consent:** when consent must be obtained, when it need not be obtained, the elements of valid consent, capacity to consent in adults and minors, proxy consent, valid refusal.
- **Confidentiality**: when confidentiality should/may be breached, when information sharing is permitted between health care practitioners, when information sharing is permitted with relatives or carers.
- **Legal principles on termination of pregnancy and guidelines on conscientious objection**
- **Aspects of mental health legislation**
- **End of life legal principles and professional guidelines:** withdrawing and withholding treatment that either is or has the potential to prolong life, assisted suicide, guidelines on *Do Not Attempt CPR*
- **Procedures for reporting adverse incidents**
- **Child protection legislation**

One of the best guides for writing MCQ type questions is the US National Board of Examiners guide: Constructing Written Test Questions for the Basic and Clinical Sciences by Case and Swanson, which is available on-line (21). This includes a number of examples which do not include MEL but which do cover examples of good practice in clinical and basic sciences.

See Box 9 for an example of a One Best Answer question (OBA) using MEL core content.

Box 9 Example of an OBA (One Best Answer)

Young people and consent

Charlie is 16, lives in Manchester and has acute heart failure. He has engaged during discussions about the prognosis: he asks lots of questions and seems very clear about the risks and benefits of having and not having the operation. At the end of the discussion he tells the consultant that whilst he does not want to die, he really can't imagine living with someone else's heart and does not want to have to take medication for the rest of his life. He then says that he does not want the operation and is very clear about what this means.

Can Charlie's refusal of treatment be overridden?

A No, he is Gillick competent and therefore able to consent to and refuse treatment
B Yes, he is too young to consent to and refuse treatment
C Yes, as only someone with parental responsibility can consent to and refuse treatment on his behalf
D Yes, he is 16 and refusals of treatment may be overridden in life threatening circumstances
E No, he is 16 and is presumed to have capacity to consent and refuse treatment unless there is reason to doubt his capacity to consent

ANSWER: D

b) Short clinical scenarios

An alternative method of assessing basic knowledge in MEL is to present the students with a short clinical scenario and ask them to identify relevant legal principles, ethical considerations or guidelines that apply to the case. These types of short answer questions can assess students' developing awareness and ability to identify key aspects of a case in different clinical settings, before assessing their ability to think through a case in more detail. These may also lend themselves to short marking plans or checklists enabling them to be marked by a range of teachers and this approach might be helpful in integrated questions (ie., those which cover wider aspects of the curriculum – see Box 11). Students' work can be marked as pass/fail or graded according to how completely the student has identified the relevant set of issues.

Methods for assessing more depth of understanding and analysis

a) Short essay questions

A more in-depth or reflective understanding can be assessed through short essay style answers to case scenarios, effectively building on the method outlined above. Students can be presented with a scenario where a more thorough understanding of MEL is required in order to arrive at a conclusion about, for example, what the most right action would be to take. Students need to be able to critically analyse the case and justify their answers.

For example students can be asked to:

- Identify the ethical and legal factors that apply to the case
- Critically discuss the case in the light of these factors drawing on different perspectives
- Recommend and justify a course of action

Box 10 Short essay: example case

Jamie lives with his mother and brother. His father died when Jamie was two years old. Jamie was diagnosed with leukaemia at age four and given a 50% chance of survival. He had a course of aggressive chemotherapy after which his cancer went into remission and he was given an 80% chance of survival. However at age 9 his cancer returned. It was estimated that he had a 40% chance of survival this time. The treatment options were bone marrow transplant or more aggressive chemotherapy. However, Jamie said he didn't want any more treatment. When it was explained that the treatment could make him better he disagreed saying it hadn't worked before so why would it work this time. Jamie's mother stood by his decision and refused treatment. She was of the opinion that as the treatment happened to Jamie then Jamie should decide. She also took into account that the chance of survival was no more than 40%. If the chance had been much better she may have decided differently.

continued overleaf

Box 10 ***continued***

Identify and discuss the ethical and legal aspects of this case and outline how you might respond to Jamie and his mother

Possible marking plan

- Understanding of capacity in children, their right to consent to and refuse treatment
- Outlines rights and responsibilities of parents
- Takes into account the perspective of the patient and his mother
- Outlines how personal value system may influence their views of the case.
- Understanding the need for the good communication in conveying statistics on risks and benefits.
- Consideration of what is in child's best interest, given the risks and benefits
- Brings together discussion to recommend action

These types of questions can be adapted to reflect students' learning at different stages of the curriculum and applied in a wide variety of clinical settings. In the example outlined in Box 10, additional components can be added at a more advanced level; for example, a world view dimension: the mother could have a belief in life after death or reincarnation; she could have talked to Jamie about dying, explaining that his life would end but that part of him would live on forever, or that he might be reincarnated in a future life. This would allow for an exploration of attitudes towards faith and beliefs and to what extent such beliefs should be respected or should affect judgements about the quality of a patient's or carer's decision/s.

Whilst this method allows for the assessment of more in-depth understanding, it can be onerous to mark for an entire year group. Keeping marks to pass/fail or fail/satisfactory/good may help to reduce the time spent marking these sorts of questions. In addition, general feedback can be given to students after the assessment (rather than individual feedback) and this can include: the ethical and legal factors that applied, factors that weighed for or against a particular outcome, and the points that a balanced and comprehensive discussion should have addressed.

The short essay is a way of developing a critically reflective understanding and approach to decision-making. One or more essays of this type may be sufficient to determine whether a student has developed or started to develop this ability (which can be built on with other forms of assessment), and also to identify students who might need further support. It can be focused on issues taken to be basic to medical ethics and law and as preparation for first clinical encounters, such as informed decision-making and valid consent/refusal; capacity and incapacity; confidentiality. They can also focus on core issues in more specialised domains such as mental health, and the beginning and end of life.

b) Case analysis

Whilst the short essay assessment is a form of case analysis, this can be adapted to be used in clinical rotations drawing on students' experience within the specialty. Students can be asked to select a case they encountered in practice and analyse it in much the same way as described

above for a short essay. In practice, they are likely to have experienced a case where a decision was made so they can be asked to analyse the decision discussing the different possible options and explaining why it was the best decision or why they would have made a different decision. Whilst the latter may be unrealistic if the teacher was the decision maker, this sort of discussion might be possible in certain seminar situations. Marking can be shared with, or delegated to, the clinical teachers involved with the specific rotation or the assessments can primarily be used for feedback. This method is suitable for assessing similar areas to the short essay but has the advantage of being linked to more real situations for students.

A more complex form of case analysis than the short answer essay, which focuses on ethical and legal issues (solely or in addition to other aspects of the curriculum), can be used with students to integrate MEL within clinical aspects of the curriculum. Students can be given a fictional case description, history, examination details, investigation and management information and asked to identify the relevant science, clinical and pathological factors, legal and ethical factors, and social and cultural factors that may bear on the care of the particular patient.

Box 11 gives an example of this type of integrated question.

Box 11 Case analysis: example of integrated question

(Reproduced with kind permission from the School of Medicine, University of Leeds)

Presentation: Hasnain and Shabila are in the antenatal clinic awaiting her 20 week anatomy scan

History: This is Shabila's fourth pregnancy. After an uneventful first pregnancy which led to the birth of Sidrah, her next appeared to have successfully concluded with the delivery of her first son Zain. At the post-delivery check the midwife noted what seemed to be a lumbar myelomeningocele (spina bifida). This was soon confirmed by the neonatal team. Zain subsequently required a ventriculoperitoneal shunt on account of hydrocephalus. Now aged 12, he attends a local private school, where he is making excellent progress. He can walk independently but still uses his wheelchair for effective mobilisation. He is intellectually unimpaired and in the top academic stream. In her next pregnancy, Shabila took folic acid supplements and had normal antenatal scans undertaken by the regional feto-maternal medicine unit. Ikra was born by normal delivery at term. In this pregnancy Shabila has again taken folic acid supplements and, now 20 weeks, awaits her anatomy scan.

Examination:
General: healthy, not anaemic. P 70 reg, BP 100/60, HS soft systolic flow murmur, no pedal oedema.
Abdominal: uterus palpable, striae gravidarum and linea nigra evident, fetal heart tones heard.
Urinalysis: NAD

continued overleaf

Box 11 ***continued***

Investigation:
Booking bloods-
FBC: Hb 11.5 g/dl, WBC 14000, Pl 250, MCV 80 fl
Blood group: A positive
Rubella: Immune (IgG Abs present)
HIV/HBsAg screen: negative
Transabdominal ultrasound scan: viable singleton intrauterine pregnancy, male infant; fetal abdominal circumference and femur length consistent with 20 weeks gestation; thoracolumbar discontinuity consistent with a large myelomeningocele; cranial examination exhibits characteristic 'lemon' and 'banana' signs

Management: The consultant counsels a very distressed Hasnain and Shabila to discuss the options. They meet the paediatric neurosurgeon the following day, whom they know well from Zain's care. In view of the extremely poor prognosis, they elect termination, and Shabila is admitted the following day for a medical termination of pregnancy.

Marking plan for tutors
Task for students: Identify and discuss the relevant issues under each of the following categories.

Basic Science
Essential elements to understanding this case should include embryology and development of the neural tube and vertebral column.

Clinical/Pathological
The focus is on screening and diagnostic testing in early pregnancy, with particular interest in the prevention (folic acid supplements) and detection (ultrasound) of neural tube defects such as spina bifida. The long term sequelae for affected infants should be briefly presented to help understand the decisions that Hasnain and Shabila made in this pregnancy.

Social/Cultural
What are the likely attitudes towards i) disability ii) screening for disability iii) termination for disability within this ethnic group and Hasnain and Shabila in particular? Should this determine our counselling approach? What groups exist to help them reach a decision or cope with the outcome?

Legal/Ethical
The laws governing termination of pregnancy.
Issues concerning disability.
Can we judge the quality of life of another person?
Status of the fetus – legal and ethical.
Rights of the father and mother in relation to termination of pregnancy – legally and ethically.
Informed consent for 'routine' screening tests such as ultrasound, and the cost/benefits rationale.

This kind of approach is likely to require clinical input both to develop and mark the questions. Depending of the level of analysis, knowledge and understanding of the ethical issues that is required, this can be assessed as well as taught by clinicians. If the learning outcomes include in-depth understanding of the different ethical and legal factors then the involvement of teachers with additional expertise in MEL is likely to be beneficial. In the case above (Box 11), this can be expanded to include issues such as different views on the status of the fetus, the morality of abortion, the concept of personhood, and subjective versus objective accounts of the quality or value of life.

This method is suitable for assessing understanding of the importance of patients' values, narratives, rights and responsibilities; informed decision-making and valid consent/refusal; capacity and incapacity; confidentiality; children and young people; mental health; beginning of life; and end of life learning outcomes. It can also be used to assess understanding of issues around justice and public health if the way the assessment is constructed encourages students to critically engage with the ethical issues defined in the 'Justice and Public Health' section of the core content. For example, a case could include treatment that is either contentiously licensed by NICE or which has not been licensed by NICE (due to cost); treatment that is subject to 'postcode lotteries'; or treatment for conditions that might be considered 'self-inflicted'.

c) Portfolios

Portfolios are being increasingly used in undergraduate and postgraduate medical education. They can be used to provide evidence of reflection and of learning, and as a tool which gathers information together for assessment. They allow for a variety of topics to be covered and, by including reflection, can be a more powerful way to enable students to consider their values and behaviour and the impact these may have on a clinical encounter. As a form of assessment the validity and reliability of portfolios are still uncertain, and portfolios can be very time intensive to mark, depending on how they are constructed.

In the early years, a number of case analyses (short essay/clinically integrated) can be required. Students can either select from cases discussed in lectures or seminars or be given cases to research and analyse independently or with other students; these could be built up and marked over time.

For students in their later years, such cases could be linked to their clinical rotations: for example one for each clinical rotation or a given number allowing them to choose which rotations they choose from. These analyses could form part of an assessment of clinical knowledge and be a section of a larger case analysis, rather than be confined to ethical and legal aspects. This is especially valuable when whether or how ethical and legal factors apply to a given case will turn on clinical factors.

Alternatively, portfolios can incorporate a number of different forms of assessment and learning, requiring the integration of a range of different skills. An example of a mark sheet for a Special Study Module (SSM) in medical ethics is given in Box 12. In this SSM, students had to gather specific information together into a portfolio for submission at the end of module. While the presentation and essay were marked independently, the focused reflections were spread out through the 13 weeks of the SSM and were to provide evidence of reflection and learning through the block.

d) Group presentations

Students can be presented with the kinds of scenarios used for short essay questions, but asked to prepare a group presentation. Rather than necessarily reach one conclusion (as with an individual written piece of work), this can allow for an explanation of how different conclusions can be reached. Presentations can be peer and tutor marked.

One advantage of group presentations is that students can learn from their peers. For example, if a number of groups of students are assessed together but each group explores a different scenario, then each student will learn more than if they had been required to write a short essay on a scenario. Students can also be asked to provide feedback – written or oral to other groups – although they may need support in how best to do this.

Box 12 Example of a portfolio structure

Name:		
Area	Mark:	Comments
Attendance		
Presentation: *The task is to produce a 10 minute presentation on a medical ethical issue of choice that has been researched in detail. The student gives the presentation to a group of colleagues and has to answer questions.* *The student is assessed by tutor and peers and is marked on content, timing, presentation style and audience engagement.* *Reflections on the process and on feedback are included in the portfolio of evidence*		
Focused reflections: *1. 5 article reflections e.g. Metro, Daily Mail, Guardian, BBC on line, JME (200 words each)* *These articles are used to develop skills in ethical analysis throughout the Special Study Component. Students are asked to: identify the ethical issues presented in the article; explore the facts and values presented and analyse the arguments and ethical approaches being used.* *2. 1 book analysis (500–1000 words)* *The student has to read a novel with ethical themes and write a reflective account of the ethical issues identified and how they are dealt with in the narrative.* *3. 2 film analyses (500 words each)* *The students watch 2 films as a group and move on to discuss the relevant ethical themes, using a series of prompt questions. They complete and submit a Structured Reflective Template on each film and discussion.* *4. Reflection on the module as a whole (500 words)* *A reflection on their expectations, experience, learning and future planing*		
Essay: *A 2000 word essay and reflection on an ethical issue of choice. The student is told to write a two part essay. Part 1 is an article for a specified medical journal, for example the student BMJ. Part 2 is an explanation of what was chosen and why, and how it was tackled and why. The essay is formally assessed using a University marking schedule.*		

Group presentations that involve role play can be useful for demonstrating a reflective understanding of the perspectives of the different people involved, including that of the student as doctor, other healthcare professionals, patients' and carers' perspectives. The patient's perspective and values will be relevant in any clinical encounter and to any of the topic-specific domains: informed decision-making and consent/refusal; confidentiality (particularly when breach is concerned); lack of access to treatment due to rationing decisions (justice); children and young people; mental health; beginning of life (in relation to parents' perspective and values); end of life decisions. Sensitivity to and a reflective understanding of patients' perspectives can, therefore, be integrated into assessment of group presentations on topics in these areas.

Group presentations are less labour intensive to assess than individual essays. However, in order for students to learn from them they will need to be provided with feedback on the strengths and weaknesses of their presentation. A marking template can be developed to provide information on presentation style, team work, ethical and legal content, and argument and analysis. The potential problems include the difficulties associated with marking – do you grade the individual or the group? If you grade the group, students who have put in less work can benefit from the effort of more diligent students in the group or the more diligent students can suffer from the lack of work by the less diligent, causing resentment and anxiety.

e) Long essays

Essays of 2500–3000 words in length (or longer dissertations) give students the opportunity to research, theoretically or empirically, an issue in medical ethics or law in greater depth than would otherwise allow. This can be part of an SSM where the students select amongst a number of topics on offer and work under the supervision of a tutor.

The obvious disadvantage is that it requires a large number of tutors to provide enough topics for an entire cohort of students. However, the tutor burden can be reduced if an ethics or law essay is an option within a larger SSM module.

Supervising this type of project involves providing guidance on reading and discussion opportunities to explore ideas and aid understanding of literature. Marking of individual essays is also time consuming and requires moderation of essay marks to ensure that different tutors are marking to equivalent standards. As with any essay assessment, it requires good feedback to students on the strengths and weaknesses of their assignment.

Students can be marked on the clarity and logical structure of their essay, the cogency of their arguments, the relevance and breadth of the material they have included, their understanding of the material, and their critical analysis of it.

The advantages of such essays are that they provide the opportunity for students to research a topic of interest and so potentially improve their engagement with medical ethics and law, and, as with any SSM, improve their self-directed learning skills. It can be a valuable tool for teaching the theoretical foundations of medical ethics and law by applying these to the particular issue that is the topic of the SSM. In this way students can appreciate the relevance of studying these theoretical foundations. Ethical and legal theory can often appear rather remote and irrelevant to medical students if studied in isolation rather than applied to a concrete issue. The main value

of such essays, however, is in developing a reflective and in-depth understanding of MEL. They can also reveal problematic attitudes which are less likely to be revealed in more structured, shorter pieces of work such as short essays and case analyses where there is less scope or requirement for the development of individual ideas.

f) On-line discussion

Some programmes are using Wikis (shared computer spaces) and other interactive on- line discussions. While many of these types of innovations are being piloted few have been evaluated. Assessment usually focuses on evidence of involvement in the discussion or could be the results of an on-line tutorial. This sort of learning platform could be an ideal opportunity to explore issues around confidentiality and security of electronic data and on-line professional behavior (for example, an exploration of Facebook and healthcare forums as private or public spaces).

Methods for assessing the application of MEL in clinical practice

a) Objective Structured Clinical Exam (OSCE)

OSCEs are a type of structured clinical exam: students rotate through a series of stations which assess primarily clinical skills. They are used at different stages in the undergraduate curriculum, with varying degrees of complexity. Most medical schools have at least one OSCE or similar examinations which are high stakes and, therefore, the inclusion of some MEL in these can be very useful. The assessment of students' skills and abilities takes place in situ and so the burden of marking scripts is reduced and students are assessed on their 'in practice' LOs in appropriate contexts (see section 3).

Appendix B contains a template for integrated OSCEs and Appendix C contains an example of how this template can be used for a specific learning outcome from the core content: *The ability to demonstrate in practice an understanding of legal and ethical examples of informed consent.* This learning outcome has been linked with another learning outcome from a different subject area, in this case the clinical skill of venesection. Three different methods for marking are included: checklist, competence and global marking. The template can be adopted and adapted for use by different medical schools at different stages of the curriculum.

b) Other observation methods

Section 3 highlighted the importance of trying to assess what students actually do in practice rather than what they do for/during an assessment such as an OSCE. One method used in the postgraduate context is 360-degree assessment: students could be assessed during their attachments by a range of people from the multidisciplinary team to patients, through the use of a standard form. This method has been shown to influence students' behaviour in a positive way but also in a negative way. The reliability of such type of assessment is difficult to achieve given the range of assessors, the varied length of time they spend with students and their different motivations (22). These assessments could, however, contribute to a more formative type of assessment, giving students feedback and providing schools with valuable information on students who may need additional help.

Another method – similar to an OSCE station but longer and closer to the practice setting – is the mini-CEX (mini clinical examination) and these are increasingly being used in undergraduate and postgraduate education. They are structured assessments of a clinical encounter and students can be provided with immediate feedback. Rather than a number of encounters being assessed at the same time (like an OSCE), mini-CEXs can be carried out in different clinical contexts over time. Issues of reliability of assessors are also associated with this method but these can be minimised by using multiple assessments (23).

c) Consultation responses

The GMC, The Nuffield Council on Bioethics, The Human Genetics Commission often produce consultation documents with themes very relevant to professionalism and ethics and law in medicine. These come out at varied times during the year, and are usually widely circulated.

Responding to consultations is something that students can be encouraged to do individually, but developing a consultation response can be set as assignments at different stages of the curriculum, and can be particularly relevant for SSMs. The assessment criteria can often be adapted from School essay marking schedules. Timing and consultation topics can be difficult to fit in exactly with time frames, but it is often useful to ask if medical students can submit a response after the deadline, because of the issues with curriculum time. An example of such an assignment designed for first year medical students is provided in Appendix C.

5

Questions to Consider

This section outlines some questions to consider before, during and after developing and implementing assessment strategies. It is not intended to be exhaustive, rather act as prompts for thinking.

- What is the purpose/s of your assessment/s?
- What activities/actions will generate and feedback information about a person's abilities?
- Will these a) enable you to say something meaningful about students' learning; and/or b) encourage students to learn?
- How will you sample across the range of learning outcomes?
- What is appropriate at what stage?
- What areas have students been enabled to experience/learn/practise/get feedback on?
- What is appropriate/achievable within the local context?
- Look at what you don't ever assess or rarely choose to assess and explore why; for example:
    - don't teach it well/formally;
    - too difficult to assess formally
    - doesn't seem so important as other things
    - concern about lack or quality of teaching
    - learning and assessment 'space'.
- Do you focus on the same things? Why? What are the consequences of this?
- Are you being too ambitious or not ambitious enough?
- What needs to be or can usefully be integrated into other assessments? What is appropriate as a stand-alone ethics and/or law assessment?
- Do your methods ensure you can assess areas that reflect the clinical context and practice and are not trivial?
- Did the methods chosen have any unintended/unforeseen consequences?

- Do any methods appear to discriminate unfairly?
- Do you only have one shot or can you link (formative and summative) assessment activities over time?
- What contribution do you want ethics and law assessments to make to students' progression?
- Who has appropriate expertise for the different aspects of assessment (eg assessment designing, observations, marking)?
- Will peer assessment and self-assessment be incorporated? If so, how will you counter some of the problems with these?
- Are there any staff development needs?
- As appropriate: what are the criteria for marking? Is there a marking plan/model answer?
- What checks do you need to put into place (eg double marking, moderation)?
- Can/do students get feedback other than a grade?
- What happens if students do poorly or fail?
- What help is available and from whom?
- What could be better/needs developing?
- Would you want to change any assessment methods? Why? How might you best go about this?

References

1. General Medical Council. *Tomorrow's doctors: recommendations on undergraduate medical education*. London. 2009 http://www.gmc- uk.org/education/undergraduate/tomorrows_doctors_2009.asp
2. Consensus statement by teachers of medical ethics and law in UK medical schools. Teaching medical ethics and law within medical education: a model for the UK core curriculum. *Journal of Medical Ethics* 1998; 24: 188–92.
3. Stirrat, GM, Johnston C, Gillon R & Boyd K. Medical ethics and law for doctors of tomorrow: the 1998 Consensus Statement updated. *Journal of Medical Ethics.* 2010; 36(1): 55–60
4. GMC Good Medical Practice: guidance for doctors. London. 2009 http://www.gmc-uk.org/guidance/good_medical_practice.asp
5. http://www.foundationprogramme.nhs.uk/index.asp?page=home/keydocs#afp
6. http://www.wma.net/en/30publications/10policies/e8/index.html
7. Association of American Medical Colleges. *Report 1: Learning Objectives for Medical Student Education: Guidelines for Medical Schools*. Washington, DC. 1998. https://members.aamc.org/eweb/DynamicPage.aspx?Action=Add&ObjectKeyFrom=1A83491A-9853-4C87-86A4-F7D95601C2E2&WebCode=PubDetailAdd&DoNotSave=yes&ParentObject=CentralizedOrderEntry&ParentDataObject=InvoiceDetail&ivd_formkey=69202792-63d7-4ba2-bf4e-a0da41270555&ivd_prc_prd_key=6686E63C-F836-43EA-A915-118169C41953
8. Lehmann et al A. Survey of Medical Ethics Education at U.S. and Canadian Medical Schools. *Academic Medicine* 2004; 79(7): 682–9
9. Association of Teachers of Ethics and Law in Australian and New Zealand Medical Schools. An ethics core curriculum for Australasian medical schools *Medical Journal of Australia.* 2001; 175: 205–10
10. Claudot F, Alla F, Ducrocq X & Coudane H. Teaching ethics in Europe, *Journal of Medical Ethics* 2007; 33: 491–5
11. Mattick K & Bligh J. Teaching and assessing medical ethics: where are we now? *Journal of Medical Ethics* 2006; 32: 181–5
12. Hafferty F. The hidden curriculum, ethics teaching and the structure of medical education. *Academic Medicine* 1994; 64: 861–71

13. Sheehan T J, Husted SD, Candee, D, Cook CD & Bargen M. Moral Judgement as a predictor of Clinical Performance. *Evaluation and the Health Professions* 1980; 8: 379–400

14 Leo T & Eagen K, Professional Education, the medical student response. *Perspectives in Biology and Medicine* 2008; 15(4): 508–16

15. Miller GE. The assessment of clinical skills/competence/performance. *Academic Medicine* 1990; 65 (9) Supplement: 563–7

16. Campbell AV, Chin J & Voo TC. How do we know that ethics education produces ethical doctors? *Medical Teacher* 2007; 29: 431–6

17. Arnold L, Shue CK, Kritt B, Ginsburg S, & Stern D. Medical Students' Views on Peer Assessment of Professionalism. *Journal of General Internal Medicine* 2005; 20(9): 819–24

18. Edwards RK, Kellner KR, Sistrom CL & Magyari, E. Bottom of Form Medical student self-assessment of performance on an obstetrics and gynecology clerkship *American Journal of Obstetrics & Gynecology* 2003; 188(4): 1078–82

19. Ross JA. The reliability, validity and utility of self- assessment. *Practical Assessment, Research & Evaluation* 2006; 11(10): 1–13

20. Schuwirth LWT & van der Vleuten CPM*. How to Design a Useful Test: the principles of assessment.* Association for the Study of Medical Education. Edinburgh. 2006

21. Case SM & Swanson DB. *Constructing written tests questions for the basic and clinical sciences* (3rd edition revised). National Board of Medical Education, Philadelphia. 2002 http://www.nbme.org/pdf/itemwriting_2003/2003iwgwhole.pdf

22. Rees C & Shepherd M. The acceptability of 360-degree judgements as a method of assessing undergraduate medical students' personal and professional behaviours. *Medical Education* 2005; 39(1): 46–57

23. Hill F, Kendall K, Galbraith K, Crossley J. Implementing the undergraduate mini-CEX: a tailored approach at Southampton *Medical Education*. 2009; 43(4): 326–34

Appendix A
Embedding learning outcomes

The following is an example of embedding or mapping learning outcomes into the curriculum.

TOPIC: Towards the end of Life

LEARNING OUTOME: Demonstrate in practice an understanding of the ethical and legal issues of dignity, patient choice and the limits on respect for patient autonomy

IMPORTANCE AND RELEVANCE

Over the last five years there has been a profusion of media, legal and ethical discussion regarding patients anticipated to be in the last year of life. This subject touches on the aging population, rationing and economics, advance decisions and patient choice but the list is not exhaustive. Doctors in virtually every specialty would be expected to have a working knowledge of these areas.

In relation to mental capacity, students will need to be able to:
- know how to assess capacity for a specific treatment
- establish the clinical relevance of an advance decision
- establish the legality of lasting power of attorney
- know how to assess a patient's best interests

In relation to end of life guidance, students will need to be able to:
- establish a patients preferred priorities of care
- identify a means of recognizing patients who are in the last year of life
- discuss the relevance of patient choice, religion and the law in the context of different cases

In relation to ethical principles, students need to be able to:
- Define and discuss the concept of dignity
- Define and discuss the concept of autonomy and its limits in different settings (for eg acute illness, terminal illness, acute hospital).

TEACHING

The relevant teaching could initially be delivered in a lecture format. After or during clinical attachments, students could be expected to more widely explore the issues and limitations around end of life autonomy and decision making in a small group setting. Teaching can be reinforced at the bedside such that students would be expected to demonstrate a working knowledge of assessing capacity, best interests and relevant end of life guidelines.

LINKING AND MAPPING

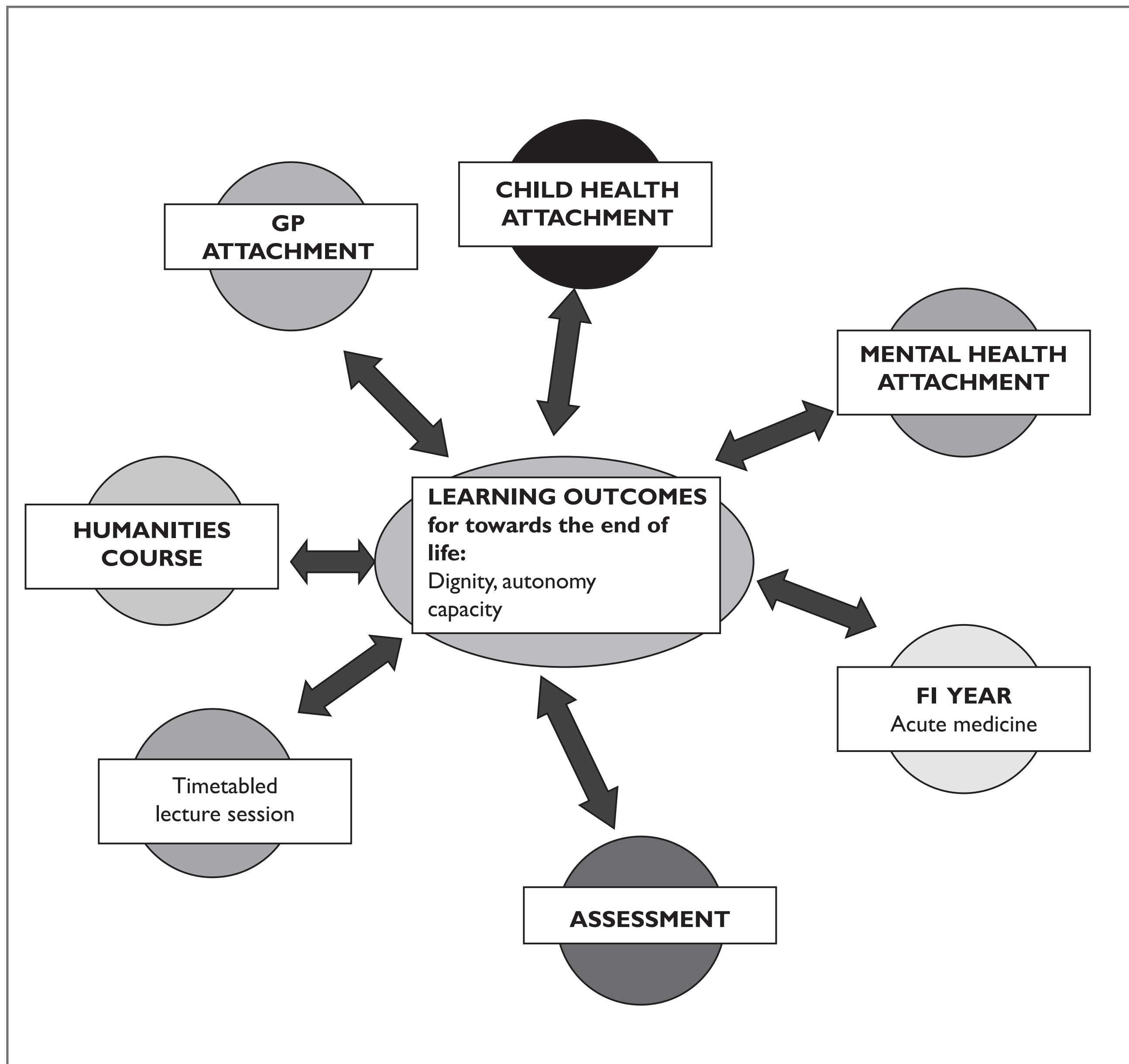
Throughout the course, regular links need to be made to the relevance and importance of the subject and also to the learning outcomes. These can be used as a driver for learning if students are assessed on their ability to demonstrate achievement.

Issues of autonomy, capacity, dignity and best interests are not particular to older adults in palliative care. These issues can be explored and learning reinforced in a number of settings other appropriate settings including:

- Child health
- Mental health
- Humanities and social science
- Acute care settings

Diagram 2 shows another way of how this might be represented. The central circle or 'hub' (the particular ethical and legal area and learning outcome/s) may be overseen by the ethics and law co-ordinator/s. Undertaking this role would mean ensuring that the teaching, learning and assessment of MEL is carried out in a way that is consistent with the culture of each individual medical school. Co-ordinators could also provide the 'sign-posts' (arrows) to where teaching and learning is appropriate, relevant and practically possible. Articulating these links in a way that is accessible to potential teachers, students, administrators and directors of education makes it clear where the MEL content of learning is both formally and more informally taught and enables students to identify appropriate learning opportunities across the curriculum. It may also open up opportunities for where learning might be assessed. In different settings, clinical and other teachers can offer support through, for example, discussion at the bedside, or through discussions on the application of various ethical and legal principles in relation to patients, their own practice, the work of the multi-disciplinary team, and institutional barriers to practice. Such links can also facilitate the embedding of MEL assessments within existing assessment methods such as the mini-CEX, Objective Structured Clinical Examinations (OSCEs) etc. Section 4 outlines different methods in more detail.

Diagram 2
Mapping part of the MEL curriculum
Example topic area: Towards end of life



Appendix B
Examples of Templates

- **OBA**
- **Integrated OSCE**

Template: One Best Answer (OBA)

Year / Semester	
Module:	
Subject:	
Author:	
Lead in:	
Options:	
A	
B	
C	
D	
E	
	Correct Answer:

Comments:

Template: Integrated OSCE

TITLE OF STATION:	
Learning outcomes being assessed:	
Mapping on assessment blueprint:	
Ethical, legal and professional focus:	
Clinical focus:	
Time for station:	
Role Player Instructions	
Name:	
Age:	
Sex:	
Ethnicity:	
BMI:	
Special visual features:	
Presenting problem:	
Opening statement:	
Title of Station	
Describe the presenting problem • What is it? • Where is it? • Does it radiate? • When did it start? • How did it start? • What is it like? • How bad is it? • What does it stop the patient doing? • Any triggers? • How has it developed over time? • Any exacerbating or relieving factors? • Any associated features?	
Identify the patient's ideas, concerns and expectations • What does the patient think is going on and why? • What are they worried about and why? What are they wanting out of the consultation and why?	

Cues • What verbal cues will the patient give and how will they give them? • What non-verbal cues will the patient give and how will they give them? • Dress cues? • Affect cues? • Body language? • Props?	
Psychosocial • What is the home situation? • Family and friends? • Hobbies? • Lifestyle • Drugs • Smoking • Alcohol • Sexual behaviour • Belief systems • What is important?	
Examination • What are the examination findings?	
Management • What does the patient expect in management? • What questions will they ask? • What will they do if they are unhappy with the management?	
Patient record • What is on the patient record?	
Props and Equipment	
What props are needed?	
What equipment is needed?	
What room set up is needed?	
Examiner guidance	
What is being tested?	
What does the examiner need to say to the candidate?	
What does the examiner need to do?	
What are the timings for the station?	
How will start and finish be signalled?	

<table>
<tr><th colspan="5">Marking schedule</th></tr>
<tr><td colspan="5">Marking schedule: check list</td></tr>
<tr><td>Check list item</td><td>Yes</td><td>No</td><td colspan="2">Mark</td></tr>
<tr><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td>Total</td><td></td><td></td><td colspan="2"></td></tr>
<tr><td colspan="5">Marking schedule: competence based</td></tr>
<tr><td>Competence</td><td colspan="4">Rating scale</td></tr>
<tr><td></td><td>0</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="5">Marking schedule: global marking</td></tr>
<tr><td>Level of achievement</td><td colspan="4">CRITERIA</td></tr>
<tr><td></td><td colspan="4"></td></tr>
<tr><td></td><td colspan="4"></td></tr>
<tr><td colspan="5">Candidate Instructions</td></tr>
<tr><td>What written instructions will the candidates be given?</td><td colspan="4"></td></tr>
<tr><td>In what way will feedback be given? By whom?</td><td colspan="4"></td></tr>
</table>

Appendix C
Examples of Assessments

- **Integrated OSCE: Informed consent and venesection**
- **Policy consultation activity**

Integrated OSCE: example

Venesection with informed consent	
Learning outcomes being assessed:	1. The ability to demonstrate in practice an understanding of legal and ethical examples of informed consent 2. Demonstrate in practice knowledge of the legal criteria for establishing that a person lacks capacity 3. The ability to perform venesection competently
Mapping on assessment blueprint:	Clinical skills Professionalism
Ethical, legal and professional focus:	Informed consent
Clinical focus:	Venesection skills
Time for station:	10 minutes
Role Player Instructions	
Name:	Joanne James
Age:	24
Sex:	Female
Ethnicity:	Any
BMI:	Normal
Special visual features:	Nil
Presenting problem:	Awaiting Evacuation of the Remaining Products of Pregnancy (ERPC)
Opening statement:	N/A
Describe the presenting problem	Joanne James is waiting to go to theatre for an ERPC. She has just had a miscarriage. She has been told by the SPR, Dr Patel, that a student will come along and take her blood before going to theatre. She has not been told what this blood test is for. She does not want to talk about the miscarriage at the moment. This is her first pregnancy and she got pregnant 2 months after coming of the pill. She was happy to be pregnant.

Venesection with informed consent	
Identify the patient's ideas, concerns and expectations	Joanne James wants to know: The name of the person taking her blood That the person is a medical student What the blood is being taken for and why *Joanne is happy to have a full blood count but she does not want blood taken for a cross match as she will not want a blood transfusion.* *If asked why she will willingly explain the reason is that her 35 year old cousin got HIV from a transfusion 20 years ago, following a Road Traffic Accident.* *She would be willing to have the blood test done for a cross match if the student can reassure her that better measures are in place today than 20 years ago to screen for HIV, and the risk is now minimal for this and other blood carried viruses.* http://www.sign.ac.uk/guidelines/fulltext/54/section2.html
Cues	Joanne James is not too traumatised by her miscarriage, but really doesn't want to talk about it. She will close down any questions into this verbally and non verbally, but not in a way that cues depression.
Psychosocial	Joanne James is happily married to Philip, and has been for 2 years. She works in the Halifax building society. She plays badminton, loves Jane Austin and left school at 18 doing A levels in English Sociology and Art. She went straight into a building society career training scheme. She is a non-smoker and has been on the pill for 6 years.
Examination	N/A
Management	N/A
Patient record	N/A
Props and Equipment	
What props are needed?	Venesection arm Theatre gown Blood form ticked for FBC and cross match

Venesection with informed consent			
What equipment is needed?	Syringes Tourniquet plus spare Needles A full selection of blood bottles		
What room set up is needed?	Bed on which patient is laying		
Examiner guidance			
What is being tested?	The ability to obtain informed consent for venesection The ability to take blood competently		
What does the examiner need to say to the candidate?	Nothing		
What does the examiner need to do?	Observe the student obtain consent and take blood from the venesection prosthetic arm *Do not mark student down in both domains for failing to get consent for a cross match.*		
What are the timings for the station?	Ten minutes		
How will start and finish be signalled?	Bell		
Marking schedule			
Marking schedule: check list for venesection			
Check list item	*Yes*	*No*	*Mark*
Checks and confirms identity of patient			
Washes hands before procedure			
Puts on gloves correctly			
Assembles syringe and needle correctly			
Puts on tourniquet correctly			
Takes blood correctly			
Puts blood in bottles correctly			
Puts blood in correct bottles			

Venesection with informed consent				
Disposes of syringe and needle correctly				
Washes hands after procedure				
Labels bottles correctly				
Marking schedule: competence based				
Competence	Rating scale			
	0 absent	1 borderline	2 good	3 excellent
Explains the procedure: • discovers what the patient is expecting • explains to the patient what is planned and why • addresses their questions and concerns				
Ensures informed consent: • checks patient understanding ensuring capacity • obtains informed consent for the procedure				
Demonstrates a professional approach: • introduces self and role, and confirms patient identify • demonstrates respect and empathy				
Total Mark				
Marking schedule: global mark:				
Level of achievement	CRITERIA			
Fail	The candidate takes blood in a barely competent or incompetent way, failing to obtain informed consent or identify whether the patient has capacity to make the decision to agree to the procedure			

Venesection with informed consent	
Pass	The candidate takes blood in a competent way, obtaining informed consent to the procedure, including an implicit or explicit assessment of capacity to make the decision to agree to the procedure, for example in ascertaining and exploring the patient's understanding. Addresses patients concerns.
Good pass	The candidate takes blood in a proficient way, skilfully obtaining informed consent to the procedure, including an implicit or explicit assessment of capacity to make the decision to agree to the procedure, for example in ascertaining and exploring the patient's understanding. Fluently explores and addresses patient's concerns.
Candidate Instructions	
What written instructions will the candidates be given?	Joanne James has just had a miscarriage and is waiting to go to theatre. You have been asked the SPR, Dr Patel, to take blood from the patient. Please take some blood from her for a Full Blood Count and a Cross Match.
Feedback method	
In what way will feedback be given? By whom?	This is an end of year assessment so no individualised feedback will be given. Course co-ordinator will post general feedback to all students on the website

Policy consultation activity: example

Module assignment

(Reproduced with kind permission from Steve Malcherzyk, Leicester Medical School, University of Leicester)

What's involved in doing the modules assignment?

The assignment involves undertaking a project within your allocated group. It will require some careful thought, preparation and will rely on a coordinated team effort for its completion. The Nuffield Council on Bioethics is currently bringing together a national consultation on: **Give and Take? Human Bodies in Medicine and Research.** Information is on Blackboard or alternatively at: **http://nuffieldbioethics.org/go/ourwork/humanbody/introduction.**

A consultation paper is available at:
https://consultation.nuffieldbioethics.org

Your assignment will be to respond to this national consultation. The closing date is the 13th July 2010. If you wish your work to be included as a student representative of Leicester Medical School you will need to visit their web site and follow the given instructions. I have reproduced these below.

Submitting your response

It would be better to send your response electronically if deemed suitable after marking. Responses can be submitted online via a dedicated consultation website: https: //consultation.nuffieldbioethics.org

Alternatively, you can email your response together with the respondent's form to: consultation@nuffieldbioethics.org.

If the Nuffield Council receives your response electronically, there is no need to send a paper copy. You will receive an acknowledgment of your response. If you would prefer to respond by post or by fax, you can send your completed response and respondent's form to: consultation@nuffieldbioethics.org

Responding to this consultation will require research to scope relevant subject areas or topics and using the learning resources provided. Information and research in support of your final submission could use different methods, i.e. paper based research, using Blackboard or talking to medical specialists or other healthcare professionals and agencies. Do not forget that your entire group needs to contribute and you may surprise yourself with how quickly you begin to understand the ethical issues being considered.

To successfully undertake this project you will be need to demonstrate that you have achieved, as a group, a standard of work worthy enough to be included within the Nuffield Councils programme. Leicester Medical Students have done this sort of work with the Nuffield Council before; the standard to date has been excellent.

Some suggestions:

- Read all the information and documents carefully.
- A good idea to begin with will be to discuss in your group what your aims and objectives are and how you are going to organize your working schedule for the week.
- The consultation document is divided into 7 sections. Each section has a series of guide questions that will provide you a focal point. **DO NOT attempt to summit materials on all seven topic areas- one or two will do.** Concentrating on a limited topic area means that the work output by the 25th June is achievable and stands a better chance of being of good quality.
- Do not intend to submit shoddy or badly prepared work or reproduce material via copy and paste. Normal conventions for referencing will apply.
- Please indicate on your work what group you are and who is the nominated contact person from your group who is willing to upload your submission after marking.

If you intend to submit your groups work, please do not upload your work to Nuffield Council before it has been marked. In the first instance please upload your submission to Blackboard for marking. If your group's effort is appraised as excellent then we will recommend that you proceed to submission i.e. upload. A group assessed as satisfactory may need some changes or alterations and this can be negotiated with the course tutor prior to submission if requested. Changes after marking will not alter the category of achievement recorded. A group that fails to reach the required standard will not be invited to make a submission to the Nuffield Council as a student representative of Leicester Medical School.

Appendix D
Useful Resources

A range of supplementary material that can provide useful ideas etc includes:

The IME (Institute of Medical Ethics) website contains examples of teaching, learning and assessment activities.
http://www.instituteofmedicalethics.org/website/

The Journal of Medical Ethics has a regular section on teaching and learning ethics which occasionally includes issues around assessment.
http://jme.bmj.com/

ASME (The Association for the Study of Medical Education) website contains links to useful booklets on assessment in medical education in general
http://www.asme.org.uk/

AMEE (The Association for Medical Education in Europe) website contains a range of booklets but see in particular:
Dowie A & Martin A. *AMEE Guide 53: Ethics and Law in the Medical Curriculum.* 2011.
http://www.amee.org/

The Journal of Medical Education has regular articles on assessment in medical education and occasionally within the context of medical ethics and law:
http://www.mededuc.com/

Appendix E
Abbreviations

ASME	Association for the Study of Medical Education
AMEE	Association for Medical Education in Europe
BMA	British Medical Association
EMI	Extended Matching Items
GMC	General Medical Council
IME	Institute of Medical Ethics
JME	Journal of Medical Ethics
LO/s	Learning outcome/s
MCQ	Multiple Choice Question
MEL	Medical Ethics and Law
OBA	One Best Answer
OSCE	Objective Structured Clinical Examination
SSM	Special Study Module (can also be SSC: Component or SSU: Unit)

The Institute of Medical Ethics (IME) is a charitable organisation dedicated to improving education and debate in medical ethics. The IME is founder and co-owner of the Journal of Medical Ethics (JME) a leading international journal reflecting the whole field of medical ethics.

Our mission is *"promoting and supporting the study and understanding of medical ethics and its integration into clinical practice through education, research, and publication"*. We are currently involved in organising conferences, providing grants to students interested in medical ethics and in a project to support and develop medical ethics and law teaching in UK medical schools.

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