

Navigating Ethical and Legal Education in Medical Schools: Exploring Complexities and Divergent Approaches

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Abstract

Exploring Complexities and Diverge Medical ethics and law (MEL) are firmly established components of medical education in the UK; however, evaluating MEL within medical schools presents significant challenges. In 2021, the Institute of Medical Ethics convened a working group specifically to address issues surrounding assessment. This article summarizes the group's findings and deliberations. We begin by outlining the inherent difficulties in assessing MEL, particularly in light of the rigorous expectations outlined by the General Medical Council (GMC) in the UK. Next, we examine current practices for assessing MEL across UK medical schools. We then evaluate various assessment methods and their effectiveness in measuring knowledge and understanding of ethics and law. Finally, we present the key recommendations proposed by the working group, concluding that existing assessment approaches may not adequately measure the GMC's stated learning outcomes.

Keywords: Ethics- Medical, Education, Medical Schools, General Medical Council (GMC)

Introduction

Experts in medical ethics and law (MEL) have long emphasized that the subject should be a core component of medical education [1] and its inclusion is now well-established across UK medical schools. The General Medical Council's (GMC) *Outcomes for Graduates* specify numerous learning outcomes directly related to MEL [2] and the forthcoming Medical Licensing Assessment, scheduled for 2025, will also include MEL content [3]. Passing this assessment is a prerequisite for medical registration. Despite the recognized importance of MEL and its established presence in curricula, there

remains uncertainty about the most effective methods for evaluating whether students achieve MEL-related learning outcomes.

In 2021, the Institute of Medical Ethics (IME) convened a working group to examine MEL assessment and update guidance in this area [1]. This paper provides a summary of the group's work and its key recommendations. We begin by outlining the challenges inherent in assessing MEL, then review current assessment practices across UK medical schools. We subsequently discuss a range of potential assessment methods, noting their advantages and limitations, and conclude by presenting the working group's principal recommendations.

Centrality of MEL

Medical ethics and law (MEL) hold a central role in UK medical education, a position reinforced by the General Medical Council (GMC), which is responsible for setting standards in medical training [2]. The GMC's *Outcomes for Graduates* defines the competencies students must

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achieve by the time they graduate, including a section on 'Professional values and behaviours.' Within this section, the subsections 'Professional and ethical responsibilities,' 'Legal responsibilities,' and 'Dealing with complexity and uncertainty' specify a range of learning outcomes students are expected to meet [2].

These outcomes range from fundamental requirements, such as understanding confidentiality and consent [2], to more demanding expectations. For instance, newly qualified doctors should be able to identify and summarise contemporary ethical dilemmas in medicine, recognise ethical issues in routine clinical practice, and apply ethical reasoning to real-world scenarios [2]. Meeting these standards requires not only knowledge of current debates but also the ability to think critically and reason ethically in practice [2]. Consequently, MEL teaching and assessment must be carefully designed to ensure students develop these competencies. The diversity of outcomes—encompassing knowledge, skills, and attitudes—adds complexity, as different educational and evaluative strategies may be necessary for each domain.

While the GMC provides broad learning outcomes, it does not prescribe specific curriculum content or teaching methods for MEL. These responsibilities fall to individual medical schools, though the Institute of Medical Ethics (IME) offers an indicative Core Curriculum [4]. This curriculum aims to equip students to recognise ethical and legal issues, reflect critically on them, and justify their decisions based on their understanding, skills, and professional attitudes [4]. This principle guided the IME working group's work and can be summarised as fostering doctors who act ethically and responsibly for well-reasoned reasons [4].

The central challenge lies in assessment: medical schools must ensure that graduates meet these outcomes through methods that are valid, reliable, and fair, and that are administered by qualified individuals [1]. With the breadth of MEL learning objectives set by the GMC, designing robust assessment strategies remains a significant and ongoing challenge.

Learning, teaching and assessment

While this paper concentrates on assessment, it is important to situate evaluation within the wider framework of MEL teaching. Earlier guidance from the IME on assessment drew on Mattick and Bligh's 2006 study to describe the state of MEL education [5], but this information is now outdated. More recent work by

Brooks and Bell sought to appraise undergraduate ethics curricula in light of the IME Core Curriculum [6]. Although only 11 of the 33 invited medical schools participated, offering a limited perspective, the findings still provide valuable insights. On average, courses offered approximately 38 hours of ethics teaching, predominantly during the first three years, with the final year receiving minimal formal instruction (around 1.65 hours) [6].

Curricular structures varied across institutions: six of the 11 schools reported having a discrete ethics curriculum with explicit MEL learning objectives, while the remaining five delivered MEL content as part of integrated modules [6]. Summative assessment of MEL was common, with 10 of 11 schools including some form of evaluation [6]. Most schools relied on integrated written examinations (9/11), with fewer offering a standalone written ethics exam (5/11) [6]. Objective structured clinical examinations (OSCEs) and work-based clinical assessments were also frequently employed (6/11 and 5/11, respectively) [6]. A concern previously identified by Mattick and Bligh persisted: in nearly half of the responding schools (5/11), students could fail MEL components yet still progress to graduation and gain registration as doctors [5].

Developing guidance

To inform the working group's activities, a multi-stage consultation was carried out across UK medical schools, incorporating a survey, a workshop, and a deliberative review process [1]. During the summer of 2021, a questionnaire was sent to 44 medical schools, targeting educators involved in MEL. The survey sought to capture current assessment practices, the reasoning behind these approaches, and perspectives on what constitutes an ideal assessment for MEL. Fifteen schools responded, providing a snapshot of contemporary approaches and their justifications [1].

Following the survey, the IME convened a national workshop in March 2022, attended by 43 individuals representing 18 medical schools. Invitations were extended to IME members, including ethics educators, clinicians involved in assessment, and medical students. Observers from the GMC and the Medical Schools Council also participated [1]. The workshop was designed to explore the rationale underpinning MEL assessment strategies and to guide recommendations for best practice. Participants reviewed a draft report summarising survey results and engaged in small-group

discussions to examine different assessment methods. Written notes from these discussions were collected for analysis [1].

The Assessment Working Group met on multiple occasions both prior to and following the workshop to plan activities, reflect on the implications of the upcoming Medical Licensing Assessment, and consider effective strategies for assessing MEL [1]. An internal Interim Report was completed in June 2022 [1]. The following section presents a narrative summary of the survey results. The recommendations offered at the end of this paper represent a synthesis of insights gained from the consultation, combined with relevant literature on MEL assessment [1].

MEL assessment consultation results in UK medical schools

How and when MEL is assessed

Responses revealed considerable variation in both the timing and methods of MEL assessment across institutions. However, all respondents indicated that assessment occurs at multiple points throughout the curriculum rather than as a single, isolated evaluation. Formative assessment is widely employed, with 12 of 15 schools using it to support and enhance MEL learning. Every participating school reported incorporating single-best answer (SBA) multiple-choice questions (MCQs) into their assessments, while 13 also included MEL components within OSCEs. Other methods, used less frequently, included assessed presentations, essays, reflective exercises, and open-book assessments.

Why MEL is assessed in this way

Many respondents noted that summative assessments serve to signal the significance of the content being evaluated. They also recognised that distinct areas within MEL—such as ethical reasoning versus legal knowledge—are best assessed using different methods. Six participants emphasised the value of employing a variety of assessment approaches to capture the full spectrum of learning outcomes. Additionally, six respondents indicated that decisions about the format of MEL assessments were often guided by the institution's overall assessment strategy, suggesting that MEL educators may not always have complete autonomy in determining how their subject is evaluated.

Important aspects of MEL

Respondents agreed that all areas of MEL hold significance, though consent (7 mentions) and confidentiality (6 mentions) were most frequently highlighted. Four participants stressed the importance of evaluating students' ethical reasoning, while others referred to related skills, such as managing consent and confidentiality in complex or challenging situations. These priorities correspond with several GMC learning outcomes.

When it comes to assessment methods, SBA MCQs were generally considered more suitable for legal content, where definitive answers exist, than for ethical topics, which often demand nuanced interpretation. While SBAs and OSCEs were seen as effective for assessing knowledge, evaluating professional behaviour and reasoning proved more context-sensitive and difficult. About half of the schools [7] integrate professionalism teaching and assessment within MEL, whereas in the remaining institutions, professionalism is addressed in separate modules outside the MEL curriculum.

Areas of challenge in developing MEL assessment

Several respondents identified marking MEL assessments as a particular challenge. Three highlighted that the process can place a heavy workload on staff and that evaluating behaviours and ethical reasoning is inherently difficult. Two respondents pointed out that designing assessments is also challenging, especially when attempting to link questions meaningfully to real-world practice. One participant observed that while short-answer questions (SAQs) allow for more depth than SBA MCQs, they still fall short of fully capturing the complexity of ethical reasoning. Overall, respondents agreed that different assessment formats are better suited to different learning outcomes, but each method comes with its own limitations and practical difficulties.

The remaining challenges for our working group

Respondents emphasised the need for a consistent and well-structured approach to MEL assessment, suggesting that a comprehensive programme should adequately address the full range of learning outcomes. However, several constraints can hinder this goal. One key concern is the "assessment burden" on both staff and students: while multiple and varied assessments might strengthen the evaluation of MEL, they can also place significant demands on resources and time. Consequently, our recommendations must be practical and adaptable, reflecting the unique context and assessment frameworks

of individual institutions. Nevertheless, if existing constraints compromise the ability to assess MEL outcomes effectively, changes are clearly required. Variability in teaching also presents challenges, including differences in content coverage, instructional methods, and timing across schools. Diverse institutional assessment strategies introduce additional local constraints, such as limited staff availability for marking, varying proportions of formative versus summative assessments, and differing degrees of integration of MEL within the wider medical curriculum. These factors mean that a universal set of prescriptive recommendations is unlikely to be appropriate for all educators. As such, the guidance offered here is intentionally high-level. The following section provides an overview of key assessment methods before presenting our overarching recommendations.

The key assessment options available

Multiple choice questions

Multiple-choice questions (MCQs) are widely used in medical education to assess a variety of curriculum areas. They offer standardisation, provide students with clear feedback on knowledge gaps, and are relatively easy to mark, particularly when computer-assisted grading is employed. However, their effectiveness in evaluating complex issues has been questioned. While well-designed MCQs can test higher-order cognitive skills, creating items of sufficient quality is challenging [7-9]. A key limitation is the requirement for a single unequivocal best answer, which does not align well with ethical scenarios where multiple responses may be defensible. Developing plausible distractors that do not themselves constitute valid answers is particularly difficult for ethics-focused questions. Fenwick has noted that although MCQs may achieve strong statistical reliability, they risk losing validity when assessing nuanced ethical judgement [10], and Wong *et al.* highlight the challenge of presenting brief scenarios in a realistic, multi-dimensional manner [11]. In summary, MCQs are well-suited for assessing knowledge-based outcomes, but they are less appropriate for evaluating subtle judgement, reasoning, or explanatory skills.

Modified essay questions (MEQs) and short answer questions

Short-answer questions (SAQs) and modified essay questions (MEQs) linked to brief clinical scenarios can offer a way to assess more complex issues and deeper

understanding. For example, Mitchell *et al.* describe the use of MEQs at Newcastle, Australia, where clinical cases were presented in a stepwise manner, with students unable to revisit earlier decisions [12]. They found this format, similar to MCQs, was effective for testing knowledge. Favia *et al.* also embedded questions within clinical scenarios and reported that their structured approach allowed assessment of knowledge, the application of knowledge, and ethical reasoning [13]. However, SAQs and MEQs have potential limitations. Students may rely on formulaic or “safe” responses that show minimal understanding yet are technically correct, leading to marks being awarded despite limited insight. SAQs are often assigned relatively few marks, reducing the ability to distinguish between strong, moderate, and weak answers. Furthermore, marking these assessments is time-intensive and requires subject-matter expertise, as evaluators must exercise judgement and may need to adapt mark schemes to accommodate unexpected but valid answers.

OSCEs

In addition to acquiring and applying knowledge of ethics, medical students are expected to develop professional behaviours and attitudes [14]. OSCEs, first introduced at the University of Dundee Medical School in 1977, have since become widely adopted as a reliable method for assessing practical skills at the “shows how” level of Miller’s pyramid [15]. Singer and colleagues explored the use of OSCEs specifically focused on ethics [16]. Their evaluation showed that while the assessments demonstrated acceptable construct validity and inter-rater reliability, internal consistency was low. They concluded that ethics-specific OSCEs are not suitable as a standalone summative assessment of clinical ethics [17].

Nonetheless, OSCEs can still play a valuable role when used alongside other MEL assessment methods. Incorporating ethical components into primarily clinical OSCE stations provides an alternative to written assessments, offering a practical dimension to evaluation. Campbell *et al.* suggest that OSCEs are among the more effective ways to assess competence, while also highlighting their utility as a formative learning tool [18].

Situational judgement tests (SJT)

Goss *et al.* explored the use of situational judgement tests (SJTs) to assess professionalism in medical students [19]. They developed three 40-item tests designed to evaluate

both students' understanding of professional principles and their ability to apply them appropriately. Each test included 25 scenarios requiring students to rank five possible responses from most to least appropriate, and 15 scenarios with eight options, from which students had to select the three most suitable. The researchers reported that the tests demonstrated acceptable validity and reliability, and students indicated that the assessments positively influenced their learning. However, significant time was required to develop the questions and to conduct standard setting and marking, though the authors expected this burden to decrease in subsequent years.

Building on this, Foucault and colleagues extended the SJT concept in ethics by creating a concordance-of-judgement learning tool [20]. They developed validated clinical vignettes illustrating issues of professionalism, which were evaluated by a panel of clinician role models chosen by students. The panel's responses formed the benchmark for the test, which was delivered via a web-based platform. This allowed students to receive immediate feedback, comparing their answers with expert explanations. Students reported that the tool was user-friendly and promoted new learning. While SJTs have faced recent critique and are less widely used in some settings [21], they remain a potentially useful method for assessing whether students can perform the "right actions," even if they may not fully capture whether students act for the "right reasons."

Portfolios and peer evaluation

Portfolios and peer feedback offer additional ways to evaluate students' engagement with ethics. In one study, O'Sullivan *et al.* explored whether maintaining a portfolio could enhance reflective practice and ethical reasoning [22]. Students were asked to report their own perceptions of completing portfolio tasks, with 63% indicating that the process had strengthened their reflective abilities. Fewer students (48%) felt that it had improved their ethical reasoning. Notably, the study did not directly measure students' understanding of ethical principles or their ability to apply them in real-world contexts.

Emkee and colleagues investigated paired self-assessment alongside peer evaluation as a means of monitoring professional behavior [23]. Their analysis highlighted two groups of concern: students who consistently rated themselves higher than peers' evaluations suggested, and students who failed to engage with the assessment process. While this approach may

help flag individuals who might need additional support, it does not provide a reliable framework for assessing the ethical knowledge or professional conduct of the broader student cohort.

Simulation and serious games

Emerging technologies are opening up new possibilities for both teaching and assessing medical ethics. Digital platforms can deliver educational content through "serious games," which are designed specifically for pedagogical purposes [24]. These games have been applied successfully to teach and assess clinical reasoning [25], and several studies have explored their potential for teaching ethics [26-28], although they have not yet been widely used as an assessment tool. Gisondi and colleagues have incorporated ethical challenges into high-fidelity simulations with video monitoring, offering students realistic clinical scenarios. The growing availability of virtual reality technology could further enhance this approach. While technology-based assessments remain resource-intensive, advances in computing power and artificial intelligence—despite the ethical and practical considerations they entail—may provide promising opportunities to develop innovative, technology-assisted methods for evaluating students' ethical knowledge and decision-making.

Conclusion

A uniform, "one-size-fits-all" approach to assessing MEL is unlikely to be effective. As discussed above, different assessment methods are better suited to different elements of MEL, and variations in how curricula deliver the same content across medical schools may necessitate tailored approaches. The upcoming introduction of the Medical Licensing Assessment (MLA) will not resolve this issue [29]. The Applied Knowledge Test component of the MLA is limited to MCQs, with the blueprint allowing for as few as two MEL questions out of 200 [30]. Consequently, assessment of MEL outside the MLA remains essential. We propose that a comprehensive MEL assessment strategy should include the following elements:

- Diverse assessment methods: A combination of assessment formats is necessary to cover the range of MEL learning outcomes. Assessment methods should align with the specific outcomes being evaluated and the stage of the programme at which they are assessed. Likely components include

MCQs or SAQs alongside practical assessments such as OSCEs, though these alone are unlikely to be sufficient. No single assessment type can adequately evaluate the full spectrum of MEL outcomes.

- Ability to identify unmet outcomes: Assessment systems should be capable of identifying students who fail to achieve GMC MEL learning outcomes. Compensation across curriculum areas should be limited; for example, strong performance in anatomy should not offset inadequate achievement in MEL. This does not necessarily require standalone MEL assessments but could be addressed through more granular marking of specific curriculum domains within broader assessments, similar to domain marking in OSCEs. Mechanisms should ensure that students cannot progress or graduate without demonstrating competence in the assessed outcomes.
- Supportive monitoring in clinical settings: When formal summative assessments cannot fully capture all MEL outcomes, clinical supervisors should be encouraged to flag students who appear to struggle with outcomes that require demonstration or enactment of professional behaviours. While egregious unprofessional conduct is already reported, a lower threshold for raising concerns could help identify students in need of support and enable timely remediation. Framing this process as supportive rather than punitive, with clearly defined thresholds linked to MEL outcomes, may encourage supervisors to engage proactively.

Based on our consultation with medical schools and a review of the literature, we remain unconvinced that current approaches to MEL assessment are sufficient to fully address GMC outcomes. Developing new assessment tools was beyond the scope of our working group, and further research is required to create methods capable of robustly evaluating ethical reasoning and professional behaviour. Emerging technologies, including virtual reality and artificial intelligence, show promise for innovation in this area, but careful development and evaluation are essential. The principal recommendation from our working group is therefore the urgent need for further research into effective, reliable, and practical approaches to MEL assessment.

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