Are national qualifying examinations a fair way to rank medical students?

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YES

The General Medical Council’s consultation on student assessment1 and the inquiry into Modernising Medical Careers2 have prompted interest in national examinations for medical students or newly qualified doctors. We believe that national examinations are the only fair way to rank medical students because they offer a unique opportunity for standardisation, consensus, and pooling of resources.

Level playing field

The UK already has a system for ranking medical students as part of the application process for their first postgraduate position. Students are ranked 1, 2, 3, or 4 depending on their performance within their medical school. In 2007 this rank provided 45 marks of the total application score of 100 (45 being the maximum mark and 30 the minimum allocated according to each rank) and therefore had a major effect on every student’s chance of getting his or her preferred post. Each medical school uses its own internally devised assessments to rank students.

The current system is inherently unfair because it erroneously assumes that all medical schools have the same spread of candidate capability and that their assessment data are of equal value or validity for ranking. However, recent studies of medical school final examinations in the UK have shown several important differences in their qualifying assessments3 and standard setting,4 and the value of the current ranking system in the application process has recently been down-weighted. These differences may persist through a doctor’s working life because graduates from different medical schools show significantly different performance in subsequent postgraduate examinations.5,6

Fair ranking requires good reliability. Reliability requires standardisation and structure.7 Standardisation is best achieved by all candidates experiencing the same assessment tasks rather than the current plethora of non-standardised local assessments. National examinations would provide a common set of assessment tasks for every student, a prerequisite for fair ranking.

Quality and usability

Any national examination with high stakes would need to be designed and delivered to current standards of best practice in test procedures.8 This includes a robust and defensible approach to definition of the test, implementation, standard setting, and quality assurance. These criteria are best achieved by consensus of stakeholders, including employers,9 and pooling rare assessment expertise, as is currently done in the United States and Canada. However, such an approach is impossible in the UK while resources for assessment are divided among medical schools. It costs as much to set a high quality test for 100 students as for 10000. Pooling of resources to create one national examination could therefore reduce costs or make better use of available funds.

A national examination has other advantages. Firstly, it would support the establishment of a common curriculum. This will be increasingly important with the establishment of private medical schools. Secondly, because national examinations are independent, they can remove any local bias. Some students perform particularly well in one high profile area: the subsequent “halo” effect10,11 may bias their local ranking. Thirdly, a national examination would provide prospective students with a more robust comparison of how medical schools performed. Applicants to seemingly expensive medical school courses will increasingly demand better data to inform their choices. The performance of each medical school’s graduates in a national examination would be important information. Fourthly, with the movement of doctors globally, especially freely within the European Economic Area, a national examination would allow direct comparison of all graduates and doctors wanting to enter practice.

Finally, a national qualifying examination is likely to improve patient care. Although much of the evidence for the impact of national examinations on patient outcomes is from postgraduate certification examinations,12 there is also evidence that performance on earlier licensing examinations also affects patient care.13

Role of national examination

A further question relates to whether a national examination should automatically be a qualifying examination. There are clear benefits for a national examination and its unique role in ranking students. The main difference between a ranking and a qualifying examination is that the first provides information about candidates’ relative ability whereas the second also provides a pass or fail decision. Several nationally delivered examinations primarily provide ranking or grading information without pass or fail decisions—for example, A levels and medical school admission tests. The main purpose of national ranking of medical students is to aid recruitment to the first postgraduate training post. So, a national examination may not need to be a qualifying examination.

However, relying on national ranking but local qualification may produce anomalies. A student may qualify from one medical school but be ranked lower nationally than a student who has failed to qualify from another. Using a national examination for both ranking and qualification is therefore fair to medical students, standardises the minimum qualification level, and is likely to improve patient care.

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Much has been made of the lack of standardisation within UK medical schools as a result of a recent research paper. The authors called for a national licensing examination after they found that medical schools had significantly different pass rates for the Royal College of Physicians postgraduate examinations. However, these exams are for progression in higher training and not a test of the accepted level of competence to practise as a foundation doctor. There is no evidence that UK medical schools are not currently fulfilling their responsibilities of ensuring that students who reach the required standard to qualify as doctors are fit to practise. Indeed, in a 2005 survey of postgraduate deans, only three UK graduates out of 5833 first year doctors caused concern relating to their clinical competence.

**Ranking and diversity**

Whether a national qualifying examination is a fair way to rank medical students is less important than the actual desirability of ranking medical students. Traditionally, medical degrees in the UK have not been classified. Medical students graduate having achieved the level required to practise medicine. There has been no better or worse graded doctor at the initial stage of postgraduate training, and rightly so. Ranking students across the country would result in the higher ranked, and therefore perceived “better” doctors, going to the most desirable parts of the country and the lower ranked, or “worse,” doctors being sent to the less desirable parts. Perversely, this distribution is likely to be indirectly proportional to the health needs of the relevant communities. The more affluent, and therefore more healthy, parts of the UK would be more competitive in the job market than the less affluent parts.

If it is decided that ranking of newly graduating doctors is desirable for their allocation into a generic training programme, a national qualifying examination is not the appropriate way to do it. Medical schools’ curriculums and delivery of the undergraduate programme are quality assured and controlled by the General Medical Council through its Quality Assurance of Basic Medical Education process. The standards for undergraduate medical education leading to a UK recognised primary medical qualification are set out in the GMC document *Tomorrow’s Doctors.* The standards for the first year of the foundation programme are outlined in *The New Doctor.*

A national examination would ruin the current diversity in assessment of medical education and, because assessment has been shown to drive learning, would probably ruin the diversity in education. All schools would be likely to amend their curriculum to teach students how to pass the exam. Undergraduate medical education should be about learning how to be a good doctor and not merely about how to pass an exam. Indeed, a national examination would make it likely that schools would be reticent to innovate new curriculums. Yet surveys of several thousand first year graduates have shown that curricular change may have contributed to trainees feeling better prepared for work.

**Knowledge is not all**

Until a system of examination can be demonstrated to be fair, valid, and reliable it would not be appropriate to use it for ranking. There is currently no single method of assessment in medicine that fulfils these criteria. Although multiple choice questions may be reliable, they can assess only knowledge and do not offer a valid assessment of the clinical skills required to practise as a junior doctor. Objective structured clinical examinations may be more valid but are not absolutely reliable and therefore not absolutely fair.

A national ranking examination is likely to be based on an assessment of pure knowledge and not on performance. Medicine is a performance and practical discipline, and although knowledge is important, it is not what makes the difference between a good doctor and a less good doctor. Selection into specialty training should be based on ability and aptitude within that specialty, not merely pure knowledge from a breadth of other specialties.

Performance on the day for such a high stakes assessment is likely to play an important part for candidates. There is a drive away from high stakes single point assessments in medical education. Muijtjens and colleagues strongly advised against the use of such assessments in making qualitative comparisons between medical schools. Their study of around 5000 students in three medical schools over four years showed that single assessments have a higher potential for error than multipoint testing.

The British Medical Association has clear policy in opposition to a national qualifying examination that has been voted on and set by representative conferences of both medical students and the full profession. The Medical Schools Council, which represents all the UK medical schools, is also opposed to a national qualifying examination (J Tooke, personal communication). The case has not been made for one, and even if it were made there is no valid and reliable method to introduce it. Such an assessment in the UK could badly affect the diversity, methods, and therefore quality of medical education in the UK. There is no requirement, need, or will for such an examination, and it is highly unlikely that it would ever be truly fair.

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**Chris Ricketts** and **Julian Archer** argue that a national test is the only fair way to compare medical students, but **Ian Noble** believes that it will reduce the quality of education.