Implementation of a Multiple Mini Interview for all shortlisted applicants to the undergraduate programme in Medicine

Project aims

It has been shown that admissions strategies which take into consideration more than simply taking the students with the highest grades result in an improved progression rate at medical school (O'Neill et al, 2011). In 2013 a GMC commissioned report found evidence to support the use of multiple mini interviews, aptitude testing, situational judgement tests and selection centres better than the evidence for traditional interviews, references and autobiographic reports (Cleland et al, 2013).

The University of Leeds uses academic scoring from past and predicted grades and a minor weighting of non-academic attribute scoring from the personal statement in addition to an aptitude test (BioMedical Admissions Test) to determine who should be invited to interview. Although we have always considered measurement of traits of the best doctors that fit within the values of the NHS Constitution, in the past we used a traditional interview model but this did not allow us to measure many of these traits. In addition there were other concerns with the

traditional interview as interviewer variability was shown to account for more than 50% of the variance in interview ratings and candidate rehearsal was known to be a problem (Cleland et al, 2013).

McMaster University in Ontario pioneered the multiple mini interview (MMI) in 2003. The Selecting for Excellence final report summarises the evidence base supporting their use within selection stating that they are an effective method of testing values during the admission process (Medical Schools Council, 2014).

The School of Medicine at Leeds decided to adopt MMI within their selection process as it has been determined that:

1. It is fairer than the traditional interview.
2. It allows us to test more of the attributes and values that are good predictors of the best doctors which can be mapped to the values of the NHS Constitution.
3. It has a high level of acceptability from candidates.

Process

- To create an outline for our proposals the admissions team visited other medical schools that had developed MMIs to look at the practical and theoretical implications of the change and to share best practice. The emerging literature on MMIs was also critically evaluated.

- The outline was discussed with key stakeholders including local schools and colleges, and our clinical partners including the Foundation School. The outline included proposals on the attributes and values to be tested, along with an assessment of the feasibility of implementing the change, including the resources required. The admissions team presented the revised outline to relevant committees within the School and Faculty.

- A pilot project was run with 60 applicants from our transfer scheme with the Clinical Sciences BSc at University of Bradford.

- A working group with representation from clinicians and academics across the curriculum, including assessment experts and psychologists developed the outline for the initial stations.

- The team worked with the outreach and marketing teams on communication of the change to the interview process to prospective applicants including web-based information, video material and workshops.

- All student, clinical, academic and alumni interviewers attend annual interview workshops including equality and diversity training in which the ethos behind the selection method is explored.

- The MMI was initially used for assessment of the whole cohort of applicants three years ago. Each year, 512-540 students are assessed over an eight station MMI which includes stations on inter-personal communication, ethical reasoning, team working, self-evaluation and problem solving. All interviewers receive training on equality and diversity at the annual interviewer workshop which is supported by on the day briefing sessions.

- Candidates are short-listed for interview on the basis of their academic achievements, an aptitude test and their personal statement. The personal statement scoring looks at attributes and values grouped into motivation and insight, leadership and responsibility, social awareness and interests and achievements.

- A report based on the metrics of the stations is created to ensure that the assessment methods are valid, reliable, fair and equitable. This information helps us to make adaptations to the stations each year, decisions being made at committee with stakeholder representation. Feedback is offered to all examiners about their performance.

- The patient carer community are already heavily involved in teaching and curriculum development and they are involved in station development and delivery.

- Students on the MBChB act as interviewers and the students undertaking a BSc in Medical Education are involved in station writing and development.

- Best practice is shared and is leading to the use of MMIs in selection across other health-care courses e.g. audiology who will be adopting this method from 2016.

Key challenges

Although there is considerable published literature on the values and attributes required to be a doctor, many of these attributes are difficult to turn into a measurable tool to differentiate between candidates. Many individuals from the working group outlined above are involved in further development of MMI stations as we respond to the statistical evidence from our previous assessments and new developments in the literature.

The large pool of interviewers have been involved in traditional interviewing for many years and the implementation of the change of format, change of marking criteria and management of other aspects of the selection process had to be communicated with them carefully to ensure that they understood the reasoning behind the changes and were confident to act within the remits set out to them to ensure the validity and reliability of the assessment tool.

Impact

Each year the student intake is critically evaluated for inclusion of target groups including students from a widening participation background and black, ethnic and other minorities. The impact on the MMI in this process is determined using statistical analysis of time and date information, gender, inter-rater statistics and differences in interview pool profile in relation to student, alumni and clinician inclusion.

The performance of students across the cohort is now being determined as using the assessment data that we collect throughout the course.

Next steps and sustainability

- Continual statistical evaluation of the MMI to adapt the stations in order to improve their performance and ensure that the best applicants are made offers onto our course.

- Mapping of the student cohorts on the undergraduate course to look at performance data in comparison to the MMI scores that candidates achieved at entry.

- Continuation of sharing of best practice across the University and with other key stakeholders in the sector, working together to deliver this labour intensive selection method for ourselves and other healthcare courses.

Key Tips

- Use the expertise that you already have in your Faculty, for example, assessment, statistical, psychometric.
- Visit other institutions to discuss and share best practice.
- Plan at least twelve months in advance of adopting the change.

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References

Cleland J, Dowell J, McLachlan J, Nicholson S, Patterson F (2012) *Identifying best practice in the selection of medical students*. [Date accessed: 7/11/15]. Available from: http://www.gmc-uk.org/Identifying_best_practice_in_the_selection_of_medical_students.pdf_51119804.pdf

Medical Schools Council (2014). *Selecting for Excellence Final Report*. [Date accessed: 7/11/15]. Available from: http://www.medschools.ac.uk/SiteCollectionDocuments/Selecting-for-Excellence-Final-Report.pdf

O'Neill L, Hartvigsen J, Wallstedt B, Korsholm L, Eika B. *Medical school dropout-testing at admission versus selection by highest grades as predictors*. Medical Education. 2011;45:1111–20.