Quality Assurance of Basic Medical Education

Report on the University of Nottingham Medical School

November 2009

General Medical Council

Regulating doctors
Ensuring good medical practice

Contents

The GMC's role in medical education

1. The General Medical Council (GMC) sets and monitors standards in medical education. The standards for undergraduate medical education are set out in the publication *Tomorrow's Doctors*.

2. In order to ensure that UK medical schools maintain these standards the GMC runs a quality assurance programme, which involves regular assessments and visits to schools. This programme is called Quality Assurance of Basic Medical Education (QABME) and is carried out on behalf of the GMC Undergraduate Board by a team of medical and educational professionals, student representatives and lay members.

3. The team makes determinations as to whether these schools are meeting the standards in *Tomorrow's Doctors* after analysing school documentation and completing a range of quality assurance activities at the School and partner institutions. The determinations in this report have been scrutinised and endorsed by the GMC's Undergraduate Board.

Introduction

4. This is the 2008/09 quality assurance report to the GMC Undergraduate Board on the established medical school at the University of Nottingham (the School).

5. The last GMC review of the School was in 2000, prior to the establishment of the QABME programme. Areas identified for further consideration at that time included refining the core curriculum, reduction of the quantity of factual information students are required to assimilate, reduction of the number assessments, the assessment of special study modules (SSMs), the experience of medicine in a multicultural society, students' awareness of complementary therapies, training on advanced life support and feedback to students.

6. The School has over 1500 students across two courses:

   a. The five year Bachelor of Medical Sciences (BMedSci) Bachelor of Medicine and Bachelor of Surgery (BM BS) course, during which students perform a six month BMedSci integrated research project. The two and a half year BMedSci portion of the course is a systems based integrated curriculum and leads to the award of a classified honours degree following completion of the first clinical phase.

   b. The four year Graduate Entry to Medicine (GEM) BM BS course, the first 18 months of which is a problem based learning (PBL) curriculum.

   c. The courses merge for the clinical phases of the programme, which consist of clinical phases one to three (CP1-3) and last for two and a half years.

7. The School undertook a curriculum review of the BMedSci and BM BS between 2000 and 2002 of the BMedSci to align the course with existing GMC requirements. These alterations were implemented during the academic year 2003/04. Since implementation, the Medical Education Unit has worked to align the learning outcomes to *Tomorrow's Doctors* 2003 and the Foundation Programme entry requirements.

The QABME team

8. The visiting team members appointed by the GMC Undergraduate Board to undertake the quality assurance visits were:

Professor Anne Garden (Team Leader)
Mr Philip Brown
Ms Raisha Nurani
Professor Trudie Roberts (stood down as of 1 January 2009, see paragraph 9)
Professor Janice Rymer
Dr Mairi Scott (stood down as of 1 January 2009, see paragraph 9)
Dr Fiona Sim
Dr David Taylor
Dr Niten Vig

9. Following their appointment to the GMC on 1 January 2009, Professor Trudie Roberts and Dr Mairi Scott stood down from the visiting team because of the conflict of interest that their appointment to the GMC presented. Prior to standing down, Professor Roberts and Dr Scott attended the quality assurance visit on 4 November 2008 (see paragraph 11).

10. Mr Graham Mockler (GMC Education Quality Officer) supported the QABME team.

Our programme of visits in 2008/09

11. The team conducted seven quality assurance visits on: 4 November 2008, 18 February 2009, 18-19 March 2009, 26 March 2009, 6-7 May 2009, 20 May 2009 and 25 June 2009.

12. The findings of the team have been reached by reviewing documentary evidence submitted by the School and undertaking the following activities:

a. Meetings with members of the School responsible for curriculum development, assessment, student support and selection and quality management.

b. Observation of teaching sessions in the main university teaching hospital and district general hospitals.

c. Demonstration of e-learning resources.

d. Site visits to various NHS trusts.

e. Site visits to various GP practices.

f. Discussions with students.

g. Discussions with teachers, including general practitioners (GPs) and clinical consultants.

h. Discussions with Foundation Year One (F1) doctors and their educational supervisors.

i. Observation of the final examination of clinical skills; objective structured clinical examinations (OSCEs) and objective structured long examination records (OSLERs).

j. Observation of the final examination board.

The report

Summary of our key findings

13. Subject to the requirements in paragraph 16, the School's BMedSci and BM BS programmes meet the requirements of *Tomorrow's Doctors* in accordance with Section 5(3) of the Medical Act 1983.

14. Although we have recommended some areas for improvement by the School, these should be read in the context of our overall findings.

15. The School is requested to respond to the requirements with the timelines for action within the 28 day right of reply to the report.

Requirements

16. The School is required to:

a. Improve the reliability of the OSLER or discontinue its use. The School must ensure the clinical examination tools in use are in line with current best practice (see paragraph 78).

b. Accelerate the implementation of Touchstone to provide individualised feedback on assessments to students or introduce interim measures (see paragraphs 94-95).

Recommendations

17. To enhance the quality of the School's programme, we have identified the following recommendations. The School should:

a. Implement planned changes to improve teaching and assessment in prescribing and monitor the effectiveness of this (see paragraph 29).

b. Put in place a structure to ensure that all SSMs are assessed formally and consistently (see paragraph 50).

c. Continue with its plans to increase the vertical integration of the course (see paragraph 59).

d. Review the personal tutor system to ensure all students receive appropriate pastoral support throughout the course and particularly during the clinical phases (see paragraph 73).

e. Discontinue the use of negative marking in examinations in line with current best practice (see paragraph 80).

f. Continue to strengthen the assessment of public health, developing a systematic approach to this throughout the duration of the course (see paragraph 82).

g. Review the delivery of clinical assessments across multiple sites to ensure clarity and consistency (see paragraph 88).

h. Ensure students are aware of and engage with School policies regarding professional practice and performance including the new concerns form, whistleblowing and the yellow card system (see paragraphs 96 and 98).

Areas of innovation and good practice

18. We commend the School on the following areas of innovation and good practice:

a. The teaching and assessment of acute care (see paragraph 32).

b. The transparency of funding available for teaching at the Royal Derby Hospital (see paragraph 54).

c. The Networked Learning Environment (NLE) as a teaching and learning resource (see paragraphs 65 and 68).

d. The School's initiative to implement the Lincoln widening participation programme (see paragraph 72).

e. The Training and Support Unit (TSU) of the East Midlands Healthcare Workforce Deanery as an excellent resource available to the School. We encourage the continued use of this, but acknowledge that only a small number of students will use this resource (see paragraph 74).

f. Touchstone as a resource for blueprinting, standard setting, receiving external examiners' comments on examination questions, performing post examination analysis and especially the potential to provide detailed feedback on examination performance to students (see paragraphs 81 and 94).

Curricular outcomes, content, structure and delivery

Outcomes

19. We are satisfied that the curricular outcomes are mapped appropriately to *Tomorrow's Doctors.* While we are content that curricular and *Tomorrow's Doctors* outcomes form an integral part of the standard setting of exams, we encourage the School to continue its plans to map these outcomes explicitly to assessment.

20. Students learn basic emergency care with students of other health professions. The School is piloting scenarios for interprofessional learning (IPL)

small group learning with a view to introducing these more widely, which we encourage. The School asks students to document in their logbooks how they work with students of other health professions in practice based around a patient case. The course management committees have IPL as a standing agenda item with a view to identifying opportunities for IPL and piloting approaches based on these opportunities.

21. The School, along with Sheffield Hallam University, has created the Trent Universities Interprofessional Learning in Practice (TUILIP) project on a three year pilot basis to develop IPL models to promote and facilitate the professional skills of students through collaborative working within the practice setting among 13 different health professions.

22. F1 doctors and their educational supervisors were generally very positive about how their undergraduate medical training at Nottingham Medical School prepared the F1s for the first year of the Foundation Programme.

Content

23. The School will be undertaking a curriculum review in light of the proposals resulting from this QABME review and the new edition of *Tomorrow's Doctors*.

24. The School has been and continues to work towards reducing the quantity of factual information students are required to assimilate and reducing the assessment burden on students. It is estimated that the assessment burden has been reduced by 50 per cent since the last GMC visit in 2000. The School has also addressed this issue with the way information is delivered, for example moving Year 2 microbiology teaching from an organism to a disease and systems based approach. The School reported that student evaluation is taken into account in identifying areas of the course that put more pressure on students. As a result the School has rescheduled parts of the course to distribute workload more evenly and reduce pressure on students.

The scientific basis of practice

25. We are satisfied that the basic sciences are adequately covered within the curricula for both the BMedSci and GEM courses.

26. Dissection is highly regarded by students on the BMedSci course as an effective method of learning anatomy. Students on the GEM course do not perform dissection, but use prosections.

27. The integrated BMedSci degree project aids the development of students' understanding of scientific methods. Clinical phase three (CP3) students and F1s reported great variability in their experience of the BMedSci in terms of the project itself and the supervision of this. However, the School reported taking steps to enhance the experience for students, such as increasing the number of laboratory-

based projects which has increased the number of students who receive their first choice project.

Treatment

28. Educational supervisors were generally content with the level of prescribing knowledge shown by Nottingham graduates, although F1s reported that the teaching on this varied depending on the placement site, with some feeling less well prepared.

29. The School reviewed the teaching of prescribing in the 2007/08 academic year and is planning to develop further the assessment of prescribing in the course. It was noted that the assessment of prescribing is at the forefront of the School's planning, with the School looking at other medical schools to find the most appropriate way to implement this, which we support. We recommend that the School implements planned changes to improve teaching and assessment in prescribing and monitor the effectiveness of this.

30. Students are aware of complementary therapies and attend a lecture on this in the first year of the BMedSci course. The School provides optional modules on this, for example an herbal medicines SSM has been introduced, with research projects also available. Students are required to complete a project to demonstrate their awareness of complementary therapies, while some students are also exposed to complementary therapies on general practice placements.

Clinical and practical skills

31. We are content that clinical and practical skills are taught satisfactorily and meet the requirements of *Tomorrow's Doctors*. F1s reported receiving appropriate training in clinical skills.

32. The teaching and assessment in CP3 of acute care is commendable and related to everyday situations encountered as an F1. F1s felt confident in acute care and their educational supervisors positively reported the F1s' preparedness in this area.

Communication Skills

33. Communication skills are thoroughly covered and assessed in the BMedSci and GEM portions of the course, but this reduces in the clinical years. We are, however, content that the School delivers the teaching of communication skills appropriately. Students and F1s reported receiving a great deal of teaching in this area, including communicating with individuals with disabilities or from different cultures, which prepared them well for F1.

34. Options are available in SSMs to develop communication skills, for example the Arabic and French for Medics SSMs.

Teaching skills

35. Students are given a sufficient background of educational principles to be able to develop their teaching skills and are given the opportunity to teach other students, for example through an SSM in clinical phase two (CP2) and the SCRUBS Surgical Society anatomy teaching.

36. CP2 students have the opportunity to teach in the clinical skills centre, with over 20 per cent of those in the current CP2 cohort participating in this. Of these students, over 70 per cent have received training in effective clinical skills teaching and all are briefed before the sessions they teach.

37. We found that students were able to identify their own learning needs, especially in the clinical phases when seeking out experience in the clinical skills and the hospital setting.

General skills

38. We are content that the course adequately prepares students to be able to perform general skills such as analysing data, problem solving and time management, especially during the BMedSci project. The shadowing period before F1 provides an opportunity to consolidate these skills.

The working environment

39. Students in Year 2 of the BMedSci course take part in an Ethical Issues in Resource Allocation seminar, which aids their understanding of issues such as the resource implications of doctors' decisions, prioritising resource allocation to services, priority setting and overall resources in the NHS.

40. The majority of Nottingham graduates remain in the Nottingham area for the Foundation Programme, with the vast majority completing a two week shadowing course before F1 within the Trent Foundation School. The shadowing period was reported very positively by both F1s and educational supervisors, who felt it prepared the F1s well for their first placement.

Medico-legal and ethical issues

41. Medico-legal and ethical issues are well covered in the course, notably during general practice seminar sessions, and prepare students to be able to deal effectively with these issues on commencement of F1. The CP3 OSCE station observed by the team on ethical issues was challenging yet at an appropriate level, and educational supervisors highlighted this as an area of strength for Nottingham graduates.

Disability and rehabilitation

42. We are content that students and F1s are aware of the issues surrounding the needs of patients with physical or mental disabilities, and how to manage individuals' impairments and disabilities.

The health of the public

43. Students receive teaching on public health during the GEM and BMedSci years of the course, before the streams come together for the clinical phases. Public health specific elements of the course include general practice visits during Years 1 and 2 of the BMedSci, and visits to prison health services, cancer screening services, and YMCA drugs service units. The School considers that teaching in public health has been successful as the number of students performing public health related SSMs is increasing. We support the School's plans to introduce public health as a vertical curriculum thread in the clinical phases and the School recognises the need to evaluate the effectiveness of this.

The individual in society

44. BMedSci students undertake a behavioural sciences module in Year 1 and a community follow-up project in Year 2. GEM students cover these aspects of medicine within each PBL module. All students perform a community follow-up project during CP1. In this project students discuss the patient's experience of their illness, including its physical, psychological and social effects and how the process of care has affected them and their family.

45. Students have the opportunity to organise their elective period abroad, which provides a chance to experience medicine in a different culture with different levels of service provision.

46. The issues of drug and alcohol abuse are mapped within the curriculum of Years 1-3 of the BMedSci. The GEM course features a specific alcohol abuse PBL case, with alcohol and drug abuse covered within other PBL cases.

Structure

47. All students on the five year BMedSci BM BS course undertake an integrated BMedSci degree in their third year of study. The projects for the BMedSci are placed under four main home bases (biomedical sciences, clinical sciences, community health sciences and molecular medical sciences). Within these four home bases are 14 more subject specific subsidiary bases, which contain individual projects. Students rank the projects they would like to undertake through a computer based allocation system and are allowed to identify one home base in which they do not wish to undertake a project.

48. The School has increased the number of subsidiary bases for the BMedSci research project and increased the number of laboratory research projects following a shortage in the 2007/08 academic year. It was noted that in the current academic year, 80 per cent of students received their first choice BMedSci project, as opposed to 66 per cent in 2007/08. The School now informs students of the type and content of the projects available in each home base, which should overcome reported problems of students being ill-prepared for, or unhappy with, the projects they are allocated.

49. Students reported positively the ability to organise their own SSMs, but only one per cent of SSMs offered are entirely non-medical. The School ensures that students do not undertake SSMs in any subject more than once as these are used to help inform career choice and as such the School wants students to experience a breadth of SSMs.

50. We note there are inconsistencies in the assessment of SSMs across the course, some having no assessment requirements other than attendance. While we acknowledge that the School does not consider that the purpose of SSMs is to identify academic excellence, we recommend that the School puts in place a structure to ensure that all SSMs are assessed formally and consistently.

51. The School meets the requirement in *Tomorrow's Doctors* for SSM percentage in the five year course: it calculates 30.4 per cent of all course credits are SSMs, which includes the BMedSci project.

52. Most students were unaware that it might be possible to undertake an intercalated BSc/BA degree in addition to the BMedSci project. Some would have taken this opportunity if they had been aware. The School reported uptake of intercalated Masters degrees and PhDs, although the number of students undertaking these remains low.

Delivering the curriculum

Supervisory structures

53. We are content that in general the School has appropriate supervisory structures in place, being able to efficiently organise and deliver two well run parallel courses and the clinical phases of the course. There were, however, concerns reported by some students that teaching staff at some sites were unaware of student learning objectives.

54. We commend the transparency of funding at Derby Royal Hospital, which has enabled the site to fund staff, including clinicians and nurses who focus on teaching, and dedicated teaching clinics, facilitating more small group teaching. The funding is also available to staff for teaching qualification courses, enhancing the quality of teaching students receive at this site.

Teaching and learning

55. We observed teaching at a number of sites and are satisfied with the standard and delivery of the sessions observed.

56. Students reported variable experiences of teaching depending on the placement site while in the clinical phases. However, in general, students reported the overall experience across the totality of placements to be satisfactory.

57. The School runs teaching improvement programme system (TIPS) and teaching and assessing clinical skills (TACS) courses, which are very popular and have a waiting list of approximately one year. The School intends to use learning and development agreements to make training mandatory for those responsible for teaching medical students.

58. The School is dissatisfied with the long waiting list for TIPS and TACS and are investigating the introduction of an interim solution in the form of a half day ‘mini TIPS’ course to address this.

59. The School is working to increase the integration of the course, specifically integrating explicit vertical themes into the curriculum which link to learning outcomes and the Foundation Programme to ensure coherence with these. We note this and recommend the School continues to strengthen vertical course integration.

60. Students and F1s were generally enthusiastic and satisfied with the standard of teaching at the School. Both groups commented positively on the early clinical exposure in general practice and hospitals, but would have appreciated more of these sessions.

61. The comparability of student experience across sites is measured through student evaluation. These evaluations are obtained via semi-structured interviews with students at placement sites. The evaluations are sent to Trusts and individual consultants and hospital sites act upon student evaluations at the end of placements, implementing changes in time for the next placement. We are satisfied with the School’s quality management systems.

62. The School has a requirement to maintain the standard and continuity of teaching, which requires that should a teaching position become vacant someone must be recruited to cover this teaching until the vacancy is filled. Junior staff are recruited by the School to maintain teaching, ensuring that teaching sessions are not cancelled. The School acknowledges that it relies heavily on some individuals and is attempting to produce more effective contingency plans, which include the appointment of deputies.

63. We note with approval the School’s involvement of pharmacy students in reviewing prescriptions written by the medical students.

64. We are content that students gain experience in a variety of environments, including central teaching hospitals, peripheral district general hospitals, general

practices and independent sector NHS providers, predominantly in the clinical phases of the course.

Learning resources and facilities

65. We commend the Networked Learning Environment (NLE), an online teaching, learning, curriculum database and information resource for students and staff.

66. The facilities used by the School for teaching and assessment are of a high standard and provide sufficient space for these activities. However, concerns have been expressed by staff at Nottingham City Hospital that there has been a reduction of teaching space to make way for research and other interests.

67. We note with approval the School's use of the Trent Simulation and Clinical Skills Centre and the Nottingham NHS Treatment Centre for CP3 students. Both facilities are at the Queen's Medical Centre (QMC) site and provide teaching resources of a high standard.

68. The School has introduced pod casts of the lectures of some modules and placed these on the NLE. The School reported no noticeable downturn in lecture attendance. The pod casts have proven useful for students to revisit topics they have struggled with, during revision periods and by students with learning difficulties.

Student selection

69. Applicants to the BMedSci course are required to fill out a questionnaire which allows them to give evidence of attainment of skills in a variety of domains, for example showing a caring attitude. The score obtained from this is then added to scores based on the applicant's GCSE results, UK Clinical Aptitude Test (UKCAT) percentile score, a personal statement and the number and type of outside interests the applicant has to determine whether or not the School will offer an interview. We are satisfied that these selection processes are valid, open, objective and fair.

70. The School's interview panel for the five year BMedSci programme comprises one person from the admissions committee and one person from a bank of volunteers. The admissions committee includes medical and non-medical persons and the volunteers are currently not formally trained, but are briefed in selection processes. The School is implementing formal training for the next academic year.

71. Applicants to the GEM programme are required to have at least a second-class degree in any subject and sit the Graduate Medical School Admissions Test (GAMSAT) UK. The decision to admit an applicant is based on performance at an in-depth structured interview. Interviews are conducted by three trained interviewers including a lay professional. We are satisfied that these selection processes are valid, open, objective and fair.

72. We commend the School's widening participation programme initiative in Lincoln which admits up to 10 students per year. This is a one year course, during which students must achieve 60 per cent in all units to progress to the first year of the Nottingham BMedSci medical course. The rate of attrition of these students from the BMedSci course is higher than for those of standard entry but the majority progress. The School reported that there have been few problems with the students adapting to the BMedSci course. Students arriving through the Lincoln course are linked with others in higher years at the School who came through the same access course.

Student support, guidance and feedback

73. Students on the BMedSci course stated that they received variable levels of pastoral support depending on their individual tutor. In the clinical phases some students reported a lack of pastoral support on clinical issues or careers advice due to having a non-clinical personal tutor. Clinical Sub Deans allocate weekly sessions to meet students, but the School acknowledges that it is difficult to provide support to students on peripheral placement sites. The School has received evaluations from students that it can be difficult to meet tutors, and has responded. We recommend the School reviews the personal tutor system to ensure all students receive appropriate pastoral support throughout the course.

74. The School has access to the Training and Support Unit (TSU) based in the East Midlands Healthcare Workforce Deanery, which is an integrated facility that provides confidential counselling, coaching and occupational health support to doctors. Students can be referred to the TSU via Clinical Sub Deans, and if the student agrees that details regarding them can be shared, the School receives information on how to best support the student given their needs. We commend the use of the TSU by the School, but recognise that it is used by a very small number of students.

75. The Academic and Professional Progress Committee is part of the pastoral care structure and looks at student health issues, academic and skills performance and or attitudinal issues related to the student involved to determine if they need to be supported and monitored by the committee or, if appropriate, escalated to fitness to practise procedures. The School has taken measures to demonstrate to students that the Committee's role is entirely supportive and distance it from the Fitness to Practise Committee.

76. Careers advice is provided by the Careers Advisory Group (CAG) and the student-led Medical Careers Society (MCareerSoc). The CAG and MCareerSoc have produced and annually update the Medical Career Handbook, which is provided to students as part of a career portfolio when they enter CP1.

77. Students are provided with a Medical Family support network when commencing the BMedSci course, which consists of students throughout the years of the course and a tutor.

Assessing student performance and competence

The principles of assessment

78. We are concerned about the use of OSLERs in the assessment of clinical skills. The OSLERs have low reliability as an assessment method as the students perform only one OSLER per assessment and in addition examiners are not present during the student and patient interaction. The School has made efforts to address the reliability of the OSLERs with the introduction of two examiners who mark independently per OSLER, a more objective marking methodology and a simplified marking scheme. However, these measures are not sufficient and we require the School to improve the reliability of the OSLERs in line with best practice, or discontinue their use.

79. Clinical skills are currently assessed and recorded in logbooks as part of assessments during placements, and a summative OSCE. The School is introducing the Mandatory Assessment of Core Clinical Skills (MACCS), which will take the form of a progression of assessments in each year that will be recorded in the student logbooks.

80. The School has discontinued the use of negative marking in the majority of its examinations. There still remains a small proportion of credits that are negatively marked, all of which appear in the first two years of the BMedSci course, and we recommend that the School entirely removes negative marking from their examinations.

81. Touchstone is used by the School to blueprint and standard set examinations, obtain feedback from external examiners on examination papers and analyse the post examination data. The blueprinting system within Touchstone allows examinations to be mapped against the learning objectives for each module. We commend the use of Touchstone.

82. The School currently relies on public health staff to ensure the inclusion of this subject in the examinations. As public health will be introduced as a vertical theme in the near future, the School is strengthening its assessment throughout the course. We recommend the School develops this.

83. The School has introduced Ebel as a standard setting method for written examinations in the clinical years. In Years 1 and 2 of the BMedSci standard setting uses either Ebel or the correction factor moderation. We support the School’s plans to phase out the correction factor moderation and extend the use of Ebel throughout the course.

84. The School has introduced a summative assessment at the end of the first year of the GEM course which must be passed for progression. This consists of multiple choice question components comprising single best answer and extended matching items, and a modified essay question component.

85. The School uses portfolios for formative assessment of student attitudes and professionalism in the first two years of the BMedSci course. At the end of all attachments in CP1 and CP3 and some attachments in CP2, students have a face to face meeting with an assessor which is recorded in their portfolios. The portfolios are also viewed during meetings with clinical advisors at the beginning and middle of each clinical attachment.

86. Students on the GEM course are required to complete portfolio analyses for the personal and professional development (PPD) modules and submit these at the end of their first year and at the 18 month stage. These analyses are summatively assessed. Students on the GEM course are also required to undertake formative and summative coursework and the School is looking to standardise the marking schemes for these to ensure consistency of assessment. The coursework will contribute to the PPD module once the assessment of these is standardised.

Assessment procedures

87. The OSCEs and OSLERs were well organised at the sites visited, with numerous administration staff to guide patients and students. The facilities provided are of a good quality with little or no noise contamination between stations.

88. We observed variation between sites regarding the number of examiners in each station of the OSCEs. Derby Royal Hospital largely employed two examiners for the stations, whereas the QMC employed one for the majority. Where examiners are being trained during a live exam this should be clearly indicated to the students. We recommend the School ensures the consistent application of practical assessment procedures between sites.

89. We are satisfied that external examiners are employed appropriately throughout the assessment process, from setting examination questions to the final examination board. Formal feedback from external examiners on the clinical assessments is used by the School to shape future assessments.

90. The examiner briefings for the OSCEs and OSLERs are suitable and appropriate, informing the examiners of the curriculum structure, purpose and structure of the examinations, marking scheme, yellow card system and requirements for an honours pass. The OSCE briefing also includes information on the standard setting process. The briefings are held at the beginning of each circuit at each site and are standardised by the use of a DVD, PowerPoint and audio presentation. Examiners are able to ask questions to a member of staff present after the presentation.

91. The examiner guides to the OSCEs and OSLERs are clear and include details of the principles of assessment at Nottingham, details of the examinations, what is expected of the examiners, marking and the examiner meeting following the exams.

92. The patient guides to the OSCEs and OSLERs are clear and include information on what to expect and what is expected of the patients.

93. The quarantine arrangements we observed during the final clinical examinations were satisfactory.

Appraisal

94. We are encouraged by the trialling of Touchstone for feedback to all students on written examinations. The School plans to implement feedback from Touchstone into both written and clinical examinations, and have appointed a staff member to train all staff in the use of Touchstone.

95. We are concerned by the lack of individualised feedback given to students on the BMedSci course regarding their assessments in the period until Touchstone is fully implemented. Students on the BMedSci reported receiving no detailed feedback on written and clinical assessments and major difficulties obtaining this unless an examination was failed, in which case they receive a high level of feedback and support. We require the School to either accelerate the implementation of Touchstone to provide individualised feedback on assessments or put in place interim procedures.

Student progress

96. The School has recently developed guidance on professional behaviour, including whistleblowing and a new concerns form to be used by staff or students. Students and F1s showed little awareness of these, and most students were unsure of the process to take if they observed inappropriate behaviour in a colleague, with some reporting that they would be hesitant to report others. The School recognises there is a barrier in students' attitudes to this and we recommend attempts are made to address this.

97. The use of the yellow card system in clinical examinations is clearly explained to examiners during the examiner briefing and each mark sheet states why this would be used. Two yellow cards across the OSCEs and OSLERs for a student constitute a 'joint clinical skills fail'. If this occurs, the students will receive feedback on their performance and are required to re-sit the clinical examinations.

98. Students and F1s were unclear about the purpose and use of the yellow card system. Both students and F1s were of the opinion that these could be used during any part of the course; however yellow cards are only used during clinical examinations. We recommend that the School considers how this could be more effectively communicated to students.

99. The communication channels between the School and the East Midlands Healthcare Workforce Deanery in terms of students with fitness to practise, health or performance issues are effective and well laid out.

100. The School reviewed its fitness to practise procedures in 2008 and we are satisfied that these follow the recent GMC and MSC guidance; *Medical students: professional values and fitness to practise*. The Medical and Health Sciences Faculty

fitness to practise panel applied to medical students comprises a chair from outside the School of Medicine and two other members, at least one of which is a clinically active doctor. The School has considered employing external panel members, but do not consider this would add value. We are satisfied with the School's fitness to practise procedures.

Student health and conduct

101. Students are required to sign the University of Nottingham Medical School Contract on the commencement of their studies which outlines their responsibilities. The contract is based on *Good Medical Practice*, the Medical School Charter and Nottingham University's Code of discipline and covers, among other items, students' personal health.

Acknowledgement

102. The GMC would like to thank the University of Nottingham Medical School and all those they met during the visits for their co-operation and willingness to share their learning and experiences.

28 October 2009

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Dear Professor McKillop,

The University of Nottingham Medical School acknowledges receipt of the report of the GMC assessment visits to the Medical School which took place in the academic year 2008/9 as part of the Quality Assurance of Basic Medical Education (QABME) Programme. The School welcomes the findings that our programme, including that linked to our Graduate Entry phase, currently meets the requirements of Tomorrow's Doctors in accordance with Section 5(3) of the Medical Act 1983 and that our learning outcomes map clearly to Tomorrow's Doctors. The School is pleased that the visiting team found that our graduates as F1 doctors and their educational supervisors were very positive about how their undergraduate medical training at Nottingham prepared them for their first year in clinical practice (paragraph 22).

The School welcomes the many positive comments in the report and, in particular, the six areas of innovation and good practice highlighted for specific commendation. These include the teaching and assessment of acute care; the Networked Learning Environment (NLE) as a teaching and learning resource; the online assessment system *Touchstone* as a resource for blueprinting, standard setting, receiving external examiners' comments on examination questions, performing post examination analysis and especially the potential to provide detailed individualised feedback on examination performance to students; the transparency of funding available for teaching at the Royal Derby Hospital; the School's initiative to implement the Lincoln widening participation programme; and the Training and Support Unit (TSU) of the East Midlands Healthcare Workforce Deanery as an excellent resource available to the School.

We are encouraged, by positive comments on the organisation and integration of the 4-year and 5-year parallel programmes (paragraph 53). While the first 18 months of the recently implemented Graduate Entry Medicine (GEM) phase is based upon a 30% PBL

curriculum, a significant amount of complementary taught sessions, in the form of lectures, workshops and clinical and communication skills sessions are also a part of the GEM curriculum. This teaching and learning strategy ensures that graduate entry students, and especially those from non-science backgrounds, are able to reach the same levels of attainment as students in the BMedSci phase, allowing the formation of a very successful common merged group progressing through clinical phases 1-3 of the course.

As noted in the report, the School had already planned for a complete curriculum review in the light of the proposals resulting from the QABME review and the new edition of Tomorrow's Doctors (paragraph 23). Our action plan for the implementation of the issues noted in the report will be closely linked to this review which will span 2009-2012, with incremental implementation reported to the GMC as part of ongoing annual reporting.

We note the two requirements and eight recommendations stipulated in the report. The requirements involve firstly, to accelerate the implementation of *Touchstone* to provide individualised feedback on assessments to students or introduce interim measures (paragraphs 94-95), and secondly, to improve the reliability of the OSLER or discontinue its use. The School must ensure the clinical examination tools in use are in line with current best practice (paragraph 78).

We note and welcome the requirement to accelerate the implementation of Touchstone to provide individualised feedback on assessments to students (paragraph 16b) or to provide alternative or interim measures. At present all students who fail any assessment are offered detailed personal feedback and this will continue.

- Assessments delivered online: the *Touchstone* system will be extended to provide feedback. Questions in all assessments will be mapped to module learning objectives and the attainment of each sampled objective will be presented to students in an online portfolio system for reflection and action. The systems to do this have already been created and piloted. Implementation has been made a priority with all course phase committees. This will be done for assessments currently delivered via Touchstone during the 2009-2010 session.

- Written and presentation assessments: a structured feedback sheet will be developed, piloted and implemented for introduction for these types of assessment in 2010.

- Skills assessments: a scheme for providing individual feedback for OSCES has been piloted in years 1-2 and this will be extended to other summative sampled graded skills assessments in 2010.

- Placement assessments: the existing student review and feedback meetings that are scheduled during clinical placements will be reviewed in 2009 to ensure that a coherent system is in place across the programme for all placements in 2010.

Progress on implementation over the curriculum will be monitored through the module feedback systems and overseen by the Curriculum Policy Group.

The need to address the OSLER assessment reliability has been discussed by the Curriculum Policy Group in October 2009. The group noted that the OSLER assessment in the child health module was associated with evidence of good reliability. A working group is being established with a remit to define the assessment objectives of existing OSLERs, identify alternative methods for assessing those objectives where appropriate, and review strengths and weaknesses of the various methods, including validity, reliability and feasibility. The working group will propose a consistent model of graded skills assessment that can be adapted and applied across the clinical phases. Implementation of modified clinical assessments will be as soon as possible, with the timeline of implementation determined by the minimum time required to be consistent with University regulations regarding appropriate student consultation and the ability to develop staff resources through the SIFT-funding mechanisms.

Planning or implementation linked to the eight recommendations (a-h) in the report has already commenced, as follows:

a. Implement planned changes to improve teaching and assessment in prescribing and monitor the effectiveness of this (paragraph 29). The Curriculum Policy Group will contribute to develop teaching and assessment in prescribing as a part of a longitudinal theme throughout the medical course, ratified in its meeting of October 2009. The Medical School Formulary of commonly prescribed drugs is now implemented on the NLE and mapped to session objectives. We will monitor the use and effectiveness of this resource (paragraph 17a), which is an example of a new structure for vertical themes being implemented as part of the curriculum review process (paragraph 17c).

b. Put in place a structure to ensure that all SSMs are assessed formally and consistently (paragraph 50). SSMs in years 1-3 are already assessed formally within a framework that is coherent with the other BMedSci assessments. SSMs during clinical phases 2 and 3 are being revised as part of the wider planned curriculum review, previously noted. A component of this will be the implementation of a uniform approach to assessment in this component of the course.

c. Continue with plans to increase the vertical integration of the course (paragraph 59). Vertical integration is being promoted through the development and implementation of longitudinal themes, as part of the wider curriculum review. The vertical theme groups will ensure a coherent and progressive specification of learning outcomes throughout the course, whilst avoiding unnecessary duplication.

d. Review the personal tutor system to ensure all students receive appropriate pastoral support throughout the course and particularly during the clinical phases (paragraph 73). A personal tutor training system has been implemented. Contact with personal tutors has now extended to include formal contact between each student and their tutor during all of the later phases of the programme. This will be monitored by the Student Support & Development Committee.

e. Discontinue the use of negative marking in examinations in line with current best practice (paragraph 80). This has been completed in the one course phase in which this form of assessment was in place.

f. Continue to strengthen the assessment of public health, developing a systematic approach to this throughout the duration of the course (paragraph 82). The School will contribute to the development of Public Health teaching and assessment as a longitudinal theme, linked to a recent staff appointment in this area since the visit.

g. Review the delivery of clinical assessments across multiple sites to ensure clarity and consistency (paragraph 88). The School will build on its existing systems for ensuring clarity and consistency of assessments across multiple sites, in liaison with all phases and by reference to best practice. Much of this work will be progressed as part of the full curriculum review, previously noted. Existing good practice that has been developed in individual modules will be extended to other modules where appropriate, including:

- Use of standardized written and audiovisual instructions regarding assessment procedures.
- Refinement of assessment instructions to minimize the need for on-site interpretation.
- Use of standardized structured marksheets.
- Training of new examiners through mentorship, training sessions and audiovisual materials.
- Constructive feedback to examiners on performance during examinations compared with their peer group, based on statistical analysis of student results, and other information resulting from student and examiner feedback.
- Engagement of all examiners and sites in the further development of assessments, facilitating ownership at the same time as an understanding of the need for standardization.
- Overview of assessments on different sites by both internal and external examiners who travel between several sites and comment on any observed inconsistencies.
- Review of statistical analyses of student performance at different sites, adjusted where possible for confounding factors (e.g. student ability determined by performance in other assessments, site at which taught). Confounding factors such as uneven distribution of students between sites or according to site at which taught will be avoided to permit interpretation of such analyses.

It has been specified that there will be one examiner per OSCE station except at stations where two examiners are deemed to be necessary for the function of the station and in these stations two examiners will be available at all sites to ensure consistency.

h. Ensure students are aware of and engage with School policies regarding professional practice and performance including the new concerns form and whistleblowing schemes (paragraphs 96 and 98). A new Course Handbook developed for the 2009 intake specifies these systems to all students. Student awareness will be enhanced by continued emphasis on the Network Learning Environment and WebCT (GEM) as a primary source for their information, and pages will be updated to ensure clearer communication through that medium. Student engagement will be further encouraged during the development of School policies as part of curriculum review. Student representation will be strengthened by encouraging membership and attendance at relevant management meetings, and membership of working groups where relevant.

Finally, we would like to acknowledge and welcome a number of other comments and statements in the main body of the report. These include:

- The high regard by students on the BMedSci course for the continuing use of dissection in learning anatomy (paragraph 26).

- The BMedSci research project aids development of the students' understanding of scientific methods (paragraph 27), and develops skills in data analysis, problem solving and time management (paragraph 38).

- The system for BMedSci project allocation is fair (paragraph 48) and allows some flexibility of allocations based on the popularity of options.

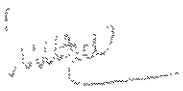
- The following areas receive coverage within the BMedSci: complementary therapies (paragraph 30), communication skills (paragraph 33), ethical issues in resource allocation (paragraph 39), public health (paragraph 43), behavioural sciences (paragraph 44), drug and alcohol abuse (paragraph 46).

- All students undertake a community follow-up project that commences in year 2 for BMedSci students and year 1 for GEM students, and is completed by all students during Clinical Phase 1 (paragraph 44).

- Students and F1 doctors commented positively on the early clinical exposure in general practice and hospitals (paragraph 60).

- Podcasts have proven useful for students to revisit topics (paragraph 68).

The Medical School wishes to thank the GMC and its QABME staff, and the members of the visiting team, for their work in undertaking this review and generating the report. We look forward to working with the GMC in relation to implementing the 2009 version of Tomorrow's Doctors.



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