Quality Assurance of Basic Medical Education

Report on University of Keele
School of Medicine

December 2009
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 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 a report to the GMC on the quality assurance programme for Keele Medical School (the School) for 2008/09.

5. The School previously delivered the University of Manchester’s clinical course from 2002 to 2008 and is in the last two years of running a five year programme validated by Manchester. The last cohort on the validated programme will graduate at the end of the academic year 2010/11.

6. The School applied to award a primary medical degree independently from Manchester for its own Curriculum 2007, introduced in 2007/08. The QABME process has been monitoring the development and implementation of this curriculum since 2006/07 and will continue this monitoring until the first cohort of students graduate at the end of the academic year 2011/12.

7. The School has over 600 students on the various MB ChB programmes. The School currently admit 130 students annually, and up to 10 students entering directly into Year 2 through the Graduate Entry Fast Track route. The School also offers a Health Foundation Year for Medicine which allows entry onto the five year MB ChB after successful completion.

8. The key features of the MB ChB programme are:
   a. An integrated spiral curriculum.
   b. Early clinical contact from Module 1.
   c. Small group learning throughout the first four years: problem based learning in Module 1 and 2, case based learning in Module 3, and clinical teams in Module 4. In Module 5 there will be some group learning, particularly in the General Practice (GP) placements.
   d. Clinical attachments in Modules 3 to 5.
   e. A programme of student selected components in each year to include an eight week elective period in Module 5.
   f. A programme of interprofessional education in each year.

9. The five year programme is divided into four phases and five modules. The modules correspond to the academic years. Phase 2, Integrated Clinical Pathology crosses Years 2 and 3.

10. There are five vertical themes running throughout the programme which are drawn from *Tomorrow’s Doctors*. These are Scientific Basis of Medicine; Clinical Communication and Information Management Skills; Individual, Community and Population Health; Quality and Efficiency in Healthcare; and Ethics, Personal and Professional Development.
11. The focus of the quality assurance activities this year has been on:
   a. Module 1 evaluation.
   b. Module 2 implementation.
   c. Review of detailed Module 3 curriculum and implementation plans.
   d. Review of development and implementation plans for Modules 4 and 5.

The QABME team

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

   Professor Jim McKillop (Team Leader, stood down as of 1 January 2009, see paragraph 13)
   Professor Julius Weinberg (Deputy Team Leader, subsequently Team Leader, see paragraph 13)
   Dr Mohammad Akhtar
   Dr Nick Bishop
   Professor David Croisdale-Appleby
   Miss Hannah Donnelly
   Dr Mairi Scott (stood down as of 1 January 2009, see paragraph 13)
   Dr Chris Stephens (see paragraph 13)
   Dr David Taylor

13. Following their appointment to the GMC on 1 January 2009, Professor Jim McKillop and Dr Mairi Scott stood down from the visiting team because of the conflict of interest that their appointment to the GMC presented. Professor Julius Weinberg became the Team Leader in place of Professor McKillop. Dr Chris Stephens was appointed to the team in place of Dr Scott. Prior to standing down, Professor McKillop and Dr Scott did not attend any of the quality assurance visits (see paragraph 15).

14. Miss My Phan (GMC Education Quality Officer) supported the QABME team.
Our programme of visits in 2008/09


16. The high quality of information received allowed a scheduled visit to the School in April 2009 to be replaced by documentary review.

17. 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:
      i. Curriculum development and assessment for Modules 2, 3, 4 and 5.
      ii. The evaluation of Module 1.
      iii. Student Selected Components.
      iv. Interprofessional education.
      v. Review of student selection.
      vi. Stakeholder relations.

   b. Discussions with Module 1 and 2 students.

   c. Discussions with Module 2 and 3 teachers, including PBL tutors, clinical teachers and general practitioners (GPs).

   d. Observation of the Module 2 examination board.
The report

Summary of our key findings

18. Subject to the requirements in paragraph 21, the School is on track to introduce Module 3 of its medical degree in 2009/10 to meet the outcomes in Tomorrow’s Doctors at this stage of development.

19. Given the extent of changes planned for the new curriculum and development of hospital and community placements required to support its delivery, the QABME process will monitor progress during the period of study of the first cohort of students until 2011/12.

20. 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

21. The School is required to provide:

   a. An overall mapping of the curriculum to the new Tomorrow’s Doctors for all years by 15 March 2010 (see paragraph 27).

   b. The detailed curriculum and implementation plan for Module 4 by 14 December 2009 (see paragraph 34).

   c. The detailed curriculum and implementation plan for Module 5 by 15 March 2010 (see paragraph 34).

Recommendations

22. There are no recommendations in the findings of this report.

Areas of innovation and good practice

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

   a. The use of a consistent framework of ‘fundamental questions’ to support the case based learning scenarios across the clinical blocks in Module 3 (see paragraph 32).

   b. Continued responsiveness to student evaluation (see paragraph 33).
Priorities for 2009/10

24. The priorities we identified for the next cycle of visits in 2009/10 are to review:

a. Development of Modules 4 and 5 of the new curriculum.

b. Development of clinical opportunities and resources sufficient to accommodate the expected numbers of students on the course.

c. Student assessment and progression.

d. The Graduate Entry programme, including student recruitment, progression and evaluation.

e. Continuing staff recruitment and development for future modules.

f. The depth and breadth of the full curriculum against Tomorrow’s Doctors.

Curricular outcomes, content, structure and delivery

Outcomes

25. The School’s Curriculum 2007 mapping documents show the intended learning outcomes (ILOs) of the programme both horizontally by year (module) and vertically by theme separated into knowledge, skills and attitudes ILOs. Each ILO is mapped against the outcomes (paragraphs 4 -10) in Tomorrow’s Doctors.

26. We are satisfied that appropriate ILOs for Modules 1, 2 and 3 are mapped against the five curricula themes and that elements of the themes identified in paragraphs 13 to 37 in Tomorrow’s Doctors are covered appropriately at this level.

27. To ensure that all the standards in Tomorrow’s Doctors have been covered within the five year programme, we require a mapping of the remaining ILOs for Modules 4 and 5 to be displayed with the ILOs for Modules 1, 2 and 3 already mapped in the curriculum by 15 March 2010.

Content

28. We have reviewed the detailed content of Modules 1, 2 and 3 of the curriculum and consider it to be sufficiently challenging for students, appropriately covering the knowledge, skills and behaviours expected at this stage of the programme. We reviewed the assessment documentation for Module 2 which shows that greater demand is placed on students as they progress when compared to the Module 1 assessment documentation reviewed last year.
29. The Module 1 and 2 students who we interviewed stated they understood the nature of the course and how topics are repeated and considered the course to be well structured and organised. Students found there to be adequate time for reflection within the programme.

30. We reviewed the detailed plans for the nine four-week blocks in Module 3 on a surgical patient, medical patient 1, medical patient 2, young patient, elderly patient and mental health, two student selected blocks and one consolidated clinical skills block. We are satisfied with the content and structure of the module.

31. We acknowledge the School’s responsiveness to certain external events which impacted on the curriculum development for Module 3 and resulted in replacing at short notice two planned blocks in musculoskeletal and neurology, with medical patient 2 and mental health. We are satisfied that musculoskeletal and neurology will be covered adequately in Module 4 and that the timing of the introduction of these topics will support student learning.

32. We reviewed the detailed case based learning (CBL) scenarios to be used in the clinical blocks and commend the approach of using fundamental questions to support the CBL scenario teaching. We consider that this approach highlights the ILOs to the students and provides a consistent approach and clear format for students and staff.

33. We continue to be satisfied that systems are in place to evaluate the new curriculum through the independent evaluation team. We reviewed the formal evaluation report of Module 1 and commend the School’s continued responsiveness to student evaluation and concerns. We consider the School is making appropriate balanced changes to the curriculum. We will review the formal evaluation report for Module 2 in the 2009/10 visit cycle.

34. The 2007/08 report required information on the curriculum and proposed implementation plans for Modules 4 and 5. We reviewed the information received in March 2009 and are content with the progress made by the School so far. We require the detailed curriculum and implementation plans for Module 4 by 14 December 2009 and Module 5 by 15 March 2010 for review.

The scientific basis of practice

35. We are satisfied that clinical and basic sciences are integrated in the curriculum in Modules 1, 2 and 3 through the vertical Scientific Basis of Medicine theme.

Treatment

36. The principles of treatment are covered in all units in Modules 1 and 2 and within the clinical and consolidated skills units and the longitudinal patient component of Module 3 as part of the Individual, Community and Population Health theme.
Clinical and practical skills

37. Clinical and practical skills are covered through the Clinical Communication and Information Management Skills theme. We are satisfied that the appropriate skills are being taught and assessed in the Objective Structured Skills Examinations (OSSEs) in Modules 1 and 2 and will be assessed in the Objective Structured Clinical Examinations (OSCEs) in Modules 3 and 4. In addition, students will be required to complete a Record of Clinical Skills on placements in Module 4. We will review the list of conditions and skills in future visits.

Communication Skills

38. Module 1 students received and valued communication skills teaching during the Experiential Learning component. Feedback is given to students from their peer group and the simulated patients.

39. Every unit in Module 2 incorporates communication skills teaching. In Module 3, all the clinical blocks, communication skills and consolidation block, longitudinal patient, student selected components (SSCs) and appraisal including multisource feedback will cover elements of communication skills training.

40. We are satisfied that an appropriate range of communication skills is included in Modules 1, 2 and 3.

Teaching skills

41. As part of the weekly Problem Based Learning (PBL) sessions in Modules 1 and 2, students lead the midweek PBL sessions. There are mixed views from the students we spoke to on the effectiveness of the midweek sessions.

The working environment

42. As students progress through the programme, there is a stronger emphasis on learning about the working environment through the clinical placements. As part of the integrated curriculum, the early clinical placements and interprofessional education (IPE) strand from Module 1 give students exposure to the structures and functions of the NHS and working in a multi-disciplinary team. The Quality and Efficiency in Healthcare theme include ILOs around understanding the working, organisational and economic framework in which medicine is practised.

Medico-legal and ethical issues

43. We are satisfied that medico-legal and ethical issues are covered within the Ethics, Personal and Professional Development theme of the curriculum and integrated in Module 1 and 2.
44. In Module 3, ethics is covered in all clinical blocks and the associated Keele spine day and the clinical consolidated skills block. We note that a Module 3 SSC option is also available for students to go to Yale University as part of the Yale Bioethics Intern Program to compare health provision in the UK and US. This is a prestigious attachment with limited places.

Disability and rehabilitation

45. All units in Module 1, except the Emergencies unit, and all four units in Module 2 cover ILOs around adaption to illness and disability. In Module 3 the consolidated clinical skills block and longitudinal patient component will provide learning in this area. We are satisfied that the Individual, Community, and Population Health theme covers appropriate ILOs in disability and is integrated throughout the curriculum so far.

The health of the public

46. We are satisfied that the ILOs in the Individual, Community and Population Health theme cover population health, public health and epidemiology, health promotion and improvement, disease prevention, surveillance, screening, case-finding and strategies and communicable disease control and response to physical agent threats appropriately. This is integrated vertically in the units in Modules 1, 2 and 3 so far.

The individual in society

47. Understanding of the social and cultural environment in which medicine is practised is covered as part of the Individual, Community and Population Health theme. We are satisfied that this is appropriately covered in Module 1 to 3 so far.

Structure

48. In the 2007/08 report, we highlighted concerns over variability in the community care placements for the Module 2 SSC and the potential for a student to fail the SSC as a consequence of a poor experience. Students confirmed variability in placements and views on the value of the SSC were mixed. The School reflected that no students failed to reach the expected standard for the SSC through a poor placement experience and advised that there is an opportunity to modify the SSC placements during the year if required. One student failed this component due to non-attendance.

49. We recognise there were varied experiences in the Module 2 SSC and look forward to the School’s response to student feedback.

50. We reviewed the full details of the Module 3 SSC unit which occupy two of the nine four-week blocks in the year. Students can choose SSCs in clinical practice,
research methodology, humanities or law and ethics. We understand that there are currently no SSCs in pure humanities subjects. However, a number of SSCs with a humanities perspective, for example art and medicine are available.

51. Non-medical SSCs such as languages will not be available for the immediate cohort, but the School remain open to the possibility of introducing this. The School advised that it is waiting on the publication of the new Tomorrow’s Doctors before making any changes. The School considers there is enough meaningful choice within the curriculum. We will review the overall range of SSCs and student views as we look at the later years of the course.

52. The eight-week Module 5 SSC allows students to identify their own learning outcomes in a local or international elective clinical placement. Students that require remediation will undertake a placement in the areas identified as a weakness.

53. In the 2007/08 report, we required the School to provide information on how the student selected component (SSC) framework fulfils the standards in Tomorrow’s Doctors. The School has confirmed that it will now offer a four week SSC option in Module 4 with an emphasis on potential career paths. We have reviewed the detail for this option together with the overall SSC framework for the programme and are satisfied that as planned the SSCs would provide sufficient choice and offer opportunities to develop research skills, explore areas of interest and consider potential career paths.

Delivering the curriculum

Supervisory structures

54. In our 2007/08 report we recommended that the School develops additional mechanisms for sharing knowledge of the curriculum across different module teams. We are pleased to note that a Curriculum Strategy Group (CSG) has been established in November 2008 following the appointment of a Curriculum Development Lead in October 2008. The CSG provides cohesive, strategic leadership and guidance for the curriculum development process.

55. The CSG meet regularly to discuss development of the curriculum design strategy and policy and vertical integration. The Group also provides decision making support for curricular leads and communicates with all curriculum development teams. We are satisfied that the CSG is an effective mechanism for sharing knowledge across different module teams in addition to the Curriculum Project Officer.

56. We had previous concerns about engagement with stakeholders to ensure placement development for teaching and made recommendations in 2006/07 to establish explicit mechanisms for engaging with all NHS partners, and in 2007/08 to strengthen strategic links with all delivery partners. We are satisfied that explicit mechanisms are now in place to engage directly with all NHS partners.
Teaching and learning

57. We note the planned appointments of Clinical Deans at each acute trust and clinical teachers for Module 3 and are satisfied that the school has enough resources to deliver the programme. We note the School has contingency plans in place to use recently retired teachers if it is unable to fill the remaining posts for September 2009.

58. We spoke to Module 2 and 3 teachers and all felt appropriately trained, briefed and supported by the School in advance to deliver teaching and assessment. All were given opportunities for educational and clinical training and were actively encouraged to take study leave, which the School funded. The evaluation report for Module 1 confirmed that tutors were content with the training they received. We are satisfied that teaching staff have the necessary knowledge and skills to deliver the programme.

59. We consider there is an adequate range of different teaching and learning opportunities within the programme so far with a mixture of small and large group teaching, practical classes and opportunities for self-directed learning. The five year programme will be mostly based in North Staffordshire, with Modules 4 and 5 also being delivered in Shropshire and the rest of Staffordshire. We will visit placement sites in future visits and review how the quality of teaching is monitored.

60. We considered the approach for integrating IPE in Module 2 was innovative in our 2007/08 report. Following a review of its implementation and comments from students, we note the delivery of IPE continues to present challenges for the School, as it does elsewhere. The School is taking on board student evaluation to make changes and is currently identifying site leads to manage the organisation of IPE on each site and level leads to manage the organisation of each IPE level.

61. In Module 3, IPE will take place within a clinical setting. We understand students will have the responsibility to determine for themselves how they will take advantage of the available local opportunities to meet the intended learning outcomes. We consider this to be potentially an effective way of delivering the IPE component. The IPE activity will be logged as part of the student portfolio.

62. We received an update on the two pilots of a training ward so far and note the mixed evaluation from students of this. Two further pilots will be held next year and if successful, the School will integrate a training ward into Module 5. We encourage the School’s developments in IPE and will follow up with interest the outcomes of the further training ward pilots next year.

63. We note that changes will be made to the introduction of anatomy on the two week induction for students entering directly to Module 2 through the Graduate Entry Fast Track route. We will continue to monitor the progress of students entering through this route, the recruitment to it and the School’s evaluation of this.
Learning resources and facilities

64. We reviewed the available evaluation reports from students including those on the validated programme, and spoke to students in Modules 1 and 2. All confirmed that they are satisfied with the learning resources and facilities available at the School.

65. We note the effective development of teaching resources in general practice, the appointment of a chair in general practice and effective recruitment of general practices for clinical placements.

Student selection

66. The School has made alterations to its procedures for the 2009/10 entry. These include:

   a. Changing the method of assessing applications to improve consistency.

   b. Standardising the panel as one academic, one clinician and one lay person with mandatory training every two years.

   c. Introducing a new discussion scenario in the interview.

67. Our 2006/07 report recommended that the School reconsider the student selection process and in the 2007/08 report we observed that a lay person or senior medical student is not necessarily an interchangeable position on an interview panel. We are pleased to note the School has reconsidered its processes and we consider the amendments support open, objective and fair selection procedures.

68. We note the School’s initiatives to widen participation in the local area, including the Widening Access to Medical School group and e-mentoring and encourage the School to develop these initiatives.

Student support, guidance and feedback

69. From review of evaluation data and discussions with Module 1 and 2 students, we continue to be satisfied with the academic and pastoral support available to students. Students commented that they were aware of support services available, both formal and informal, and felt able to access this if required.

70. Students receive group feedback on their performance following formative assessment and individual feedback on the reflective summaries in their portfolio. Students found the feedback received to be useful.
Assessing student performance and competence

The principles of assessment

71. We reviewed the detailed documentation for the Module 2 assessment and plans for Modules 3, 4 and 5 assessments. We are satisfied that the School’s assessment strategy adequately tests the ILOs of the curriculum and allows students to demonstrate the breadth and depth of their knowledge at each year.

72. For each year, the assessment strategy comprises four components: Attitude, Information Management Skills, Clinical and Practical Skills and Knowledge. The SSC parts of the curriculum are assessed within the Information Management Skills component and contribute to the overall result. No compensation is allowed across the different components.

73. Professional behaviours are assessed in the Learning Portfolio which is maintained throughout the five years of the programme and must be satisfactorily completed to progress to the next year.

74. We are satisfied with the range of assessment techniques used to test the curriculum outcomes in Module 2 which include the learning portfolio, data interpretation paper, OSSE, multiple choice questions, extended matching questions and key feature problems. We note that the School is considering merging the separate knowledge papers together to allow students to maximise the time available for both examinations.

Assessment procedures

75. The Module 1 students that we spoke to and the evaluation report of Module 1 for the 2007/08 cohort stated that students did not fully understand what was expected of them in the assessments and they felt they did not have enough practice at the various exam formats. The Module 2 students that we spoke to had a good understanding of the assessment strategy as this was similar to Module 1.

76. Staff are invited to attend exam question writing workshops and all OSSE examiners receive training on the principles of OSSE marking and the application of the marking guidelines.

77. We observed the Module 2 Exam Board and considered it was well run with clear documentation and followed the School’s Undergraduate Assessment Practices rules for progression to determine the final pass list. A separate Progress Committee considers any students with mitigating circumstances.

78. The School has external examiners for each module with expertise in assessment development and the content of the module. We reviewed the external examiner reports for Module 1 and observed their contribution to the Year 2 Exam Board and are satisfied that they have appropriate input into all aspects of
assessment development, selection, application, pass mark setting and student progress decisions to ensure that standards are met.

Appraisal

79. Students continue to be appraised through the review of their learning portfolios with their tutors. This must be deemed satisfactory in order to progress to the next year.

Student progress

80. The rules of progression from each Module are clearly outlined in the Undergraduate Assessment Practices document. There are processes in place to consider any students with mitigating circumstances.

81. We reviewed the regulations on fitness to practise and cheating, the guidance notes on cheating and the procedure for referral of students in instances that give rise to concern. We are satisfied that these procedures are robust and fair and deal with students with academic and non-academic concerns. We found the School’s fitness to practise procedures to be aligned with the joint guidance from the GMC and Medical Schools Council, Medical students: professional values and fitness to practise.

Acknowledgement

82. We acknowledge the School’s continuing commitment to medical education through the:

a. Implementation and evaluation of Modules 1 and 2 to date, whilst continuing to successfully deliver the validated Manchester Programme.

b. The detailed work produced in developing and revising Module 3 (see paragraph 31).

c. The advanced development of Modules 4 and 5.

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