

Quality Assurance of Basic Medical Education

Report on University of Keele
School of Medicine

December 2008

**General
Medical
Council**

Regulating doctors
Ensuring good medical practice

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The GMC's role in medical education

1. The Education Committee of 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 Education Committee 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 extensive school documentation and completing a range of quality assurance activities at the School and partner institutions. The determinations in this report have been endorsed by the GMC Education Committee.

Introduction

4. This is the 2007/08 quality assurance report to the GMC Education Committee on Keele Medical School (the School).
5. The School delivers Manchester's current clinical course to students in Year 5. The last students on this programme will graduate at the end of this academic year 2007/08.
6. The School has also been running a separate five year programme validated by the University of Manchester. This course was reviewed during the QABME assessment of Manchester Medical School in 2005/06 and satisfied the requirements of *Tomorrow's Doctors*. Currently, students in Year 2 to 4 are undertaking the validated Manchester programme, from which the last graduation will occur at the end of the academic year 2010/11.
7. The School has applied to award a primary medical degree independently from Manchester. This was introduced in the academic year 2007/08 and the first cohort of students will graduate at the end of the academic year 2011/12.

The QABME team

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

Professor Jim McKillop (Team Leader)
Professor Julius Weinberg (Deputy Team Leader)
Dr Mohammad Akhtar
Dr Nick Bishop
Professor David Croisdale-Appleby
Ms Hannah Donnelly
Professor Gillian Needham
Dr Mairi Scott
Ms Jessie Sohal-Burnside
Dr David Taylor

9. Miss My Phan (GMC Education Quality Officer) supported the team.

Our programme of visits in 2007/08

10. The team conducted four quality assurance visits on: 13-14 December 2007, 17 April 2008, 11 June 2008 and 26 June 2008.

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

- a. Meetings with a variety of representatives from the School.
- b. Discussions with Year 1 students.
- c. Discussions with academic and NHS teachers.
- d. Discussions with NHS partner representatives from:
 - i. NHS West Midlands Workforce Deanery
 - ii. University Hospital of North Staffordshire NHS Trust
 - iii. North Staffordshire Combined Healthcare NHS Trust
 - iv. Mid-Staffordshire NHS Foundation Trust
 - v. Stoke-on-Trent Primary Care Trust
 - vi. South Staffordshire and Shropshire Healthcare NHS Foundation Trust
 - vii. South Staffordshire Primary Care Trust.
- e. Observation of the Year 1 skills examination.
- f. Observation of the Year 1 Examination Board.

The report

Summary of our key findings

12. Subject to the requirements in paragraph 14, the School is on track to introduce Year 2 of its medical degree in 2008/09 to meet the outcomes in *Tomorrow's Doctors* at this stage of development.

13. 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.

14. Where there are requirements, the School is requested to respond to the requirements with timelines for action within the 28 day right of reply to the report.

Requirements

15. The School is required to provide:

a. A detailed curriculum and implementation plan for Module 3 by the end of September 2008, detailing how this articulates with Modules 4 and 5 (see paragraph 27).

b. Information on the curriculum and proposed implementation plan for Modules 4 and 5 by the end of March 2009 (see paragraph 27).

c. A clear mapping of the programme's intended learning outcomes against *Tomorrow's Doctors* by the end of March 2009 (see paragraph 27).

d. Information to assure the team of the School's capacity to deliver the curriculum in a way that takes account of possible changes in the university sector and the NHS. This should include the School's analysis of the opportunities and risks to the delivery of the clinical components of the Keele curriculum for the first cohort and beyond by the end of March 2009 (see paragraph 27).

e. Information on the student selected component (SSC) framework, demonstrating how this fulfils the requirements of *Tomorrow's Doctors* by the end of March 2009 (see paragraph 32).

Recommendations

16. To enhance the quality of the programme we have identified the following recommendations.

- a. Ensure integrated and sustainable curriculum development consistent with the School's vision for healthcare education by:
 - i. Strengthening the strategic links with all the delivery partners in the regional healthcare economy to ensure sufficient and sustainable teaching provision to students on the new curriculum (see paragraph 36).
 - ii. Sharing curriculum knowledge across the different Module teams (see paragraph 40).
- b. Finalise the transference of Keele Service Increment for Teaching (SIFT) funds from the North Western Deanery to the West Midlands Deanery to simplify accountability mechanisms by the end of the current NHS financial year, at the end of March 2009 (see paragraph 38).

Areas of innovation and good practice

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

- a. The proposed model for inter-professional education (IPE) within the curriculum and its evaluation (see paragraph 24).
- b. The appointment of an independent evaluation team to evaluate the curriculum (see paragraph 26).
- c. The successful implementation of Module 1 (see paragraph 41).
- d. The apprenticeship model used to train new examiners (see paragraph 63).

Priorities for 2008/09

18. The priorities we identified for the next cycle of visits in 2008/09 are:
- a. Engagement with NHS partners given the School's dependency on them.
 - b. Review the development of adequate clinical opportunities and resources to accommodate the expected numbers of students on the course.
 - c. Review the development of Modules 3, 4 and 5 of the new curriculum.
 - d. Student assessment and progression.
 - e. Review the progress of the Graduate Fast Track entry route.
 - f. Continuing staff recruitment and development.
 - g. Review the developments of the student selection process.

Curricular outcomes, content, structure and delivery

Outcomes

19. The intended learning outcomes for the new programme are the outcomes identified in paragraphs 4 – 10 in *Tomorrow's Doctors*. We are satisfied from the information we have reviewed that appropriate outcomes for Years 1 and 2 are mapped against the five curriculum themes.

20. The five curriculum themes which run throughout the five year course are drawn from *Tomorrow's Doctors*. These are:

- a. Scientific Basis of Medicine (33%)
- b. Clinical, Communication, and Information Management Skills (34%)
- c. Individual, Community and Population Health (15%)
- d. Quality and Efficiency in Healthcare (10%)
- e. Ethics, Personal and Professional Development (8%).

21. The overall percentage of the course for each theme is indicated above, and is weighted differently in each year. The learning outcomes are determined and grouped through the theme structure and form the framework for assessment.

Content

22. We consider the content of Years 1 and 2 of the curriculum to be sufficiently challenging for students. Provided the development of the curriculum is sustained, we consider that it is on track to deliver the knowledge, skills and behaviour required by *Tomorrow's Doctors*.

23. We reviewed the detailed plans for the five units of Module 2 including the problem based learning (PBL) cases to be used, the SSC and the plans for incorporating IPE. We are satisfied with the proposed content and teaching delivery methods to be used.

24. We commend the innovative approach for IPE integration in Module 2, particularly the natural groupings and scenarios to be used. Students will consider a variety of major incidents using a case based learning approach and will analyse one incident in depth. The School plan to pilot an IPE training ward next year which we will follow up with interest in future visits.

25. We note that there is limited input from primary care in the development of Module 2 and recognise that this in part was due to resources being committed to the validated Manchester course for Year 3 – 5 students. We encourage the School to revisit this module once the resources become available.

26. We are satisfied with the systems that are in place to evaluate the new curriculum using multiple methods from multiple sources and commend the appointment of an independent evaluation team.

27. The School anticipates that curriculum development of Module 3 will be completed by the end of September 2008 and Modules 4 and 5 by the end of March 2009. We will continue to monitor the developments until the first cohort graduates in four years time. We shall do this by reviewing the curriculum and implementation detail, mapping documentation on the intended learning outcomes against the standards in *Tomorrow's Doctors* and considering the School's analysis of risks and opportunities to the delivery of the clinical components. We will require this information to be provided to us as detailed in paragraph 15.

Structure

28. The structure of the new Keele curriculum is an integrated spiral comprising five vertical themes. PBL is at the core of the curriculum with supporting lectures, laboratory practicals, clinical skills teaching, experiential learning, and IPE. There is a programme of SSCs. The curriculum is designed to increase in clinical content and decrease in non-clinical content as the course progresses.

29. Module 1, Challenges to Health, is intended to be 10% clinical and 90% non-clinical. This consists of six units, each lasting four weeks, in the subject areas of Accidents, Infection and Immunity, Cancer, Ageing, Lifestyle and A Complex Family and one SSC unit lasting three weeks.

30. Module 2, Integrated Clinical Pathology 1, is intended to be 20% clinical and 80% non-clinical. This consists of four units, each lasting four weeks, titled Inputs and Outputs, Movement, Life Support & Defence and Sensation. There are 10 days allocated for the SSC unit (16 half day sessions) and four days for IPE.

31. The SSC framework for the full course was formulated using the standards of *Tomorrow's Doctors* as a guide.

a. The Year 1 SSC unit consists of a three week literature review where students can choose from a list or propose their own topic.

b. The Year 2 SSC unit consists of 16 half day sessions throughout the year. Students will work in pairs to participate in community projects which will look at the population needs and services in non-NHS organisations. This unit aims to give students an insight into the range and variety of agencies in healthcare provision. Eight sessions will be spent at the host organisation and eight for background research.

c. The Year 3 SSC unit will allow students to choose from science or humanities based studies with the aim to introduce students to research. This will provide an opportunity for students to explore their major interests in more than one theme and their preferred method of study. The School reported current difficulties in Year 3 with timetabling, sustainable resourcing and the volume of assessment.

d. The Year 5 SSC unit will follow the current model of a programme of local or international elective clinical placements. Students who require remedial work will select their placements from a list with the intention to address the areas of weakness.

32. The School is considering whether to offer an SSC option for Year 4. We note that the overall proportion of SSCs may not meet the standard in *Tomorrow's Doctors* without a Year 4 SSC option. We will monitor the SSC framework in future visits and will require information on this by the end of March 2009 to demonstrate how it fulfils the requirements of *Tomorrow's Doctors*.

33. We reviewed full details of the Year 2 SSC unit and consider that there is an emphasis on the context and structure of placements in preference to student choice. We welcome the wide range of health and social care settings which will be used for the SSC and recognise the valuable learning opportunities that this type of placement may offer. We do have some concerns about the potential variability of experience provided by the different organisations providing placements. It is difficult to predict the impact of this variability on the student experience in the early years. We have discussed with the School what mechanisms could be put in place to ensure that a student does not fail the unit solely because of a poor placement. It will be important to ensure that students are well informed of the underlying rationale for this SSC in order to not only allow them to gain maximum benefit from their individual experiences but also to allow the School to determine the suitability of these placements for future years.

34. The School does not have a mechanism in place as yet to allocate students who received their lower ranked SSC choice in previous years to a higher ranked SSC choice in the following years. We encourage the School to review their processes in this regard.

Delivering the curriculum

Supervisory structures

35. We are generally content with the supervisory structures for planning and implementing the new curriculum and assessments, but continue to have concerns about the engagement with stakeholders required to deliver suitable placements for the new curriculum.

36. The interaction between the Medical School and the wider healthcare economy is symbiotic. The involvement of Trust Chief Executives is necessary to maximise the benefits of this interaction, particularly in light of the anticipated major changes in the local healthcare economy. The School has a Partnership Board which is intended to “assist in the development of a dispersed clinical structure that efficiently utilises clinical teaching resources” (Terms of Reference). However, the NHS Chief Executives do not attend the Partnership Board. We are aware of the dependence of the School on NHS partners for delivery of the programme. We recommend that the School strengthens the strategic links with all the delivery partners in the regional healthcare economy.

37. The presence of senior staff members of the Medical School on the acute trust boards strengthens the links with the School and we encourage similar relations with the relevant primary care trusts.

38. The allocation of SIFT funding for Keele is currently from the North West Deanery, reflecting the link with Manchester Medical School. Discussions are underway to move the Keele SIFT to the West Midlands Deanery as this will simplify accountability mechanisms. No deadline has been set for this to occur. We recognise the importance of this funding for teaching and recommend the finalisation of transfer of SIFT by the end of the current NHS financial year (end of March 2009).

39. We are satisfied that student evaluation is being captured directly through lectures and questionnaires at the end of Semester 1 and the end of the Module. The School is required to follow the University’s structure for student liaison committees. Some student representatives do not disseminate messages about evaluation adequately to their colleagues. The School is attempting to address this by using the virtual learning environment system (WebCT) and recruiting focus group members directly from each PBL group.

40. We continue to commend the use of the dual leadership model for the senior management team responsible for developing the new curriculum. This ensures continuity in case of any changes to staffing. However we noted that the School is reliant on a small number of key staff members and we recommend that the School

develops further mechanisms for sharing knowledge of the curriculum across different module teams.

Teaching and learning

41. We are satisfied that the School is meeting the standards set out in *Tomorrow's Doctors* in respect of teaching and learning at this stage in the development of the curriculum. We commend the implementation of Module 1, which has been delivered successfully, as indicated by the feedback from students, school staff and external examiners.

42. We are pleased to note the new teaching appointments in public health, psychology, general practice and anatomy to ensure delivery of the new curriculum and to inform the ongoing curricular development.

43. We note that all staff delivering Module 1 had been involved in some aspect of its development. We recognise that staff had experience delivering the validated Manchester curriculum and were supported by the School to adapt to the new course. This included activity specific training to include IT and assessment training and a PBL bridging programme for tutors to explain the differences in the Keele PBL method. We note that administration systems did not change and therefore re-training of staff was not always necessary. We consider that staff members have the necessary knowledge, skills and attitudes to deliver Module 1.

44. New PBL tutors receive formal training. Extensive training notes are provided and offices are shared with existing PBL tutors who are their partners so that they can get reassurance on their performance. The weekly PBL staff meetings also provide opportunities for the new PBL tutors to raise any issues.

45. The biggest change in the new curriculum is in the delivery of anatomy teaching. The School has recruited more staff for this purpose, where clinicians are rotated and Foundation Year 2 doctors assist. Before each teaching session, the lead in Anatomy teaching for Module 1 will meet with the teachers to discuss learning objectives. Students were very positive about this teaching.

46. Year 1 students reported that they had received a good general induction to the School, new curricular structure and PBL. Students were generally very positive about the balance and quality of teaching and learning opportunities through the integration of lectures, clinical skills teaching and personal study with PBL. However, they did not consider the study group tasks to be valuable. The School recognise the problems with the study group tasks and advised that it will be reviewing this.

Learning resources and facilities

47. We are satisfied that students have access to appropriate learning resources and facilities at the School and that they are able to provide evaluation of these through the end of semester and module questionnaires. In particular, the majority of students commented on the excellent dissection sessions.

48. In future visits we will monitor the progress of the expansion of teaching facilities at Shrewsbury, Stafford and Telford which will accommodate the increasing student numbers on clinical placements.

Student selection

49. Following our findings in last year's report on the selection processes, the School reviewed its processes for 2008/09 entry using the guiding principles issued by the Medical Schools Council. We are pleased to note that the School held an Admissions Forum to discuss potential changes to the admissions criteria. As a result a working group has been set up to explore changes and present recommendations to the Admissions Committee for selection in 2009/10. We will monitor this in future visits.

50. The School provides training for the interview panel members. At present there is the option for either a lay person or a senior medical student to sit on the revised admissions panel. We consider that these are not necessarily interchangeable positions and we have conveyed this to the School for consideration. As yet there are limited numbers of lay persons involved.

51. We heard about the School's initiatives to widen participation. We note that the numbers of students in medicine coming from the local area through these initiatives and local Access to Medicine Programmes are very small. The partners in the wider healthcare economy consider increased recruitment from the local community to be a major potential benefit. We encourage the School to prioritise initiatives which achieve this.

52. We will continue to monitor the progress of the Graduate Fast Track entry route in future visits, and the School's evaluation of this.

Student support, guidance and feedback

53. We continue to be satisfied that the academic and pastoral support available to students meets the requirements of *Tomorrow's Doctors*. Students stated that they knew about and felt able to access support if required through the formal or informal mechanisms.

54. The students considered the guidance on the content of Year 1 of the curriculum and SSCs and assessment strategy to be clear and were communicated via introductory lectures and the module and unit handbooks.

55. The students considered the feedback received at the end of week PBL sessions and formative assessments to be useful. Students commented that there were limited examples of each type of assessment method available on the School's WebCT, but there were no past papers available. Students had sat a mock formative examination in Semester 1 which proved useful. They said they would have welcomed more formative assessment in Semester 2.

Assessing student performance and competence

Principles of assessment

56. We are satisfied that the schemes of assessment used in Year 1 and the proposed scheme for Year 2 support the curriculum and allow students to demonstrate that they have met the intended learning outcomes.

57. Year 1 assessment is classified into four groups: Attitude (learning portfolio), Information Management Skills (publication based paper and SSC), Clinical and Practical Skills (objective structured skills exam) and Knowledge (multiple choice questions, extended matching questions and key feature problems). Students must satisfy examiners of their competency in each group. Limited compensation is allowed within each group only.

58. Year 2 assessment procedures will be similar to Year 1, with the exception of the Information Management Skills group. The publication based paper will be replaced by a data interpretation paper and the SSC will be assessed by a student reflective diary and poster presentation and an evaluation report from the host organisation.

59. Assessment throughout the course is weighted to the overall theme structure. The weighting of the themes vary for each year of the course. The earlier years have more weighting on the scientific basis of medicine theme and lighter weighting on the clinical, communication and information management skills theme.

60. We reviewed documentation of all of the assessments in Modules 1 and 2. We are satisfied with the School's assessment strategy and will continue to monitor the implementation of this in future visits.

Assessment procedures

61. The students who were interviewed stated that they understood the scheme of assessment for Year 1, how it relates to the curricular outcomes and what is expected of them in the examination and assessments.

62. All examiners have contracts with the School and receive training for their particular role. All examiners have undertaken the Teaching and Learning for Health Professionals course and can undertake university programmes on the theoretical aspects of assessment. Training is dealt with explicitly as part of continuing professional development.

63. An apprenticeship model is used to train new examiners to assess and mark exams. An experienced examiner mentors each new examiner through the process. This model will be rolled out to the existing examiners on the validated Manchester course for Years 2 and 3 of the new course. We found this to be an example of good practice.

64. The initial standard setting for the knowledge based papers in the current year included an optimistic expectation of students' performance. However, the School employed appropriate standard setting to develop final cut scores.

65. The Year 1 Examinations Board was observed to be well organised with clear documentation provided for the Board to consider when determining the final pass list. Mitigating factors were considered by a separate Progress Committee.

66. We noted that a very small number of students could not be signed off because they had not completed their appraisal due to problems with timetabling. The School advised that it will be reviewing the pool of appraisers and is looking to hold the appraisals earlier for the next cohort.

67. We are satisfied that external examiners are appropriately involved throughout the assessment process to ensure that standards are met. This is achieved by participating and providing feedback on: item writing, data storage, thematic selection, emendation, standard setting, paper selection from the curriculum/assessment blueprinting database, observation of practical/clinical examinations, examination board meetings and meetings with students to gain independent feedback on the examination.

Appraisal

68. Year 1 students have two compulsory appraisals where their learning portfolios are reviewed and personal professional development issues are discussed. The learning portfolio will continue to be reviewed on a yearly basis through the appraisal system and must be deemed satisfactory to progress to the next year.

Acknowledgement

69. We commend the School on their commitment to medical education, the successful implementation of Module 1 and the detailed work they have produced in developing Module 2.

70. The GMC would like to thank Keele Medical School and all who were involved in the review process this year for their co-operation.



KEELE
UNIVERSITY

SCHOOL OF MEDICINE

12th November, 2008

Professor Peter Rubin,
Chair, Education Committee,
General Medical Council,
2nd Floor, Regents Place,
350 Euston Road,
London. NW1 3JN.

Dear Peter,

I would like to thank the Education Committee for its Final Report on the 2007/08 QABME cycle of visits to the School of Medicine at Keele. The staff and students are very pleased with the largely positive outcome and are grateful to the QABME team for their advice during the year.

I attach the School's response to the Committee's report.

The School looks forward to the continuing engagement with the QABME process as we endeavour to develop the best possible curriculum and learning environment for our students.

Yours sincerely

Professor Richard Hays
MBBS PhD MD FRACGP FACRRM MRCGP
Chair of Medical Education and Head of School

Professor Richard Hays
Head of School of Medicine
Telephone: (01782) 734670 Fax: (01782) 734637 Email: headofmed@hfac.keele.ac.uk
Head of School Confidential Fax: (01782) 733634
Keele University Medical School, (Keele Campus)

Keele University, Staffordshire, ST5 5BG, United Kingdom
Telephone: +44(0)1782 732000 or 621111 Web: www.keele.ac.uk/

RESPONSE OF KEELE UNIVERSITY MEDICAL SCHOOL TO THE REPORT TO THE GMC EDUCATION COMMITTEE ON THE QUALITY ASSURANCE OF BASIC MEDICAL EDUCATION AT KEELE MEDICAL SCHOOL 2007- 8

We note that the Education Committee has found that the School is currently on track for Year 2 of its medical degree being introduced in 2008-09 to meet the standards in *Tomorrow's Doctors* at this stage of development.

The School notes the requirement to provide more detailed information on various aspects of the curriculum for Years 3, 4 and 5 by the end of September 2008 and the end of March 2009. We will comply with this request and we look forward to sharing this information with you during the next visit cycle.

The School has considered seriously the recommendations in the report, and we can advise on our progress, as follows:

- a. *Ensure integrated and sustainable curriculum development consistent with the School's vision for healthcare education by:*

- i) *Strengthening the strategic links with all the delivery partners in the regional healthcare economy to ensure sufficient and sustainable teaching provision to student on the new curriculum.*

We note the concerns about the strength of our links with our NHS partners across Staffordshire and Shropshire. We remain confident that the joint strategy of regular 1:1 meetings with senior executives of key NHS Trusts plus quarterly meetings with the Medical Directors of each Trust (the Partnership Board) is achieving our goal of ensuring effective communication, shared understanding and partnership approach to the development of the medical school.

- ii) *Sharing curriculum knowledge across the different Module teams.*

The curriculum implementation is now the responsibility of a new group, the Curriculum Strategy Planning Group, under the guidance of a new post titled Curriculum Development Lead. This group is modelled on the successful approach to implementing Module 1 last academic Year. Group membership includes the Module Leaders for all five new curriculum Modules and therefore ensures that the curriculum development team is aware of progress throughout the new curriculum. Each Module continues to have its own, expanded team to ensure appropriate development across all five curriculum themes.

- b. *Finalise the transfer of the Keele Service Increment for Teaching (SIFT) Funds from the North Western Deanery to the West Midlands Deanery to*

simplify accountability mechanisms by the end of the current NHS financial year, end of March 2009.

The two SHAs have agreed to the transfer of funding from central NHS sources as from the commencement of the 2009/10 financial year. The School of Medicine at Keele is now firmly within the governance processes of West Midlands Strategic Health Authority region and is working well with the other two West Midlands medical schools. We have commenced regular (three per year) SIFT Finance and Strategy monitoring meetings with the West Midlands SHA.

The School notes with satisfaction, the commendation on 4 areas of innovation and good practice, ie:

- a) The proposed model for Interprofessional Education (IPE) within the curriculum and its evaluation;
- b) The appointment of an independent evaluation team to evaluation the curriculum;
- c) The successful implementation of Module 1;
- d) The apprenticeship model used to train new examiners.

We are confident that we can build on this success and look forward to presenting out progress to the QABME Team next year.

Yours sincerely



Professor Richard Hays
MBBS PhD MD FRACGP FACRRM MRCGP
Chair of Medical Education and Head of School