

Quality Assurance of Basic Medical Education

A supplementary report on Imperial College
London School of Medicine

2010

**General
Medical
Council**

Regulating doctors
Ensuring good medical practice

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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 supplementary report to the [2008 quality assurance report](#) to the GMC Undergraduate Board on the established medical school at Imperial College London (the School).
5. The 2008 report required a follow up visit to the School to monitor progress on the implementation of the requirements in paragraph 23 of the 2008 report, to:
 - a. Implement the Graduate Entry Programme (GEP) in accordance with proposals approved by the GMC's Education Committee.
 - b. Ensure all students demonstrate competence in life support skills beyond basic life support.
 - c. Complete the current curriculum review and provide a clear programme of implementation thereafter. The School must ensure that the revised curriculum meets the requirements set by *Tomorrow's Doctors* [2003] and the needs of F1 doctors, while decreasing the overall burden of the curriculum and prioritising the recommendations in paragraph 25 [of the 2007/08 report].
 - d. Revise the assessment strategy in order to provide a framework of both summative and formative assessment congruent with the outcomes of the curriculum review. The new assessment strategy must test the breadth and depth of knowledge, skills and behaviour identified in the curriculum review.
 - e. Improve the reliability and validity of the clinical assessment including both the in-course assessment and the clinical examinations as a matter of urgency.

The QABME team

6. The visiting team members appointed by the GMC Undergraduate Board to undertake the quality assurance visits in 2007/08 were:

Professor Sam Leinster (Team Leader)
Dr Martin Talbot (Deputy Team Leader)
Professor John Ashton
Dr Susan Burge
Professor Richard Hays
Mr James Read
Ms Suzanne Shale
Ms Maria Slade
Dr Chris Stephens
Dr Niten Vig
Professor Olwyn Westwood

7. A smaller visiting team attended the follow up visit including Professor Sam Leinster, Professor Richard Hays, Mr James Read and Professor Olwyn Westwood.
8. Ms Louise Wheaton (GMC Education Quality Officer) supported the QABME team.

Follow up visit 2009

9. The team conducted one quality assurance visit on 4 December 2009.
10. 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 and assessment.
 - b. Demonstration of the School's curriculum and assessment mapping project, iMAP, and electronic portfolios.
 - c. Discussions with Year 1 and 2 Graduate Entry Programme (GEP) students.

The report

Summary of our key findings

11. The School has made considerable progress and we are pleased to see the changes that have been made in the short period between visits. We support the School in its plans to continue to develop the programmes.
12. We found that subject to the requirements in paragraphs 23d and 23e of the 2008 report, the School's MB BS programme meets the requirements of *Tomorrow's Doctors* in accordance with Section 5(3) of the Medical Act 1983 as amended.
13. We are satisfied that the School has taken appropriate action to address the requirements in paragraphs 23a to 23c of the 2008 report. These include the implementation of Year 1 of the GEP (see paragraphs 41-43), ensuring all students demonstrate competence in life support skills beyond basic life support (see paragraph 29), and completing the current curriculum review with a clear plan for implementation (see paragraphs 21-22).
14. The School has made significant progress in relation to meeting the requirements in paragraphs 23d and 23e of the 2008 report (see paragraphs 55-61) and once the changes in the School's updated assessment strategy are fully implemented the requirements in the 2008 report will be satisfied. The School will report on the implementation and evaluation of the assessment strategy in its 2010/11 QABME Annual Return.

15. The findings in this supplementary report should be read in context with the requirements, recommendations and findings of innovations and good practice in the report of 2008.

16. The School will continue to update the GMC on its progress towards implementing the 2008 requirements as part of the GMC's annual monitoring process.

Requirements

17. There are no further requirements in the findings of this report.

Recommendations

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

- a. Continue to implement, monitor and evaluate the planned changes following the completion of the curriculum review (see paragraphs 21-22).
- b. Continue to monitor and evaluate the GEP (see paragraphs 41-43).

Areas of innovation and good practice

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

- a. The medical ethics and law programme (see paragraphs 30-32).
- b. The appointment of six vertical theme heads as a mechanism to ensure integration across the course (see paragraphs 44-45).

Curricular outcomes, content, structure and delivery

Outcomes

20. The School's iMAP project, which has developed from the learning outcomes project reviewed in the 2007/08 visit, maps learning outcomes across the curriculum and assessment and to *Tomorrow's Doctors*. We are pleased that the School is mapping its curricular and assessment to the outcomes in *Tomorrow's Doctors* 2009.

Content

21. The School has completed the current curriculum review and final changes were agreed by the School's Education Committee and Medical Studies Committee in February 2009. The key changes include:
- a. Year 2: an introduction of elements of the BSc course and a reduction in the length of the clinical introductory attachment from 2009/10 and implementation of restructured teaching, feedback and assessment in Years 1 and 2 from 2010/11.
 - b. Year 3: extended first attachment creating three ten week attachments, introduction of a three week Background to Clinical Specialities course from 2009/10.
 - c. Year 4 (BSc): introduction of a two week Foundation Course block.
 - d. Year 5: obstetrics and gynaecology (O&G) block reduced to seven weeks and a two week critical care module introduced from 2009/10. From 2010/11 the O&G and paediatric blocks will be seven weeks, psychiatry six weeks, and musculoskeletal four weeks. A Teaching Skills block will be introduced and radiology will move to Year 5 from 2010/11.
 - e. Year 6: Neurology moves from Year 5 to Year 6, shadowing introduced.
22. We are satisfied that the School has completed the curriculum review and has clear plans for implementation of changes. We note that the Curriculum Review Implementation Group (CRIG), which meets monthly, is monitoring the changes and we recommend the School continues to implement, monitor and evaluate the curriculum review.
23. We found that the curriculum remains crowded, particularly in Years 1 and 2 of the six year course and in Year 1 of the GEP, with little time for reflection and consolidation of learning. The GEP students reported this as an issue.
24. The School is aware of this and are working to clearly identify time for reflection already in the programme. As part of reviewing the learning outcomes the School has been able to look across courses and decrease the amount of duplicated material. The current reductions are around half a week more time for reflection over Year 1 and a week and a half to two weeks in Year 2. The Student Union President reported that there have been fewer complaints from students this year related to the number of hours in lectures. We acknowledge that this is a work in progress and encourage the School to continue its efforts in this area, in line with the recommendation in paragraph 25a in the 2007/08 report.
25. We are pleased to see that the School is making efforts to introduce more protected time for reflection and consolidation of learning. We encourage the School to continue exploring ways of lightening the burden of didactic material in the first two

years of the course while continuing the integration of clinically relevant material into the first two years of the course.

The scientific basis of practice

26. The GEP students reported that the scientific grounding from their previous degree was useful preparation for medicine. The Year 2 GEP students found the first year provided good scientific grounding in a clinical context before progressing into later years of the course.

27. The School is working to identify core basic medical sciences in Years 1 and 2 to form the basis of the revised curriculum content from 2010/11. Basic science and scientific method will form one of the vertical themes throughout the curriculum.

Treatment

28. The School has introduced a prescribing examination which students must pass, close to graduation in Year 6. We found this to be set at an appropriate level and are satisfied that all students graduating from 2008/09 will be summatively assessed on prescribing.

29. From 2009/10 all students will complete a Critical Care module in Year 5, including undertaking Immediate Life Support (ILS) training. The School reported that if funding is cut it may not be sustainable for students to receive an ILS certificate, however all students will still be trained. This training is reinforced in the Year 6 Emergency Medicine module. After reviewing the handbook and discussing the module with curriculum staff we are satisfied that the School has met the requirement from the 2007/08 report to ensure all students demonstrate competence in life support skills beyond basic life support.

Medico-legal and ethical issues

30. Since the 2007/08 report the School has appointed a Vertical Theme Head for Ethics, Professionalism, Leadership and Management and a Clinical Lecturer in Medical Ethics and Law. These appointments have facilitated the vertical integration of medical ethics and law across the programme.

31. There has been a reduction in teaching in Year 2 to enable clinically integrated law teaching in Year 3. Changes to medical ethics and law in Year 5 were implemented in 2008/09 using case based discussions and significant event analyses within speciality rotations. The School reported that the final assessment of ethics and law in Year 5 will incorporate specific ethical and legal material into written and clinical examinations.

32. We commend the new medical ethics and law programme.

The health of the public

33. We note the development of a new BSc in Global Health in partnership with the Imperial Institute of Global Health.

The individual in society

34. We are pleased to note the progress made in the teaching of psychology. This includes the appointment of a course lead and the implementation of a revised course in 2008/09. We encourage the School to take a similar approach with the other social sciences.

35. We recognise the efforts the School is making to develop the teaching of social sciences, however we continue to have concerns about the low levels within the curriculum. The GEP students reported issues with structure, and content of the sociology course in Year 1. We acknowledge that the School was unable to make new academic appointments in social sciences due to funding cuts. We support the School in its plans to appoint to this area in order to address the recommendation in paragraph 25d of the 2007/08 report.

Delivering the curriculum

Supervisory structures

36. The School has made significant progress following the QABME review in 2007/08 and has a strong, committed, central management team who are enthusiastic about continued development of the programme.

37. We are disappointed that, despite the School's best efforts, it has been unable to appoint further medical education expertise to enhance the curriculum and assessment management structures. We continue to support the School's plans to find an appropriate person to add value in this area.

38. We note the appointment of a clinical education/ curriculum development fellow with a role in the iMAP project and other teaching fellows with roles in projects. Since these appointments are short term we encourage the School to ensure appropriate plans are in place to monitor the outcomes of their projects.

39. We note that the GEP Committee reports to the Faculty Education Committee.

Teaching and learning

40. There have recently been a number of redundancies within Imperial College and we are impressed that the Director of Education was able to protect the delivery of medical education from being severely affected by funding cuts and redundancies.

41. The GEP is monitored and evaluated by the School in a number of ways. The School has a dedicated GEP Staff-Student Liaison Group, which meets every term. Student online evaluation (SOLE) has been used for students to evaluate their induction and modules. The School has enhanced monitoring for the first cohort of GEP students with fortnightly meetings, opportunities to feedback to the Head of the GEP, sessions based on specific areas of the course, an end of year feedback session and a meeting with the Director of Medicine. The Head of the GEP also liaised regularly with course teachers and administrators. We recommend that the School continues to monitor and evaluate the GEP.

42. The key issues identified by the School when evaluating Year 1 of the GEP were: the volume of material to cover in Year 1; limited practice examination material; availability of printed course guides and access to online support material. A number of changes were made to the delivery of the cellular and molecular science theme and a few changes to other themes and courses are planned for 2009/10.

43. We are satisfied with the mechanisms in place to monitor and evaluate the GEP. The GEP students we met reported that the School was responsive to their evaluation and provided examples of changes made as a result.

44. We are pleased to see that the School has successfully appointed six vertical theme heads to enhance vertical integration throughout the course. The themes are as follows: Improving the Student Experience; Clinical and Technical Competencies, Preparation for Practice and Patient Safety; Ethics, Professionalism, Leadership and Management; Patient Centred Education and Communication; Scientific Method and Evidence Based Medicine for Clinical Practice and Research for Scientific Advancement of Medicine: The Clinician Scientist.

45. The vertical theme heads have been in post since April 2009 and work closely with Year Heads. The vertical theme heads will identify areas not properly represented across the curriculum and ensure they are integrated at an appropriate level and depth within the course. We commend the appointment of the vertical theme heads as a mechanism to ensure integration across the course.

46. We support the School's plans to use other health and social care professionals to teach and assess students. We note the pilot for 20 Year 1 students to be trained as healthcare assistants, which has received positive feedback from the students involved. We support the School's plans to roll this out to greater numbers of students.

Learning resources and facilities

47. The Hammersmith campus is the main campus for GEP students. GEP students reported that their access to library resources was restricted as they spend less time at South Kensington, where the majority of library resources are.

Student selection

48. The School publishes information about the GEP selection process on its website. The minimum entry requirements for the GEP are a 2.1 Honours degree or a PhD in a biological subject to ensure knowledge of the basic physiology and biochemistry of mammalian cells and organs. The School provides an admissions checklist, which sets out criteria that needs to be met in relation to a previous degree, such as 100 hours of laboratory experience. Candidates are considered for interview on the basis of their application and ranking in the UK Clinical Aptitude Test (UKCAT). The guidance on the website explains what is expected from candidates at each stage of the application process. We are satisfied that the selection procedures for the GEP are appropriate.

Student support, guidance and feedback

49. We note the School's new arrangements for pastoral care including the introduction of three year-specific Senior Tutors who coordinate and monitor the activities of personal tutors.

50. The GEP students we met reported that everyone is allocated a personal tutor but there is no requirement to meet them regularly. Some students were not sure who to go to for support and others reported they would go to the student union or the Head of the GEP, who students found approachable.

51. The GEP students reported some difficulties self-organising tutorials around an already busy timetable. GEP students also noted that the tutor does not always turn up. The students reported this to the School and alternative arrangements were made to ensure tutorials went ahead.

52. Students in Year 2 of the GEP act as peer tutors for Year 1 GEP students. The Year 1 GEP students reported that the Year 2 GEP student have been supportive and provided guidance. The GEP students have formed their own GEP Society, 'Dep Soc' ratified by the School's Student Union and have taken responsibility for Union facilities at the Hammersmith campus.

53. The School is currently piloting an electronic portfolio which provides students with a web based record of clinical skills, activities and assessments. It can also be used as a reflective, development plan and aims to improve feedback to students. This was introduced to Year 1 and for the clinical attachment in Year 2 in 2009/10. Each student will meet with their personal tutor to discuss the content of the e-portfolio but there is currently no sanction if students do not use it. We reviewed the student and tutor guides and look forward to seeing the e-portfolio develop.

54. We note the introduction of formative written examinations in the early years of the course with immediate feedback. The GEP students reported a limited amount of practice material for Year 1 of the course, which the School is working to address. The GEP students have access to the practice questions available to those on the six year course and there are also online practice questions written by students. The School has commissioned a study into what students think feedback mean.

Assessing student performance and competence

The principles of assessment

55. We note the increase in the average length of stations in the Year 3 objective structured clinical examination (OSCE) to 12 ten minute stations. We are satisfied that the content of the OSCE stations are appropriate for the stage in the course.

56. We reviewed the Year 5 practical assessment of clinical examination skills (PACES) stations and marking scheme and note the increase in the number of stations from four to six and the changes to scoring and calculation of the pass mark. While this has improved the validity and reliability of decision making in this examination, further increases in station numbers would be desirable in line with the requirement in paragraph 23e of the 2008 report. The School is moving away from discipline based approach and explained that the six stations test across domains so the sampling depends where domains fall. We encourage the School to monitor the sampling carefully to ensure that it is adequate to provide an acceptable level of generalisability.

Assessment procedures

57. The School's iMAP project aims to blueprint each summative and formative assessment event against the outcomes in *Tomorrow's Doctors* 2009. It also aims to identify the key outcomes and domains against which individual examination questions or clinical stations could be blueprinted. This should prove useful providing it is constantly updated and we support the School's vision for a web-based version.

58. We reviewed updated Year 1 and 2 written examinations and recognise the shift to incorporate non-biomedicine with fewer examinations. However, the item quality could be improved. We note the movement towards clinical integration in the written examinations and encourage the School to continue to enhance this in line with the recommendation in paragraph 26c of the 2008 report.

59. The School reported that its question bank has 2000 questions and is common to the six year course and the GEP. The School holds question writing sessions with scientists and clinicians for early years of the six year course and the GEP. An external examiner raised the equivalence of the GEP and six year course as an issue and the School have addressed this in the shared question writing sessions.

60. The School has enhanced the examiner training for clinical examinations on Year 3 and Year 6. We note the School's plans to increase the number of in course, work place based assessments. We encourage the School with its plans to set up training days for those delivering in-course assessments and the current Clinical Education Fellow will monitor the standard of assessments at different sites. This will help to address the recommendation in paragraph 26e of the 2008 report. We note

that the Clinical Education Fellow is not a long term role and we encourage the School to ensure this monitoring continues.

61. The School has reviewed the compensation rules for the Year 5 PACES and we are satisfied with the changes. However continuing attention needs to be given to ensuring appropriate standard setting and consistent decision making.

Student progress

62. We note the satisfactory progression rates for the GEP students.

Student health and conduct

63. The GEP students we met were aware of the route for raising concerns about a fellow student.

Acknowledgement

64. The GMC would like to thank Imperial College London School of Medicine and all those they met during the follow up visit for their co-operation and willingness to share their learning and experiences.

Professor Jim McKillop
Chairman, Undergraduate Board
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25 May 2010

Quality Assurance of Basic Medical Education – Response to Supplementary Report

Dear Professor McKillop,

Thank you for your supplementary report outlining the findings of the QABME follow-up visit that took place in December 2009 to Imperial College London.

We are pleased to note that the GMC identified several areas of innovation and good practice during their visits.

We also note that the GMC acknowledged the significant progress we have made in the implementation of a revised assessment strategy. We have continued to make progress since the visit and continue with our phased implementation over the remainder of 2009-10 and during 2010-11.

If you require any additional information, or wish to discuss this further, then please do not hesitate to contact either me or Mr Paul Ratcliffe, Quality Management and Educational Business Manager, by telephone on 020 7594 9819, or alternatively by email on: p.ratcliffe@imperial.ac.uk.

Yours sincerely,



Professor Jenny Higham,
Director of Education