

Quality Assurance of Basic Medical Education

Report on Dundee Medical School,
University of Dundee

November 2009

**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 the 2008/09 quality assurance report to the GMC on the established medical school at the University of Dundee (the School).
5. The last GMC review of the School was in 1999, prior to the establishment of the Quality Assurance of Basic Medical Education (QABME) programme. The areas identified for further consideration at that time were: definition of the core curriculum, mapping standards of professional conduct to curricular outcomes, equity of access to special study modules (SSM), integration of public health teaching, experience of practising in a multicultural environment, identification of further opportunities for students to learn about complementary and alternative medicine, timing of the final core curriculum examination and feedback to students.
6. The School has largely addressed these issues. The nature of the local population creates challenges for the School to provide teaching experience relevant to practice in an ethnically diverse population. However the School appropriately uses the available opportunities to expose students to issues of diversity. The School still faces some challenges in improving feed back to students (see paragraphs 57 and 121).
7. The School has approximately 820 medical students on the Bachelor of Medicine, Bachelor of Surgery (MB ChB) programme. The School currently admit 145 to 175 students annually. The School also offers a pre-medical year before joining the five year MB ChB.
8. Entry requirements for the pre-medical year are slightly higher although fewer scientific qualifications are required. The School indicated it is likely to explore the possibility of a fast track curriculum for graduate entrants in the near future.
9. The programme is delivered through the use of core clinical problems, small group problem oriented sessions and integrated teaching area sessions in parallel with lectures, tutorials and a systematic training in clinical skills. Students are introduced to basic clinical and communications skills from the first phase of the programme.
10. The key features of the MB ChB programme are:
 - i. A spiral curriculum.
 - ii. An outcome based approach to teaching and learning.
 - iii. Early clinical contact.
 - iv. Problem oriented learning.
 - v. Two years of clinical attachments allowing the application of skills and knowledge gained during Year 1 to 3.

vi. Six week elective period between Years 4 and 5.

11. The spiral curriculum was introduced in 1994 with the first graduates from the new course in 1999. The curriculum was revised in 2004 and the revised curriculum introduced in the academic year 2005/06. Of the current intake Years 1 to 4 are on the new curriculum while Year 5 students are completing the previous curriculum.

12. Phase 1 of the curriculum, *Foundation of Medical Practice*, covers the first 12 weeks of Year 1 and introduces students to the curriculum outcomes and key scientific principles (Psychosocial, Disease Mechanisms, Anatomical, Safe Medical Practice and Biomedical) using core clinical problems. The vertical curriculum strand Doctors, Patients and Communities (DPaC) and the Clinical Skills programmes begin in Phase 1.

13. Phase 2 of the curriculum, *Integrated Systems Based Course*, runs from semester 2 of Year 1 to the beginning of semester 6 in Year 3. This is followed by a transition block before students begin Phase 3, *Clinical Practice*, which runs from Year 4 to Year 5.

The QABME team

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

Professor Julius Weinberg (Team Leader)

Professor David Cottrell (Deputy)

Professor Trevor Beedham

Professor David Croisdale-Appleby

Mr Ian Fraser

Professor Richard Hays

Mr Matko Marlais

Professor Olwyn Westwood

15. Miss Jennifer Barron (GMC Education Quality Officer) supported the QABME team.

Our programme of visits in 2008/09

16. The team conducted seven quality assurance visits on: 20 October 2008, 19-20 February 2009, 21 April 2009, 20 May 2009, 17 June 2009, 10 July 2009 and 24 July 2009.

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 curriculum development, assessment, the DPaC vertical curriculum strand, the Year 5 portfolio, student support, transfer of students from St Andrews and the International Medical University (IMU), selection and widening participation, quality management, staff development, inter-professional learning, public health and careers advice.
- b. Observation of teaching sessions in both the main university teaching hospital and district general hospitals.
- c. Site visits to various NHS health boards.
- d. Discussions with students from all years including IMU transfer students and Undergraduate Medical Education Committee (UMEC) and Medical Students Council (MSC) representatives.
- e. Discussions with teachers, including general practitioners and clinical consultants.
- f. Discussions with Foundation Year 1 (F1) doctors and their educational supervisors.
- g. Observation of the Year 5 portfolio viva.
- h. Observation of the Year 4 OSCE.
- i. Observation of the final examination board.

The report

Summary of our key findings

18. Subject to the requirements in paragraph 21, the School's MB ChB programme meets the requirements of *Tomorrow's Doctors* in accordance with Section 5(3) of the Medical Act 1983.

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

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:

- a. Undertake a review of and improve the following assessment practices:
 - i. The assessment of DPaC. The School must summatively assess this key curriculum strand (see paragraph 62).
 - ii. The mapping, rules and decision making process of the final year exam board regarding the award of the MB ChB, in order to ensure decision pathways are clear and more protocol driven (see paragraphs 103, 112 - 115).
 - iii. Review the cut point of the Year 5 portfolio viva, to ensure that a higher proportion of students undertake the Year 5 OSCE, so that all borderline students are tested close to graduation and are fit to practise (see paragraphs 107 - 108).
- b. Provide progress updates to the GMC regarding transfer of students from St Andrews to Dundee via the annual returns for 2009/10 and 2010/11 (see paragraph 65).
- c. Undertake a review of and improve the following with regard to peripheral clinical placement sites:
 - i. Engagement of clinicians with the School's curriculum and expectations including attendance at training and staff development initiatives (see paragraphs 68 and 78).
 - ii. The quality management and oversight of education and training (see paragraph 81).

Recommendations

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

- a. The School should strengthen the teaching and assessment of prescribing, particularly in the latter parts of the course as students approach graduation (see paragraphs 37 and 41).
- b. The School should emphasise the importance of promoting health and preventing disease through the adaptation of existing core clinical problems or the addition of new ones (see paragraph 39).
- c. The School should set a consistent standard to ensure all students are adequately equipped with teaching skills (see paragraph 44).
- d. The method and quantity of student evaluation of teaching data collected should be reviewed to ensure it is appropriate and not overly burdensome to students (see paragraphs 80).
- e. The standardisation of the ward simulation exercise should be improved before it is used to determine whether a student passes or fails (see paragraph 86).
- f. The School should consider more formal evaluation and dissemination of some of the innovative assessment processes that it is using (see paragraph 120).
- g. The method and quantity of feedback to students should be reviewed to ensure it is valuable (see paragraph 121).

Areas of innovation and good practice

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

- a. The varied and well received interprofessional education programme (see paragraphs 28, 47 and 82 - 85).
- b. The *Getting Started* series of booklets for clinical placement tutors (see paragraph 45).
- c. The engagement of the local NHS and NHS Education Scotland in partnership working, including the appointment of a joint Director of Medical Education for undergraduate and postgraduate medical education, the accessibility to students of ward experience, and the joint plans for the development of the educational facilities (see paragraphs 50 and 76).

- d. The careful consideration and collaborative working that has supported the transfer arrangements for students from St Andrews to Dundee (see paragraphs 65 and 97).
- e. The development of the ward simulation exercise which is well received by students, F1 doctors and their clinical placement tutors and educational supervisors (see paragraph 87).
- f. The guidance and resources available to students through the virtual learning environment (VLE) (see paragraph 89)
- g. The exploration and evaluation of the School's innovative admissions processes (see paragraphs 91 - 93).
- h. The emphasis placed on the assessment of professionalism in the final assessment (see paragraph 108).

Curricular outcomes, content, structure and delivery

Outcomes

- 24. Students are required to maintain a portfolio as evidence that they have acquired the necessary clinical skills to graduate. The portfolio is mapped to the 12 curricular outcomes of the *Scottish Doctor*.
- 25. Clinical placement tutors and F1 educational supervisors interviewed during the visit were universally impressed by the standard of students and recent graduates' clinical skills.
- 26. Students are advised of their requirement to meet and maintain the standards of *Good Medical Practice* from the first day of Year 1. This is reinforced throughout the course and through the maintenance of the portfolio in Years 4 and 5.
- 27. Early clinical teaching and patient contact allows students to begin building relationships with patients and their relatives or carers. Students also identified DPaC as teaching them how to interact with patients, their responsibilities to patients and the appropriate attitudes and behaviours (see paragraph 56).
- 28. We commend the emphasis the School places on working with colleagues from other disciplines. Students can undertake joint SSCs with nursing students visiting local primary schools and inter-professional education includes interactive ethics teaching and ward simulation exercises (see paragraphs 51, 84 and 87).
- 29. Although we found there were many opportunities for students to gain teaching skills, the curriculum does not set a consistent minimum standard for all students (see paragraph 44).

30. Students showed some understanding of the term probity. Students are required to sign the student charter upon entering the School. The first lecture of Year 1 is on patient expectation of students as a professional and the GMC's expectations as set out in *Tomorrow's Doctors* and *Good Medical Practice*.

31. We found student awareness of their duty to protect patients and others by taking action when they considered a fellow student was not performing to the required standard.

32. There is a DPaC module on self care which emphasises the importance of students' health and the potential health risks of medical practice. This teaching is supported by independent study and re-emphasised throughout the curriculum.

Content

33. Students and F1 doctors who graduated from the School advised that the curriculum becomes more intellectually challenging as students progress.

34. Students reported that the School was very supportive when taking a planned or unplanned break from studies, for example to compete in a sporting event or through long term illness. Students reported that support had been further improved with the introduction of the new curriculum.

35. We found students were offered adequate opportunity to reflect on their experiences and the portfolio is a useful tool to aid reflective thinking.

The scientific basis of practice

36. Year 1 of the old curriculum was devoted to the basic sciences with limited clinical exposure until Year 4. The new curriculum integrates the teaching of basic science. Integrated teaching in DPaC includes: the Death and the Cadaver module which teaches anatomy and encourages students to reflect on and discuss their own experiences of and feelings about death; the immunisation session which includes both the basic science reasons for immunisation and the community aspects reinforcing public health learning about preventing disease. Students learn about the physiological and psychological aspects of student, patient and carer stress and coping.

37. While all students identified early clinical contact as positive, some students would value more basic sciences teaching including integration into the later years and particularly identified a greater emphasis on the scientific basis of prescribing. Students would also value more assessment in the principles of basic sciences as related to clinical medicine to drive learning. Clinical placement tutors at Ninewells and Perth Royal Infirmary supported this view.

38. The transition block in the academic year 2008/09 (linking Phase 2 to Phase 3) was delivered jointly by three people each covering basic science, behavioural science or clinical practice. This is the first year the School has delivered

this teaching and it is currently awaiting student evaluation. If this is favourable, we support the School's intention to explore delivering teaching throughout Phase 3 in this manner.

Treatment

39. We note that currently alcohol misuse is the only core clinical problem related to public health and lifestyle. The School should consider including further core clinical problems such as smoking cessation to emphasise the importance of promoting health and preventing disease.

40. We are content that students will have adequate opportunity to learn about palliative care through DPaC.

41. Year 4 students receive teaching in common dosages of drugs used in emergency situations while a more comprehensive two week prescribing course is run towards the end of Year 5. Students and clinical placement tutors would welcome more prescribing teaching than is currently in the curriculum and the School has identified this as an area for further development. We recommend the School increase prescribing teaching and strengthen the assessment of prescribing, particularly in the latter parts of the course as students approach graduation (see paragraph 37).

Clinical and practical skills

42. We are content that students have adequate opportunity to gain the clinical and practical skills listed in *Tomorrow's Doctors*. F1 educational supervisors and clinical placement tutors were uniformly impressed by students' and graduates' clinical skills and confidence in their ability. F1 doctors felt adequately prepared for practice, their educational supervisors confirmed this was the case.

Communication Skills

43. We are satisfied that communication skills are adequately taught and assessed. We note the teaching on consulting through interpreters and encourage the School to consolidate teaching on communication with vulnerable patients.

Teaching skills

44. Teaching skills are delivered in a number of ways including; the doctor as teacher SSC; peer tutoring and peer review, leadership of group work and peer appraisal in DPaC. However, we did not find evidence of a consistent minimum standard to ensure all students are adequately equipped to teach. Students who showed an interest in teaching could gain good experience but as current arrangements are subject to student choice there is the possibility that some

students could graduate without gaining any teaching skills. The School should ensure this minimum standard is in place and monitored.

45. We found good support for F1 doctors who teach and assess students. As F1 doctors hold provisional registration, we encourage the School to set clear parameters outlining what is and is not appropriate for F1 doctors to teach and assess. The School could build on the helpful resources in place for teachers such as the *Getting Started* series of booklets which include advice on structuring on the clinical teaching sessions and interacting with students and which we commend.

General skills

46. We are satisfied that the curriculum provides opportunities for students to gain general skills. We note that all students complete an audit during their core GP placement and note that several of the students interviewed had undertaken research which has been published.

The working environment

47. Students are taught about the working environment through the inter-professional education module on Ward Management which is delivered to medical and nursing students. This teaches students to work with other healthcare professionals and introduces elements of working in the NHS. We commend the School's approach to interprofessional education.

48. Through DPaC, students will see patients in their home as well as GP and community settings. This provides them with the opportunity to explore continuity of care and interdisciplinary and multi-agency working. Students will be placed in groups of 10 with one DPaC tutor for three years. The School identified this as key for building team working and resolving potential conflicts.

49. The School also introduces students to the working environment through significant event analysis, intravenous fluids workshop and the prescribing workshop.

50. Students reported being able to access the wards outside scheduled teaching time. We noted consistent comment about how helpful ward staff were in providing students with access and commend NHS Tayside for encouraging this supportive attitude towards medical students.

Medico-legal and ethical issues

51. Ethics are taught from the first day of Year 1 through a lecture on the GMC's requirements and expectations of medical students and doctors. Students also reported a series of useful ethics lectures, research papers and joint ethics teaching with nursing students.

52. Some students identified a need for teaching on the legislation surrounding vulnerable patients, such as those with a disability, or a patient who is not deemed competent to make decisions regarding their treatment.

Disability and rehabilitation

53. We are content that the curriculum adequately addresses disability and rehabilitation. During DPaC students have access to the brain injury unit where they explore the causes of and the extent to which patients can recover from brain damage and strokes. Students learn about the role doctors and other healthcare professionals play in the rehabilitation of those with brain injuries and the support available to patients and carers. Disability and rehabilitation are also studied during core paediatrics and geriatrics placements.

The health of the public

54. We consider the public health teaching which is delivered is well integrated into the curriculum; it runs throughout the curriculum rather than taught as a distinct topic. Public health runs through systems based teaching from Phase 1 onwards and is heavily addressed in DPaC. Public health concepts are also pooled and revisited during the transition block and more detailed coverage is available through SSCs. The School has integrated microbiology well with public health and have run a student cleanliness champions scheme in Perth Royal Infirmary for final years students since 2002. We note positive student evaluation of this scheme.

55. The School identified some difficulty engaging clinicians and we note there is a lack of public health in the core clinical problems. Following increased additional cost of teaching (ACT) funds the School aims to increase the involvement of public health clinicians from NHS Tayside in undergraduate teaching, we support these plans.

The individual in society

56. DPaC allows students to understand the patient as an individual and as part of their culture and environment through the integration of community care and public health. Through the patient journey module students follow one patient for three years. This allows students to see the effect of chronic illness in a patient and how long term care is managed through general practice.

57. Although there is little ethnic diversity in Dundee and the surrounding area the School has taught the principles of valuing diversity through learning about rural and urban society and role play. Also as part of DPaC, students will be given profiles of four people of different age and ethnicity and asked to give a critique of how this could affect them if they were that patient. The School advised that public health teaching has also led to discussions around professionalism and student attitudes towards social and ethnic status.

58. Students will also be shown slides of unsightly conditions and their reactions filmed so they can understand how this reaction could affect a patient.

Structure

59. The curriculum is spiral based and comprises three phases including problem oriented learning, lectures, tutorials, small group work, clinical skills labs, DPaC, electives, the integrated teaching area, student selected components and clinical placements as described in paragraphs 9 to 13. We are content that that the course structure is fit for purpose.

60. DPaC is a vertical curriculum strand developed over the last four years, it constitutes 10 per cent of the curriculum in Years 1, 2 and 3 and is delivered by 32 tutors, 16 of whom are GPs. Teaching is covered in one afternoon a week and is linked to the systems based teaching students receive in the morning to show how diseases and conditions are treated long term, in community settings and the effects, especially of chronic illness, on patients.

61. The DPaC team advised that integration between systems based lectures and the DPaC course had been inadequate on occasion; and hindered the delivery of an integrated programme. We encourage more effective information exchange to avoid this in future.

62. We found DPaC to be a useful component of the curriculum where a number of core topics are covered. However DPaC suffers from a perceived lack of relevance by students because it is only formatively assessed and does not contribute to their overall course assessment. The School has introduced mandatory attendance. If a student misses a session they must submit written work to show they have met the learning outcome of that session through self study. Failure to do so will result in students being excluded from final exams. As a vital part of the core curriculum the School must summatively assess DPaC.

63. The transition block from Phase 2 to Phase 3 is designed to draw together students' learning, the cross systems teaching in particular focusing on basic science, and prepare students for the transition from the problem oriented learning in Phase 2 and the task-based clinical approach to teaching adopted in Phase 3 with an emphasis on safe practice. This transition block helps students to see the relevance of DPaC, albeit retrospectively.

64. Students transferring from IMU will join the course between Phase 2 and Phase 3. A bridging course is run for IMU students which mirrors the transition block although it is longer and provides additional information, for example, around working in the NHS.

65. Students transferring from St Andrews will enter the course at the beginning of Phase 3. To facilitate transition students will have teaching with Dundee students in Years 2 and 3 and a transitional block over the summer months between Years 3 and 4. We are content that the School has adequately mapped the two curricula and that students will have an appropriate clinical experience as the Dundee Years 4 and

5 are longer than those of other medical schools in Scotland. We commend the School for the careful consideration and collaborative working that has supported the transfer arrangements for students from St Andrews to Dundee and require the School to provide an update on the implementation of this process in the QABME annual return.

66. Phase 3 comprises 17 clinical blocks over two years including core placements in surgery, medicine, obstetrics and gynaecology, paediatrics, psychiatry and general practice.

67. Clinical placements are based around Dundee and Perth with some peripheral placements as far away as Stirling and, in the case of one SSC, Middlesbrough. The majority of students interviewed did not consider travel to and from placements outside of Dundee to be a problem and welcomed the diversity of placements.

68. We found variable knowledge and application of the Dundee curriculum at peripheral sites. This was particularly evident at sites where students from multiple Schools were taught. Students and clinical placement tutors reported that a generic experience was provided to students from three Schools which did not necessarily map to the learning outcomes of the Dundee curriculum. The School must ensure that clinical placements allow students to gain the experience and meet the outcomes prescribed in the Dundee curriculum while based at peripheral sites.

Delivering the curriculum

Supervisory structures

69. Following scrutiny of the evidence submission we are content that the committee structure at the School is appropriate. During the review of the School we explored the level of student involvement in these committees and their role in policy and decision making. Although we found this to be adequate students would welcome an increased degree of involvement in decision making.

70. Each Phase of the curriculum has a management committee which reports to the UMEC. The UMEC, Assessment Committee and East of Scotland Deanery Foundation Committee report to the Medical School Board which has final authority for academic quality assurance and will formally ratify and adopt policy, validation processes relating to the organisation of education and research including curricula and examinations. Above the Medical School Board is the College Board which reports to the University Senate and above that, the University Court.

71. Student representatives on the MSC and the UMEC are democratically elected through competitive online elections. The MSC attempts to be genuinely representative of the student body and has representatives from each year who are specifically charged with collecting views from students to bring to the MSC and disseminating information back out from the MSC to each year. They also use email and web page communication.

72. The MSC meet the Undergraduate Teaching Dean once every two weeks and consider that the School listens and responds to their concerns, which are recorded, monitored and tracked. If concerns are not acted upon the School will explain their reasons. The MSC think they are an underused resource and would welcome greater opportunity to feed into course development and School initiatives proactively before changes are implemented.

Teaching and learning

73. The teaching sessions we observed were mostly well structured and appropriate. Practical sessions observed were clearly presented and used appropriately sized groups for teaching. One practical session was based on a Year 4 student project; we thought this innovative session provided good hands-on experience.

74. Students accepted the School requirements around attitudes and behaviours. The School has introduced a yellow/green card system where both students and their tutors can receive a card as an indicator of professional conduct. The yellow card indicated a cause for concern with respect to professional behaviours and a green card where their professional conduct is exemplary. We found School requirements of their students around attitudes and behaviours to be appropriate.

75. Students identified their tutors as role models and reported that role models could also be found on the ward and in clinical skills. There is an open culture of debate between staff and students within the School.

76. The School undertook a needs assessment of staff development in August 2006. Staff delivering undergraduate teaching identified their own development needs. This did not appear to reach out very effectively to the peripheral units visited. The School and postgraduate deanery are working together with the Director of Medical Education for NHS Tayside to provide a coherent approach to staff development reducing the time and cost of training.

77. Staff development programmes are available to all doctors from F1 to consultant grade who are involved in the teaching and assessment of undergraduate medical students.

78. The uptake of staff development programmes on peripheral sites could be improved. Although the School make clinical placement tutors aware of the training and development opportunities available to them there is little pressure from the School on tutors to meet their requirement to train. The School must work to ensure staff receive appropriate training.

79. The School and NHS Tayside's quality management activities have produced evidence that the level of staff development clinical tutors receive is variable. NHS Tayside has agreed to fund four hours of staff development per year for consultants delivering undergraduate teaching.

80. Student evaluation of teaching has a 70 to 80 per cent response rate. The School recently made this a compulsory part of the students' portfolio. Students acknowledged that their evaluation was taken seriously and provided examples of changes made as a result. Developments as a result of student evaluation are posted on the VLE. However the students are concerned that the frequency and volume of data they are asked for at the end of each block, some of which are only a week long, is excessive. We endorse this concern. The School should review how student evaluation is collected.

81. The School recognised that quality management of peripheral placements could be improved. Much reliance was placed on student evaluation, which although valuable, should not be the sole driver for change. The School must strengthen monitoring and review of the quality of teaching in peripheral placements.

82. We commend the School's commitment to interprofessional education (IPE). In addition to formal IPE teaching including written work and lectures they identified opportunities to work with healthcare professionals such as speech therapists, practice nurses and a week during core placements in obstetrics and gynaecology spent with a midwife. The School has introduced an IPE module called Ward Management which includes medical and nursing students working together and incorporates elements such as prescription writing.

83. Students participate in two interprofessional ethics discussions with nursing students, midwives and specialist nurses. Sessions are facilitated by interprofessional tutors. Student evaluation indicated it is popular.

84. Medical and nursing students visit local primary schools in pairs as part of an SSC. The School identified this as a good opportunity for interprofessional learning and evaluate interprofessional learning opportunities to ensure only those that work well continue as part of the curriculum.

85. Through the use of the ward simulation exercise in Year 5 students are assessed on their ability to work as part of a multiprofessional team (see paragraph 87).

Learning resources and facilities

86. We were impressed by the standard of some facilities, for example the clinical skills centre at Ninewells and found resources generally at the sites visited to be adequate although quite crowded at one site. We note that following the merger of two hospitals, students will have a purpose built education centre on that placement which should relieve this pressure. We encourage the School in its plans to modernise facilities such as lecture theatres at Ninewells.

87. We note the Year 5 ward simulation exercise was valued by students, F1 doctors and their educational supervisors. The exercise tests students' ability to apply their basic science and clinical knowledge in a simulated ward environment. It also tests their ability to deal with pressure and work with colleagues from other health professions, professional attitudes and behaviours and generic skills such as

completing a handover and taking a history. Events within the ward simulation exercise are timed, if students complete component parts quickly they will only have to deal with one challenge at a time whereas students completing them less quickly will have several events to deal with concurrently. The standardisation of the ward simulation exercise should be improved before it is used to determine whether a student passes or fails.

88. Following completion of the exercise students are assessed summatively and formatively. There is an opportunity for students to view the video of their performance with a student colleague and group feedback sessions are run by the School.

89. We consider the School's VLE to be a valuable resource, students are confident that all information pertaining to their course including curriculum, assessment and student support are available and easily accessible. The School has identified the need for all clinical placement tutors to have access to the VLE, and is providing them with log in details.

Student selection

90. We are satisfied that selection processes and procedures are appropriate and note that the School and University take an integrated approach to admissions.

91. The School has introduced a multiple mini-interview format selection interview. There are 10 stations of seven minutes duration, interview results are considered alongside academic scores achieved at School and in the United Kingdom Clinical Aptitude Test (UKCAT) and Universities and Colleges Application Service (UCAS) applications when selecting students.

92. Some applications are doubled marked, and entry requirements have been lowered with a greater emphasis placed on the attitudes and behaviours displayed during the multiple mini-interviews to ensure that the right applicants are offered places.

93. The selection process is explained fully to prospective students; early evaluation indicates that students found it fair and appropriate. The School has appointed a member of staff to collect and analyse the resultant data and identify areas for improvement. We commend the rigour with which the School is exploring and evaluating its innovative admissions policy.

94. There is a pan-Scotland widening participation system for outreach to Schools. The School primarily sees the challenge of widening participation as appealing to potential students from different social backgrounds rather than students from ethnic minorities. The data provided by the School suggests that the relatively low percentage of students from ethnic minority backgrounds reflects the Scottish population and the ethnic balance of the applications.

95. The School plans to pilot a scheme whereby six places on the pre-medical course will be reserved for students from deprived areas who might not have gained

the required entry qualifications. They will then sit the multiple mini-interviews in order to enter the MB ChB course.

Student support, guidance and feedback

96. Students are allocated a DPaC tutor for Years 1-3, there is the opportunity to develop a consistent relationship and DPaC tutors are often the first to identify when students are experiencing difficulty. DPaC tutors have established strong links with phase conveners and personal tutors to ensure students are given support in a timely fashion.

97. We are satisfied that the School has put in place structures to support students transferring from IMU and St Andrews. Nevertheless, the School has in place a number of fall back options, including allowing St Andrews students to decide for themselves at the end of the transitional block that they will enter Year 3 rather than Year 4. If students struggle in Year 4, they can repeat the year and will complete their course in the same time as students transferring to other Schools before qualification. We commend the considerable progress the School has already made and require the School to provide updates of the implementation and evaluation of these arrangements via the QABME annual return.

98. The School has made a number of quite extensive changes to the content and structure of the transitional course that they run for IMU students in response to the views of those students and the views of staff. The School has argued that their considerable experience of admitting IMU students to Year 4 makes them well placed to successfully deliver similar plans for St Andrews students.

99. IMU students would appreciate more teaching on exam techniques as part of the bridging course. They also suggested taking the Year 3 exam as a formative assessment. IMU students indicated they were pleased with the new appointment of an IMU tutor lead and that they found the session on understanding the local accent to be very useful.

100. We are content that adequate guidance is provided to students via the VLE and through their personal tutors. The Medical School Secretary provides additional guidance on assessment, appeals and School policies.

101. We are content that feedback provided to students following assessments is appropriate however feedback following clinical placements could be improved (see paragraph 121).

Assessing student performance and competence

The principles of assessment

102. We are content that the assessment system for Years 1 to 3 maps appropriately to the curriculum allowing students to demonstrate that they have

achieved the 12 curricular outcomes of the *Scottish Doctor*. With the exception of teaching and training we are content that this also maps to the curricular outcomes of *Tomorrow's Doctors* (see paragraph 44).

103. We are concerned by the complexity of mapping of curricular outcomes to the Year 4 and 5 OSCEs. During the final exam board, the School advised that the Year 5 OSCE maps to the *Scottish Doctor* curricular outcomes 1 to 7. These do not address *Tomorrow's Doctors'* outcomes for teaching and training, probity or health. However, we recognise that the OSCE stations are 15 minutes each and test more than one of the *Scottish Doctor* curricular outcomes. The School's analysis stated that the Year 4 OSCE mapped to all the outcomes of the *Scottish Doctor*. However, in our opinion each station attempted to assess too many outcomes. The School must more clearly map assessments, including the Years 4 and 5 OSCEs, to curricular outcomes.

104. We are content that both core and SSC parts of the curriculum are assessed. The School is aware of the challenge in ensuring consistent assessment of SSCs and is working to address this.

105. We are satisfied that the range of assessment techniques, including essays and written work, OSCEs, online and written exams, are appropriate for testing the curricular outcomes. The School has introduced the mini-Clinical Examination Exercise (mini-CEX) which students consider good preparation for the foundation programme.

106. The Year 4 OSCE is the final clinical examination all students will take before graduation. We considered the examination to be well run and organised, the facilities used were of a high standard and examiners and students were well briefed. Stations were comprehensive, realistic and addressed several of the *Scottish Doctor* outcomes. Although this attempt to assess students more broadly and across a number of domains within each station is to be encouraged, the School will need to ensure that mapping to outcomes is more specific and the enthusiasm to simulate real medical practice does not result in overly complicated assessment rules and practices.

107. In addition to the Year 4 OSCE, students are assessed by clinical placement tutors in each of the 17 blocks in Phase 3. The 10 Year 4 clinical placement assessments are used to provide ongoing formative assessment of progress in year 4 and to indicate in which areas students may require additional support perhaps as directed study in year 5. The assessments for the seven blocks in Year 5 are compiled in a portfolio along with students' reflective pieces. Students then undertake a viva based on this portfolio to gain an exemption from further examination. If students fail to gain an exemption they undertake a short period of focused learning and development before sitting another portfolio viva and the Year 5 OSCE.

108. We commend the emphasis maintenance of a portfolio places on professionalism and the preparation this provides for foundation, specialty training and revalidation. We consider the portfolio exemption examination would be best employed to identify those students who are clearly well above a conservative

borderline cutpoint and so regarded as clearly fit to practise. We therefore require that the School review the cut point of the portfolio viva to ensure all borderline students' are tested close to graduation through the Year 5 OSCE.

Assessment procedures

109. Final examinations are taken in two parts across Year 4 and Year 5. Part 1 in Year 4 comprises an extended matching items assessment and an OSCE. Part 2 in Year 5 comprises a portfolio viva in May which can lead to an exemption from the OSCE in June. Those who undertake the OSCE are required to complete a further portfolio viva in June. The first portfolio examination includes assessments, reflective pieces and work from Years 4 and 5 while the second also includes targeted work undertaken following the portfolio viva in May.

110. We encourage the School to minimise examiner prompting and coaching of students during clinical examinations and where prompts are necessary, ensure that they are standardised.

111. The School has a number of formative assessments throughout the course including anatomy practicals, OSCEs, online questions, DPaC feedback/appraisal, systems based self assessment, clinical skills, block outcome assessment forms, ward simulation exercise and progress tests each year.

112. The final year exam board was asked to consider ratings of A to F against each of the 12 curricular outcomes of the *Scottish Doctor* from the June portfolio viva, and percentage scores for the seven OSCE stations when deciding whether a candidate was fit to graduate. The Examination Board considers both achievement of the overall standard for the examination and the number of failed stations. Judgements about progress are made based on consideration of information about students:

- a. With E grades or worse in any outcome in the portfolio.
- b. Who fail to meet the overall standard for the standard-set OSCE.
- c. Who fail to meet the standard in 3 or more stations in the OSCE.

113. We are concerned that the process to make progress decisions is not sufficiently robust. For example, a student may fail three of the seven marked Year 5 OSCE stations, yet gain a pass overall and graduate.

114. We are concerned that borderline fail (E) grades may or may not be moderated depending upon the views of the two portfolio examiners, who are required to indicate whether they would support such moderation. Both the lack of reproducibility of viva examinations and the differential treatment of some E grades as against other E grades are of concern.

115. The final decision appears to be a judgement made by the Exam Board, influenced by the examiners and other less objective sources of information. We are

concerned by the complexity of the process of adding together scores that reflect categories (A-F) and percentages. This is compounded by a lack of clarity around compensation rules. This is of particular relevance to borderline scores, where the decision rules are unclear. We require the school to have more clearly defined assessment regulations for final examinations and better manage the complexity to ensure consistency and transparency in decision making year on year.

116. We discourage the School from identifying students by name in the paperwork for the exam board. This will ensure that decisions made are objective.

117. The School has been piloting mini-CEX and Direct Observation of Procedures (DOPs) with a view to including them in the portfolio in subsequent years.

118. Standard setting is completed using a modified Angoff technique. The standard setting group will remove questions that do not behave as expected; this group will always include GP representation. Students can find information on standard setting in *Up Stethoscope*.

119. External examiners review written assessments, observe assessments, provide the School with reports and attend the Exam Board. The external examiner took an active part in the final year Exam Board and reported that the OSCE was well run and the portfolio was an innovative tool. However, the external examiner reported that it took two years of observation before he fully understood the process of the portfolio viva.

120. We commend the School's approach to developing innovative assessment procedures including mini-CEX, DOPs, portfolio and ward simulation and the way the School is attempting to combine these scores to produce a student performance profile. The School should consider more formal evaluation and dissemination of some of the innovative assessment processes that they are using.

Appraisal

121. Students receive feedback regarding performance in assessments throughout the course and School protocol requires feedback to be given to students following each clinical attachment. Students reported the quality of feedback was variable with many clinical placement tutors marking a single line in the satisfactory column and failing to provide comments. The School should review how feedback is collected to ensure processes are fit for purpose and clinical placement tutors provide students with useful feedback.

Student progress

122. The Teaching Dean meets those students who fail the final year to discuss their options before discussing their cases at the Student Progress Committee. Those failing finals for the first time are eligible to re-sit the examinations the following year. They will complete three seven week clinical attachments and then

re-sit the June portfolio viva and the Year 5 OSCE. They remain matriculated and have full access to educational resources such as the library.

123. The School pass graduates' records to the East of Scotland Deanery regardless of their performance or to the deanery where they will complete the foundation programme. We suggest that, where appropriate and with the consent of the graduate, specific information should be shared with all deaneries accepting Dundee graduates using forms in line with guidance issued by the UK Foundation Programme Office.

124. Students thinking of leaving the course are encouraged to discuss the possibilities of transfer to other courses in the university. Students will be given a credit rating based on how much they have done so far that is transferable to other courses or a BSc (Med Sci) after successful completion of Year 3 and a BSc (Med Sci with Hon) after successful completion of Year 4. First discussions about doubts and options are not kept on student records. Students can also have informal discussions with tutors that do not go on record if the student does not want them to. Students interviewed were aware that various qualifications were available to those choosing to leave the course before completion.

125. Students whose fitness to practise is under investigation will contact the Medical School Secretary for advice on how their case will be handled and what support is available to them. This information is also available on the VLE and students are supported by their personal tutor. The School has previously arranged representation by the British Medical Association (BMA) and the Medical Defence Union (MDU) for students in fitness to practise hearings.

126. The School is revising its fitness to practise procedures in light of the new GMC and MSC guidance, *Medical students: professional behaviour and fitness to practise*. The School is currently taking advice from the university legal team and has established a Student Support and Progress Committee (SSPC) which will, amongst other things, decide whether a formal fitness to practise hearing is required. Investigations for undergraduate fitness to practise will be undertaken by the postgraduate deanery and vice versa for F1 doctors. Fitness to practise proceedings will be heard by a Fitness to Practise Committee which includes senior consultants, junior doctors, representation from another medical School and students. GMC and MSC guidance *Medical students: professional values and fitness to practise* requires that the student representative must not know the student under investigation. The university considers this to be equivalent to its own termination procedures, and the Fitness to Practise Committee reports to the University Senate via the Medical School Board and the College of Medicine Dentistry and Nursing Board.

127. If the School has concerns in the final portfolio exam about professional attitude students must agree to these concerns being raised with the deanery where they will complete the foundation programme in order to be allowed to graduate. The record of these concerns is passed to the East of Scotland deanery automatically.

128. Clinical placement tutors would value information from the School on student progress so that they could write appropriate references when requested.

Student health and conduct

129. Clinical placement tutors praised the conduct of students and students interviewed identified good conduct as a strength within their own cohort.

130. Students were aware of a number of reasonable adjustments made for students with a disability such as students with sight problems being given extra time in exams and using touch instead of sight.

131. Students advised that dyslexic students are given a sticker to put on their written work so assessors will take this into account for spelling and grammatical errors. They will also be given extra time in exams and the university provides a disability services room.

Acknowledgement

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



College of Medicine, Dentistry and Nursing

MEDICAL SCHOOL

9 October 2009

Ms Kirsty White
Head of Quality Assurance (Education)
Education Section
General Medical Council

Dear Ms White

RE: Final QABME report Dundee Medical School 2008-2009

Thank you for your e-mail of 16th September 2009 and the attached final QABME report for Dundee Medical School.

The Medical School are pleased with the positive outcome of the process and that the visiting team were able to commend us across a range of areas of innovation and good practice. We note the requirements and recommendations and I enclose a document outlining the Schools plans to address these.

I would like to reiterate comments made at the final session in respect of the constructive and positive nature of the QABME process and I would like to thank on behalf of the Medical School the visiting team members for their professional and valuable input to a process which I am sure will further enhance the quality of education we provide to our medical students.

Kind regards

Yours sincerely

A handwritten signature in black ink that reads 'Gary Mires'.

Professor Gary Mires
Undergraduate Teaching Dean

University of Dundee Medical School response to GMC QABME report 2009

Requirements:

Undertake a review of and improve the following assessment practices:

1. The assessment of DPaC. The School must assess in a summative way this key curriculum strand

This requirement fits with our existing strategy to assess in a summative way this strand of the curriculum as part of our integrated assessment process. Consideration is underway by the DPaC teaching group who will bring recommendations to UMEC and the School Assessment Committee in respect of how this is to be implemented. The most likely approach will be through revised OSCE content and associated summative portfolio work.

2. The mapping, rules and decision making process of the final year exam board regarding the award of the MB ChB, in order to ensure decision pathways are clear and more protocol driven.

3. Review the cut point of the Year 5 portfolio viva, to ensure that a higher proportion of students undertake the Year 5 OSCE, so that all borderline students are tested close to graduation and are fit to practise.

The Medical School welcomes the helpful comments made by the GMC QABME visitors after the Final Examination Board. These will be taken up in the context of our current review of the content and use of the portfolio and the OSCE in the Final examination.

The Medical School Assessment Committee will review the exemption criteria for the final OSCE and portfolio examination with the aim of increasing assurance that all borderline students are identified and proceed to these examinations. The potential additional criteria being considered include performance in the part 1 MB ChB examinations and clinical placements in year 4.

We agree with the concern of the visitors about the need for greater clarity over how the results of the OSCE (continuous data) and Portfolio (categorical data) are used in the final decision making process for the award of the MB ChB, particularly the interrelationships when there is a discrepancy between the two sets of results. We are therefore going to propose to the Assessment Committee that in future the detailed content of the seven 15-minute stations in the final OSCE is mapped to the curriculum outcomes as well as to the individual stations. This should enable the results to be more clearly related to those curriculum outcomes which the OSCE is able to assess. Any moderation of borderline fail portfolio grades at the Final examination

board will then be in the light of performance in specific outcomes (relative to the standard set for the activities encompassed by that outcome) in the OSCE. There will still be a requirement to meet the overall pass standard in the OSCE and the review by the Assessment Committee will include the question of degree of compensation across stations.

The School will clarify the relationship between performance in the OSCE and in the Portfolio during the Final Examination in the MBChB regulations and information provided directly to examiners and students.

Provide progress updates to the GMC regarding transfer of students from St Andrews to Dundee via the annual returns for 2009/10 and 2010/11

These will be provided and informed by student and staff feedback on the transfer / integration process in addition to student performance data.

Undertake a review of and improve the following with regard to peripheral clinical placement sites:

1. Engagement of clinicians with the School's curriculum and expectations including attendance at training and staff development initiatives

2. The quality management and oversight of education and training

The Medical School will establish a rolling programme of staff development and quality assurance visits to peripheral sites used in the education of our students. This will build on successful visits already undertaken to some sites during the last academic year e.g. Oban. These visits will provide an opportunity to meet local staff development needs in association with ensuring that the teaching and learning requirements of the Medical School are clarified. The visits will also allow a review of the educational facilities provided to students including IT. Where possible and appropriate we will explore making these visits joint with the Postgraduate Deanery (Foundation Programmes).

With the NHS Director of Medical Education we are reviewing the SLA for provision of undergraduate education. This will include a requirement for staff development.

Recommendations:

The School should strengthen the teaching and assessment of prescribing, particularly in the latter parts of the course as students approach graduation

This is an area already recognised by the School as requiring development. We have recently established a group tasked with reviewing and developing our teaching and assessment of prescribing. In addition we have appointed two part time lecturers in teaching and scholarship to deliver teaching on prescribing across the curriculum with one of these posts based in clinical skills for earlier years simulated training and the other within the clinical environment to develop materials for final year students undertaking their foundation apprenticeship attachments.

Another example of initiatives in this area is foundation doctor led practical prescribing tutorials which are running for the second year following a successful pilot last year.

The School should emphasise the importance of promoting health and preventing disease through the adaptation of existing core clinical problems or the addition of new ones

This is being undertaken as part of a review of the core clinical problems

The School should set a consistent standard to ensure all students are adequately equipped with teaching skills

The GMC recognised that teaching skills are delivered in a number of ways within the curriculum including the doctor as teacher SSC; peer tutoring and peer review, leadership of group work and peer appraisal in DPaC and that students who showed an interest in teaching could gain good experience via a number of opportunities.

We agree that there is not a consistent minimum standard to ensure all students are adequately equipped to teach and will work to define this.

The method and quantity of student evaluation of teaching data collected should be reviewed to ensure it is appropriate and not overly burdensome to students

A review of student feedback / evaluation requests is underway. We have already agreed a revised feedback form which provides the required dataset for our QA processes (University and NES) but contains a reduced number of questions from the previous version. In addition we are planning to reduce the frequency of completion of these forms by student particularly in Phase 3.

The standardisation of the ward simulation exercise should be improved before it is used to determine whether a student passes or fails

We are pleased with the GMC's recognition of the potential value of and encouragement to continue to develop the ward simulation exercise as part of our assessment toolkit.

We acknowledge the need for this further development particularly in respect of standardisation and ensuring reliability. We have no plans to use the exercise for pass fail decisions until this further work is completed.

The School should consider more formal evaluation and dissemination of some of the innovative assessment processes that it is using

We appreciate the GMC's commendation of our approach to developing innovative assessment procedures including mini-CEX, DOPs, portfolio and ward simulation and our attempts to combine these scores to produce a student performance profile.

We acknowledge the need to more formally evaluate and disseminate some of this work and hope that the recent appointment of a new Chair in Medical Education Research will facilitate this.

The method and quantity of feedback to students should be reviewed to ensure it is valuable

We agree that the quality of feedback provided to students on their performance is variable. We propose a review of the current feedback opportunities across all areas including summative assessments and clinical placements with a view to ensure processes are fit for purpose feedback provided is useful. This will be a collaborative review with the ACT QA lead.