Reaccreditation of a Master of Pharmacy degree course (MPharm)

Robert Gordon University

Report of a reaccreditation event, 6-7 March 2013

Introduction

The General Pharmaceutical Council (GPhC) is the statutory regulator for pharmacists and pharmacy technicians and is the accrediting body for pharmacy education in Great Britain. The GPhC is responsible for setting standards and approving education and training courses which form part of the pathway towards registration for pharmacists. The UK qualification required as part of the pathway to registration as a pharmacist is a GPhC-accredited Master of Pharmacy degree course (MPharm). The GPhC's right to check the standards of pharmacy qualifications leading to annotation and registration as a pharmacist is the *Pharmacy Order* 2010. It requires the GPhC to 'approve' courses by appointing 'visitors' (accreditors) to report to the GPhC's Council on the 'nature, content and quality' of education as well as 'any other matters' the Council may require.

This reaccreditation event was carried out in accordance with the GPhC's 2011 MPharm Accreditation Methodology and the course was reviewed against the GPhC's 2011 education standards 'Future Pharmacists: Standards for the initial education and training of pharmacists'.

Background

The Robert Gordon University School of Pharmacy and Life Sciences was previously re-accredited on 17-18 February 2009 by an accreditation team representing the Royal Pharmaceutical Society of Great Britain. The then accreditation team agreed to recommend to the Society's Education Committee that the University's MPharm degree be accredited for a full period of 5 years until the academic year 2013-14. There were no conditions or recommendations reflecting the accreditation team's view that the School was working effectively within the then current constraints and that the School wished to develop aspects of the course whenever this became possible. The accreditation team agreed that a series of seven commendations be given to the School.

Although the period of re-accreditation granted was until 2013-14, the School requested that the scheduled re-accreditations of its MPharm and OSPAP courses be exchanged, allowing the School to plan the re-accreditation of the OSPAP course in the light of findings from the MPharm re-accreditation, and to review the future viability of the OSPAP course. The GPhC agreed to this request.

Documentation

The provider submitted submission documentation to the GPhC in line with agreed timescales and a pre-visit took place at the Robert Gordon University on 30 January 2013 . During the pre-visit the schedule of meetings and timings for the reaccreditation event were confirmed.

The following documents were submitted by the University in advance of the reaccreditation event:

-    Completed GPhC submission template 'Reaccreditation of an MPharm degree course'
-    MPharm re-approval report (draft – the final version was presented during the visit)
-    Evidence documents: 145 evidence documents were submitted on a USB memory stick as tabulated below:

The event

The event began with a private meeting of the accreditation team and GPhC representatives on 5 March 2013 at the Copthorne Hotel, Huntly Street, Abrdeen. The remainder of the event took place on site at the Robert Gordon University Aberdeen on 6-7 March 2013, and comprised a series of meetings with staff and students of the University.

Accreditation team

The GPhC's accreditation team ('the team') comprised:

Name	Designation at the time of accreditation event
Professor Stephen Denyer*	Accreditation team leader, Deputy Pro-Vice Chancellor, Cardiff University
Dr Andrew Husband	Accreditation team member (Academic), Dean of Pharmacy, Durham University
Mr Michael Pettit	Accreditation team member (Pharmacist), Lead Pharmacist for Women's and Children's Division, Royal Sussex County Hospital
Dr Linda Hakes	Accreditation team member (Pharmacist), industrialist, UCB Pharma Vice President & Global Project Leader.
Ms Leonie Milliner	Accreditation team member (Lay), Chief Executive for the Association for Nutrition

along with:

Name	Designation at the time of visit
Ms Joanne Martin *	Quality Assurance Manager (Education), General Pharmaceutical Council
Dr Ian Marshall	Rapporteur, Emeritus professor, University of Strathclyde
Professor Chris Langley	Observer , Professor of Pharmacy Law & Practice and Deputy Head of the School of Pharmacy, Aston University
Professor Bill Scott	Observer, Chief Pharmaceutical Officer for Scotland
Mr Shazad Ahmad	Observer, Recently qualified community pharmacy manager
Dr Ruth Cartwright	Observer, Principal Pharmacist at Trent Medicines Information Service, Leicester

*attended pre-visit meeting on 30 January 2013 (Professor Denyer by teleconference)

Declaration of potential conflicts of interest
Professor Bill Scott declared that he was a visiting professor at both Scottish Schools of Pharmacy. It was agreed that as an observer on behalf of the Scottish Government rather than the GPhC this did not constitute a conflict of interest.

Meeting the accreditation standards

	Accreditation team's commentary
Standard 1 – Patient and public safety There must be clear procedures to address concerns about patient safety arising from initial pharmacy education and training. Concerns must be addressed immediately.	**The team was satisfied that the one criterion to meet this standard will be met** The admissions process for the MPharm includes Declaration of Good Health and Good Character (DGHGC) forms which are also completed and reviewed annually, and Disclosure Scotland or other appropriate criminal record checks which all students will have completed before attending any off-campus placement activity. The School has Pharmacy Fitness to Practise (FtP) procedures in place which ensure that any suspected student-related FtP issues, including those which may jeopardise patient safety, are appropriately considered and addressed. This applies to relevant health issues as well as to behaviour. The MPharm teaching, learning and assessment strategy is based on ensuring patient safety. The criteria used for all assessments are explicit; unsafe practice automatically results in failure regardless of performance in other aspects of the assessment. The development of professionalism starts at student induction with the understanding that the student is not only beginning an academic course but joining a healthcare profession. Placement providers are given clear information prior to any work-based placement about support including supervision which they need to provide for the student. Written confirmation is obtained from the provider on their responsibilities under health and safety legislation in the workplace. Each student is required to sign an agreement form indicating intended compliance with required standards of behaviour and

	conduct before they are permitted to attend the placement.
Standard 2 – Monitoring, review and evaluation of initial education and training The quality of pharmacy education and training must be monitored, reviewed and evaluated in a systematic way.	**The team was satisfied that the one criterion to meet this standard will be met** The Head of School is responsible for overall planning, co-ordination, development and supervision of the academic work of the School through a formal committee structure and reports to the Dean of the Faculty of Health and Social Care. The School Academic Board (SAB) oversees the operation and development of all courses in the School's portfolio. The MPharm Teaching, Learning and Assessment strategy reflects the broader institutional approach in that quality assurance processes are used to promote a culture of quality enhancement in teaching, learning and assessment. The University must be assured of the ability of placement providers to provide the learning opportunities to enable the specified learning outcomes to be achieved, to support students on placement, and to fulfil responsibilities under health and safety legislation in the workplace, having regard to the level of skill and experience of placement students. Student representation and evaluations inform and direct enhancement by highlighting problems, and hence focusing attention and enhancement actions.
Standard 3 – Equality, diversity and opportunity Initial pharmacy education and training must be based on principles of equality, diversity and fairness. It must meet the requirements of all relevant legislation.	**The team was satisfied that the two criteria to meet this standard will be met** The University has a customised online equality and diversity training package (Diversity in the Workplace) which must be completed by all academic, administrative and technical staff. Completion of the package is a requirement for all new-start staff and a phased roll-out of the training commenced in November 2012 for all existing staff. The School volunteered to be the pilot staff group to complete the training package and also held a workshop on this topic at a School staff meeting in December 2012. The aim of the School is to deliver the MPharm in a manner that is accessible to all and as far as possible to anticipate the needs of any student who may disclose a disability. Throughout all stages of the course, students encounter simulated patients and have to respond to case studies, in which they are presented with a diverse patient population. Throughout these scenarios it is emphasised that students must not judge patients on the basis of their personal religious, cultural or other beliefs.
Standard 4 – Selection of students and trainees Selection processes must be open, fair and comply with relevant legislation. Processes must ensure students and trainees are fit to practise at the point of selection. Selection includes	**The team was satisfied that the three criteria to meet this standard will be met** Information provided for potential applicants about the MPharm includes an overview of the course and its content, entry requirements and career prospects. Open Days are held with a tour of facilities and provision of an overview lecture. All applicants being offered a place are invited to an Applicants' Day where academic staff give more detailed course information including 'taster' lectures and are available to answer questions. Admissions are made on the basis of secondary school academic performance by the University Admissions Office with a second check for consistency by another member of the University Admissions staff. Non-standard applications are referred to the School admissions tutor; any decisions are double-checked for consistency by University Admissions and may sometimes involve consultation with other staff within

recruitment and admissions.	School e.g. Head of School/Course Leader within the School. The Admissions Office provides training for the acceptance of overseas students. A prior arrangement exists between the School and two institutions in the Sultanate of Oman where annually a small number of outstanding students from each institution may be admitted to stage 2 of the MPharm. Additionally, In 2012, the University launched an International College (ICRGU) with Navitas, an international private tertiary level educational provider offering a pathway for international students, mainly from Malaysia, Hong Kong and Singapore, to the MPharm award through a University Foundation course which will help equip potential students with the skills, knowledge and confidence needed for the MPharm. Progression to Year 1 of the MPharm is assured as long as the minimum pass marks are achieved within the University Foundation course.
Standard 5 – Curriculum delivery The curriculum for MPharm degrees and the pre-registration scheme must deliver the outcomes in Standard 10. Most importantly, curricula must ensure students and trainees practice safely and effectively.	**The team was satisfied that the eleven criteria to meet this standard will be met** The University operates a modular system and hence the MPharm is based on a modular approach enhanced by a system of teaching groups that principally support vertical integration. The pedagogic approach taken is to focus on outcomes, promoting active learning to produce independent learners that understand the requirement to integrate science into their practice. The MPharm Teaching Learning and Assessment strategy aims to ensure that students experience the MPharm degree as an integrated whole, rather than as a series of discrete modules. Thus, although initially assessment is planned and designed at the module level, it is then considered at the course level to ensure that all learning outcomes are assessed, and once only, and that assessment instruments are appropriate for capturing the desired outcome. All marking criteria make it clear that unsafe practise will automatically result in failure regardless of performance in other aspects of the assessment. All feedback on assessment is officially returned within 20 working days although in practice often more quickly. Nevertheless, some students interviewed considered that the University could improve its performance on feedback in that not enough feedback on performance is given. Others felt that feedback was always available if students requested it and that there was no resistance on behalf of the School to providing feedback. Students are provided with opportunities to acquire and demonstrate clinical competencies ensuring that the increased focus on clinical skills causes no erosion in the teaching of the underpinning science. The course is designed to achieve this through a set of modules which integrate science, clinical, therapeutic and professional practice within broad themes of The Patient, The Pharmacist and The Medicine. The themes become increasingly intertwined as the course progresses until stage 4 where the student integrates all the knowledge and skills acquired on the course to achieve the best possible patient outcomes. The accreditation team queried the appropriateness of a modular approach being used to produce a truly integrated curriculum; the Head of School re-emphasised that modularity is a philosophy of the University and that integration of the course is facilitated by the integration of the teaching team with all staff on the course having two mentors – an educational specialist and also a mentor who is an experienced member of the MPharm teaching staff. It was emphasised that any future move to a 5-year integrated MPharm would be facilitated by identification of natural break points in the curriculum to allow periods of pre-registration training. The team was told that the new course that will be introduced in 2013 replace all years of the old programme. Thus, students already on course will progress to the next phase of the new course.

	A Professional Experiences Programme provides students across all four stages of the MPharm with a range of learning experiences with patients, carers, pharmacists, other healthcare professionals or healthcare professional students in order to allow them to develop as future pharmacists up to the point of their pre-registration year. Students interviewed opined that the amount of practice learning should be increased. A collaborative partnership, IPE Aberdeen, has been developed enabling staff from the Faculty of Health and Social Care and the Division of Medical and Dental Education (University of Aberdeen, UoA) to develop l curricula across 17 courses enabling 900-1000 students per stage from 10 disciplines, including medicine and dentistry, to engage in interprofessional learning.
Standard 6 – Support and development for students and trainees Students and trainees must be supported to develop as learners and professionals during their initial education and training.	**The team was satisfied that the one criterion to meet this standard will be met** The concepts of professionalism and regulation are introduced in Year 1 through the *GPhC Code of Conduct for Pharmacy Students* and developed further in Year 3 when the work of GPhC committees is replicated. Students interviewed were cognisant of the roles of the regulator and the professional body. In order to support the students in developing as professionals, throughout the course the Professional Experiences Programme ensures they work with a range of professional role models in addition to the MPharm academic staff. The professional role models encountered include: all academic staff, scientists, researchers, support staff, academic personal tutors, clinical e-tutors, teacher practitioners from community, primary and secondary care, and other health and social care professionals including GPs, nurses, social workers and allied health professionals. Students interviewed spoke highly of both academic staff and others as role models.
Standard 7 – Support and development for academic staff and pre-registration tutors Anyone delivering initial education and training should be supported to develop in their professional roles.	**The team was satisfied that the three criterion to meet this standard will be met** All staff members involved in delivering the MPharm are under the supervision of their Teaching Group Leader as line manager. Many staff teaching on the MPharm are also research-active and are members of the Institute for Health and Welfare Research. The core of the UK Professional Standards Framework (UKPSF) in the University is provided by the PgCert HELT course which is open to all staff including part-time staff. The team was told that the majority of staff members have undertaken the course. The PgCert HELT recognises the importance of subject-specific as well as pedagogical expertise. To this end, all participants on the course are provided with two mentors: one an educational expert, the second a subject-specific mentor. The subject-specific mentors are all experienced members of academic staff who receive on-going training to enhance their own development in this role. The primary source of peer support for academics is a mentoring system. However, a recently launched initiative within the MPharm team is a Buddy System. Initially, part of the initiative to provide staff with opportunities to visit a community pharmacy was that integration would be improved if staff were put into science-practice pairs. Staff members were offered the opportunity to pair up with a colleague from a different discipline as a voluntary exercise. The team was told that staff members preferred this system to the approach of peer observation of teaching. In addition module team members act as personal support to other members of each team.

Standard 8 – Management of initial education and training Education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage	**The team was satisfied that the one criterion to meet this standard will be me** The detailed management of the MPharm course, including development, delivery and quality control, is the responsibility of the MPharm Course Management Team which reports to the School Academic Board through the MPharm Course Leader and thence through the Head of School to Faculty and Academic Council. The MPharm Course Management Team is responsible for the development, delivery and quality control of the MPharm and also co-ordinates appropriate StudentStaff Liaison Committee meetings, which deal with day-to-day matters relating to students. The Course Management Team approves all Module Descriptors and Module Performance Descriptors before approval by the Dean. The Course Leader is primarily responsible for all matters relating to the organisation, delivery and review of the MPharm, supported by the MPharm Administrator, and is responsible for maintaining accurate course information.
Standard 9- Resources and capacity Resources and capacity are sufficient to deliver outcomes.	**The team was satisfied that the one criterion to meet this standard will be met** The allocation of all resources to the School is in accordance with standard University practice which is based on FTE student numbers. The School will occupy the top two floors (Floors 5 & 6) of a new building on the Garthdee Campus. School staff members have been involved in the whole design process from initial planning, layout of facilities, to space-fitting and services. The accommodation has been designed to be fit-for-purpose and future-proofed. Laboratories for Pharmaceutical Science, Biomedical Science, Microbiology, Analytical Chemistry and Chemistry have been designed to accommodate 70 students (half a typical MPharm cohort) and these and other smaller specialist facilities will be equipped appropriately. The Pharmacy Simulation Centre is a dedicated resource designed to support the teaching, learning, feedback and assessment of practical skills necessary for practice as a pharmacist. Additionally, a capital allowance of £300k is being made available by the University in order for the School to purchase the necessary additional laboratory equipment for the new building and replacement of outdated equipment and instrumentation. The recruitment target for the MPharm is 120 Home/EU students plus 10-15 international students. There are 38 academics, 25 e-tutors and 12 Teacher-Practitioners who are School- funded, and 4 staff members that are externally funded, a total of 79 individuals with contractual arrangements to contribute to MPharm delivery, approximating to some 38 FTEs. Nineteen members of staff (45%; 17 of 38 FTES) are on the GPhC Register of Pharmacists. Non-pharmacist staff spend half a day in local community pharmacies with a pharmacist member of staff and the lead pharmacist to ensure that all staff who deliver on the MPharm are familiar with services available under the new community pharmacy contract in Scotland and similarly there are opportunities for staff to visit the pharmacy department of the local teaching hospital and a pharmaceutical manufacturing site. The current Staff-Student ratio on the MPharm is 1:17. All academic staff are actively encouraged to participate in research and many staff are also involved in the delivery of the School's taught postgraduate courses. The accreditation team was told that the School anticipated making savings with the move to the new accommodation at the Garthdee Campus through combining activities from 2 separate buildings into one building. The Head of School was unable to say if the new curriculum approach would be more expensive than the old, but opined that it would not be.

Standard 10 - Outcomes	The team scrutinised the learning outcomes by discussions with the teaching staff in two parallel integrated- outcomes subgroup sessions exploring integration and outcomes. The themes examined were drug design for personalised medicine, public health, quality, public health and health inequalities, meeting the needs of specialist patient groups, e.g. older people, functional group chemistry and ethics. Staff members in both subgroups spoke freely and confidently about the development of these themes in the RGU course and demonstrated to the accreditation team subgroups that they operated in an integrated manner. Similarly, the team sampled the delivery and assessment of 8 of the 58 outcomes and agreed that they were met. Accordingly, the team agreed that all the outcomes were likely to be met.
Indicative Syllabus	The team was content with the School's use of the Indicative Syllabus to inform its curriculum. The team agreed that the MPharm degree met the requirements of Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications for the initial education and training of pharmacists.

In summary of Standard 10. the team sampled the delivery and assessment of 8 of the 58 outcomes and agreed that they were met. Accordingly, the team were confident outcomes will be met.

The team was satisfied that the MPharm degree met the requirements of Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications for the initial education and training of pharmacists.

Summary and conclusions

The accreditation team agreed to recommend] to the Registrar of the General Pharmaceutical Council that the Robert Gordon University Aberdeen should be reaccredited to provide an MPharm degree for a further period of six years, with a practice visit to take place in three years . No conditions or recommendations were imposed.

The accreditation team recognised a strength of the provision. This was:

The continued development of interprofessional education at The Robert Gordon University.

Standing condition of accreditation:

These are the conditions which will apply in all circumstances of degree accreditation:

1. The school or department of pharmacy always seeks approval from the General Pharmaceutical Council for curriculum amendments and always at least informs the General Pharmaceutical Council of significant changes to pharmacy undergraduate student numbers or resources for their teaching, learning support and assessment, including any change from internal to teaching, learning and assessment from outside the school or department;
2. The school or department of pharmacy produces and submits to the General Pharmaceutical Council annually requested data on student numbers and progression and degree awards;
3. The school or department of pharmacy produces and submits to the General Pharmaceutical Council annually requested information about the extent of human and physical resources it enjoys for the delivery and support of the degree course;
4. The school or department of pharmacy or the university makes students and potential students aware of the existence and Internet address where they can view the General Pharmaceutical Council's summary reports of degree accreditation exercises, main after- actions therefrom and of the timetable for future accreditation exercises.

The *Pharmacy Order* 2010 states:
Part 5 Education, training and acquisition of experience and continuing professional development, Information to be given by institutions or other providers.
  (3) Whenever required to do so by the Council, any institution or other provider to which this article applies must give to the Council such information and assistance as the Council may reasonably require in connection with the exercise of its functions under this Order.

  (4) Where an institution or other provider refuses any reasonable request for information made by the Council under this article, the Council may, in accordance with article 47 ('Refusal or withdrawal of approval of courses, qualifications and institutions'), refuse to approve or withdraw approval from, any course of education or training, qualification, test or institution or other provider to which the information relates.

It is a requirement of accreditation that institutions or other providers provide the GPhC proactively and in a timely manner with any information which is, or has the potential to be, material to the delivery of an accredited course. This includes, but is not limited to: changes in staffing, changes in funding, and/or substantial changes in curriculum or delivery.

Reference: http://www.legislation.gov.uk/uksi/2010/231/contents/made

Caution: Preregistration and employment as a pharmacist:

- In respect of all students, successful completion of an accredited course in not a guarantee of a placement for a pre-registration year or of future employment as a pharmacist.

Following the above reaccreditation event, the Registrar of the General Pharmaceutical Council agreed with the accreditation team's recommendation and approved the Robert Gordon University MPharm degree for a further period of 6 years,. Reaccreditation will take place in the 2018-2019 academic year, with an interim pre-visit in three academic year's time (2015-16).

Appendix 1 – Standards for the initial education and training of pharmacists

---

Standard 1 – Patient and public safety

1. **There must be clear procedures to address concerns about patient safety arising from pharmacy education and training. Concerns must be addressed immediately.**

1.1. There must be effective systems in place to ensure that students *and trainees*:

    1.1.a   do not jeopardise patient safety;

    1.1.b   only do tasks for which they are competent, sometimes under supervision;

    1.1.c   are monitored and assessed to ensure they always practise safely. Causes for concern should be addressed immediately;

    1.1.d   have access to support for health, conduct and academic issues;

    1.1.e   must not be awarded an accredited degree *or pass pre-registration training* if they might pose a risk to patients or the public;

    1.1.f   understand what is and what is not professional behaviour and are familiar with the GPhC's *Code of Conduct for Pharmacy Students* (2010)*Standards of conduct, ethics and performance* (2010);

    1.1.g   understand what fitness to practise mechanisms apply to them. All schools of pharmacy must have fitness to practise procedures to deal with student causes for concern;

    1.1.h   undergo required health and good character checks;

    1.1.i   understand that it is an offence to impersonate a pharmacist. Pharmacists are registrants of the GPhC.

Standard 2 – Monitoring, review and evaluation of initial education and training

2. The quality of pharmacy education and training must be monitored, reviewed and evaluated in a systematic and developmental way.

2.1 There must be systems and policies in place covering :

    2.1.a   information about roles & responsibilities and lines of accountability;

    2.1.b   university information on:

        2.1.b.i   entry requirements;

        2.1.b.ii   the quality of teaching, learning and assessment;

        2.1.b.iii   the quality of placements and other practice learning opportunities;

        2.1.b.iv   appraisal and feedback systems for students and trainees;

        2.1.b.v   supervision requirements;

        2.1.b.vi   educational resources and capacity;

    These must be monitored, reviewed and evaluated systematically. When an issue is identified it must be documented and dealt with promptly;

    2.1.c   *pre-registration tutors evaluating trainees. To do this, tutors must have access to reliable evidence about a trainee's performance. Tutors must be competent to assess the performance of trainees;*

    2.1.d   *the quality and development of pre-registration tutors.*

Standard 3 – Equality, diversity and fairness

3. Initial pharmacy education and training must be based on principles of equality, diversity and fairness. It must meet the requirements of all relevant legislation.

3.1 systems and policies for capturing equality and diversity data. Concerns should be documented, addressed and disseminated;

3.2 strategies for staff training in equality and diversity

Standard 4 – Selection of students *and trainees*

4. Selection processes must be open, fair and comply with relevant legislation. Processes must ensure students *and trainees* **are fit to practise at the point of selection. Selection includes recruitment and admissions.**

4.1 Selection process must give applicants the information they need to make an informed application.

4.2 Selection criteria must be explicit. They should include:
  4.2.a   meeting academic and professional entry requirements;
  4.2.b   meeting English language requirements appropriate to MPharm degree study. Guidelines issued by English language testing bodies should be followed to ensure that admissions language requirements are appropriate;
  4.2.c   meeting numeracy requirements;
  4.2.d   taking account of good character checks, such as Criminal Records Bureau (CRB)/Disclosure Scotland checks;
  4.2.e   passing health checks (subject to reasonable adjustments being made). Health checks could include self-evaluations and/or evaluations by healthcare professionals;
  4.2.f   recognising prior learning, where that is appropriate

4.3   Selectors should apply selection criteria fairly. They should be trained to do this. Training should include equality and diversity matters

Standard 5 – Curriculum delivery and the student experience

5. The curriculum for MPharm degrees *and the pre-registration scheme* **must deliver the outcomes in Standard 10. Most importantly, curricula must ensure students** *and trainees* **practise safely and effectively**. **To ensure this, pass criteria must describe safe and effective practice.**

5.1 Curricula must be integrated.

5.2 Curricula must be progressive, dealing with issues in an increasing more complex way until the right level of understanding is reached.

5.3 An MPharm must be delivered in an environment which places study in a professional and academic context and requires students to conduct themselves professionally. *Pre-registration training must be delivered in a professional environment which requires trainees to conduct themselves professionally.*

5.4 An MPharm must be delivered in an environment informed by research. This means that whether or not all staff are engaged in research, their teaching must be

informed by research.

5.5 An MPharm degree teaching and learning strategy must set out how students will achieve the outcomes in Standard 10. Learning opportunities must be structured to provide:

    5.5.a an integrated experience of relevant science and pharmacy practice;

    5.5.b a balance of theory and practice;

    5.5.c independent learning skills.

5.6 The MPharm degree curriculum must include practical experience of working with patients, carers and other healthcare professionals. Practical experience should increase year on year.

5.7 There must be a clear assessment strategy for the MPharm degree. Assessment methods must measure the outcomes in Standard 10.

5.8 The MPharm degree assessment strategy should include:

    5.8.a diagnostic assessments;

    5.8.b formative assessments;

    5.8.c summative assessments;

    5.8.d timely feedback.

5.9 Academic regulations must be appropriate for a degree that is both academic and professional and may lead to further professional training. As a general principle, all assessments must be passed. This means that condonation, compensation, trailing, extended re-sit opportunities and other remedial measures should be extremely limited, if they are permitted at all. MPharm degree academic regulations may be more stringent than university norms. This may include higher than usual pass marks for assessments demonstrating knowledge and skills essential to safe and effective pharmacy practice.

5.10 Marking criteria must be used for all assessments and all pass criteria must reflect safe and effective practice.

5.11 Patient safety must be paramount in assessments: any evidence of an assessment demonstrating unsafe practise must result in failure.

5.12 A pre-registration training plan must describe how the learning outcomes for pre-registration will be delivered.

5.13 A pre-registration training plan must describe all assessments, including tutor evaluations and tutor sign-offs.

Standard 6 – Support and development for students *and trainees*

6. Students *and trainees* **must be supported to develop as learners and professionals during their initial education and training.**

6.1. A range of mechanisms must be in place to support students *and trainees* to develop as learners and professionals.

Standard 7 – Support and development for academic staff *and pre-registration tutors*

7. Anyone delivering initial education and training should be supported to develop in their professional roles.

7.1. There must be a range of mechanisms in place to support anyone delivering initial education and training to develop in their role.

7.2. Induction programmes are provided *for tutors* and university staff as appropriate. This should include induction programmes for non-pharmacists working on MPharm degrees.

7.3. Everyone involved in delivering the curriculum should have:
   7.3.a effective supervision;
   7.3.b an appropriate and realistic workload;
   7.3.c effective personal support;
   7.3.d mentoring;
   7.3.e time to learn;
   7.3.f continuing professional development opportunities.

7.4. Tutors have an identified source of peer support.

Standard 8 – Management of initial education and training

8. Initial pharmacist education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage

8.1. All education and training will be supported by a defined management plan with:

8.1.a a schedule of responsibilities

8.1.b defined structures and processes to manage the delivery of education and training

Standard 9 – Resources and capacity

9. Resources and capacity are sufficient to deliver outcomes.

9.1 There must be:

    9.1.a robust and transparent mechanisms for securing an appropriate level of resource for delivering an accreditable MPharm degree;

    9.1.b sufficient staff from relevant disciplines to deliver the curriculum to students *and trainees*. Staff must be appropriately qualified and experienced. The staffing profile must include:

        9.1.b.i sufficient numbers of pharmacists – registrants of the GPhC – with experience of teaching in higher education to ensure that an MPharm degree can produce students equipped to enter pharmacist pre-registration training in Great Britain.

        9.1.b.ii sufficient numbers of pharmacists to act as tutors and professional mentors at university *and in pre-registration.* Not all personal tutors must be pharmacists.

        9.1.b.iii pharmacists who are leaders in the profession and in their university, who can influence university policy relevant to pharmacy

        9.1.b.iv non-pharmacist academics who can influence school and university policy relevant to pharmacy

        9.1.b.v staff who are sufficiently experienced to supervise research. It would be unusual for anyone to supervise research at a particular level unless they had researched to that level or beyond. New research supervisors must be mentored and signed off as being fit to supervise after a period of mentoring

        9.1.b.vi science academics who understand the relevance of their discipline to pharmacy and deliver their area of expertise in a pharmaceutical context

        9.1.b.vii academic pharmacists and other experienced MPharm degree staff who are able to act as mentors to non-pharmacist colleagues

  9.1.c *pre-registration tutors who meet the GPhC's standards for pre-registration tutors.*

  9.1.d career pathways in universities for all staff teaching on MPharm degrees, including pathways for practice staff

  9.1.e clear lines of authority and responsibility for the strategic organisation and day-to-day management of placements

  9.1.f training and ongoing support for all non-pharmacists involved in the delivery of MPharm degrees which must help them understand:

    9.1.f.i help and understand the relevance of their work to pharmacy

    9.1.f.ii how to deliver their area of expertise in a pharmaceutical context

  9.1.g appropriate learning resources

  9.1.h accommodation and facilities that are fit for purpose

  9.1.i *pre-registration premises which meet the GPhC's standards for pre-registration premises*

Standard 10 - Outcomes

10.1 Expectations of a pharmacy professional

Learning outcome	MPharm	Pre-reg
10.1.a Recognise ethical dilemmas & respond in accordance with relevant codes of conduct and behaviour	**Shows how**	*Does*
10.1.b Recognise the duty to take action if a colleague's health, performance or conduct is putting patients or public at risk	**Knows how**	*Knows how*
10.1.c Recognise personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients or public from any risk posed by personal health	**Does**	*Does*
10.1.d Apply the principles of clinical governance in practice	**Knows how**	*Does*
10.1.e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices	**Shows how**	*Knows how*
10.1.f Contribute to the education and training of other members of the team, including peer review and assessment	**Shows how**	*Does*
10.1.g Contribute to the development of other members of the team through coaching and feedback	**Knows how**	*Shows how*
10.1.h Engage in multidisciplinary team working	**Knows how**	*Does*
10.1.i Respond appropriately to medical emergencies, including provision of first aid	**Knows how**	*Shows how*

10.2 The skills required in practice

10.2.1 Implementing health policy

Learning outcome	MPharm	Pre-reg
a. Promote healthy lifestyles by facilitating access to and understanding of health promotion information	**Shows how**	*Does*
b. Access & critically evaluate evidence to support safe, rational & cost effective use of medicines	**Shows how**	*Knows how*
c. Use the evidence base to review current practice	**Shows how**	*Does*
d. Apply knowledge of current pharmacy-related policy to improve health outcomes	**Knows how**	*Shows how*
e. Collaborate with patients, the public and other healthcare professionals to improve patient outcomes	**Knows how**	*Shows how*
f. Play an active role with public and professional groups to promote improved health outcomes	**Knows how**	*Knows how*
g. Contribute to research & development activities to improve health outcomes	**Knows how**	*Knows how*
h. Provide evidence- based medicines information	**Shows how**	*Does*

10.2.2 Validating therapeutic approaches and supplies prescribed and over-the-counter medicines

Learning outcome	MPharm	Pre-reg
a. Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health	**Knows how**	*Shows how*
b. Identify inappropriate health behaviours and recommend suitable approaches to interventions	**Shows how**	*Does*
c. Instruct patients in the safe and effective use of their medicines and devices	**Shows how**	*Does*
d. Analyse prescriptions for validity and clarity	**Shows how**	*Does*
e. Clinically evaluate the appropriateness of prescribed medicines	**Shows how**	*Does*
f. Provide, monitor and modify prescribed treatment to maximise health outcomes	**Shows how**	*Does*
g. Communicate with patients about their prescribed treatment	**Shows how**	*Does*
h. Optimise treatment for individual patient needs in collaboration with the prescriber	**Shows how**	*Does*
i. Record, maintain and store patient data	**Shows how**	*Does*
j. Supply medicines safely and efficiently, consistently within legal requirements and best professional practice. NB This should be demonstrated in relation to both human and veterinary medicines.	**Shows how**	*Does*

10.2.3 Ensuring safe and effective systems are in place to manage risk inherent in the practice of pharmacy and the delivery of pharmaceutical services

Learning outcome	MPharm	Pre-reg
10.2.3.a. Ensure quality of ingredients to produce medicines and products	**Knows how**	*Shows how*
10.2.3.b. Apply pharmaceutical principles to the formulation, preparation and packaging of products	**Shows how**	*Shows how*
10.2.3.c. Verify safety and accuracy utilising pharmaceutical calculations	**Does**	*Does*
10.2.3.d. Develop quality management systems including maintaining appropriate records	**Shows how**	*Shows how*
10.2.3.e. Manage and maintain quality management systems including maintaining appropriate records	**Shows how**	*Does*
10.2.3.f. Procure and store medicines and other pharmaceutical products working within a quality assurance framework	**Knows how**	*Does*
10.2.3.g. Distribute medicines safely, legally and effectively	**Knows how**	*Does*
10.2.3.h. Dispose of medicines safely, legally and effectively	**Knows how**	*Does*
10.2.3.i. Manage resources in order to ensure work flow and minimise risk in the workplace	**Knows how**	*Shows how*
10.2.3.j. Take personal responsibility for health and safety	**Does**	*Does*

10.2.3.k.	Work effectively within teams to ensure safe and effective systems are being followed	**Knows how**	*Does*
10.2.3.l.	Ensure the application of appropriate infection control measures	**Shows how**	*Does*
10.2.3.m.	Supervise others involved in service delivery	**Knows how**	*Does*
10.2.3.n.	Identify, report and prevent errors and unsafe practice	**Shows how**	*Does*
10.2.3.o.	Procure, store and dispense and supply veterinary medicines safely and legally	**Knows how**	*Knows how*

10.2.4 Working with patients and the public

Learning outcome	MPharm	*Pre-reg*
a. Establish and maintain patient relationships while identifying patients' desired health outcomes and priorities	**Shows how**	*Does*
b. Obtain and record relevant patient medical, social and family history	**Shows how**	*Does*
c. Identify and employ the appropriate diagnostic or physiological testing techniques to inform clinical decision making	**Knows how**	*Shows how*
d. Communicate information about available options in a way which promotes understanding	**Shows how**	*Does*
e. Support the patient in choosing an option by listening and responding to their concerns and respecting their decisions	**Shows how**	*Does*
f. Conclude consultation to ensure a satisfactory outcome	**Shows how**	*Does*
g. Maintain accurate and comprehensive consultation records	**Shows how**	*Does*
h. Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals	**Shows how**	*Does*

10.2.5 Maintaining and improving professional performance

Learning outcome	MPharm	*Pre-reg*
a. Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour	**Does**	*Does*
b. Reflect on personal and professional approaches to practice	**Does**	*Does*
c. Create and implement a personal development plan	**Does**	*Does*
d. Review and reflect on evidence to monitor performance and revise professional development plan	**Does**	*Does*
e. Participate in audit and in implementing recommendations	**Knows how**	*Shows how*
f. Contribute to identifying learning and development needs of team members	**Knows how**	*Does*
g. Contribute to the development and support of individuals and teams	**Knows how**	*Does*

h. Anticipate and lead change	**Knows how**	*Shows how*

Indicative syllabus

A1.1 How medicines work

Therapeutics
- Routes of administration
- New therapeutic advances
- Infection control
- Complementary therapies
- Clinical therapeutic uses of drugs

Applied Physical, Chemical and Biological sciences
- Sources and purification of medicinal substances
- Physicochemical characteristics of drugs and biological systems
- Thermodynamics and chemical kinetics
- (Bio)Analytical principles and methods
- Drug design and discovery
- Cell and molecular biology
- Biochemistry
- Genetics
- Microbiology
- Immunology
- Pharmaceutical chemistry
- Drug identification
- Drug synthesis

Pharmacology, pharmacokinetics & pharmacodynamics

- Contraindications, adverse reactions and drug interactions
- ADME
- Prediction of drug properties
- Pharmacogenetics and pharmacogenomics
- Drug and substance misuse
- Clinical toxicology and drug-over-exposure
- Molecular basis of drug action
- Metabolism

Pharmaceutical technology including manufacturing & engineering science

- Biotechnology
- Manufacturing methods
- Quality assurance processes
- Sterilisation and asepsis
- Environmental control in manufacturing

Formulation and material science

- Materials used in formulations and devices
- Biopharmaceutics, developmental pharmaceutics, pre-formulation and formulation studies
- Design and standardization of medicines
- Microbiological contamination
- Contamination control
- Product stability
- Medical devices

A1.2   How people work

Normal & abnormal structure & function

- Nutrition
- Physiology

- Pathology
- Infective processes

Sociology

- Social and behavioural science

Health psychology

- Health promotion
- Disease prevention
- Behavioural medicine

Objective diagnosis

- Differential diagnosis
- Symptom recognition
- Diagnostic tests

Epidemiology

- Aetiology and epidemiology of (major) diseases

A1.3 How systems work

Healthcare management

- Public health
- Organisations: NHS,DH, govt priorities
- Other professionals
- Health care systems

Evidence-based practice

- Health information systems/ resources
- Health policy and (pharmaco)economics

Professional regulation

- Legislation

- Professional ethics and fitness to practise

- Sale and supply of medicines

- CPD

- Political and legal framework

Medicines regulation

- Evaluation and regulation of new drugs and medicines

- Pharmacopoeial specifications and biological standards

- Medicines licensing

- Product quality, safety and efficacy

- The supply chain

- Packaging, labelling and patient information

Clinical governance
- SOPs
- Research methodology / research ethics
- Risk & quality management
- Good manufacturing/dispensing practice
- Good clinical practice
- Health policy, clinical and science research methods

Clinical management

- Disease management

- Chronic medicines management

- Medicines use review

- Care planning

Workplace Regulation
- Health & Safety
- Sexual boundaries
- Independent Safeguarding Authority
- Data protection
- FOIA

- Consumer protection incl. complaints procedures

A1.4 Core and transferable skills

Professionalism

Research and research methods

Critical appraisal
- Audit and learning from errors

Problem solving
- Study skills
- Team-working skills

Clinical decision making
- Leadership skills

Accurate record keeping

Reflective practice (incl. continuing professional development)

Effective communication
- Interpersonal skills
- Medical terminology

Interpret & interrogate clinical data

Analyse & use numerical data

Pharmaceutical numeracy

Technological literacy

A1.5   Attitudes and values

See the GPhC *Code of Conduct for pharmacy students* (2010) and *Standards of conduct, ethics and performance* (2010)