

Reaccreditation of a Master of Pharmacy degree course (MPharm)

University of Brighton

Report of a reaccreditation event, 11-12 December 2014

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 previous accreditation event took place on 21-23 May 2013. At that event, the then accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the University of Brighton should be reaccredited to provide an MPharm degree for a further period of two years. The team considered that the University's approach to delivering an integrated curriculum by the use of case studies was valid and appropriate. However, the team concluded that there was not a clear and fit-for-purpose assessment strategy that tests integration, measures the outcomes of standard 10, or demonstrates progression dealing with issues in a consistently increasing and complex way. Therefore in order to give the MPharm degree team time to undertake this work, the team set a period of accreditation of 2 years, whereupon the GPhC team would revisit the University for a reaccreditation visit in the autumn of 2014. This was to meet standard 5.2, 5.5a and 5.7. In addition, there were two conditions: 1) The team acknowledged the University plan to deliver a virtual inter-professional learning experience but considered this as only part of a coherent inter-professional learning strategy. Therefore, the University must articulate a strategy that includes meaningful engagement with a range of healthcare professionals; this was to meet standard 5.6. 2) The team considered the staffing resource available to deliver this intensive integrated programme to be insufficient and

currently not sustainable; therefore it was essential that the balance of staff with appropriate level of experience be achieved in order to deliver an accreditable MPharm degree; this was to meet standard 9.1a.

Documentation

The provider submitted submission documentation to the GPhC in line with agreed timescales and a pre-visit took place at the University of Brighton on 7 November 2014. During the pre-visit the schedule of meetings and timings for the reaccreditation event were confirmed and the GPhC requested that 3 documents be submitted ready for the event.

The event

The event began with a private meeting of the accreditation team and GPhC representatives on 10 December 2014. The remainder of the event took place on site at the University of Brighton on 11-12 December 2014, 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 Terry Healey*	Accreditation team leader, Emeritus Professor of Pharmacy, Robert Gordon University
Professor Chris Langley	Accreditation team member (Academic), Professor of Pharmacy Law and Practice, Deputy Head of School, School of Pharmacy, Aston University
Dr Ruth Edwards	Accreditation team member (Academic), Senior Lecturer, MPharm Course Leader, Robert Gordon University
Mr Mark Brennan	Accreditation team member (Pharmacist), Director of Pharmacy, Deputy Head of School of Pharmacy, University of Lincoln
Mr Ian Smith	Accreditation team member (Pharmacist), Lecturer in Pharmacy Practice, Keele University
Ms Anne Watson	Accreditation team member (Pharmacist), Assistant Director of Pharmacy, NHS Education for Scotland
Ms Samantha Hayman	Accreditation team member (Newly-registered Pharmacist), Clinical Pharmacist Maidstone and Tunbridge Wells NHS Trust
Professor Dorothy Whittington	Accreditation team member (Lay), Emeritus Professor of Health Psychology, University of Ulster and Non-executive Director, Northern Health and Social Care Trust (Northern Ireland)

along with:

Name	Designation at the time of visit
Ms Joanne Martin *	Quality Assurance Manager (Education), General Pharmaceutical Council
Dr Ian Glendenning	Rapporteur, Emeritus Professor of Pharmacology, University of Strathclyde

*attended pre-visit meeting on 7 November 2014

Declaration of potential conflicts of interest

No potential conflicts of interest were declared.

The team also met a group of 16 MPharm students comprising 3 from year 1, 5 from year 2, 4 from year 3 and 4 from year 4, along with 2 newly qualified Brighton University graduate pharmacists and 2 Brighton University graduate pre-registration trainees.

Meeting the accreditation standards

Accreditation team's commentary	
<p>Standard 1 – Patient and public safety</p> <p>There must be clear procedures to address concerns about patient safety arising from initial pharmacy education and training. Concerns must be addressed immediately.</p>	<p>The team was satisfied that the one criterion to meet this standard was met</p> <p>All students must report any instances where they notice any conduct or behaviour that may compromise the safety of patients, other staff or students. Students are provided with a hard copy of the Code of Conduct for Pharmacy Students on their arrival on the course. In addition, students will be obliged to undertake an on-line assessment on the Code of Conduct and its application every year for the first three years of the MPharm programme. The School has a Fitness to Practise procedure which provides a mechanism to investigate issues around students' conduct, attitude or behaviour. Students are required to sign, as part of the Fitness to Practice declaration, that they understand that it is an offence to impersonate a pharmacist. To emphasis this, during all hospital placements student will wear a name badge which clearly displays their role as a 'pharmacy student' and not a pharmacist. Failure to wear this in a clear and prominent position whilst in contact with patients will be a disciplinary offence. Students are under supervision for all tasks undertaken on the University premises. When on placement they are supervised by a member of staff from the School of Pharmacy and/or by a member of staff from the host premises. The tasks the students are given to undertake are appropriate for their level. Each student is assigned to a personal tutor on entry to the course, and will normally remain with that tutor throughout the first three years of the course. In the final year of the course the research project supervisor takes on the role of personal tutor as they will be working with the student on a one-to-one basis</p>
<p>Standard 2 – Monitoring, review</p>	<p>The team was satisfied that the one criterion to meet this standard was met</p>

<p>and evaluation of initial education and training</p> <p>The quality of pharmacy education and training must be monitored, reviewed and evaluated in a systematic way.</p>	<p>Quality of teaching is assessed primarily by student achievement of the course learning outcomes and secondarily by the student feedback. The success of graduates in their Registration examination is also monitored. The School has a dedicated placement officer within the administrative team who, every three years, visits all local pharmacy premises accessed by MPharm students in order to assess suitability. The normal criteria for inclusion as a local placement provider are that the premises are registered as a pre-registration provider and that they have sufficient resources and space. The School holds regular stakeholder events to determine the views of patients and professionals on what their expectations of a pharmacist are and what they think is important to cover in a course for students who will become pharmacists.</p>
<p>Standard 3 – Equality, diversity and opportunity</p> <p>Initial pharmacy education and training must be based on principles of equality, diversity and fairness. It must meet the requirements of all relevant legislation.</p>	<p>The team was satisfied that the two criteria to meet this standard were met</p> <p>The University is clear in the expectations and requirements of its community with five University Equality Objectives. Course leaders are expected to explore relationships between student admission, performance and progression and ethnic origin, gender, age, etc. within the annual course monitoring and evaluation report and to highlight any emerging issues. The Head of School confirmed that equality and diversity training is compulsory and told the team that he receives reminders from HR if staff members have not undergone the training. It was also confirmed that the principles of equality and diversity are embedded throughout the course, and that Year 1 students must pass an on-line training programme by the end of Year 1. If students observe practice in placement settings that contravenes equality and diversity standards they are expected to report this information to the School, which will take action if necessary. The team noted that although this criterion was clearly met, it gained the impression that the information given to the students during the programme was restricted to English pharmacy issues. The School was reminded that the MPharm qualification, coupled with GPhC registration allowed students to work in any part of Great Britain and that consideration should be given to providing more information on the pharmacy provision in the devolved nations of the UK.</p>
<p>Standard 4 – Selection of students and trainees</p> <p>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.</p>	<p>The team was satisfied that the three criteria to meet this standard were met</p> <p>Applicants must be at a suitable academic level before they are allowed onto the MPharm programme. The standard offer at A-levels is ABB, including chemistry and one further science A2-level. There is course-specific information which is available to applicants and contains details about the course structure which also appears on the University of Brighton website. One student interviewed told the team that he considered the application process at Brighton much better organised than those at 3 other schools of pharmacy to which he had applied. In addition to a numeracy pre-admissions test, applicants are required to respond to a NHS values-based ethical dilemma in a group exercise which is used to assess whether they are suitable for entry onto the MPharm programme. Selection is carried out by one person only, the course admissions tutor. It was confirmed during the visit that the course admissions tutor has undertaken the University's equality and diversity training and undertakes values-based interviews. Members of the course teams that are involved in the interview process</p>

	undergo training by the admissions tutor and other senior colleagues on the selection criteria.
<p>Standard 5 – Curriculum delivery</p> <p>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.</p>	<p>The team was satisfied that the eleven criteria to meet this standard were met</p> <p>The new MPharm course is designed to prepare students for their pre-registration experience and beyond by progressively developing their knowledge and skills over the four years. The team was told that the School had obtained on-line feedback from students which had informed the new approach as well as input from a stakeholders’ group, organised by recently-appointed staff, and containing members of patients’ groups. A case-based approach is used in the first three years, to show the relevance of both practice and science. There are 10-11 cases in each of the first three years of the programme. Basic knowledge is taught alongside the practical implications for patients. Each of the cases involves the acquisition of knowledge from lectures and the use of that knowledge in practical classes. The programme has been designed to provide students with a logical progression through increasingly complex material as they move through the course with difficult concepts being introduced in Year 1 and re-visited in later years. The choice of the cases delivered during Year 1 of the course was led by the INTERACT programme (a course adapted from the National Pharmacy Association Counter Assistant Pharmacy course) while being mindful of the need to present basic scientific information in a logical and progressive manner. This course, which the team was told has been specifically enhanced to meet the needs of pharmacy undergraduates, permits the students to gain an understanding of minor ailments and their treatments. There is an expectation that the students will conduct themselves professionally as laid out in the Code of Conduct for Students.</p> <p>In Year 4 there is a 60-credit ‘Preparing for Practice’ module which covers the pharmaceutical care of complex, multisystem disorders and recent changes in pharmaceutical legislation and practice. Teaching is predominately carried out by pharmacists with the aim of ensuring students have the requisite knowledge and skills to be successful in their pre-registration experience and as future practitioners. The students also choose a 40-credit research project and are expected to demonstrate their independence in planning and designing the experiments/study, interpreting the evidence and communicating their findings. In addition, students are able to extend their studies in areas of personal interest or career by choosing to study two 10-credit special topics. There will also be small group, inter-professional education sessions involving simulation (SimMan). During the interprofessional learning in years 2-4, students gain the perspective of other healthcare workers. During their placements throughout the course the students increase their understanding of the challenges of medicines use related to patient behaviour, multi-system disorders and the social implications of many diseases. Experiential learning in the degree has been designed to provide students with a breadth of experience across both the hospital and community sectors. The experiential visits give students opportunities to interact and work alongside patients, carers and healthcare professionals. In addition, the degree has a variety of interprofessional learning activities which allows students from different healthcare disciplines to work alongside and learn with each other. The time that students spend in a patient-facing environment increases as they progress throughout the course, as does the complexity of the activities undertaken. In addition to experiential learning, the course has numerous simulated clinical activities; these provide opportunities for</p>

	<p>learning and practising clinical skills. Throughout all four years of the MPharm programme, there is practical experience of working with patients, carers and other healthcare professionals, both simulated and real. The accreditation team explored the level of integration of the course material by asking small groups of teaching staff to describe and discuss how they delivered and assessed a series of themes in the course; these were: ethics, COPD, diabetes, contraception, communication, formulation, diagnostic testing, and prescribing. The team was satisfied that the teaching staff worked closely together in determining the order of delivery of material to ensure that material was taught contemporaneously in different case studies and agreed with the School's assessment of the level of integration as most closely representing multidisciplinary on the Harden's Ladder scale.</p> <p>The assessment strategy had been designed to accord with the University assessment regulations to allow for credit accumulation and transfer, eligibility to refer and re-assess, and for exit awards. However, the specific strategy was stated to be to ensure that students became safe and effective practitioners. Staff members told the team that it was difficult to assess in an integrated way early in the course and hence MCQS and SAQs were used at this stage to assess knowledge in subject areas. Subsequent written examinations follow an integrated format whereby each examination paper contains a mixture of questions from the primary subject areas that are centred around several short clinical scenarios. To ensure that students do not progress with a deficit of knowledge in any one subject area, the marks awarded for each question are extracted from the integrated paper to form three Assessment Modules (in Pharmaceutical Sciences, Therapeutics or Pharmacy Practice; the domains of the course). Overall failure of a module requires the student to re-sit a paper with targeted questions in the subject area in which they failed. The team found it counter-intuitive that after a strong attempt to present the material in an integrated fashion during the case studies the students' answers to examination questions should be disaggregated into the three subject areas (domains) but accepted the School's reasoning for such an unusual system.</p>
<p>Standard 6 – Support and development for students and trainees</p> <p>Students and trainees must be supported to develop as learners and professionals during their initial education and training.</p>	<p>The team was satisfied that the one criterion to meet this standard was met</p> <p>Each MPharm student has a personal tutor who, not only acts in a pastoral capacity but also hosts a series of tutorials in each of the first 3 years of the programme, which aim to develop the students as independent learners. All students on the MPharm programme are encouraged to become involved with the Peer-Assisted Study Sessions (PASS). PASS is a student-led initiative where issues relating to course material and student life can be discussed in a friendly, informal environment with peers and trained student facilitators. Throughout all levels of study on the MPharm programme, students will be inculcated with a professional ethos. In year 1, as part of the Induction case study students will be instructed on being a professional and what it means to be a pharmacist in terms of role and responsibility.</p>

<p>Standard 7 – Support and development for academic staff and pre-registration tutors</p> <p>Anyone delivering initial education and training should be supported to develop in their professional roles.</p>	<p>The team was satisfied that the three criteria to meet this standard were met</p> <p>The Head of School is responsible for the overall supervision of academic staff. This is mainly delegated to the assistant heads overseeing each division, and they in turn can delegate to the heads of section, responsible for the day-to-day management of typically 8-10 staff. The University offers a one- day induction workshop for staff that have recently joined the University, regardless of whether they are completely new to higher education or simply new to the University. In addition the University requires each academic staff member to undergo an induction programme with their direct line manager, usually the Head of Division. Each new staff member is appointed two mentors from the experienced staff team, one for research and one for teaching for at least the first two years of their appointment. All staff members that make a significant contribution to the MPharm are expected to undertake at minimum an experiential visit of half a day a year in a pharmacy setting, in order to allow them to contextualise their learning. All staff members are allowed a minimum of one day a week of their time for personal development activities, such as research, scholarly activity or developing their professional practice.</p>
<p>Standard 8 – Management of initial education and training</p> <p>Education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage</p>	<p>The team was satisfied that the one criterion to meet this standard was met</p> <p>The School of Pharmaceutical and Biomedical Sciences sits within the College of Life, Health and Physical Sciences, one of three colleges in the new University structure, each headed by a Dean. The presentation explained that the School is led by the interim Head of School, supported by Assistant Heads of School responsible for undergraduate education, resources and operations, quality assurance, postgraduate education, and research respectively. The team was told that the post of Head of School had been advertised twice but no suitable applicants had been identified. It is now planned to re-advertise in early 2015 with the expectation that a new head will be in post by summer 2015.</p> <p>The School is now divided into three divisions; Chemistry, Bioscience and Pharmacy each with an Assistant Head of School, with the last-named division responsible for the delivery of the MPharm degree, containing all the MPharm teaching staff and led by the Academic Director of Pharmacy. Within the Division of Pharmacy there are subject clusters, each containing <i>ca</i> 6 staff members and with its own head. The course is managed by the course leader, with delivery and coordination of the learning material being the responsibility of each case leader and assessment of that learning material being the responsibility of the module co-ordinator. Further, the role of Assistant Course Leader has been created with one assistant course leader for each year of the course; their role is to support the course leader in the management of the course by taking responsibility for pastoral and year-specific issues within the course. Within the three subject areas (Pharmaceutical Sciences, Therapeutics, and Pharmacy Practice) there is also a subject lead that coordinates teaching within that area. The course leader reports to the Pharmacy Course Board, and the course board in turn reports to the School Board. The School Board meets three times per year and is ultimately responsible for overall cohesiveness and currency of the programme. The team was told that the development of the new case-based course has resulted in an overall better understanding by staff</p>

	members of others' roles and that staff members are capable of taking over others' responsibilities in the case of absence through illness etc.
<p>Standard 9- Resources and capacity</p> <p>Resources and capacity are sufficient to deliver outcomes.</p>	<p>The team was satisfied that the one criterion to meet this standard was met</p> <p>The budget (resource) allocation to the School by the Dean is based upon student numbers (FTE) and the type of course delivered (laboratory versus lecture). Income generated above target by recruitment of additional international/full-fee students is retained by the School after deduction of central overheads. The team was told that the resource allocation system was now more responsive than it had been at the previous accreditation visit where the then team had found that resources had not followed an increase in student numbers. Now there is a mid-year review along with a protected cost base for schools. Strategic bids for funding can be made on the basis of increased student numbers and the system was described as being more agile than the previous system. Of the 41 members of staff, including teacher-practitioners and part-time staff who teach on the MPharm programme, 20 are GPhC registrants. Of those 20, thirteen are full-time (0.8 or greater) experienced members of staff, two are part-time staff and the remaining five are teacher-practitioners with a range of experience from highly experienced to recent appointments (there are currently two posts vacant in this area). Of the academic staff members that supervise Year 4 research projects on the programme, 30 have doctorates or equivalent professional experience and are research-active. The remaining members of staff all have extensive experience in supervising projects. The choice and duration of placements and the activities to be undertaken are the responsibility of the pharmacy attitudes and skills co-ordinator in years 1-3 and the Preparing for Pharmacy Practice module coordinator in the final year. The development of the new programme using a case-based approach was said to have facilitated the development of non-pharmacists to see the relevance of their areas to the pharmacy profession. The team was told that there was on-going negotiation at a high level in the University with the University of Sussex, which is planning to introduce an MPharm programme in the near future; these negotiations were centring on potential areas for collaboration including placements and interprofessional education, and on areas of potential competition, mainly recruitment of students.</p>
<p>Standard 10 - Outcomes</p>	<p>The team scrutinised the learning outcomes by discussions with the teaching staff in two integration and outcomes meetings. Rather than examining each of the 58 outcomes in these sessions, a selection of nine outcomes was chosen for detailed discussion. The outcomes selected were 10.1.d, 10.1.h, 10.2.1.a, 10.2.1.c, 10.2.1.f, 10.2.2.f, 10.2.3.c, 10.2.4.g, 10.2.4.h. Additional outcomes were covered in discussions addressing Standards 1-9 and by the team's scrutiny of the documentation. For each of the nine outcomes scrutinised in detail, the evidence provided by the discussions with the staff gave the team confidence that these outcomes would be met at the required level for the MPharm programme, and the team was confident that all other outcomes would be similarly met. The team agreed that following the satisfaction of the nine outcomes tested that it was confident that all 58 outcomes would be delivered at the appropriate level.</p>
<p>Indicative Syllabus</p>	<p>The team was content with the School's use of the Indicative Syllabus to inform its curriculum.</p>

	<p>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. The team also agreed that following the satisfaction of the nine outcomes tested that it was confident that all 58 outcomes would be delivered at the appropriate level.</p>
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Summary and conclusions

The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the University of Brighton should be reaccredited to provide an MPharm degree for a further period of six years, with an interim visit to take place in three years. No conditions were set.

The team recognised a strength:

the collegiate nature of the staff team and the shared enthusiasm and commitment to the development and delivery of the MPharm degree. The team also recognised the efforts and achievement of the interim Head of School who has clearly created an environment for the development of an MPharm degree that is now fit-for-purpose.

As a result of this event, a private record and a public report will be prepared and sent to the University for comment on matters of factual accuracy. Once agreed by the Registrar, both documents will be sent to the University for its records and the report, along with a formal response from the University, will be posted on the Council's website for the duration of the accreditation period. The full record and report includes other comments from the team and the Registrar regards the record and report in its entirety as the formal view on provision. Providers are required to take all comments into account as part of the reaccreditation process.

The provider was reminded that the team's recommendations are not binding on the Registrar, who may accept, modify or reject them. Also, that the accreditation team's feedback is confidential until it has been ratified by the Registrar of the General Pharmaceutical Council but it may be shared with staff and students internally.

Following the above reaccreditation event, the Registrar of the General Pharmaceutical Council agreed with the accreditation team's recommendation and approved the University of Brighton MPharm degree for reaccreditation a further period of six years. Reaccreditation will take place in six academic year' time; with an interim visit in three academic years' time (2017/18)

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, 46. ...

(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 is not a guarantee of a placement for a pre-registration year or of future employment as a pharmacist.

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

[Note: The parts of the standards shown in grey italics are applicable only to those offering a 5-year MPharm degree with integrated periods of pre-registration training.]

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	<i>Does</i>
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	<i>Knows how</i>
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	<i>Does</i>
10.1.d Apply the principles of clinical governance in practice	Knows how	<i>Does</i>
10.1.e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices	Shows how	<i>Knows how</i>
10.1.f Contribute to the education and training of other members of the team, including peer review and assessment	Shows how	<i>Does</i>
10.1.g Contribute to the development of other members of the team through coaching and feedback	Knows how	<i>Shows how</i>
10.1.h Engage in multidisciplinary team working	Knows how	<i>Does</i>
10.1.i Respond appropriately to medical emergencies, including provision of first aid	Knows how	<i>Shows how</i>

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	<i>Does</i>
b. Access & critically evaluate evidence to support safe, rational & cost effective use of medicines	Shows how	<i>Knows how</i>
c. Use the evidence base to review current practice	Shows how	<i>Does</i>
d. Apply knowledge of current pharmacy-related policy to improve health outcomes	Knows how	<i>Shows how</i>
e. Collaborate with patients, the public and other healthcare professionals to improve patient outcomes	Knows how	<i>Shows how</i>
f. Play an active role with public and professional groups to promote improved health outcomes	Knows how	<i>Knows how</i>
g. Contribute to research & development activities to improve health outcomes	Knows how	<i>Knows how</i>

h. Provide evidence- based medicines information	Shows how	<i>Does</i>
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10.2.2 Validating therapeutic approaches and supplies prescribed and over-the-counter medicines

Learning outcome	MPharm	<i>Pre-reg</i>
a. Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health	Knows how	<i>Shows how</i>
b. Identify inappropriate health behaviours and recommend suitable approaches to interventions	Shows how	<i>Does</i>
c. Instruct patients in the safe and effective use of their medicines and devices	Shows how	<i>Does</i>
d. Analyse prescriptions for validity and clarity	Shows how	<i>Does</i>
e. Clinically evaluate the appropriateness of prescribed medicines	Shows how	<i>Does</i>
f. Provide, monitor and modify prescribed treatment to maximise health outcomes	Shows how	<i>Does</i>
g. Communicate with patients about their prescribed treatment	Shows how	<i>Does</i>
h. Optimise treatment for individual patient needs in collaboration with the prescriber	Shows how	<i>Does</i>
i. Record, maintain and store patient data	Shows how	<i>Does</i>
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	<i>Does</i>

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	<i>Pre-reg</i>
10.2.3.a. Ensure quality of ingredients to produce medicines and products	Knows how	<i>Shows how</i>
10.2.3.b. Apply pharmaceutical principles to the formulation, preparation and packaging of products	Shows how	<i>Shows how</i>
10.2.3.c. Verify safety and accuracy utilising pharmaceutical calculations	Does	<i>Does</i>
10.2.3.d. Develop quality management systems including maintaining appropriate records	Shows how	<i>Shows how</i>
10.2.3.e. Manage and maintain quality management systems including maintaining appropriate records	Shows how	<i>Does</i>
10.2.3.f. Procure and store medicines and other pharmaceutical products working within a quality assurance framework	Knows how	<i>Does</i>
10.2.3.g. Distribute medicines safely, legally and effectively	Knows how	<i>Does</i>
10.2.3.h. Dispose of medicines safely, legally and effectively	Knows how	<i>Does</i>

10.2.3.i.	Manage resources in order to ensure work flow and minimise risk in the workplace	Knows how	<i>Shows how</i>
10.2.3.j.	Take personal responsibility for health and safety	Does	<i>Does</i>
10.2.3.k.	Work effectively within teams to ensure safe and effective systems are being followed	Knows how	<i>Does</i>
10.2.3.l.	Ensure the application of appropriate infection control measures	Shows how	<i>Does</i>
10.2.3.m.	Supervise others involved in service delivery	Knows how	<i>Does</i>
10.2.3.n.	Identify, report and prevent errors and unsafe practice	Shows how	<i>Does</i>
10.2.3.o.	Procure, store and dispense and supply veterinary medicines safely and legally	Knows how	<i>Knows how</i>

10.2.4 Working with patients and the public

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

10.2.5 Maintaining and improving professional performance

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

g. Contribute to the development and support of individuals and teams	Knows how	<i>Does</i>
h. Anticipate and lead change	Knows how	<i>Shows how</i>

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)*