



Master of Pharmacy
degree (MPharm)

University of Birmingham

Report of a step 7 accreditation event

January 2017

Event summary and conclusions

Provider	University of Birmingham
Course	Masters of Pharmacy degree (MPharm)
Event type	Accreditation
Step	Step 7 part 1
Event date	25-26 January 2017
Accreditation period	2016/17 – 2022/23
Outcome	<p>Approval</p> <p>The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council (GPhC) that the MPharm degree provided by the University of Birmingham be fully accredited for a period of six years, with a three year interim event, subject to a Step 7 Part 2 visit in June 2017.</p> <p>Following a satisfactory outcome of this visit the University of Birmingham MPharm graduates will be permitted to apply to enter pharmacist pre-registration training in Great Britain.</p>
Conditions	There were no conditions
Standing conditions	Please refer to Appendix 1
Recommendations	No recommendations were made
Registrar decision	Following the event, the Registrar of the GPhC accepted the accreditation team's recommendation and approved full accreditation of the programme for a period of six years, subject to a satisfactory Step 7 Part 2 visit.
Key contact (provider)	Professor John Marriott
Accreditation team	<p>Professor Ian Marshall (Team leader), Emeritus Professor of Pharmacology University of Strathclyde, Proprietor Caldaran Research (Educational and Writing Services)</p> <p>Professor Angela Alexander (Academic), Professor of Pharmacy Education</p> <p>Dr Katie Maddock (Academic), MPharm Director of Learning and Teaching, Keele School of Pharmacy</p> <p>Professor Bill Dawson (Pharmacist), Chief Executive Bionet Ltd</p> <p>Mrs Gail Fleming (Pharmacist), Head of Pharmacy, Health Education England (London and South East)</p> <p>Ms Rosaline Pollard (Pharmacist - recently registered), Clinical Pharmacist, Worthing Hospital</p> <p>Professor Dorothy Whittington (Lay member), Emeritus Professor of Health Psychology, University of Ulster and non-executive, Northern Ireland Health</p>

	and Social Care Business Services Organisation
GPhC representative	Ms Joanne Martin, Quality Assurance Manager, GPhC
Rapporteur	Professor Brian Furman, Emeritus Professor of Pharmacology, University of Strathclyde

Introduction

Role of the GPhC

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). This accreditation 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'.

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.

The powers and obligations of the GPhC in relation to the accreditation of pharmacy education are legislated in the Pharmacy Order 2010. For more information, visit:

<http://www.legislation.gov.uk/ukxi/2010/231/contents/made>

Step 7 accreditation event

The MPharm degree accreditation process involves seven steps before full accreditation is granted. The final step (Step 7) is made up of two parts. The first part of the two-part Step 7 accreditation event involves a visit to the University by the accreditation team to review the suitability of the programme for full accreditation. In reaching its conclusion, the accreditation team must make two separate judgements: First, whether or not the University meets the criteria for a new provider delivering a new MPharm degree; and, second, whether or not the University meets the criteria for an established provider delivering an existing MPharm degree.

The second part of the Step 7 accreditation event involves a return visit to the University by the team leader and the GPhC's Quality Assurance Manager to confirm the appropriate conduct of the assessment process for the current academic year. At that meeting, the views of external examiners will be sought.

Background

The University of Birmingham approached the GPhC early in 2011 with an intention to apply for accreditation of an MPharm degree. A step 1 event was subsequently held at the GPhC's office in London on 15 July 2011, when the University put forward a formal proposal for introducing this new programme and informed the GPhC of its plan to seek accreditation of a 5-year integrated MPharm degree; this would be provided by the University's then School of Clinical and Experimental Medicine within the College of Medical and Dental Sciences. The GPhC advised that

the suggested intake of students to the new course in 2013/2014 would be feasible, provided a successful outcome was achieved at both step 2 and step 3 upon the first attempt. The GPhC agreed that the proposed staffing ratio was acceptable and advised that key staff should be appointed in good time in order to influence the business case and curriculum. The GPhC also advised that it was important that teaching, including science subjects, was sufficiently pharmacy-oriented. At the subsequent step 2 event, the GPhC agreed that the University of Birmingham should be permitted to progress to step 3 of the accreditation process, on condition that the University reviewed the timetable for the appointment of academic staff to ensure the development of an integrated MPharm degree curriculum, and updated the GPhC at the step 3 event. The GPhC also recommended that the University should organise the curriculum to ensure that the science is integrated with professional and clinical practice, as this would be the focus of the step 3 process. A step 3 event was subsequently scheduled for 4-6 December 2012, when the accreditation team agreed to recommend that the University should be permitted to move to step 4 of the accreditation process for its four-year programme; this was subject to the condition that a coherent assessment strategy be developed, which should include diagnostic, formative and summative assessments and marking criteria that are consistent with safe and effective practice. However, the accreditation team was unable to recommend that the University could move from step 3 to step 4 of the accreditation process in relation to its proposed five-year programme, because the provision proposed for that programme was not sufficiently developed; in particular, the finances underpinning pre-registration were not clear and there were differing views among staff about the content and delivery of preregistration training. At the step 4 event for the four-year programme, held on 5-7 March 2014, the team recommended that the University should progress to step 5 of the accreditation process; there were no conditions or recommendations. A step 5 event was held on 4-5 June 2015, when the team agreed to recommend that the University be permitted to move from step 5 to step 6 of the accreditation process, subject to the condition that the School reviewed the delivery and assessment of material on safeguarding and on equality and diversity for incorporation into the MPharm curriculum for the start of the 2015/16 academic year; the team's view was that the current provision did not prepare the students sufficiently to interact with patients; this was to meet standard 1 and standard 3. In response to this condition, the School undertook a comprehensive review of the approaches to safeguarding and the equality and diversity aspects of the course and has made appropriate adjustments to the curriculum to address these matters. Following the subsequent step 6 accreditation event in May 2016 the GPhC agreed that the University should progress to step 7; on that occasion, there were no conditions or recommendations and a step 7 accreditation event was scheduled for January 2017. The following is a report of that event.

Key findings

Standard 1: Patient and public safety

The team was satisfied that all criteria relating to this standard are met. (See Appendix 2 for criteria)

The safety of patients and the public is an underpinning principle of the MPharm programme and systems are in place to ensure that students practise safely, and that they will not graduate unless safe practice can be demonstrated. These systems include early introduction of students to patient safety and fitness to practise, and appropriate levels of supervision in their patient facing activities, for example, when on placements; while supervision on placements is direct in the first two years, the requirement for direct supervision is progressively relaxed across years 3 and 4 as students' competence increases. Mechanisms are in place that allow concerns about a student's performance while on placement to be transmitted to the University and dealt with appropriately. Students undergo health and good character checks as part of the admission process and these are confirmed annually through self-declaration.

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

The team was satisfied that all criteria relating to this standard are met.

The quality of the MPharm programme is directly managed and assured through systems organised by the College Quality Office within the College of Medical and Dental Sciences. The programme has an Academic Lead for Quality who chairs the MPharm Quality Committee, and who liaises with the College Quality Office. The programme and its constituent modules are reviewed annually, the ensuing reports being considered by the College and University Quality Assurance Committees. These annual reviews incorporate feedback from students and reports from the four external examiners. Quality management of the MPharm programme includes specific processes for the quality management of placements; there is a rolling cycle of quality monitoring visits to every placement, and placement partners are required to complete an action plan in response to any recommendations made.

Standard 3: Equality, diversity and fairness

The team was satisfied that both criteria relating to this standard are met.

The University is committed to ensuring that each staff member is aware of issues and legislation associated with equality and diversity and has an ongoing commitment to developing, enhancing and promoting an equality and diversity agenda. The 'Access to Birmingham' (A2B) scheme is designed to help students from families and communities in the West Midlands who have little or no experience of higher education. All members of staff have undertaken training in equality and diversity and there has been additional training in 'unconscious bias'. Students also receive lectures on equality and diversity and are fully aware of the need to respect patients whatever their background; matters relating to equality and diversity recur throughout various activities across the whole programme.

Standard 4: Selection of students

The team was satisfied that all criteria relating to this standard are met.

Substantial information about the admissions criteria, selection processes and the course is available on the University of Birmingham MPharm webpages. Applications are initially screened centrally in the University, after which they are assessed by the School of Pharmacy to determine their suitability for an offer, based on achieved and predicted grades, information provided by the applicants in their personal statements, and their academic references. Applicants who are successful at this stage are given a standard offer and are invited to attend an Applicant Visit Day. The entry requirements clearly state the academic and non-academic offer requirements, which include the requirement to demonstrate an interest in, and a commitment to, pharmacy as well as to highlight relevant work experience; all accepted candidates are required to complete a health declaration form, providing appropriate evidence of immunisation, and to obtain a satisfactory Disclosure and Barring Services/Disclosure Scotland check. Currently, candidates are not interviewed but it is intended to use interviews from 2018/9 in compliance with the principle of values-based recruitment; this is common practice for admission to courses in medicine, nursing and dentistry within the College.

Standard 5: Curriculum delivery and student experience

The team was satisfied that all criteria relating to this standard are met.

The programme aims to produce graduates delivering science-based clinical skills in common practice sectors with a focus on patient safety and wellbeing, and who can become leaders in the profession. Accordingly, the course is practice-orientated with frequent exposure to structured placements and a

focus on clinical communication, along with the integration of science and professional principles, this integration increasing progressively from year to year. The present academic session had seen the first implementation of the final year of the programme, which incorporates a research project and a 'Business and Enterprise' module, as well as an 'Integrated Pharmacy Practice' module, which includes extensive inter-professional input and inter-professional education (IPE). IPE spans the whole of the programme and pilot projects in this area include the student-led Knowledge and Skills Exchange (KASE) which involves students of dentistry, nursing, pharmacy, medicine, physiotherapy, and clinical psychology, as well as students from the physician associate programme; the idea underlying KASE is that the impetus for IPE should come from the students themselves, and KASE-activities will feature on students' 'IPE passports' through which students will be able to tick off their inter-professional skills from a list as they acquire them. There is a comprehensive range of placement activities across the whole programme; these cover hospital, community pharmacy, primary care and manufacturing, and the final year includes an extensive placement that is self-selected by the students. Assessments in all years include written examination papers and assessment of coursework assignments, as well as objective, structured clinical examinations (OSCEs).

Standard 6: Support and development for students

The team was satisfied that the single criterion relating to this standard is met.

Student support starts with an induction programme into the University, the College and the degree programme; this induction includes signposting of students to the various extensive support mechanisms available, these covering academic, personal and financial matters, as well as for careers advice and specific support for those students with disabilities. There is also a formal, two-week review period which is compulsory for all first year students and which is aimed at facilitating the transition between school and university. Each student is allocated a personal tutor who can provide advice on academic and other matters, and individual members of staff serve as specialist subject tutors to groups of students, for example, when delivering small group teaching sessions; personal tutors are seen at the beginning of each year, as well as in classes. Similarly, when in placement environments, students are supervised by members of staff who act as their tutors and mentors for that element of professional experience. There is also a student 'parenting' scheme, whereby senior students act as 'parents' for their juniors; this is a mechanism assisting the transition from school to university and students receive training for this role. A wide variety of technology-based learning systems are used within the pharmacy programme in order to support effective student learning. Extensive support is available to assist students in obtaining pre-registration training places; this includes assistance in preparing applications, as well as in preparing for interviews.

Standard 7: Support and development for academic staff

The team was satisfied that all criteria relating to this standard are met.

All staff members have an annual, individually-targeted and structured review of their development and performance, including a formal review of educational, teaching, research and administrative activities. Early career staff members, who undergo a probationary period, are allocated an experienced mentor, who works with them on an individual basis in order to facilitate effective development of all aspects of their careers. Successful completion of the 60-credit Postgraduate Certificate in Academic Practice is mandatory for new staff members during their probationary period. The University's Staff Development service offers a wide range of support and training initiatives geared to personal teaching and career development. All new staff members receive induction at both University and College level; this includes a pre-induction check list and an induction package. Those who are not pharmacists are assigned a pharmacist 'buddy'.

Standard 8: Management of initial education and training

The team was satisfied that both criteria relating to this standard are met.

Education matters are managed at University level through the Education Committee, which is chaired by the Pro-Vice-Chancellor (Education), and reports to Senate, liaising with the Quality Assurance Committee and Academic Policy and Regulations Committee on general learning and teaching issues; the Director of Education of the College of Medical and Dental Sciences represents the College on this committee and also reports to the College Management Group and College Education Executive. The College Education Committee provides impartial and independent advice on developing and running the College degree programmes and considers all aspects of teaching strategy and delivery, including the resource requirements to maintain teaching excellence and quality assurance. Immediate responsibility for management of the MPharm rests with the MPharm Programme Committee, within the School of Pharmacy; this is led by the MPharm Programme Director. Quality assurance and enhancement is managed through the MPharm Academic Lead for Quality, who reports to the College Associate Director of Education (Quality). Academies have been established between the College of Medical and Dental Sciences and sixteen NHS Trusts; these are each required to complete a detailed implementation plan, which acts as the agreement to deliver education between the College (Medical School, Dental School, Nursing School, Physiotherapy School and Pharmacy School) and the NHS. The implementation plan includes a strategy and timetable for annual appraisal and peer observation of teaching staff involved in clinical teaching, including MPharm placement activities; similar processes have been implemented for MPharm placements in community pharmacy, GP surgeries and primary care groups (Clinical Commissioning Groups).

Standard 9: Resources and capacity

The team was satisfied that all criteria relating to this standard are met.

The activity of the School of Pharmacy is subject to extensive business planning with calculation of full economic costs with contingencies. The University Executive Board has approved the financial commitment for the development of the MPharm and the funding for these activities has been ring-fenced. The development of the MPharm, including the employment of the academic, administrative and technical staff required, is proceeding according to the business plan as originally defined, although there has been some increase in staffing and capital investment, with an enhancement of the clinical infrastructure and a wider placement exposure. Funding developments are considered at College Management Group, with decisions being ratified at College Board; the Head of the School of Pharmacy is a full member of College Board and has direct input to the decision making process. The current core staff profile includes 13 staff members of who are registrants of the GPhC; there are further academic staff members who hold a first degree in pharmacy. It is intended to maintain the balance of pharmaceutically qualified academic staff in order to ensure that there are sufficient such staff members to mentor or advise staff members acting as MPharm tutors, as well as tutoring students, on issues with a specific professional emphasis. The staffing strategy includes joint appointments, namely Academic Practitioners, supported by the University and external bodies. The programme is supported by extensive teaching facilities, including fully equipped biomedical and clinical skills laboratories, anatomy teaching rooms, an extensive onsite library dedicated exclusively to healthcare and healthcare science, specialist IT-based teaching and technology-enhanced learning, supported by a student- and staff-friendly VLE (Canvas). The MPharm programme principally utilises the accommodation and facilities within the College of Medical and Dental Sciences, which are located within the Medical School building, together with the associated buildings on the Medical School site. Additional teaching and research facilities are available through the NHS/University partnership at University Hospital Birmingham NHS Trust and Birmingham Women's & Maternity Hospital, which are sited immediately adjacent to the Medical School.

Standard 10: Outcomes

The team was satisfied that all 58 outcomes relating to Standard 10 will be delivered at the appropriate level.

The team had scrutinised the learning outcomes in discussions with the staff in meeting 6. Rather than examining each of the 58 outcomes, five outcomes (10.1.e, 10.1.h, 10.2.2.e, 10.2.3.c, 10.2.4.a) had been selected for detailed discussion; the University of Birmingham staff members had been unaware of the outcomes to be discussed before the meeting. For each of the five outcomes scrutinised in detail, the evidence provided by the discussions with the staff, along with other evidence provided with the documentation, gave the team confidence that these outcomes will be met at the required level; the team was confident that all other outcomes will be similarly met. This view was supported by the documented material for each of the other outcomes, which had also been scrutinised by the team; other discussions had also addressed many of these outcomes. Thus, the team was satisfied that standard 10 is met.

Indicative syllabus

The team was satisfied 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.

Appendix 1 - Standing conditions

The following are standing conditions of accreditation and apply to all providers:

1. The record and report include other comments from the team, and providers are required to take all comments into account as part of the accreditation process. The provider must confirm to the GPhC that required amendments have been made.
2. The provider must respond to the definitive version of the record and report within three months of receipt. The summary report, along with the provider's response, will be published on the GPhC's website for the duration of the accreditation period.
3. The provider must seek approval from the GPhC for any substantial change (or proposed change) which is, or has the potential to be, material to the delivery of an accredited course. This includes, but is not limited to:
 - a. the content, structure or delivery of the accredited programme;
 - b. ownership or management structure of the institution;
 - c. resources and/or funding;
 - d. student numbers and/or admissions policy;
 - e. any existing partnership, licensing or franchise agreement;
 - f. staff associated with the programme.
4. The provider must produce and submit to the GPhC on an annual basis:
 - a. requested data on student numbers and progression and degree awards;
 - b. requested information about the extent of human and physical resources it enjoys for the delivery and support of the degree course.
5. The provider must make students and potential students aware that 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.
6. The provider must make students and potential students aware of the existence and website address where they can view the GPhC's accreditation reports and the timetable for future accreditations.
7. Whenever required to do so by the GPhC, providers must give such information and assistance as the GPhC may reasonably require in connection with the exercise of its functions. Any information in relation to fulfilment of these standing conditions must be provided in a proactive and timely manner.

Appendix 2 – Standards

GPhC standards for the initial education and training of pharmacists

NB. Information that is shaded grey or shown in grey italics is only applicable to those wishing to offer a 5-year MPharm degree with intercalated 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 and 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 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 should 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 learning resources 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
10.1.a Recognise ethical dilemmas & respond in accordance with relevant codes of conduct and behaviour	Shows how
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
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
10.1.d Apply the principles of clinical governance in practice	Knows how
10.1.e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices	Shows how
10.1.f Contribute to the education and training of other members of the team, including peer review and assessment	Shows how
10.1.g Contribute to the development of other members of the team through coaching and feedback	Knows how
10.1.h Engage in multidisciplinary team working	Knows how

10.1.i	Respond appropriately to medical emergencies, including provision of first aid	Knows how
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10.2 The skills required in practice

10.2.1 Implementing health policy

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

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

Learning outcome	MPharm
10.2.2.a Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health	Knows how
10.2.2.b Identify inappropriate health behaviours and recommend suitable approaches to interventions	Shows how
10.2.2.c Instruct patients in the safe and effective use of their medicines and devices	Shows how
10.2.2.d Analyse prescriptions for validity and clarity	Shows how
10.2.2.e Clinically evaluate the appropriateness of prescribed medicines	Shows how
10.2.2.f Provide, monitor and modify prescribed treatment to maximise health outcomes	Shows how
10.2.2.g Communicate with patients about their prescribed treatment	Shows how
10.2.2.h Optimise treatment for individual patient needs in collaboration with the prescriber	Shows how
10.2.2.i Record, maintain and store patient data	Shows how
10.2.2.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

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
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10.2.3.a Ensure quality of ingredients to produce medicines and products	Knows how
10.2.3.b Apply pharmaceutical principles to the formulation, preparation and packaging of products	Shows how
10.2.3.c Verify safety and accuracy utilising pharmaceutical calculations	Does
10.2.3.d Develop quality management systems including maintaining appropriate records	Shows how
10.2.3.e Manage and maintain quality management systems including maintaining appropriate records	Shows how
10.2.3.f Procure and store medicines and other pharmaceutical products working within a quality assurance framework	Knows how
10.2.3.g Distribute medicines safely, legally and effectively	Knows how
10.2.3.h Dispose of medicines safely, legally and effectively	Knows how
10.2.3.i Manage resources in order to ensure work flow and minimise risk in the workplace	Knows how
10.2.3.j Take personal responsibility for health and safety	Does
10.2.3.k Work effectively within teams to ensure safe and effective systems are being followed	Knows how
10.2.3.l Ensure the application of appropriate infection control measures	Shows how
10.2.3.m Supervise others involved in service delivery	Knows how
10.2.3.n Identify, report and prevent errors and unsafe practice	Shows how
10.2.3.o Procure, store and dispense and supply veterinary medicines safely and legally	Knows how

10.2.4 Working with patients and the public

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

10.2.5 Maintaining and improving professional performance

Learning outcome	MPharm
10.2.5.a Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour	Does
10.2.5.b Reflect on personal and professional approaches to practice	Does

10.2.5.c Create and implement a personal development plan	Does
10.2.5.d Review and reflect on evidence to monitor performance and revise professional development plan	Does
10.2.5.e Participate in audit and in implementing recommendations	Knows how
10.2.5.f Contribute to identifying learning and development needs of team members	Knows how
10.2.5.g Contribute to the development and support of individuals and teams	Knows how
10.2.5.h Anticipate and lead change	Knows how

Appendix 3 – Indicative syllabus

It is expected that education providers will use the indicative syllabus to develop a detailed programme of study which will enable pharmacists to meet the learning outcomes.

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 pharmaceuticals, 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)*