



Master of Pharmacy
degree (MPharm)

Aston University

Report of a reaccreditation event

May 2019

Event summary and conclusions	
Provider	Aston University
Course	Masters of Pharmacy degree (MPharm)
Event type	Reaccreditation
Event date	21-22 May 2019
Accreditation period	2018/19 - 2024/25
Outcome	Approval The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council (GPhC) that the MPharm degree provided by Aston University should be reaccredited for a further period of six years, with an interim event to take place in three years.
Conditions	There were no conditions
Standing conditions	Please refer to Appendix 1
Recommendations	There were three recommendations. The recommendations are for the school to: 1. examine more closely the factors which influence student progression throughout the MPharm programme, 2. engage with, and more effectively respond to, student feedback, particularly securing their input on the delivery of the MPharm programme, and 3. keep the assessment strategy under review, particularly but not uniquely, in the context of the synoptic assessment and staff capacity.
Registrar decision	Following the event, the Registrar of the GPhC accepted the accreditation team's recommendation and approved the reaccreditation of the programme for a further period of six years with an interim event to take place in three years.
Key contact (provider)	Professor Chris Langley, Head of Aston Pharmacy School
Accreditation team	Professor Stephen Denyer (Team leader), Emeritus Professor, Brighton University Professor Larry Gifford (academic), Emeritus Professor, Keele University Professor Barrie Kellam (academic), Professor of Medicinal Chemistry, University of Nottingham

	<p>Mrs Barbara Wensworth (pharmacist), Freelance Pharmacy Lecturer, Standards Verifier, assessor and writer</p> <p>Mr Ian Smith (academic), Lecturer, Keele University</p> <p>Ms Kirsten Little (pharmacist – recently qualified), Mental health Services, Forth Valley Health Board</p> <p>Mrs Catherine Boyd (lay member), Chair of Tribunals, for the Health and Care Professions Tribunal Service</p>
GPhC representative	Mr Chris McKendrick, Quality Assurance Officer, GPhC
Rapporteur	Ian Marshall, Emeritus Professor of Pharmacology, University of Strathclyde; Proprietor, Caldarvan Research (Educational and Writing Services)

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 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'.

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>

Background

The last full accreditation of the Aston MPharm degree took place in 2013 at which time the team recommended that the degree be reaccredited for a period of six years subject to the condition that full integration must be clearly demonstrated and articulated. A document had to be submitted to demonstrate that this has been achieved; this would be tested in three years at a visit by members of GPhC accreditation team. At that time it was envisaged that such a visit would be independent of the three-year practice visit. This was to meet standard 5. This was because although the accreditation team acknowledged that the programme team was working towards developing a fully integrated programme, it remained concerned about the inconsistency in the integration of the programme at that time. Standard 5 (5.1 and 5.5) requires that the curriculum must be integrated. The team had also made two recommendations. The first related to the team's concern about the pass mark for the calculations assessment, where the team believed that an apparently low pass-mark (60%) sent the wrong signal concerning future practice, when students were expected to aspire to total accuracy; here, the team had

recommended that, from a public safety perspective, the School should reconsider its approach in this very sensitive area. Additionally, despite reassurances, the team had been concerned at the level of out-of-date stock in the dispensary; as this did not reflect acceptable practice, even within a simulated session, the team recommended that this should be addressed by the School. At the interim visit in 2016, the team acknowledged that the University had reviewed the integration within the programme after the 2013 accreditation event and that some work had been undertaken on how integration was viewed and understood, although the team was unable to find documentary evidence of the review process or outcomes. During this interim visit, the academic staff articulated how the programme was managed but provided little evidence of how horizontal and vertical integration was achieved. It was very clear from discussions with the students that they could see vertical progression but they were unable to describe or recognise horizontal integration. They also described very modular-based assessments, with very little information relating to integration. The team recognised that Year 1 can often be a foundation year to ensure that students have the right knowledge and skills to undertake an MPharm programme; this would not be out of step from other programmes but the team considered that the level of integration was not yet sufficient throughout and the condition imposed in 2013 had not been met. Therefore, the team agreed that the University must develop a coherent philosophy and strategy to develop an integrated MPharm degree that meets standard 5.1 and 5.5a. This condition was required to be met and implemented before the start of the September 2017 intake, and that the University would be subject to a small monitoring visit before this date, to check on progress towards satisfying this condition. At the supplementary interim visit that took place in July 2016, the team agreed that the material presented in the documentation and outlined during the visit was significantly different from the then existing programme. While acknowledging that the University regarded this as a 'major modification', the team formed the view that the philosophy of the teaching, learning and assessment of the proposed MPharm constituted what amounted to a brand-new programme. The team acknowledged that the proposed course appeared to be developing towards an integrated curriculum and stated its regret that the work had not begun sooner. As the programme was still in development, the team could not test it at that stage; a full accreditation team would need to evaluate this provision against the GPhC standards during the next full reaccreditation event. Noting the University's intention to commence the delivery of the new MPharm programme in 2017/18, the team's advice was that this programme should be presented for reaccreditation earlier than planned and that this would fall in the next academic year. Moreover, the University should consider the timelines involved in order to ensure the development of a programme that was fit for purpose while minimising self-imposed pressure; this was simply advice and was a matter for the University to decide. However, to address the condition imposed following the 2013 reaccreditation, the team had been shown a number of examples where the current course had been enhanced by implementing aspects and elements of the aspirational programme. While it had been a significant journey to arrive at its decision, the team concluded that the condition set in 2013 was now met and the current period of accreditation would continue as originally stated until 2018/19.

Documentation

Prior to the event, the provider submitted documentation to the GPhC in line with the agreed timescales. The documentation was reviewed by the accreditation team and it was deemed to be satisfactory to provide a basis for discussion.

Pre-visit

In advance of the main visit, a pre-visit meeting took place at the University on 1 May 2019. The purpose of the pre-visit meeting was to prepare for the event, allow the GPhC and the University to ask any questions or seek clarification, and to finalise arrangements for the visit.

The event

The event began with a private meeting of the accreditation team and GPhC representatives on 21 May 2019. The remainder of the event took place onsite at Aston University on 22 May 2019, and comprised a series of meetings with staff and students of the University and included a tour of the University facilities.

Declarations of interest

There were no declarations of interest.

Key findings

Standard 1: Patient and public safety

All criteria relating to this standard are met.

All new MPharm students are given an introductory timetabled session by the LHS Fitness to Practise Officer during the MPharm students' Welcome Week, where the Standards for pharmacy professionals and the University Fitness to Practise Regulations are highlighted and discussed. All students also receive a briefing on the policies and mandatory training that underpins safety concerns during Welcome Week. External stakeholders have contributed to policies on infection control, dress code standards and reporting of patient safety concerns. There is mandatory training on hand hygiene, health and safety, equality and diversity, and information governance before students attend NHS hospital sessions in Stage 1. Within the medication supply practical sessions, a high staff-to student ratio is employed to ensure that students, especially at the commencement of their studies, are given suitable and targeted educational support from qualified pharmacy professionals. Teaching involving interaction with patients and the public is always undertaken within a supervised and supportive environment and co-ordinated by the practice-linked Pharmacy School staff. Any issues students wish to raise relating to fitness to practise can be done through either their Personal Tutor or the Senior Tutor who can provide any advice necessary before any formal referral to the LHS Fitness to Practise Officer. Certain areas for the programme have additional monitoring of student activity, which includes enhanced attendance requirements, and assessments where activity which would cause a danger to patients results in failure of the whole assessment or section of the assessment as appropriate. The programme is constantly reviewed to ensure graduates are able to enter a period of pre-registration training and practise safely and knowledgeably.

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

All criteria relating to this standard are met. One recommendation was made.

As part of the annual review process, at the end of an academic year, each year lead is required to complete a module-level reflection form, including a reflection on how the module ran and a report on any action taken or proposed, and an analysis of the performance of students on the module. The module-level forms are submitted to the relevant Programme Director who deals with any immediate issues that might be raised and compiles a summary report on issues reported for both School-level and University-level action. In addition, there is a major review of all taught programmes, normally on a six-year cycle. These periodic reviews are co-ordinated by the Centre for Learning Innovation and

Professional Practice (CLIPP) and involve a holistic review of the provision. At Pharmacy School level there is a single Programme Committee for both the MPharm and OSPAP programmes; the Pharmacy Programmes Committee (PPC). The PPC is chaired by the MPharm Programme Director, with a membership made up of academic staff, student representatives and the Pharmacy Programmes Administrator; its main function is to oversee the development of the curriculum and assessment strategy for the MPharm and OSPAP, and to ensure integration both within and between years. The University web site details the admission requirements, which are reviewed annually by the Pharmacy Management Team and the Programme Director, with consultation from the Programmes Committee, senior staff in the Pharmacy School and admissions tutors. There is a formal service level agreement (SLA) between Aston Pharmacy School and each of the hospital trusts that offer student placements. All teaching is undertaken by the teacher-practitioners (TPs) or by experienced clinical hospital pharmacists and peer assessments in the workplace together with overall quality assurance by the TPs ensures equality across the sessions as far as is realistically possible. Members of University staff accompany the students on all community pharmacy placements in Year 1 and teaching is collaborative with company staff in stores. In subsequent years each student is reviewed by a member of staff at least once during the community pharmacy placement. The team was told that, as the community pharmacy placement base will be increased, a quality assurance process similar to that to be used for hospital placements will be introduced; this will be in place by September 2019 supported by service level agreements. General medical practice (GP) placements are being developed and co-ordinated by a teaching fellow from primary care. These are delivered by either a University teaching fellow or the GP practice pharmacist who has received appropriate training. To maintain consistency, a large 'super-practice' is hosting these sessions for all students. Students are given training to ensure that they can undertake any practical learning activity in a safe manner, including those that take place in a laboratory or work environment. There is a University-wide standard set out within the Student Charter for feedback on coursework that both marking and feedback must be completed within a four-week period from submission. Students were critical of the feedback on their work and assessments, telling the team that there was no feedback on OSCE performance for those that passed and that in general feedback was not individualised, except for those that failed. The team noted that feedback from students to the University on the modules had elicited very low returns and it was suggested by staff that only unhappy students tend to engage in feedback. Also, the team found that although student representatives had been made aware of the plans to revise the curriculum, this had happened after the event in that they had not been consulted before changes were planned. It will be a **recommendation** of this report that the School engage with, and more effectively respond to, student feedback, particularly securing their input on the delivery of the MPharm programme.

Standard 3: Equality, diversity and fairness

All criteria relating to this standard are met.

The University has formulated codes of practice on equality and diversity for staff and students in relation to a wide range of functions and equality issues. Staff and students who fail to act in accordance with University policies and codes of practice may be subject to disciplinary action. It is the responsibility of each member of the University to ensure that they adhere to both the relevant legislation and University Policy in their treatment of other members of the University. The University undertakes to provide guidance for staff and students to enable them to fulfil this responsibility. In addition, it has a programme of equality and diversity training which is available for all University staff. Academic and other staff members are given training in the concepts of equality and diversity. Thus, all staff members are required to undertake unconscious bias training and new staff members complete an Induction Programme which includes equality and diversity training. During the annual monitoring process, statistics are gathered for progression, entry and award which are subdivided on the basis of gender, ethnicity, age and disability amongst other factors. The team was told that the analysis had shown no significant differences in progression between the different groups. However, the team considered that the analysis undertaken was unsophisticated and it will be a **recommendation** of this report that the School examine more closely the factors which influence student progression throughout the MPharm

programme. Information on progression is circulated to Programme Directors and is available for use by programme staff during the annual programme review process. This is also the mechanism by which issues are identified and disseminated. If students feel that they need support and guidance or are concerned that they are subject to any form of discrimination, they can report their concerns to their Personal Tutor, Senior Tutor, Programme Director, Associate Head (Education), Deputy Head or Head of School. There are various channels through which students can report and it is an expectation that students can raise issues with any member of Pharmacy School staff or if they feel that these routes are not appropriate, to the University through the normal student support mechanisms. Issues relating to Equality and Diversity relevant to the practice of pharmacy are addressed in all Stages of the programme in a step wise manner as the programme develops. In addition, the University launched two new compulsory on-line training modules for all staff in March 2019 on Equality and Diversity, and on Cyber Security. All staff members are required to complete the training by 21st June 2019 and non-completion will be followed-up via line managers.

Standard 4: Selection of students *and* trainees

All criteria relating to this standard are met.

Information about application to the MPharm degree programme is provided on the University website along with additional information relating to the programme's fitness to practise requirements. The majority of applicants apply based on A-level qualifications. The grade offer of ABB/BBB is made to A-level applicants with at least two sciences, one of which must be chemistry. In addition, applicants must, as a minimum, have GCSE English grade C/4 and GCSE maths grade C/4. All applicants are interviewed prior to an offer being made, either at Applicant Visitor Days which combine an opportunity to meet staff and student ambassadors of the Pharmacy School with the selection interview, or, by video call if they emanate from outside the UK. The interview explores ethical thinking, problem-solving, and calculations skills. If there are available places on the programme following confirmation, applications are accepted through the UCAS Clearing process, and, from 2019, all students will be interviewed by video call. The team was told that if Aston is the first choice of applicants, they will be incentivised by an offer of one grade below the standard tariff, and that the School was confident that applicants with BBB should be able to cope with the programme. The team commented on the number of high degrees being awarded in recent years in relation to the entry grades decreasing. Applicants are required to undertake an Enhanced-Level Disclosure and Barring Service (DBS) check, and are required to undertake occupational health checks. Although the School will consider carefully requests to enter the MPharm at anything other than the start of the first Stage, because of recognition of prior learning (RPL), it is extremely unlikely that any such requests will be granted and since the last reaccreditation event, no such requests have been granted. The University admissions team is supported by three Admissions Tutors from the Pharmacy School who take overall responsibility for admissions to the MPharm programme.

Standard 5: Curriculum delivery and student experience

All criteria relating to this standard are met. One recommendation was made.

The revised programme commencing in September 2019 will be introduced on a year-by-year basis but with elements of the new approach, including new experiential learning opportunities, being introduced into the existing programme as it rolls out. The team was told that everything is prepared for Stage 1 with some work remaining to be completed on the timing of in-course assessments. Transition arrangements for students failing years of the existing course have been considered and there is the possibility of double-teaching or summer classes to cater for this, with the additional possibility of waiver of specific regulations for the benefit of repeating students. The new programme structure is based on 120-credit teaching units and starts with Foundation Studies for the first half of the academic year, which covers Communication Skills; Health and Pharmacy, Chemical Services; Quantitative Skills, and Biological Sciences. The remaining three and a half academic years have three blocks running through them; The

Professional, The Medicine and The Patient. Horizontal cohesion is provided by three binding strands, Collaborative Practice, Person-Centred Care, and Deliberative Practice to represent key characteristics of contemporary practice and provide the foundation for integration from the second phase of Stage 1 through to the end of the programme. The team was told that the School plans to encourage greater student engagement by adopting new methods of teaching and learning, including a flipped classroom approach. In the first teaching period of Stage 1 the focus is on ensuring that students acquire core threshold skills and knowledge in a number of clearly defined areas; this is analogous to Harden's definition of Nesting. In the second teaching period of Stage 1 through Stage 2, the integration of the programme increases, and accords to Harden's description of Multidisciplinary. In Stage 3 study involves two or more disciplines used simultaneously, corresponding to Interdisciplinary integration. In Stage 4 the emphasis is on integrated person-centred care with specialisation and transition content continuing to be represented as Interdisciplinary. However, the integrated person-centred care content is aligned with Harden's definition of Transdisciplinary, where the focus of study is exemplified by real-world examples and students work within hi-fidelity simulations. Students, who were all on the existing programme, emphasised the need for the School to continue to include more integration into the existing programme as it rolls out. All students are required to conduct themselves professionally during their studies as is made clear during Welcome Week when they are introduced to the GPhC Standards for Pharmacy Professionals and discussions are undertaken around how the Standards apply to them as a pharmacy student. Pharmacy is one of the major research groups within Life and Health Sciences and benefits from being closely allied to research in Aston Medical Research Institute based in Aston's new Medical School. In the 2014 Research Excellence Framework (REF2014), the University's research in Allied Health Professions, Dentistry, Nursing and Pharmacy was ranked 8th out of the 94 UK higher education institutions returned in this unit of assessment, and 94% of its academic research was classed as world leading (4*) or internationally excellent (3*). The third Stage builds on the student's knowledge gained in the second Stage on scientific writing and literature evaluation to develop their understanding of research methodology; this Stage also contains material relating to experimental design, hypothesis setting and both quantitative and qualitative research methods which are then used in the final year projects and electives. It was explained to the team that students will be able to undertake an extended project in Stage 4, or elective topics, or a combination of project and electives. The whole of the final Stage requires a practical understanding of how established techniques of research are used to create and interpret knowledge. The implementation of the professional experience strategy is overseen by the Professional Experience Implementation Group. Students will have patient experience from the outset with the aim of developing as confident, competent practitioners and communicators capable of delivering person-centred pharmaceutical care. The strategy is designed to allow students to develop and practise professional skills in safe simulated environments, blended with workplace learning, and supported by teacher-practitioners working closely with the MPharm Programme Director. Workplace learning commences in Stage 1 with community pharmacy visits, continues in Stage 2 with a full-day hospital placement, a GP visit and further community pharmacy experience. In stages 3 and 4 there are further hospital placements with plans to introduce GP placements into these stages also, along with a week-long community pharmacy placement in Stage 3. There are plans to move the experiential experience from observational to being more participative, along with plans to introduce more hi-fidelity simulations. Current students felt that there was insufficient patient contact in the existing programme and that those without a job in pharmacy were at a disadvantage in the placements and the IPL sessions. A teacher-practitioner post is dedicated to the development of the IPL programme with final year pharmacy students and University of Warwick medical students at Walsgrave Hospital where students engage in interactive learning tasks with students and prescribers from medicine, optometry, biomedical science and audiology. The team was told of plans to develop IPL sessions with students in the new Aston Medical School for every year of the MPharm programme, but it is expected that the link with Warwick will continue. The Visiting Professor of Applied Philosophy described the use of an online debating system, Values Exchange, for scientific and ethical situations. Expert patients are invited into the University to engage with students, and provide individual feedback on student performance and professionalism shown during these sessions. In further support of enhancing students' understanding of professional roles, they undertake training delivered by doctors and nurses on responding to patient concerns which enables them to learn from other healthcare professionals the issues surrounding

emotive conversations. The programme uses analytical assessments to ensure the knowledge “knows” and “knows how” requirements of the Miller’s scale. These assessments are generally in the format of written examinations or tests using a mixture of question types dependent upon the subject area. “Shows how” achievement is assessed largely in simulations of professional or clinical practice or in active assessment tasks involving individual students. The strategy for assessment of these objectives at the “does” level is to build such requirements into the standards expected of a student within their Personal and Professional Development portfolio at each Stage of the programme. The overall strategy is to test students’ depth and breadth of knowledge and skills. The normal University pass mark for a module at Level 4, 5 and 6 is 40%. Final Stage modules for integrated Master’s programmes are at level 7 and have a minimum pass mark of 50%; students are required to pass each individual assessment, with a minimum mark of 40% in Stages 1, 2 and 3 and a minimum mark of 50% for the final Stage. There is no condonement/compensation of marks between assessment components. The pass marks for certain critical elements may be higher than the above, with penalties for bad practice, and with the pass mark for calculations initially being increased on a yearly basis and being standard set by Stage 3. The pass level for OSCE assessments in the final Stage are set by a standard setting process. The team learned that the School intends to introduce a synoptic assessment into each year of the new programme which will be different from the integrated examinations. The synoptic assessments will represent the culmination of year-long study of how the learning from the different themes and strands of the programme has prepared the student for person-centred care in the context of a specific patient. The team was told that whereas an integrated examination draws on multiple elements from the 12 themes in the programme, the synoptic assessment can demonstrate students’ understanding of how all the themes and strands contribute to positive patient outcomes. The team, while appreciating the ambition behind this development was concerned about the eventual demands on staff workload. The team was told that staffing workload had been considered as part of the review of overall assessment loading from both a student and staff perspective, and that the revised assessment strategy reflects a plan to reduce assessment burden for the students and in turn, results in a reduced assessment load for staff. Eventually, in all four years of the programme, this activity will replace other assessment activity and represents an overall reduction in marking workload, both in number of assessments and overall assessment time. Students agreed that a reduction in the assessment load would be beneficial. It will be a **recommendation** of this report that the School keep the assessment strategy under review, particularly but not uniquely, in the context of the synoptic assessment and staff capacity.

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

All criteria relating to this standard are met.

New entrants to the programme are introduced to the University, the School of Life and Health Sciences (LHS) and the MPharm programme during a series of events which are staged during Welcome Week, including an introductory welcome lecture by the Programme Director which covers topics including how the programme is organised, taught and assessed and the support mechanisms available to students. There is a tutorial system to provide support to the students, with each student being allocated a Personal Tutor upon arrival at the University. Tutees are timetabled to meet their Personal Tutor on a termly basis throughout their time enrolled on the programme. Students submit to their Personal Tutor, a tutor-tutee meeting form on which they report on their progress, identify any problems that they are experiencing, and provide an indication as to their general health and wellbeing. Personal Tutors will seek to provide a resolution to any problems as soon as is practically possible. The team was told that the School plans to separate pastoral support from academic tutoring. Students interviewed told the team that the level of support from tutors was very variable, ranging from no support to the development of valuable relationships. To provide broader support for students the University has a wide range of facilities which includes resources within the library, offering social learning space and facilitates for both group learning and peer learning activities. The social learning area offers a group study area and meeting ‘pods’ where students can work as a group in a discreet environment. The Learning Development Centre (LDC) in the library offers Study Skills workshops including a series specifically for international students, study guides, a Maths Centre, Student Writing Mentors, various other learning

resources, email-based tutorial support and support for members of staff. Completion of CPD is required across and throughout the entire programme. Students are introduced to personal and professional development through resources hosted on the University's VLE Blackboard (BB), and through the personal tutor system. Students work closely with departmental staff that have a range of expertise and experience in all aspects of pharmacy; including community, primary care, secondary care and the pharmaceutical industry. In addition to staff employed directly by the University, students are exposed to a range of specialist pharmacists, including pharmacists employed in the pharmaceutical industry, through guest lectures in various modules throughout the programme. Students also have the opportunity to interact with a range of individuals from other health professions during the programme including consultant physicians from hospitals, optometrists, nurses, dieticians and a veterinary surgeon. The HUB), the student support service, which encompasses the Enabling Team, offers advice on finance, counselling, international student advisors, Registry and general advice on issues such as council tax. There is also a dedicated Counselling and Mental Wellbeing Service where a well-established, professional service is provided by qualified and experienced counsellors. A named member of the School staff liaises with the counsellors and students can self-refer to the counselling service. Each of the four Stages of the programme contains a Personal and Professional Development theme, and a Fundamentals of Practice theme that include professional skills. These commence in the first Stage with an introduction to the concepts of effective learning and team-working as well as instruction on concise writing and commonly used software. Personal development planning, continuing professional development (CPD) and reflective practice are also introduced. Students are encouraged to seek pharmacy experience in parallel to the programme, and are supported by the Careers and Placements team in their search for, and preparation for, summer placements. The Careers and Placements Team has pharmacist/academic contacts within the programme who work with it to ensure that the advisors understand the particular requirements of pharmacy students and the profession, and that students receive the timely advice and support that they require.

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

All criteria relating to this standard are met.

Up to the end of 2017-2018, all Pharmacy School staff will have undergone a formal Performance Development and Review (PDR) meeting annually. In 2018-2019, a new performance review programme called "My Development Conversation" has been introduced, which in addition to an annual review, aims to engage staff in an ongoing conversation throughout each academic year with their line manager. The scheme focusses upon setting individual work priorities for the year, aligned to the Aston University Strategic Plan and the departmental and School plans. In the new scheme, and the process will identify priorities as the overarching areas of work or responsibility with more task-specific objectives sitting underneath. The University provides a range of training courses for staff, with many of the courses provided electronically via Blackboard. A number of courses are mandatory (e.g. fire safety training, equality and diversity and inclusion training, and recently, GDPR training). These mandatory courses include assessment elements with minimum performance targets that must be achieved. An Introduction to Learning & Teaching Practice (ILTP) is a 20-credit, Level 6 Aston award delivered by the Centre for Learning Innovation and Professional Practice (CLIPP). This module is about classroom craft and is intended for those members of staff who have little or no previous experience of teaching in higher education. There is also a 60-credit, Level 7 award, the Postgraduate Certificate in Learning & Teaching in Higher Education (PGCert), a Postgraduate Diploma in Learning & Teaching in Higher Education, and a MEd in Learning & Teaching in Higher Education available for staff. In addition, there is a Research Inspired Teaching Excellence (RITE) programme that enables staff to apply for and gain professional recognition at four different levels of the Higher Education Academy (HEA): Associate Fellow, Fellow, Senior Fellow and Principal Fellow. Within the Pharmacy School all staff members have an identified line-manager who in turn, reports to the Head of Pharmacy or Deputy Head of Pharmacy. Each line manager is responsible for performance review and supporting the staff they manage. The team was told that workloads will be managed using a newly-piloted School of Life and Health Sciences work allocation model, which aims to incorporate teaching, research and administrative duties of staff where

appropriate. In the Pharmacy School, a normalised standard teaching load for a member of the full-time academic staff is currently around 120 hours contact per annum for staff who are also engaged in research, and around 200 hours contact per annum for staff who are not research-active. All new academic members of staff are provided with appropriate support and mentoring to develop their research profile while their teaching load is carefully managed. Staff members on teaching-only contracts are supported to engage in educational research. Formal mentoring is undertaken and is available for all staff irrespective of grade; mentors are identified for all staff new to higher education. Mentoring ensures that staff members have the opportunity to discuss their personal development with someone not directly involved in making judgements about their performance.

Standard 8: Management of initial education and training

All criteria relating to this standard are met.

The Head of Pharmacy is advised by the Pharmacy Executive, a group chaired by the Head of Pharmacy, with membership consisting of the Deputy Head of Pharmacy and the two Associate Heads of Pharmacy. The group meets frequently, with its small size allowing flexibility to respond quickly to any issues that arise at School level. The Pharmacy Executive oversees the Pharmacy School's compliance with the QAA Quality Code and each theme within the code has an identified Executive lead, along with other key staff where appropriate. The Pharmacy Management Team (PMT) meets regularly throughout the year to consider resource and strategy matters relevant to the Pharmacy School. The PMT membership is the members of the Pharmacy Executive along with the line managers of staff. To support communication throughout all staff within pharmacy, each term, a Pharmacy School Meeting is held where all members of Pharmacy staff are invited to attend. The MPharm Programme Director reports directly to the Associate Head of Pharmacy (Education) and is supported by a Programme Administrator within the School Office. The Programme Director has operational control of the MPharm programme and is supported by the Year Leads whose role is to oversee activity across the Stage and to link to the module co-ordinators for the Stage. For 'MPharm-2019' the Year Lead will also undertake the role of the Module Co-ordinator for the relevant Stage of the programme. Year Leads have the academic responsibility for assessments during each Stage including exam preparation and collation and checking of examination marks. Theme Leads have a role in overseeing the vertical co-ordination and integration of themes through the programme. All work-based learning opportunities are overseen by the Head of Professional Experience. Hospital pharmacy placements are planned, delivered and co-ordinated by a teacher-practitioner (TP) team made up of six 0.5 FTE posts funded by the Pharmacy School. These posts are located in five NHS Trusts all of which participate in ward-based teaching. There is a formal service level agreement (SLA) between the Pharmacy School and each of the hospital trusts. The hospital placements and the collaboration between the School and the trusts is managed by the Head of Therapeutics.

Standard 9: Resources and capacity

All criteria relating to this standard are met.

The University budget is set annually through a budget negotiation round that takes place before the end of April. This process balances the needs of the Professional Services and the Schools of Study. The budgetary year commences August 1st and the initial budget to each School is based upon the planned student entry numbers to that School which is finally adjusted in January when student numbers are confirmed. The income and expenditure of Pharmacy is reviewed every one or two months by the School Accountant and the Head of Pharmacy. The School's financial summary is reported to the Pharmacy Executive and Pharmacy Management Team and discussed at Pharmacy School meetings annually to ensure the budget allocation of Pharmacy is transparent to all members of the School. Major capital development programmes for Pharmacy are managed via consultation with the Executive Dean of LHS and the University Executive Team. The Dean told the team that he was confident of the financial forecast up to the following year but beyond that time was subject to external factors beyond the control of the University; the team understood this situation. The team noted a sum of around £0.5M in the

proposed budget for the following year and was told that this would be used to invest in the vacant Regius Chair in Pharmacy. Recently, the reconstruction of the second phase of the academic and research staff accommodation was based on centrally-secured funding of £585k, and the refurbishment of the clinical teaching facilities was secured separately, again from central funds, and cost £573k, with an additional AV cost of £60k. The team had the opportunity to visit the refurbished accommodation which it agreed was of a high standard. The pay costs of all staff within Pharmacy are within the Pharmacy budgetary control ensuring that the needs of the programme can be addressed. For recruitment of new staff, appointments must also be approved by the Executive Dean and LHS School Accountant if within the budget, and by the Executive Team of the University if not in the budget. Since the last MPharm reaccreditation in 2013, the total staff has increased from 45 (34.66 FTE) to 49 (41.35 FTE) in 2018/2019. The MPharm programme is taught in its entirety from within the Pharmacy School, with appropriate use of visiting specialists and other professionals. The School does not provide any service teaching, and MPharm students receive no service teaching. The team was told that there are no plans to increase the number of MPharm students, and the overall increase in numbers has been due to the introduction of a neuroscience degree, now in its third year of operation. The staff profile of the Pharmacy subject group comprises approximately 50% pharmacists including the Head of Pharmacy, the Deputy Head of Pharmacy, one of the Associate Heads, and the MPharm Programme Director. All student research supervision is conducted by staff members with appropriate research expertise. In all research projects, students have a supervisor with a higher research degree and/or significant research expertise. The Pharmacy Executive, Pharmacy Management Team and the Pharmacy Programmes Committee have representation from both GPhC registrants and non-registrants. In addition, within the programme team, taught sessions are run with pharmacists and pharmaceutical scientists, co-delivering teaching sessions. The integration of pharmacists and non-pharmacists as part of the delivery of the MPharm programme, and the provision of training and support for all staff within the pharmacy subject area underpins and supports all staff to deliver their area of expertise in a pharmaceutical context. The School has computer suites where specialist software is installed, and these can be linked to provide a simultaneous teaching environment with 130 PCs. Students have their own suite of PCs available 24/7 and can identify the availability of free PCs across campus at any time through their web portal. The same system is available for over 90 PCs available in the library. The Pharmacy School currently occupies space on floors three to six of the University Main Building. Because of the size of the Pharmacy School operation, most of the laboratories used by pharmacy programmes are used exclusively by the School.

Standard 10: Outcomes

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

The team had scrutinised the learning outcomes in discussions with the staff in meeting 4. Rather than examining each of the 58 outcomes, four outcomes (10.2.1.e, 10.2.2.g, 10.2.3.b, and 10.2.5.a) had been selected for detailed discussion; the Aston University staff members had been unaware of the outcomes to be discussed before the meeting. For each of the four 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 therefore 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 in meetings with programme staff 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 reaccreditation 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 providers offering 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 *standards for pharmacy professionals (2017)*;
- 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	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>
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10.2 The skills required in practice

10.2.1 Implementing health policy

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

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

Learning outcome	MPharm	Pre-reg
10.2.2.a Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health	Knows how	<i>Shows how</i>
10.2.2.b Identify inappropriate health behaviours and recommend suitable approaches to interventions	Shows how	<i>Does</i>
10.2.2.c Instruct patients in the safe and effective use of their medicines and devices	Shows how	<i>Does</i>
10.2.2.d Analyse prescriptions for validity and clarity	Shows how	<i>Does</i>
10.2.2.e Clinically evaluate the appropriateness of prescribed medicines	Shows how	<i>Does</i>
10.2.2.f Provide, monitor and modify prescribed treatment to maximise health outcomes	Shows how	<i>Does</i>
10.2.2.g Communicate with patients about their prescribed treatment	Shows how	<i>Does</i>
10.2.2.h Optimise treatment for individual patient needs in collaboration with the prescriber	Shows how	<i>Does</i>
10.2.2.i Record, maintain and store patient data	Shows how	<i>Does</i>
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	<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	Pre-reg
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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	Pre-reg	
10.2.4.a	Establish and maintain patient relationships while identifying patients' desired health outcomes and priorities	Shows how	<i>Does</i>
10.2.4.b	Obtain and record relevant patient medical, social and family history	Shows how	<i>Does</i>
10.2.4.c	Identify and employ the appropriate diagnostic or physiological testing techniques to inform clinical decision making	Knows how	<i>Shows how</i>
10.2.4.d	Communicate information about available options in a way which promotes understanding	Shows how	<i>Does</i>
10.2.4.e	Support the patient in choosing an option by listening and responding to their concerns and respecting their decisions	Shows how	<i>Does</i>
10.2.4.f	Conclude consultation to ensure a satisfactory outcome	Shows how	<i>Does</i>
10.2.4.g	Maintain accurate and comprehensive consultation records	Shows Does	<i>Does</i>
10.2.4.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	Pre-reg	
10.2.5.a	Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour	Does	<i>Does</i>
10.2.5.b	Reflect on personal and professional approaches to practice	Does	<i>Does</i>

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

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)*