

MPharm Interim Visit

Aston University

February 8-9 2016

Master of Pharmacy degree course (MPharm) interim visit

Aston University

Report of an interim visit, 8-9 February 2015

Introduction

The General Pharmaceutical Council (GPhC) is the statutory regulator for pharmacists and pharmacy technicians and is the accrediting body for pharmacy education in Great Britain. The GPhC is responsible for setting standards and approving education and training courses which form part of the pathway towards registration for pharmacists. The UK qualification required as part of the pathway to registration as a pharmacist is a GPhC-accredited Master of Pharmacy degree course (MPharm). The GPhC's right to check the standards of pharmacy qualifications leading to annotation and registration as a pharmacist is the *Pharmacy Order 2010*.

The Pharmacy Order 2010 requires that the 'nature, content and quality' of education and training provision is reported to the GPhC by its accreditation panel. As such the GPhC has incorporated interim visits within its accreditation methodology to provide suitable opportunities for the accreditation panel to review MPharm course provision in this way. The GPhC carried out a series of pilot interim visits in the early part of the 2013-14 academic year to help inform the development of the structure and content of the interim visits to ensure that they would be fit for purpose. Five schools of pharmacy took part in the pilot phase.

The purpose of an interim visit is to allow an accreditation team to:

- Monitor progress of delivery of the accredited MPharm degree since the accreditation or reaccreditation to the *GPhC Standards for initial education and training of pharmacists*.
- Evaluate a selection of the educational activities on the accredited course in conjunction with information provided at the main accreditation visit. The accreditation team will wish to satisfy itself of the quality, particularly of the practice opportunities available, and to ensure that they continue to meet the *GPhC Standards for initial education and training of pharmacists*. In particular, the accreditation team will be evaluating how well the accredited MPharm degree meets standard 5.6, which states:
The MPharm/OSPAP curriculum must include practical experience of working with patients, carers and other healthcare professionals. We are not suggesting that off-site placement visits are the only way to achieve this. Schools should articulate their strategy for meeting this criterion, which may include off-site placement visits, using patients, carers and other healthcare professionals' in-class, and simulation.
- Evaluate these practice activities in relation to the student's ability to demonstrate the relevant outcomes in Standard 10.

Interim visits take place three years after a main successful accreditation or reaccreditation visit and the report of the visit forms an appendix to the main accreditation report. Prior to the visit, a School is provided with the document 'MPharm degree interim visits: guidance for providers' and asked to submit the necessary documentation and to describe, and give dates for, a range of student activities that will be taking place both on-site at the University as well as off-site. The visit date is selected so that there are suitable opportunities for the accreditation team to observe activities that had been timetabled to take place that day, without the need to make special arrangements. Prior to the visit, a number of satellite visits are arranged to allow one or more members of the accreditation team to observe the off-site activities. Findings from the satellite visit, as well as information and observations gleaned on the day of the visit, help to inform the accreditation team's overall view on developments since the last visit as well as the quality of education and training being delivered.

This document summarises the visit activities and accreditation team's conclusions following the interim visit to the School of Pharmacy at Aston University

Background

The MPharm programme at Aston University was reaccredited for a period of six years in March 2013. On that occasion, while acknowledging that the staff was working towards developing a fully integrated programme, the team remained concerned about the inconsistency in the integration of the programme and imposed a **condition** that full integration was required to be demonstrated and articulated in order to meet standard 5. 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.

Prior to the interim visit the University submitted documentation to the GPhC and a pre-visit meeting took place by teleconference on 22 January 2016. The purpose of a pre-visit meeting is to help the School of Pharmacy to prepare for the visit, allow for the GPhC and School to ask any questions or seek clarification, and to finalise arrangements for the visit.

Satellite visit

In advance of the interim visit two satellite visits took place on 27 January 2016 to allow team members to observe off-site activities (See section 8, activities 4 and 5) in advance of the main visit. These were undertaken by Ms Gail Fleming, a member of the GPhC Accreditation Panel.

The interim visit

The interim visit itself took place on site at Aston University on 8-9 February 2016, and comprised a series of meetings with staff and students of the University, along with observations of a number of teaching and learning activities. It was not possible for the University to offer any dates that meant that activities could be observed on Day 2. It was decided that Day 1 would instead include the activities and should be treated as a large satellite visit and the meetings with the institution took place on day 2. The QA manager did not need to be present on Day 1 and the team leader coordinated the team members. The QA Manager joined the team later in the day and met with the team for a feedback session. In meeting 7, a presentation by senior members of staff built on the information provided in the submission and provided an update on progress since the last visit in 2013. As described below, this provided an overview of the programme and covered changes made since the 2013 reaccreditation, as well as aspects of patient-facing activities and inter-professional learning. Points raised in the presentation, as well as other matters, were discussed with the staff (meeting 7) and with students (meeting 9) and the following narrative incorporates those discussions.

Meeting number	Meeting	Time
<i>Day 1 February 8 2016</i>		
1.	Observation of activities	10:00 – 11:00
2.	Private meeting of accreditation team and GPhC representatives	11:00 – 13:00
3.	Observation of activities	14:00 – 16:00
4.	Private meeting of accreditation team and GPhC representatives	16:00 – 17:00
<i>Day 2 February 9 2016</i>		
5.	Private meeting of accreditation team and GPhC representatives	07:45 – 09:30
6.	Meeting with Associate Dean International Development (LHS)	09:30 – 09:45
7.	Presentation and meeting with staff	09:45 – 12:00
8.	Private meeting of accreditation team and GPhC representatives	11:45 – 13:00
9.	Meeting with students	13:00 – 14:30
10.	Private meeting of accreditation team and GPhC representatives	14:30 – 15:15
11.	Clarification meeting with Head of School	15:15 – 15:30
12.	Feedback to representatives of Aston University	15:30 – 16:00

Accreditation team

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

Name	Designation at the time of accreditation event	Activities observed (meetings 1 and 3; see section 8)
Professor Ian	(Team leader) Emeritus Professor of Pharmacology, University of Strathclyde	6, 7

Marshall *		
Dr Adam Todd	(Team member - Academic) MPharm Programme Director, Durham University	1, 2, 7
Mrs Barbara Wensworth	(Team member - Pharmacist) Former hospital pharmacist, freelance consultant pharmacist, Lecturer, external verifier, assessor and writer	1, 2, 7
Mrs Sylvia Hikins	(Team member - Lay member) Chair of Urgent Care 24	1, 3

along with:

Name	Designation at the time of visit	Activities observed (meetings 1 and 3)
Ms Joanne Martin *	Quality Assurance Manager (Education), General Pharmaceutical Council – Attended on day 2 of the event only (see introduction of internal visit section)	
Professor Brian Furman	(Rapporteur) Emeritus Professor of Pharmacology, University of Strathclyde	6, 7

*attended pre-visit meeting by teleconference on 20 January 2016

Course provider

Representatives of Aston University School of Pharmacy. The team met with the following:

Name	Designation at the time of accreditation event	Meetings attended
Ahmed, Rabia	Teaching Fellow (Pharmacy Practice)	7
Bush, Dr Joseph	MPharm Programme Director and Senior Lecturer in Pharmacy Practice	7
Carson, Dr Ray	Senior Lecturer and Undergraduate Medical Studies Coordinator	7
Lacey, Dr Fiona	Associate Dean – International Development (LHS) and Teaching Fellow (Pharmacy Practice)	7
Langley, Professor Chris	Associate Dean – Taught Programme (LHS) and Professor of Pharmacy Law and Practice	7
Lewis, Natalie	Clinical Teaching Fellow (Pharmacy)	7
Perrie, Professor Yvonne	Head of Aston Pharmacy School and Chair in Drug Delivery	7, 11
Terry, Dr David	Senior Lecturer in Clinical Pharmacy	7
		7

* attended pre-visit meeting by teleconference on 22 January 2016

In addition, the accreditation team met with a group 12 students, comprising a six from Year 2, four from Year 3 and two from Year 4. These students had volunteered to meet the team.

1. Changes since 2013

A major achievement had been the outcome of the 2014 Research Excellence Framework, where Aston had performed well in the Allied Health Professions, Dentistry, Nursing and Pharmacy Unit of Assessment, where a high percentage of its research had been rated as world-leading/internationally excellent. Interdisciplinary research was supported by a number of new centres, particularly the Aston Brain Centre (ABC), the Aston Research Centre for Healthy Ageing (ARCHA) and the Aston Research for Children's and Young People's Health (ARCHY). The infrastructure in the School has been enhanced through a £1.4M investment in refurbishing rooms to create individual staff offices, enhanced team-working space, and shared meeting spaces, as well as a refitting of the Pharmacy Medicines Management Suite; a second phase of this refurbishment will take place in 2017. Technological advances have included a major upgrade of the University wireless environment across the campus. This facilitated greater use of the Blackboard VLE and the development of novel and bespoke teaching resources such as the Aston Prescription Learning Environment (APLE), as well as the Aston smartphone app, which allows students to access the VLE and many other services from their mobile telephones. Aston Replay, utilising Panopto lecture-capture software, is now employed, enabling students to view lecture material again in their own time.

Staffing (standard 9)

The team learned of four newly-budgeted appointments to widen the clinical team, these comprising one teaching fellow, one lecturer and two teacher-practitioners. Of the total teaching staff comprising three professors, nine teaching fellows, nine teacher-practitioners (covering both hospital and community), seven lecturers and seven senior lecturers, more than 50% of members are registered with the GPhC. In meeting 11, the Head of School clarified that a process was in place for her replacement as Head of School, in view of her move to another university; the details of that move were yet to be finalised.

Aston Medical School

A major recent development has been the establishment of the Aston Medical School, which started in 2014 as a Postgraduate Medical School but which is submitting an MBChB programme for accreditation to the General Medical Council (GMC) based on the Leicester Medical School new curriculum. Assuming GMC approval, marketing of the programme will commence in the spring of 2016. Ten lecturers and two administrative staff members are being recruited and it is planned to commence the first year of the programme in September 2017. Inter-professional learning with pharmacy students is planned for the first year and the School is currently evaluating 'Patients Know Best' software to facilitate this. When asked if members of the pharmacy staff will be teaching on the medical programme, the staff (meeting 7) explained that although the Medical School will have core staff, there will be a great deal of cross-over in teaching between Life and Health Sciences and the Medical School; this will be facilitated by the design of the teaching space.

2. Overview of the MPharm degree.

The presentation described the programme as having a strong science core formed of the two major strands of 'physical sciences' and 'clinical sciences' bound together by a practice stream that linked teaching within the University with the external work of pharmacy. In an overview of the curriculum, the team was told that Stage 1 was concerned with developing the science base and providing an introduction to pharmacy and health; by the end of Year 1, students become qualified medicines counter assistants, which the students (meeting 9) commented on as being valuable for their CVs and for obtaining jobs. Stage 2 dealt with pharmaceutical science and practice, introducing clinical pharmacy as a discipline, with the students qualifying as dispensing technicians by the end of the year. Stage 3 covered clinical science and health,

with students developing their consultations and communication skills, and Stage 4 produced clinical practitioners who were independent learners possessing critical appraisal skills, and who were ready for practice, being able to deal with complex patients having multiple morbidities. When asked how they developed as independent learners and acquired critical thinking skills, the students (meeting 9) told the team that they became progressively independent as they progressed through the course. Lecturers provided directed study through links on slides and students were required to read the articles. Daily updates were provided through Blackboard. The students used APLE in their own time, as well as in timetabled sessions. Students also led their own groups, including sessions outside scheduled classes, where, for example, they discussed patient scenarios. In relation to critical thinking skills, the students gave an example of how they were required to read and critically analyse a paper about warfarin, bringing material together to make a poster. The final year project required critical reviewing skills. The presentation (meeting 7) showed that the course had a discipline-based modular structure. However, the staff (meeting 7) emphasised that these modules did not represent silos, with material crossing modules, and that students did not see this modular structure, which was used for administrative purposes, enabling the School to operate within University regulations. The team had some difficulty in understanding this distinction. Most modules in Years 1-3 are worth 10-20 credits and the School's wish to create larger modules is currently under discussion by the University Regulations Sub-Committee and the Programme Approval Sub-Committee; the team was told that the new MBChB programme (see below) will not be modular. Currently, 40-credit modules are allowed, as seen in the final year of the MPharm, but at earlier stages such modules created progression problems, as students failing components of a module could not progress; this was less problematic at later stages, where students were less likely to fail.

At the 2013 reaccreditation, the team had been concerned by the degree of integration of the programme and had imposed a condition (see 'Background'). In response to this, the staff explained how a programme review had been undertaken to address this through a series of away-days. This had resulted in a better understanding of what integration meant within the Aston MPharm, leading to an increased benefit to programme design through enhancement of the module teams to include staff members from both physical and clinical sciences, and with the degree of integration increasing as the level of the programme develops. Module coordinators may be in either 'physical' or 'clinical' sciences and members of staff contributed to more than one module. The documentation had stated that the content was not specifically integrated through common drugs or physiological systems, but that the teaching philosophy enabled students to make links across modules, so that by the final stage of the programme, students were independently able to identify the links between modules and with material previously taught at earlier stages. This was reiterated in meeting 7, where the staff explained that rather than compartmentalising by body systems or life cycle, the programme dealt with conditions and morbidities, starting with a focus on over-the-counter recommendations in the first year, addressing the 'medicine counter assistant role'. When asked how students would see this, the staff (meeting 7) explained that students would question the relevant member of staff about taught material, while they would approach the relevant named person when the concern was about administrative matters relating to a particular module. The team was also told that teacher-practitioners worked alongside physical scientists co-teaching on modules, as well as working with them to develop modules; for example, in the Year 3 'Medicinal Chemistry' module, there was input from a teacher-practitioner on therapeutic drug monitoring, so that the science was linked to clinical aspects. A variety of personnel teach on every module and a member of staff may also coordinate a module without teaching on it. The documentation had referred to a number of core interactive workshop-style sessions that were co-developed and/or co-taught by colleagues from both the physical and clinical sciences disciplines; the students (meeting 9) told the team that such clinical workshops, along with practical classes put everything into practice and brought together knowledge from different modules. In response to questioning on how the students navigated the course, the staff (meeting 7) explained that while students would see assessments in distinct modules, they did not see teaching sessions in this way. Moreover, although assessments were within modules, integration of knowledge was required and students were expected to incorporate material from different areas in their answers. Cross-flagging was undertaken by staff members and the final year 'Practical Therapeutics' module brought everything together. In relation to navigation through the programme, the students (meeting 9) told the team of the availability of action replays of lectures, enabling them to listen to recordings, and that modules from previous years were available on the Blackboard VLE, so that they could go back and look at earlier work. Half-days off allowed them time to do this and there was

support from their personal tutors. When asked if they understood what the course was about and how they saw integration working in the programme, the students told the team that the first year covered basic science and biology and laid the foundations, while the final year was more clinical. Each year built on the foundations laid in the previous year and students needed to retain knowledge from earlier years. The focus throughout was on patients. The course linked together for example, neurobiology with pharmacology and depression. In the third year, they were required to make clinical presentations where they saw different scenarios from other students; here, they were given a task, where they were required to undertake research in groups and present information to the class, bringing together formulation, neuroscience, chemistry and clinical work. The students told the team that law was covered in every year and that calculations provided good preparation for pre-registration training. When the team asked further about integration, the students explained that each module illustrated how it linked to others, and that they were required to use knowledge from elsewhere linking everything together; here they used the example of the third year medicinal chemistry module, which required them to link with second year material on spectroscopy, as well as to patient care. In relation to linking material within years, rather than between years, the students told the team how teaching on law and ethics linked to dispensing, how chemical structures dealt with in medicinal chemistry related to formulation of chemotherapy agents, and how clinical formulations linked to calculations. However, overall, from discussions with students and staff, the team noted that although vertical progression of taught material was evident, horizontal integration consisted only of links being drawn between modules, for example through cross-flagging and through workshops. As a result, the team agreed that the curriculum itself was not integrated sufficiently as required by standard 5.1

Assessment of teaching quality and quality assurance of placements (standard 2)

Assessment of teaching quality was undertaken largely through feedback on the modules, this being considered by the Programme Director. Teaching was peer-reviewed using a grid to determine who is reviewed by whom; this applied to all who teach, including teacher-practitioners (see below). Promotion criteria have been changed and strengthened with metrics relating to teaching; the School of Pharmacy was supportive of developing staff members in teaching.

In relation to the quality assurance of placements, the staff (meeting 7) explained that each person responsible for delivering placements received an induction by an experienced colleague, and who also reviewed the actual delivery of material by the new staff member. Teacher-practitioners underwent peer review of their practice-based teaching, and their University-based sessions were also subject to peer review. For their practice-based sessions, teacher-practitioners were required to provide a time-structured breakdown of each session. Similarly, such a breakdown was required for their University-based sessions on, for example, falls or patients with swallowing difficulties, along with extensive staff notes, so that others could run the sessions if required. Other aspects of quality assurance included surveys of student opinion undertaken using the Blackboard VLE, where there was an individual questionnaire for each NHS Trust. All teacher-practitioners were encouraged to obtain the Postgraduate Certificate in Learning and Teaching in Higher Education, although there had been a lag in the uptake, due to events such as maternity leave. Community-based placements were also run by teacher-practitioners. On these placements students were provided with workbooks and specified tasks. Staff members visited the placement premises while students were on site.

Dispensary stock (standard 5.3)

The concerns that were raised at the reaccreditation about the out-of-date stock in the dispensary had been addressed by replacing much of that stock. Although a small number of out-of-date items will always be retained deliberately as 'distractors' for the students. Team members were shown the dispensary during activity 2 (see section 8) and were satisfied with the action taken to address the recommendation that had been made by the accreditation team.

Professionalism (standard 5.3)

In response to the team's wish to learn how the course was developing them as professionals and instilling professionalism, the students told the team that they received lectures from professionals and were told how to behave, this being repeated as they progressed through the course. They were required to undergo a DBS check. During practical classes and placements they were told when they did anything wrong, knowing that this may lead to a review and to a consideration of their fitness to practise; they were aware that this also applied to activities in their personal lives. The placements helped them to develop as professionals.

3. Assessment and feedback (standard 5.8)

The staff explained that delivery and assessment were within modules but that the assessment strategy required students to use knowledge from other areas. Standard multiple choice questions and single best answer questions were used to assess basic knowledge and how knowledge is applied was tested in other ways. The Assessment Board comprised the whole teaching team, which looked at all questions to ensure integration and to ensure that they were appropriate and relevant; for example, a question concerned with the formulation of a medicine into a dry powder inhaler would incorporate science and practice, so that students would need to apply and integrate their knowledge. Assessment became focussed progressively on application of knowledge as the course progressed. In the first year, there were diagnostic and formative multiple choice questions but application of knowledge was progressively tested using OSCEs and OSPEs; for example, in an OSPE concerned with making a medicine, students would need to integrate knowledge from both science and practice. The students (meeting 9) told the team that there were assessments in each module, with module guides specifying the types of assessment and when these would take place. They told the team of assessments in dispensing practical classes, laboratory-based examinations and the use of OSCEs and OSPEs, with OSCEs being used in every class. In the first year there were five assessments in each semester, with more in the second year. There was time to revise, with gaps left for revision tutorials and there was a discussion board on the Blackboard VLE, through which lecturers replied to questions. There were also quizzes on Blackboard, which helped to prepare for assessments; these were used mostly in the first year but were also used in other years. Practice examination questions were provided. When asked if the assessments included material from other modules, the students gave the example of an assessment in the third year 'Medicinal Chemistry' module, where one question required them to use their spectroscopy skills developed in a second year module. Consideration of formulations required pharmaceutical calculations that had been done in the first year. Tutorials were held to revise topics from previous years. In meeting 7, the team was told that assessment linked to feedback, which was required to be timely and relevant, the policy being that feedback had to be provided within four term-time weeks. The students (meeting 9) told the team that feedback was both formal and informal and they could also e-mail lecturers to learn how to improve. There were also mini-tests on Blackboard; for example, there was a quality assurance practical on which they were required to obtain a minimum mark. Formal feedback was useful and rapid, being provided within four weeks. Students received feedback on the January examinations and class feedback was provided in lectures. Feedback was also provided in dispensing classes, enabling students to learn from their mistakes.

When asked how peer-assessment was used, the staff (meeting 7) told the team that this started with the employability strand, where students were required to complete an application form for a fictitious job; students' applications were peer assessed with marks from the students being moderated by members of staff. In the final year, students were peer-assessed on their teaching. The School was moving towards a single, dedicated *proforma* for peer review. The students were taught about the criteria and how to give marks, reflecting on their peers' performance. The marks awarded depended on the task, with students marking on their peers' contributions to the task, such as timekeeping, while the staff marked on criteria based on the actual task. The staff looked for discrepancies in peer-awarded marks; where these occurred, the students were called for a *viva*. When the students (meeting 9) were asked about peer review, they told the team that there were tasks

associated with each module where students developed skills, such as presentation skills, and these were marked in workshops using peer review, where they received spreadsheets and were required to complete forms. The students gave the example of being required to read and review a paper based on a problem encountered in practice, where they worked in groups of four to read the paper and prepare a presentation.

The team had noted the variability of the quality of the presentations that they had observed, in terms of, for example, audibility and students simply reading from notes (see section 8). In response, the staff (meeting 7) explained that students were taught communication skills, but the staff did not mandate who delivered the presentation or how it was to be done. Sometimes, staff members chose the teams but sometimes let the students choose the teams for themselves; the team was told that students preferred to be allocated to groups across the year, rather than simply from within their own class quarter. Students learned by doing, with assessment and feedback on good and bad points being used to improve their performances for the next session. When asked where they learned presentation skills, the students (meeting 9) told the team that they learned through feedback, but that there were also resources on presentation skills that they could attend for themselves.

Teaching and assessment of pharmaceutical calculations (standard 5)

The team was told of changes that had been made to teaching calculations in Year 1 since the reaccreditation in 2013. Teaching of this topic was now condensed into the first few weeks to bring everyone up to the same level and was now more workshop-based, with a focus on basic mathematical concepts; teaching was informed by diagnostic testing and students were signposted to University level support. In the first week, there was a diagnostic test and a co-taught workshop based on a newly-developed workbook. An exemption examination was held in the January diet; failure of the resit in the summer meant that students could not progress. The team's concern at the 2013 reaccreditation visit about the pass mark of 60% for the calculations assessment had led to a reappraisal of this pass mark. The School's view remained that the current third year calculations test was an appropriate and rigorous assessment of competency in pharmaceutical calculations. Rather than simply increasing the pass mark to 70%, the School had introduced a step-wise increase, so that it was now 50%, 60% and 70% at stages 1, 2 and 3 respectively.

Programme regulation changes (standard 5.9)

Although condonement and compensation were used infrequently on the MPharm, the team was told of a University review of condonement and a further reduction in the thresholds for these activities on the MPharm. *Viva voce* examinations will no longer be used to determine degree classifications after 2018-219

Changes in entry qualifications (standards 2 and 4)

The team had noted documentation showing a very marked change in entry qualifications for the MPharm, with 152 students being admitted with A-level qualifications for the 2013/4 session, while the profile for the year 2014/5 showed only 66 students with A-levels, the remainder having other UK qualifications. The staff stated that this was incorrect and probably due to an administrative error, and confirmed that the percentage of students admitted with A-levels remained similar to that seen in previous years.

4. Inter-professional learning (IPL) (standard 5.6)

The staff (meeting 7) outlined the inter-professional learning strategy and described the IPE activities taking place in each year. In the first year, students received lectures from various practising healthcare professionals, such as a genetic counsellor, a health visitor and a veterinary surgeon, on the roles and responsibilities of the community based health professions and their interactions with pharmacy; a placement was designed to demonstrate the role of the pharmacist in the community healthcare team. Year 2 included working with and from pharmacy technicians, while in Year 3 students again received lectures from practising healthcare professionals such as a dietician, a community nurse, a doctor and a smoking cessation advisor, as well as undertaking workshops with optometry and postgraduate nursing students. The fourth year activities also included lectures from other healthcare professionals, the examples given being a doctor dealing with medical emergencies, a dietician and a key drug worker. Practical inter-professional learning experience in the final year comprised workshop sessions with medical students from Warwick Medical School and with students of podiatry and audiology. Students participated in case-based discussions led by a junior doctor (see section 8, activity 5). The staff told the team that the workshops were undertaken in small groups and an attempt was made to balance the groups across the different types of students. An appropriate ratio of pharmacists to others was obtained, although it could never be evenly balanced. Workshops with nurses addressed issues such as swallowing difficulties, inhaler techniques, dementia care and rehabilitation following strokes. When asked about their inter-professional learning, the students (meeting 9) told the team about working with podiatry students, with whom they examined feet and measured blood pressure. They also referred to simulation sessions with audiologists and psychologists and to receiving lectures from many different professionals, including veterinary surgeons, following which they were required to reflect; some lectures were taken alongside biomedical science students. They also learned about communication with other healthcare professionals. The students told the team about problem-solving exercises with students of optometry and audiology, giving the example of determining the cause of a fall, where they shared tasks between the pharmacy and optometry students; the tasks included a consideration of the role of the patient's medication in causing the fall. These activities taught them the value of other healthcare professionals, from whom they could learn. In response to several questions, including the one concerning inter-professional learning, the students referred on a number of occasions to their involvement in an optional 'personal development module' and to activities during Aston University Carbon Week/Aston Aspires Week, where they could sign up for different activities, including lectures, for example, on global healthcare, and interactive sessions in teams, in which they used their initiative in developing leadership and teamwork skills. In this group work, the teams were mixed, so that they worked with different people. In meeting 11, the Head of School confirmed that there were no optional modules within the MPharm and that this personal development module was a School of Life and Health Sciences initiative, in which students could use, for example, Aston University Carbon Week/Aston Aspires Week to gain material for their Higher Education Achievement Reports.

5. Placements and contact with patients (standard 5.6)

The team learned (meeting 7) that student contact with patients was primarily through the clinical placements, although there was a patient-facing workshop held in the University in Year 3. The staff presented the strategy for providing clinical placements for MPharm students and outlined the placements undertaken in each year. In the first, second and third years, experiential activity was preceded by taught sessions on pharmacy systems, medicines supply, patient safety and communication and patient services (Year 1), care planning, patient history taking, use of patient medical notes and biochemistry (Year 2) and more complex care planning (Year 3). Community placements (Years 1 and 2, with a week-long placement in Year 2) focussed on building a solid foundation for key skills, such as communication and decision making. This was then further developed through the hospital placements, where, in Year 3, students participated in ward activities and spoke with patients and healthcare professionals, with the focus being on discovering the role of hospital pharmacists and their place in the multidisciplinary team; Year 3 also included working

in a mock medicines information unit. In the final year, there was an extended hospital placement, where, again, students participated in ward activities, this time working in pairs and focusing on making interventions in patient care and gaining experience of a variety of different clinical specialities and environments. In response to the team's wish to learn more details of these hospital-based experiences, the staff explained that the Year 2 hospital placement comprised a half day, during which students saw two to three patients, of which they picked one for whom they produced a care plan and received detailed feedback; the Year 3 experience was similar, but with much more complex scenarios. In Year 4, students spent 16 hours across four mornings in hospital, working with the pharmacist in pairs or individually, this being followed by an 'Intervention Forum', during which they made presentations to the rest of the class, allowing students to learn from others' experiences. The team was told that it is planned to provide increased hospital placements across all years with a focus on student involvement in service provision and direct patient care. This will involve optimising the use of teacher-practitioners and the development of strategic SLAs with local trusts, along with KPIs for quality assurance of hospital placements.

When asked about their contact with patients and their clinical placements, the students (meeting 9) told the team that in Year 2 they shadowed a pharmacist during a week-long placement and spoke to patients, including taking a drug history, having an understanding of the underlying material. In Year 3, they worked in hospitals where they watched a pre-registration trainee in action and were involved in patient medication records. They also encountered expert patients in the University in Year 3. The students explained that in the workplace they were able to apply their knowledge, which helped further learning. For community placements they had a choice according to the services offered. The two half days spent in community pharmacy in the first year were considered sufficient. In the second year, in addition to visiting Boots, they visited a hospital. In later years, they undertook placements in hospitals that they had not previously visited. They told the team that travel was not a problem in their access to placements. During hospital placements, they were involved in care plans and received help from the teacher-practitioners, from whom they obtained feedback. They were required to reflect on what they had learned from their hospital placements with guidance from the teacher-practitioners, who provided a critique of their reflections, informing them if they had been too narrow or too wide in their approaches. The students were aware that such reflection was good preparation for continuing professional development as professionals. Reflective learning and continuing professional development commenced in first year, where they met their tutors to discuss their reflections on any aspects; they were expected to undertake constant reflection. They told the team that the placements equipped them to go out into the 'real world' workplace.

The students informed the team that they also obtained their own placements, which, as the team was told by the staff in meeting 7, were facilitated by the School; they also worked in pharmacies on weekends. The students attended the pre-registration fair, where they spoke to employers from community, hospitals and the Army and obtained contact information. They told the team that they would still acquire sufficient confidence even without their voluntary placements.

To ensure that the patient voice was heard in course development and delivery of all healthcare programs at Aston, the team was told of the development of a unified approach to patient engagement across the School of Life and Health Sciences and the Aston Medical School. A Patient Involvement Forum, sitting across both schools with a dedicated budget and supported by an administrator, engaged formally in curriculum development through events organised at School level. Several themes have emerged from these events relating to communication skills, professionalism, emotional skills and competence. Patients continued to be engaged with students through the activities described above and may also be used as actors in videos; such videos were used, for example, to show good and poor consultations involving other healthcare professionals and carers. Students were assessed on their ability to interact with patients through dispensing practical classes, the Medicines Counter Assistant course, their placement activities, and through patient counselling and OTC consultation in Year 3, and history taking, counselling and interventions in Year 4.

6. Resources

The students told the team that there was plenty of resources including laptops, computers, computer rooms and CAL laboratories, and that the library helpdesk was very useful. Rooms were available for them to practise presentations and role play, and in the small workshop groups they were able to speak to the lecturer. If new books were needed, they could make suggestions. They were able to give feedback to the year representatives on the Staff-Student Consultative Committee, who transmitted the information to the staff, and who also contacted the students for suggestions for the meetings. They told the team that they were listened to as evidenced by changes that occurred.

7. International opportunities for Aston MPharm students

In meeting 6, the Associate Dean for International Development (School of Life and Health Sciences) outlined the case for allowing MPharm students at Aston to spend one year abroad, ideally between Years 2 and 3 and not necessarily in a pharmacy-related placement, informing the team that the University had significant funding to support this, and that a large number of first year students had expressed interest in this scheme. The team explained that while the General Pharmaceutical Council would not object to such a scheme, it would need to be made clear to students that they participated at their own risk, as the maximum time between starting their degree and completing pre-registration training, including passing the registration assessment, and make an application to the register of pharmacists would remain at eight years. While exemptions from this rule were granted in circumstances beyond a student's control, students electing to remove themselves from the programme for a year would not represent such an exemption. It was agreed that the University should approach the GPhC separately from the present event, once it had a clear proposal on this issue.

8. Observation of student activities:

Activity 1: Pharmaceutical microbiology practical session

The session for Year 2 students aimed to demonstrate effective hand washing procedures, as well as getting students to determine the minimum antibiotic concentration (MIC), determine pKa and logP, perform bacterial counts on an eye drop formulation to illustrate the importance of preservatives in sterile formulations, and to perform tests to illustrate interactions between antimicrobial agents. The observer was told that teaching of hand washing was in preparation for the students' upcoming clinical placements in hospital. There were around 50 students, working in groups of three on the specified tasks. Students appeared to be well prepared for the class and engaged enthusiastically. They could explain how the session linked to taught lecture material, as well as to material in previous modules. However, they could not articulate how this material linked to existing modules (i.e. horizontal integration). They were also unable to satisfactorily articulate why, for example, they were working out the pKa of lysine. The observer concluded that this was a useful session that met the learning objectives.

Activity 2: Medicines supply practical class

This was the sixth and final practical class in a series for Year 2 students and was a formative assessment taking place prior to a mock examination which would be followed by the final summative assessment. The aim of the medicines supply classes was that by the end of the module the student would be able to show the skills and

knowledge relevant to dispensing and medicines supply and so be competent to progress to the third year of the programme. Students were asked to dispense five prescriptions. This involved confirming clinical suitability and legal validity, and students were asked to consult the simulated prescriber (a member of staff) if there were queries or if they needed to advise on changes in treatment. Once dispensing, labelling and packaging had been completed, students presented their work for marking. Simultaneously with this activity, students were taken individually to a separate room where they were given a completed prescription and asked to investigate the prescription in terms of provision of advice to the patient. They had eight minutes for this and then three minutes to counsel a simulated patient, with counselling being video-recorded. The students were highly engaged and worked quietly. The educational objectives were met. The observer was also given a demonstration of the Aston Prescription Learning Environment (APLE), the aim of which was to extend the teaching range and allow the students to deal with rather more complex prescriptions than those to which they had access in dispensing classes. It had been designed for use on iPads and the current version contained community and veterinary prescriptions. As an online system, it provided access to workplace resources such as patient medication records, Medicines Complete, and the BNF. The system was accessible anywhere and allowed students to practise their dispensing activities outside of scheduled dispensing classes. It presented electronic prescriptions and asked a series of short questions requiring yes/no answers. Instant feedback was provided. There was also a facility to simulate a situation where a pharmacist must check the work of another member of the pharmacy team. The observer was of the opinion that this offered much scope for any future plans to increase inter-professional learning.

Activity 3: Practice reflections session

This was an assessment session which was part of the Year 3 CPD cycle. Here, groups of five to six students gave presentations, focussing on an actual experience from placements or other work in pharmacies, and with outcomes that assist patient care through reflection, identification of learning needs and decision-making. Assessment, covering presentation skills, structure, visual aids, and content, was made by the lecturer in charge and each group undertook peer evaluations as a separate exercise. The students were well prepared, used visual aids and followed a clear presentation structure. However, the observer considered that the learning environment for this activity was poor and was not conducive to effective feedback and communication, with students sitting at formal tables in a long room. Presentations were made at one end without microphones and students towards the middle and back had difficulty hearing. There was very little interaction and most of the questions came from the lecturer who sat in the front row. Students appeared to have received little guidance on developing presentation skills. The team has subsequently been informed these timetabling and accommodation issues are being addressed.

Activity 4: Hospital experience session

This was Day 3 of a week-long placement for final year MPharm students at the Birmingham Children's Hospital. The objective of the session was to allow students to apply their knowledge to patients and the session was to include taking drug histories and talking to members of the multi-professional team. There would be a focus on identifying interventions and gathering evidence to support medicines information enquiries. The students observed spent two hours with a teacher-practitioner and the session consisted predominantly of questions and answers to explore students understanding and to assist them to reflect and build upon previous teaching. In response to questions, the students did not appear to have much insight into the ward-based role of pharmacy technicians despite having had previous hospital placements. The students examined medical notes and drug charts of cases of children with cystic fibrosis, which had not been covered in the programme; the teacher-practitioner did an excellent job of getting the students to use their knowledge of, for example, classes of antibiotics, sensitivities, classes of bacteria, and TDM. Later, the students jointly took a medication history from a 12 year old boy. Despite previous experience in doing this, the first two students' level of confidence suggested that the skill was not

embedded. A second pair of students had less time and they spent the session taking a drug history and reviewing charts. The ward environment was extremely busy and the session was a resource-intensive style of ward visit, with the teacher-practitioner being fully focused on providing an in-depth experience for the students. On the previous day on the same ward, the students had reviewed a much larger number of charts in less detail. The observer concluded that the breadth of different approaches would support students in gaining an insight into the role of the pharmacist, as well as strengthening their clinical knowledge and confidence. The particular session did not allow engagement with other members of the multi-professional team but the observer believed that the students' experience was very positive.

Activity 5: Doctor-led case-based discussion

In this session, six final year students on a week's placement at the Birmingham Children's Hospital were taught for one hour by a paediatric registrar. The registrar had used slides to outline cases of croup and pneumonia, for which the students had to think about the presenting signs and symptoms, discuss the conditions and then focus on drug treatments. The students had little knowledge of the conditions or what was 'normal', such as a paediatric respiratory rate, and struggled with the presentations. The doctor made reference to the fact that many children with these conditions may present at a community pharmacy before they are admitted; it was thus important to be aware of such conditions. The doctor encouraged the students to reflect upon their existing knowledge, such as the type of bacteria causing a range of respiratory infections, as well as how they would be treated. The students were very positive about the session and clearly enjoyed it. The session achieved the aims of thinking about the appropriateness of a prescription and how treatment could be optimized. Building on disease states already encountered by students may have been helpful, so that they were familiar with how children present.

Activity 6: Medicalisation presentations

This session consisted of three presentations, each made by a group of five final year students and concerning policy issues in modern medicine and the NHS. The subjects were NHS Breast Screening, Quality and Outcomes Framework, and Health Checks. The presentations were assessed by the staff member facilitating the session, along with student peer assessment. The activity satisfied the stated standard 10 learning outcomes. Students were well-prepared for the activity having had two weeks to conduct the appropriate literature searching, and engaged well with the activity. All the presentations involved all members of the group taking turns to present different elements of the topic. Presentation styles differed considerably, from confident and not requiring notes, to simply reading a pre-prepared script; the latter was disappointing in final year students. The response to questions was also variable; it was of interest that the group with the least polished presentations was excellent in responding to questions.

Activity 7: Decision making lecture

The aim of the session was to improve final year students' clinical decision making skills such that they could make decisions autonomously and in a reasoned way to improve patient care. Although this session took place in a tiered lecture theatre, it was not really a lecture but rather a workshop run by two teacher-practitioners with a very full lecture room (around 150 students, including OSPAP students). Students watched successive parts of a video showing a simulated, complex patient taking multiple medicines, and the discussions between a doctor and a pharmacist concerning his treatment. After each part, the playback was stopped and a series of questions was presented, which the students were intended to answer using the Optivote electronic voting system. It was unfortunate that there were issues with the technology, the video did not run properly, and was of poor quality, with sound problems and poor visuals, in that the drug names on the patient's chart could not be

read. Moreover, the Optivote system failed completely, thus requiring answers to be made by a show of hands. The concept of the session was excellent but would have worked much better in a workshop environment where there could have been discussion about the various issues. The objectives as stated in the submission document would have been met if the technology had worked. The session marginally addressed the specified standard 10 outcomes.

Conclusions

Interim visits cover selected topics and not all standards are discussed. At this event, the team did not consider in any depth standards 1, 3, 4, 6 and 7. The team had opportunity to observe a number of activities during both the event and on the satellite visits.

Standards 5 & 10 (curriculum delivery and learning outcomes):

The range of activities observed gave the team an insight into opportunities available to the Aston students to develop their skills. The activities observed showed how the sessions encouraged students to work in small groups and develop their presentation skills. The team also observed students in the decision-making workshop, where this allowed students to explore decisions in a low risk environment. It was unfortunate that some of the facilities did not function properly, as this may have affected the students learning experience. The team members welcomed the opportunity to observe students on placements in the hospital environment. The range of activities undertaken was appropriate and the students were appropriately challenged.

The condition set in 2013 related to the level of integration within the curriculum and, as agreed at the pre-visit, this was to be measured at the interim visit. The team acknowledged that the University had reviewed the integration within the programme after the 2013 visit and that some work had been undertaken relating to how integration was viewed and understood, although the team was unable to find 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 assessment requiring integration of knowledge. The team recognised that it was appropriate for Year 1 to be a foundation year to ensure that students have the right knowledge and skills to undertake the MPharm programme. This approach is not dissimilar from other MPharm programmes, but the team agreed that the level of integration was not yet sufficient throughout to yet meet Standards 5.1 and 5.5a, and that the **condition** imposed in 2013 had **not been met and will therefore remain extant**. The University must continue towards developing a coherent philosophy and strategy resulting in an integrated MPharm degree that meets Standards 5.1 and 5.5a. This extant **condition** must now be met and implemented before the start of the September 2017 intake. The University will be subject to a monitoring visit before this date, to check on progress towards satisfying this condition.

With regard to inter-professional education (IPE), the team heard a lot of the 'about' but very little of 'with' and 'from'; the CAIPE definition of inter-professional education is learning with, from and about. The team's view was that although there are examples of IPE in the curriculum, it is not consistent and does not increase year on year. The students clearly articulated how much they benefitted from the true IPE sessions in Years 3 and 4, but there was no learning 'with' within Years 1 and 2. The level of patient engagement was acknowledged to be limited, with reliance on placements for providing this exposure. However, the team welcomed the University plans for patient and public engagement and the strategy for inter-professional education, particularly with the imminent development of the undergraduate medical programme. It is a **recommendation** of this event that both an IPE and PPI strategy is implemented by September 2017. This is related to standard 5.6. This strategy should be submitted to the GPhC for review and approval.

Finally, the team was pleased to meet with the students, who came across as intelligent, articulate and mature. They clearly appreciate the support that they receive from the staff at Aston, who are enthusiastic and act as good role models.

