

MPharm Interim Visit

University College London

7-8 March 2016

Master of Pharmacy degree course (MPharm) interim visit

University College London

Report of an interim visit, 7-8 March 2016

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 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, the IPE standard.
- 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 goes on to form 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 as being a day where there are suitable opportunities for the accreditation team to observe activities that had been timetables 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 University College London.

Background

The MPharm degree is delivered by the University College London (UCL) School of Pharmacy, a specialist institution in the Faculty of Life Science within the School of Life and Medical Sciences. The School of Pharmacy (the School) merged with UCL in January 2012, having previously been a college within the federal structure of the University of London.

The last accreditation event took place from 23-25 April 2013. The course considered at this time was a completely new programme, with a greater focus on integration and cross-reference between the science and practice of pharmacy, and a clearer emphasis on preparation for professional practice.

At the last accreditation event, the Registrar agreed to accredit the MPharm degree at UCL for a period of six years with no conditions or recommendations.

The accreditation team also identified an area of strength:

The accreditation team would like to recognise the successful relationship that has been developed by UCL and its School of Pharmacy.

The new programme is currently in its third year of implementation with the current fourth year students enrolled in the final year of the previous regulators accredited programme. The new programme will be fully implemented across all four years in the 2016/17 academic year.

Prior to the interim visit the University submitted documentation to the GPhC and a pre-visit meeting took place via teleconference on 22 February 2016. The purpose of a pre-visit meeting is to help the School 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 visits

In advance of the interim visit six satellite visits took place in October 2015 and February 2016 to allow team members to observe off-site activities in advance of the main visit. These visits are described in the 'observation of student activities' section and in appendix 1.

The interim visit

The interim visit itself took place on site at UCL School of Pharmacy from 7-8 March 2016.

7 March 2016		Time
1.	Private meeting of accreditation team and GPhC representatives	13:00 – 15:00
2.	Presentation by the UCL MPharm staff team on progress to date	15:00 – 17:00
3.	Private meeting of accreditation team and GPhC representatives	17:00 – 17:30
8 March 2016		
4.	Groups of accreditation team and GPhC representatives observed activities which ran concurrently: Activity 7: Pharmaceutical Technology (Practical) Activity 8: Integrated therapeutics workshop	9:00 – 10:00
5.	Private meeting of accreditation team and GPhC representatives	10:00 – 12:00
6.	Tour of the facilities (refurbished laboratories and clinical skills suite)	10:30 – 11:00
7.	Student meeting	12:00 – 13:15
8.	Groups of accreditation team and GPhC representatives observed activities which ran concurrently: Activity 9: Formative OSCEs Activity 10: Extemporaneous dispensing	14:00 – 15:00
9.	Private meeting of accreditation team and GPhC representatives (including review of all documentation provided (see Appendix 2)	15:00 – 16:30
10.	Feedback to University College London MPharm staff team	16:30 – 16:45

Accreditation team

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

Name	Designation at the time of accreditation event	Activities attended
Professor Andy Husband*	Accreditation team leader, Dean of Pharmacy and Professor of Pharmacy Education, Durham University	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Professor Brenda Costall	Accreditation team member (Academic), Professor of Neuropharmacology, former Head of School of Pharmacy, University of Bradford	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Mrs Gail Fleming	Accreditation team member (Pharmacist), Professional Advisor, Pharmacist Education and Training Reform, Health Education England	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Mr Javaad Ayub	Accreditation team member (Pharmacist), Medical Affairs Manager, Guerbet Laboratories, Solihull	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

along with:

Name	Designation at the time of visit	
Ms Joanne Martin **	Quality Assurance Manager, General Pharmaceutical Council	1, 2, 3, 4, 5, 6, 7, 9, 10
Mr Paul Stern	Rapporteur, Policy Manager (Education), General Pharmaceutical Council	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

*attended pre-visit teleconference, 22 February 2016

** attended the pre-visit at UCL, 22 February 2016

Course provider

Representatives of the University College London MPharm degree. The team met with the following:

Name	Designation at the time of accreditation event	Meeting attended
Professor Duncan Craig*	Director, UCL School of Pharmacy	2, 6, 10
Dr Rebecca Lever*	MPharm Programme Director	2, 10
Miss Kirsty Martin	Student and Academic Support Manager	2, 10
Dr Susan Barker*	Senior Lecturer in Pharmaceutics	2, 4, 10
Mrs Louise Brown*	Principle Teaching fellow in Pharmacy Practice	2, 8, 10

Ms Nadia Bukhari	Senior Teaching fellow and Pre-registration coordinator	2, 10
Ms Oksana Pyzik	Teaching fellow and International student advisor	2, 10
Ms Terry Ng	Senior teaching fellow in Pharmacy Practice	2, 4, 10
Dr Mike Munday	Vice Dean Education Faculty of Life Sciences	2, 10
Professor Ian Bates	NHS liaison/coordinator	2, 10
Dr John Malkinson	MPharm Deputy Director and Year 2 coordinator	2, 10
Professor Ian Wong	Head of RDPP (???)	2, 10
Dr Brian Pearce	Deputy Director, MPharm Year 1 lead	2, 10

In addition, the accreditation team met with a group of 13 students, including four from year one, two from year two, three from year three and four from year 4.

The visit

Presentation:

In meeting two the team was given a presentation by the MPharm Management Team. As described below, the presentation 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.

Highlights from the past three years:

The team was advised that the course was running well and that there were no significant problems since its introduction in 2013. The management team outlined the strong relationships that had been built with other areas of UCL since the merger and how this would provide opportunities to develop the course further over the next few years. The new course had also had a positive effect on staff culture within the organization and this had helped staff to work across all areas of the curriculum in designing the course. The team also heard how relationships had been developed with students, partners, stakeholders and patients. The School advised that since the merger, they had felt well supported by the University who recognised the strengths of the School.

Specifically, the management team wished to highlight the extensive refurbishment project that had been undertaken within the School. This included significant refurbishment of the laboratories, clinical spaces and the library. The team was given a tour of the laboratories and clinical skills suite and was impressed with the facilities that were available to students.

Another area highlighted was the successful partnership with the Greenlight pharmacy. The pharmacy has two floors, the main patient areas on the ground floor and an education centre/real pharmacy in the basement. The education centre is an exact copy of the pharmacy on the ground floor. The team was told how this gives students the opportunity to gain experience in community pharmacy practice. The team was also told about the awards this initiative had received.

The presentation also covered the partnerships the School had developed with Monash University and New Giza University in Egypt. They saw the partnership with New Giza university as an opportunity to help them develop a programme with a particular focus on student to student interactions with those on different courses, particularly medicine.

The MPharm at UCL:

The presentation outlined the structure of the MPharm programme at UCL and how it was integrated vertically and horizontally. The course management structure was outlined, with each module having a lead and deputy, with the module at each level co-ordinated by a year lead, each of whom is also a module lead at a different level of the programme to promote vertical integration. During the student meeting, the students explained they could see the links between the different module and how this was helped by lecturers referring to other modules during lectures and classes.

To improve horizontal integration the School runs integrated therapeutics workshops which start in year one and will run throughout the programme. They become increasingly complex as students progress through the programme. Students who attend the workshops are required to work through case based problems, which require them to utilise the scientific principles they have been learning about throughout the course. When discussing integration during the student meeting, the students explained that they could see how the course was integrated throughout the different years. Students also mentioned the value of the integrated therapeutics workshops during the student meeting and how this built on what they had covered in lectures.

The team heard about the research project and how this had been designed when the new course was introduced in 2013. This had been successfully delivered in 2013-14 and 2014-15 with students in the third year of the old programme, and is intended to run in the second term for the first group of fourth year on the new programme. Many students were also undertaking part of their projects overseas and the team heard how the School had processes in place to ensure students were supported while completing their projects overseas.

Options modules have also been developed for year three of the programme, with students undertaking one practice into science themed module in their first term and one science into practice themed module in the second term. The team heard that students had been provided with background information to inform their choice of module. Feedback from the students indicated that they were coping well with their options and liked the idea they were able to specialise in specific areas.

Overall, the view from the students was that the integrated nature of the course made it enjoyable as it helped them to visualise a patient at the end of the process.

Placement programme:

The team was advised about the number of placements that are undertaken by students on the programme. Students undertake a number of placements during their MPharm degree in both hospital and community settings.

Students currently undertake hospital placements during years three and four of the course. The School highlighted further developments that they would like to make in placement provision. These included increasing the number of hospital placements in year 3 and expanding the hospital placement programme to include year two.

Noting that there weren't any hospital placements for students in the first or second years of the course, the team asked the School their current rationale for this decision. The team was advised that for students to have discussions with patients about medicines, they needed to have a strong understanding of the science and that this was more developed in students in their third and fourth years of the course. However, the School did confirm that they would be reintroducing a placement in year two and was looking at ways for this to be suitable for second year students.

Community placements were more prevalent. Students undertake 13 placements at the Green Light pharmacy across all four years of the course. Students also undertake a placement in year two at a Boots pharmacy. The team heard that the School is looking to develop community pharmacy placement provision further through a partnership they are building with the Day Lewis group.

The team was keen to understand what quality assurance processes were in place to ensure that students on placement had a good experience. The School advised that for the Boots placements they only placed students in stores that were GPhC approved training sites and have a pre-registration tutor in place. In instances where students were not having a good experience, they had successfully moved them to another site. They also advised that the relationship they are building with Day Lewis will also help with placement provision and could address any capacity issues that could appear.

At the last accreditation event, the team was told that students would also be undertaking mental health placements. During the presentation the School acknowledged that it hadn't been possible for them to introduce mental health placements. The team was advised that the school is currently looking at other opportunities for the provision of clinical experience within mental health. They are also exploring how they could use the community simulation hub, a simulation centre for integrated and inter-professional training, for placement provision and the possibility of running this jointly with medics. The benefit of using this environment would be that it emulates a home or domestic environment rather than a traditional acute setting. The team also heard about how the School encouraged students to get jobs in pharmacies outside of the course and how this was supported by the School.

Inter-professional education (IPE):

In April 2013, the School outlined a number of possible inter-professional activities under consideration:

- community pharmacy placements throughout the programme where students are paired with medical students; this will include experience in a GP surgery and a range of primary care settings;
- the expansion of IPE in the third year from two sessions to three sessions, with the additional session covering medicines management issues in primary care and transfer of care in/out of hospital;
- IPE activities with BTEC pharmacy technicians in year one;
- a whole day prescribing activity for third and fourth year MPharm students with medical students devoted to prescribing and paediatric prescribing;
- a shared OSCE for fourth year MPharm students with medical students;
- supervised bedside sessions for fourth year MPharm students with medical students; and
- in the longer term, a plan to include professional socialising in the working environment from year 1 onwards.

In the presentation, the School explained they wished to build on their IPE provision with their intention to become leaders in this area. The team heard the School takes a dual approach to IPE through timetabled sessions and through student led activities supported by the School and assessed in a portfolio. Presently, the only timetabled IPE opportunities are one session for first year students with pre-registration trainee pharmacy technicians and one session for fourth year students with medical students. The session with medical students was the session observed in February 2016. The team noted that this differed from the plans outlined during the April 2013.

The school summarised a number of activities that they are aiming to develop over the coming years. This included their plans for placing MPharm students in GP surgeries, which they will be piloting next year. The team heard that involving medical students in this placement provision was dependent on the success of the pilot. The team also heard about potential 'super learning days', where students would undertake a session with medical students looking at a specific clinical topic. When questioned further about the super learning days, the team was told that these would be focussed on fourth year students initially and would not be compulsory to attend.

The School highlighted the importance of relationships with a particular focus on the strong relationship that had been built with the medical school at UCL. The School acknowledged that there had been some timetabling issues which had restricted the number of IPE sessions they could run with the medical school, but that these had had been addressed for the 2016-17 academic year. They have now planned to run a number of sessions across all four years. During the student meeting, students explain they felt comfortable working with other health professionals. They found it helpful seeing other professionals on placements. However, they acknowledged that that they thought it would be beneficial for them to have sessions with medical students earlier on in the course and had raised this with the school several times. When explored further by the team, the students advised that they had been told this was due to timetabling issues.

For student led activities, the team were advised that these included student led inter-professional reflective groups and sessions organised by the respective student unions. In the student meeting, students outlined further activities that they had undertaken outside of the course including the 'NICE championship initiative'. They explained there were many societies they could get involved with as a way of working with other healthcare professionals. The team discussed these initiatives, which they thought could be of great value to the students but noted that they were not timetabled parts of the course.

The school's revised IPE plans presented the visiting team with a dilemma, which was that the original IPE plan was not being delivered at the accreditation midpoint after three years; instead the team was presented with an alternative plan, yet to be implemented. The team agreed that this was an unusual position and for this reason the team considered imposing a condition to ensure that the revised IPE plan would be implemented (because the original one had not been). Eventually, the team decided against doing so for two reasons: 1. while it is reasonable to expect progress in all curriculum areas in the first three years of an accreditation period, a school can change its mind about provision, if there is a good reason for doing so and 2. there is no stated requirement for a set proportion of a given activity to have been implemented by the accreditation mid-point. Having said that the team felt strongly that the school should be reminded of the relevant standard for IPE - 5.6 - and its two essentials: 'practical experience of working with patients, carers and other healthcare professionals' and that 'practical experience should increase year on year'. The team felt that the latter in particular might not be fully secure in the revised IPE plan and that an accreditation team returning in three years for a full reaccreditation visit should reassure itself unambiguously at that time that the requirements of the standard were being met and implemented.

Patient and stakeholder involvement:

The team was told about the different ways patients were involved in the course. Students see patients from the start of the course and interview a patient during their induction week. They also have simulated patient contact during their OSCEs throughout the course. Students have the opportunity to see real patients during their Green Light pharmacy placements and on their Boots visit during the second year. The students confirmed the value of the Green Light pharmacy placements during the student meeting explaining that this gave them the opportunity to see and experience real interactions with patients.

The team was also advised that students undertake a session with expert patients during the third year of the course. During this session, students practice their counselling skills and get feedback from patients. Students explained that this session involved them undertaking a medicines use review with the patient. Overall, the feedback from the students on patient engagement was positive as they felt the school was trying hard to get students as much patient contact as possible.

The School also outlined the involvement of patients and stakeholders in course design. They explained that patients and stakeholders had been involved in design of the new MPharm programme and that they are now involved in the review of this course. An expert patient group had been formed to advise on the best way to involve patients on the programme. The team also heard that the School had accessed patients through the Green Light pharmacy and that they had already been involved in the design of some teaching materials. Moving forward, the School advised that patients would be involved in the design of the new Year 4 modules. Practising pharmacists are also involved in the recruitment processes.

Professionalism:

The team was advised that there was a clear focus from the School on professionalism from the start of the first year. First year students are shown videos of where things have gone wrong and the code of conduct for students is discussed. First year students also have lectures and look at case studies covering professionalism and patient safety. The team was also told that there was an expectation that students would behave in a professional way and created a professional environment to support this, for example, by setting a professional dress code.

The team was told about how the school is introducing values based recruitment into their recruitment processes for the 2016-17. Candidates who are likely to meet academic requirements for course entry will be invited to undertake a structured interview and complete a written test. The values tested have been aligned with those of the NHS constitution and those set out in the GPhC Student code of the conduct.

When asked how they developed the process, they advised that they had drawn on the experiences of others and that staff had come up with a process which best met the needs of the School. The process had been tested with first year students and had been refined further based on the results. They acknowledged that this would need to be review once a number of candidates had gone through this process.

Student engagement and experience:

During the presentation, a number of initiatives were highlighted to improve student engagement and the student experience. The School had developed a number of groups in which students could be involved. One of these groups is helping to design the fourth year of the new programme. Some of the students, the team spoke to were excited at being given the opportunity to work with staff on this project.

The presentation also highlighted the national student survey results for the school and the team was told that the school had the highest response rate within UCL. However, they did acknowledge that recent results had been poor and had taken a number of steps to improve this.

The team was told about the student experience group and how this had been involved in helping to improve the course. They were advised that this forum was open to any pharmacy student. Some of the students at the student meeting explained that they were on this group and that they thought this was valuable. The students thought this to be a meaningful way they could engage with staff. They also explained about how smaller groups had grown out of the student experience group and this provided more opportunities for students to engage with the School. Students were also being encouraged to meet students from other healthcare professions outside of the school.

During the presentation, the team heard about events to bring staff and students together, particularly efforts to increase interaction with students more informally on a social level. When asked about this, the students provided examples of a number of activities where they had interacted with staff and thought these to be spontaneous and fun.

Assessment strategy:

During the student meeting, the team was told about the assessments students were undertaking across all four years of the course. The students spoke about their OSCEs and how they found these challenging. However, they liked these assessments as it gave them an opportunity to practice their skills and prepare them for practice.

The School advised that OSCEs were used in assessment across all four years of the course. The School viewed this gives students a real opportunity for students to demonstrate their ability to apply their knowledge to practical situations. The School runs both summative and formative OSCEs. Summative OSCEs are run as part of the assessment for all practice modules and formative OSCEs have been introduced for all modules. The team asked the school about the resourcing that was required to undertake this number of OSCEs for such a large student body. OSCEs are resource intensive so the team wished to explore this further. The school advised that in the earlier years some of the stations aren't interactive due to the cost involved, but when OSCEs become more high stakes, for example in year four, they apply more resources.

Other issues addressed:

Student feedback:

The team explored this during the student meeting. Students in the second year of the course advised they had received quite a lot of feedback and that lecturers were very open at providing feedback. Students in other years had also explained that they were satisfied with the level of feedback they had received on their work. Some students explained that previous students on the course had complained about the level of feedback received, but they felt that the staff had worked hard to address this and thought feedback had improved. The students highlighted the importance of the student experience group and how their concerns were listened to and addressed. Overall, the students the team spoke to felt that concerns about feedback had now been addressed.

For the remainder of the interim visit the team divided into groups and observed a number of activities, many of which ran concurrently. The dates of the interim visit were selected to coincide with timetabled activities which would best demonstrate a range of sessions/activities. This allowed the accreditation team to review examples of student learning experiences and progression of the MPharm course to date.

Between these activities the team members convened a number of private meetings to share their observations. The team also took this time to review the additional documentation that had been provided by the School for review (See Appendix 2).

Observation of student activities:

The following summarises comments made by those team members who observed the activities both on the satellite visits and during the interim visit itself; comprehensive details of each activity are presented in appendix 1.

- **Activity 1: Poster conference associated with the Extramural Research Project (Study abroad scheme) (satellite visit)**

This session is designed for students to present the work they have carried out as part of Erasmus and extramural projects. The session was intended to take the form of a scientific conference therefore discussion between students was encouraged. Students were asked to present a poster to their peers and members of staff. There were 30 students present and each had to present their poster. They were subsequently marked on their poster by two staff members. In addition students assessed each other by voting for the best poster. The students observed were enthusiastic about their work and all posters were professionally presented and of a high quality. Students felt they were well supported by the university while abroad and working on their projects. Students were very positive and felt that this provided them with a chance to strengthen the work even further and develop transferable skills. Overall the team member thought this a well organised session with full engagement from students. It provided clear evidence of high quality research being undertaken that builds upon previous learning within the course.

- **Activity 2: Hospital placement (satellite visit)**

This session was for fourth year students. The students observed were not on the integrated MPharm programme, but this is an activity the team members were advised will be undertaken by students on the new programme. It aims to provide students with experience in conducting medicines and therapeutics reviews using current patient care data in a hospital environment. There were four students on this placement and they were split into groups of two and rotated through different clinical specialities – kidney and, renal and liver. Each group was supported by a pharmacist. This activity, is part of a larger activity where students would eventually have to give a case presentation on a patient to the rest of the cohort and it would be assessed. Students were observed attending a ward and discussing one of the patient cases. The students looked at a patient's case notes and discussed with them their medical history. The team noted this was the first time the students had seen patients with such serious conditions. The students also discussed with the pharmacist the patient's condition and they were tested on basic information related to the patient's condition by the supervising pharmacist. Team members felt the session met its aims and objectives and that the students were well prepared for this session. Team members noticed that the students were nervous during this visit and acknowledge that this may have been due to their presence. However, team members were surprised with the lack of confidence they had with being in this environment and their ability to apply their knowledge.

- **Activity 3: Green Light pharmacy (community) workshop (satellite visit)**

Students observed during this placement worked in the actual community pharmacy on the ground floor and also in the training area in the basement, which mimics the pharmacy and dispensary above. This session is designed to enable students to work in a real life pharmacy environment and make integrating links between a patient's use of medicines and the practice of pharmacy. The session consisted of 25 first year pharmacists supported by four pharmacists. For the students observed, this was the first time that they had been to the Green Light pharmacy and the first time that some of them had worked in a pharmacy.

On this placement students completed four different activities covering, observation of pharmacy dispensing process (this was in the actual pharmacy), prescription charges and prescription types, counselling and communication skills and responsible pharmacists' regulations. The students were split into small groups, each group completing one activity. Students appeared well prepared for the activities and showed an understanding of how what they were doing related to other aspects of the programme. The team member thought the students to be fully engaged throughout the activity and were well supported by experienced and knowledgeable pharmacists.

- **Activity 4: Pharmacy practice workshop (satellite visit)**

This activity was a final class of eight practicals, which are theme based. The purpose of this session was to give second year students the opportunity to understand more fully the role of the pharmacists in the care of patients with diabetes. There were 14 students in this session and they were split into groups of three or four. Each group rotated through four work stations and had 20 minutes to spend on each workstation. The first work station covered monitoring of blood glucose levels and gave students the opportunity to familiarise themselves with blood monitoring machines, test strips and lancets. The second work station covered the NICE guidelines for diabetes in adults and students were encouraged to think holistically about diabetes management and about the different health professions involved in the management of patients with diabetes. The third work station covered Hypoglycaemia. Students were given a box containing Hypostop gel and a glucagon injection and were able to think about signs and symptoms of hypoglycaemia and how each medication might be administered should a patient have hypoglycaemia. The fourth

workstation looked at diabetes risk assessment. Students were required to think about their risk of developing Type II diabetes looking at family history, weight, height and waist circumference.

Students appeared engaged and appeared to enjoy the session. Several students explained how they liked the small group nature of the class as it gave them opportunities to ask the staff questions. Students were also able to articulate they understood how this linked in with other areas of their course including their placement activities. The team member observing considered this to be useful session that helped to solidify students learning. However, thought that involving patients in the work stations could have enhanced the session.

- **Activity 5: Integrated therapeutics workshop (satellite visit)**

The session is divided into three research and report activities and is designed to encourage interaction between students and with members of staff. This workshop is one of three workshops running in a series and this was the second workshop in the series. The first workshop had covered hypertension whereas this one covered childhood asthma. The session was supported by five members of the pharmacy team representing a different area of the curriculum. The staff team was involved throughout the session including presenting topical information/ science/ demonstrating equipment, engaging the students in question and answer-style guided learning, role play or supporting them in their discussions.

The session lasted three hours and was divided into three sections. After the introduction, the students were asked to use the first half hour of the session to research answers, in their groups, to a set of guided questions on the topic from the perspective of the patient. Students worked in their teams under considerable time pressure to access all the information required to make their own notes and then to answer the questions in a whole group feedback session. Students then spent a further hour working in their to answer a second set of guided questions on the topic from the perspective of the drug using the electronic resources. The final session was very informative and practical with the aim of understanding how to use various devices with some role play. Students assumed the role of patient & pharmacist, demonstrating the use of these devices in front of the whole class. The class was asked to reflect on their learning, and to consider how they might adjust their advice, and communication style, for a range of patients. The team member observed a highly interactive and engaging session where material was clearly integrated. The paperwork provided to the students was clear and all objectives for the session were met.

- **Activity 6: Inter-professional learning with medical students (satellite visit)**

The purpose of this session was to introduce students to safe prescribing, as one aspect of developing a safe and rational therapeutic approach. This session was run together with medical students and there were 80 students in this session. Both pharmacy and medical students were in their fourth year of the course. The session commenced with a half hour introductory lecture and then the students were separated into four groups. These 4 groups then split into smaller groups of four to five aiming to have equal numbers of medical and pharmacy students. The workshop was facilitated by four pharmacists and two doctors.

Students were given three sets of resources - a case to work through, prescribing resources (guidelines) and a paper drug chart. The purpose of the session was to work through the case together and answer a series of questions related to the management of community acquired pneumonia, acute exacerbation of COPD , septic shock and polypharmacy. In addition each group had a separate 30 min break out session where they would learn how to administer an IV. The purpose of this session was

more about raising awareness of the process and practical considerations. This was the first time that pharmacy students and medical students had learned together on the course.

The team member considered the session well designed in terms of its practical nature and that the objectives set for the session were met.

- **Activity 7: Pharmaceutical Technology (Practical) (interim visit)**

This session has been designed to provide students with the basic theoretical, practical and interpretive skills associated with the preparation of conventional solid dosage forms. The students worked in small groups undertaking analysis of the various dosage forms. Students were able to discuss the purpose of the analysis activities and were confident in their articulation of how the important the properties of dosage forms have a direct and indirect clinical impact on patients. The session was facilitated by several members of staff with the senior lecturer providing guidance throughout. These practical sessions were supported by pre-session reading and a number of lectures. They are required to complete a workbook and part of the assessment would be tested through the integrated assessments and OSCEs along with examinations.

- **Activity 8: Integrated therapeutics (interim visit)**

This session is one of two workshops with students in the third year of the course. The aim of the session was to demonstrate how the modules covered in the course are horizontally integrated and to demonstrate how the fundamentals of science impact clinical practise using cystic fibrosis as a theme. There were around 40 students in small groups of five to six participating, The session was facilitated by four staff members. The workshop began with an MCQ quiz related to the workshop pre work. Students used notes made from the pre work to assist with answering the questions. The submission of answers was via interactive pads and there was healthy competition amongst groups to reach the top of the leader board. There was clear signposting by the facilitators to other areas of the course. Students were very engaged with the activity and were able to access lecture material using a tablet computer.

The next part of the workshop consisted of a case study split into different sections. An MCQ quiz followed after each section. The case study was designed to help students understand the typical journey for a transplant patient and the associated pharmacological management. The team members thought the MCQ quizzes useful as this highlighted level of understanding within the group, thus enabling facilitators to revisit areas of weakness.

- **Activity 9: Formative OSCEs (interim visit)**

This session was designed to familiarise students with the OSCE format in preparation for their summative assessments. The session was run with first year students on the programme. During the session students rotated through six different workstations with four students per workstation. Stations covered practical aspects such as checking prescriptions, preparing a list of counselling points, and using the BNF. There were also manned stations where students were required to counsel patients on their medication.

The instructions provided to students were clear and staff were supportive in explaining how to make the most out of the session as well as the logistics of the process. Students were also dressed professionally for the session. Team members considered the stations to be reflective of activities being taught in year one and thought they provided a good platform to prepare students for their summative OSCEs.

- **Activity 10: Extemporaneous dispensing (interim visit)**

The aim of the session was to enable students to accurately formulate products (cetrimide ointment) in accordance with a prescription. It consisted of around 40-45 students with four facilitators. Facilitators were available to assist students during the session. Team members were told that students were about to undertake a practical assessment and thought the students were very focussed during this session. The Professor of Pharmaceutics lead the session and his approach had all the students fully engaged in the formulation of the product.

Conclusions

The accreditation team advised the School that the team's conclusions from this visit were based on both what team members had been told, what they had observed, and documents they had read, over the course of the visit and the satellite visits.

Interim visits cover selected topics and not all standards are discussed. The team did not discuss in any great depth standards 1, 2, 3, 6, 7, 8 and 9 and chose to focus on standards 5 and 10. The range of activities observed gave the team an insight into opportunities available to the UCL students to develop their skills. The satellite visits gave team members opportunities to see the students in a range of environments and activities.

The Green Light pharmacy placement provided the students with a safe environment in a live pharmacy. The first year students were well prepared for the session and were fully engaged. The hospital placement where fourth year students were working on real clinical cases provided a valuable experience for students to develop decision making skills regarding acute and serious conditions. The interactive workshops observed on the satellite visits and at the university provided the opportunity for students to develop their skills in clinical areas. The team considered the activities appropriately challenging and the format and design of the sessions conducive to good peer to peer exchange. The team viewed these sessions as a strength and would encourage the team to continue this good work. The team believe the school should consider including patients in some of these activities to maximise the students interaction with patients. Students explained during the student meeting how patient interaction helps to develop their confidence. The team would encourage the school to seek further opportunities for students to interact with patients.

The practical sessions observed today were appropriate for the students. They were fully engaged and understood how what they were doing linked with patients and clinical outcomes. The first year formative OSCE session provided the students with an excellent opportunity to familiarise themselves with this form of assessment. The IPE activity observed on the satellite visit where fourth year students worked with medical students was appropriate. The team heard from the students that these sessions were invaluable and would like to have these sessions earlier to develop their confidence with the medics. The students indicated that they had already requested this through the normal feedback mechanisms.

The team discussed IPE provision at length and noted the school's changed plans for 2016-2017 onwards. While it is not a condition of continuing reaccreditation, the team suggests strongly that the school updates the GPhC annually on the roll out of its IPE plan, in preparation for the full MPharm reaccreditation visit in three years.

The students articulated how much the voluntary experiences they have with other professionals have helped them develop confidence and communications skills. Whilst these are enriching activities for the students, it relies on students arranging these themselves and is outside of the MPharm curriculum. All students need to have equity of opportunity to interact with other healthcare professionals.

The team would like to commend the school of the responsiveness to student needs at all levels. The students recognise this and see it continually improving. The team also recognises how well the staff are working together to deliver an integrated course. This was also reflected by the students who were able to articulate they understood what they are learning and why. This was also observed during the activities.

The team was pleased to meet with the School's students who came across as intelligent, articulate and mature in their engagement. They clearly appreciate the support they receive from the staff at UCL who are enthusiastic and are excellent role models.

Appendix 1 – Activities observed by the Accreditation team

Activity 1: Poster Conference associated with the Extramural Research Project (Study Abroad Scheme)

Session Aim

The main aim of the session is to allow students to present the background and findings of their extramural research project in the form of a poster presentation, such that the students' presentation skills and responses may be assessed, in addition to and in complement to the assessment of the written components of the project. An identical poster conference was previously held for students who carried out their research projects within the School.

Note: Although students involved in this activity are fourth year students on the last year of our outgoing MPharm programme (where projects were carried out in the third year), the format of the project assessment was designed for the new MPharm programme, hence the activity is fully representative of that which next year's fourth year will undertake as part of their research projects.

How the activity links to other learning activities (including horizontal and vertical integration)

The Research Project module (PHAYMX98) in Year 4 of the new MPharm will integrate horizontally with the Advancement of Practice through Science module (PHAYM102) and could integrate vertically with any of the previous modules in the programme, depending on the topic chosen, including the Options module in Year 3 (PHAY3104). Vertical integration will also exist where generic and translatable study skills relevant to the research project have been taught within specific modules. Examples from each year include an introduction to critical appraisal skills workshop in PHAY1001 (The role of the pharmacist in healthcare), a session on communication skills in PHAY2001 (Clinical and professional considerations) and a workshop on how to read a scientific paper in PHAY3103 (Future design, delivery and administration of medicines).

How the activity is assessed

The poster presentation contributes 25% towards the overall summative project mark (50% for research paper, 25% for portfolio). The posters are also formatively peer-assessed, addressing the additional outcome:

10.1 Expectations of a pharmacy professional

f. Contribute to the education and training of other members of the team, including peer review and assessment.

Relevant standard 10 outcomes

The exact range of outcomes will to some extent depend on the nature of the project selected, but the following may be addressed:

10.1 Expectations of a pharmacy professional

e. Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices.

h. Engage in multidisciplinary team work.

10.2 The skills required in practice

10.2.1 Implementing health policy

- b. Access and critically evaluate evidence to support safe, rational and cost effective use of medicines.
- c. Use the evidence base to review current practice.
- g. Contribute to research and development activities to improve health outcomes.
- h. Provide evidence-based medicines information.

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

- b. Apply pharmaceutical principles to the formulation, preparation and packaging of products.
- c. Verify safety and accuracy utilising pharmaceutical calculations.
- e. Manage and maintain quality management systems including maintaining appropriate records.
- j. Take personal responsibility for health and safety.

10.2.5 Maintain and improve professional performance

- a. Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour.
- b. Reflect on personal and professional approaches to practice.
- d. Review and reflect on evidence to monitor performance and revise professional development plan.
- e. Participate in auditing and implementing recommendations.

Activity 2: Hospital Placement

Session aims

To provide students with experience in conducting medicines and therapeutics reviews using current patient care data, that may be used as a foundation for pre-registration training. Students are expected to behave in a self-directed manner.

Note: Although students involved in this activity are fourth year students on the last year of our outgoing MPharm programme, the same range of NHS trusts and a similar portfolio-based approach is used for hospital placements in the new MPharm (currently PHAY3101 and additionally PHAYM101 from 2016-17)

How the activity links to other learning activities (including horizontal and vertical integration)

Clinical placements in the final year should potentially integrate with any aspect that has been taught within the integrated programme. However, in terms of development of specific skills relevant to outcome 10.2, vertical integration exists with hospital and community placements and patient-facing exercises in PHAY1001

(The role of the pharmacist in healthcare), PHAY2001 (Clinical and professional considerations) and PHAY3101 (Communicating science and practice). Year 4 hospital placements will be located in the Preparation for practice module (PHAYM101) and will integrate horizontally with complex case studies and IPL exercises within that module.

How the activity is assessed

Assessment will be by portfolio discussion/viva. These portfolio viva assessments will be held during the Year 4 OSCE assessments.

The assessment will incorporate a visual inspection of the portfolio as a check on completion according to specifications. There will also be a case-based discussion about one of the patient profiles, focussing on pharmaceutical care problems, drugs used, etc.

The assessment of portfolio completion and case-based discussion is a pass/fail determinant for PHAYM001 (previous MPharm module).

Feedback and review is provided by the clinical supervisor and it is a mandatory portfolio inclusion to record all visits and have them signed off on the day by the placement supervisor.

Relevant standard 10 outcomes

The following Standard 10 competencies are developed and assessed in this module:

10.2 The skills required in practice

10.2.1. Implementing health policy

b. Access and critically evaluate evidence to support safe, rational and cost effective use of medicines.

c. Use the evidence base to evaluate current practice.

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

c. Instruct patients in the safe and effective use of their medicines and devices (where appropriate).

d. Analyse prescription for validity and clarity.

e. Clinically evaluate the appropriateness of prescribed medicines.

g. Communicate with patients about their prescribed treatment (where appropriate).

h. Optimise treatment for individual patient needs in collaboration with the prescriber.

i. Record maintain and store patient data.

10.2.4. Working with patients and the public

h. Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals.

10.2.5. Maintaining and improving professional performance

a. Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour.

Activity 3: Green Light Pharmacy (Community Pharmacy) workshop

Session aims

A key aim of these workshop placements is to enable students to begin their journey towards becoming a healthcare professional and make integrating links between a patient's use of medicines and the practice of pharmacy.

How the activity links to other learning activities (including horizontal and vertical integration)

This particular session (the second of a series of three) involves students completing four activities, including associated pre- and post-work:-

- Activity 1 – Observation of the pharmacy dispensing process.
- Activity 2 – Prescription charges and prescription types.
- Activity 3 – Counselling and communication skills.
- Activity 4 – Responsible Pharmacist regulations.

Year 1

In PHAY1001 (The role of the pharmacist in healthcare) students are introduced to the roles and responsibilities of the pharmacist in a series of lectures that precede visits to Green Light, covering introductory aspects of dispensing, patient medication records, self-care, health promotion, professionalism and law and ethics. These topics continue to be taught in parallel to Green Light visits, through lectures, workshops and clinical skills practicals, through the remainder of the module. Lectures, practicals and workshops, including integrated therapeutics workshops, in PHAY1002 (Chemistry of medicines), PHAY1003 (Body systems and therapeutics 1) and PHAY1004 (Making safe and effective medicines) teach students the fundamental bases of the pharmacology, chemistry and formulation aspects of some of the medicines that students will encounter at Green Light.

Year 2

Vertical integration with Green Light workshops in PHAY2001, which introduce new topics, again supported by lectures, workshops and clinical skills practicals. Year 2 Green Light workshops are more complex and cover NHS health checks, including taking a blood sample and measuring blood pressure, controlled drugs dispensing, methadone supervision, controlled drug destruction, consultation skills and travel pharmacy. There is further vertical integration with the second year Boots placement, also in PHAY2001.

Year 3

Further vertical integration with Green Light workshops in PHAY3101, again supported by lectures, workshops and clinical skills practicals. Topics and skills introduced at this level include immunisation including flu vaccination, management of anaphylaxis, smoking cessation, sexual health and behavioural medicine. There is further vertical integration with the Year 3 hospital placements.

Year 4

The vertical strand will continue into Year 4, in terms of community and hospital pharmacy placements.

How the activity is assessed

Material covered in Greenlight workshops is examined in the end of module summative written examination and may additionally feature in the OSCE assessments.

Relevant standard 10 outcomes

The following outcomes are addressed by this activity:

10.2 The skills required in practice

10.2.2 Validating therapeutic approaches and supplying prescribed and over-the-counter medicines.

- c. Instruct patients in the safe and effective use of their medicines and devices.
- d. Analyse prescriptions for validity and clarity.
- e. Clinically evaluate the appropriateness of prescribed medicines.
- f. Provide, monitor and modify prescribed treatments to maximise health outcomes.
- g. Communicate with patients about their prescribed treatment.
- h. Optimise treatment for individual patient needs in collaboration with the prescriber.
- j. Supply medicines safely and efficiently, consistently within legal requirements and best professional practice.

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.

- g. Distribute medicines safely, legally and effectively.
- h. Dispose of medicines safely, legally and effectively.
- j. Take personal responsibility for health and safety.
- k. Work effectively within teams to ensure safe and effective systems are being followed.

10.2.4 Working with patients and the public

h. Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals.

10.2.5 Maintaining and improving professional performance

a. Demonstrate the characteristic of a prospective professional pharmacist as set out in relevant codes of conduct and behaviours.

Activity 4: Pharmacy practice workshop

Session aims

To give students an opportunity to understand more fully the role of the pharmacist in the care of patients with diabetes.

How the activity links to other learning activities (including horizontal and vertical integration)

Year 1

In PHAY1001 (The role of the pharmacist in healthcare) students attend workshops on how to use the BNF, aspects of law and ethics, self care, pharmaceutical calculations and health promotion, whereby students will research and give a group presentation on one of the Public Health England campaigns. These topics continue to be developed in Year 2 and this workshop, as part of a series in PHAY2001 (Clinical and professional considerations), builds directly upon this earlier teaching.

Year 2

Endocrinology, diabetes and cardiovascular diseases are taught concurrently to PHAY2001, in PHAY2003 (Body systems and therapeutics 2). There are also some lectures in insulin formulation integrated into PHAY2003. Insulin biotechnology is meanwhile taught in the parallel Year 2 module PHAY2002 (Medicines from the bench to the clinic). Each of these themes integrates horizontally with the material delivered in PHAY2001.

Year 3

Further vertical integration with Green Light workshops and hospital placements in PHAY3101, supported by lectures, workshops and clinical skills practicals.

Year 4

The vertical strand will continue into Year 4, in terms of community and hospital pharmacy placements and consolidation of clinical teaching in preparation for practice (PHAYM101 module).

The following outcomes are addressed by this activity:

Assessment

Material covered in this workshop will be examined in the end of module summative written examination and may additionally feature in OSCEs

Relevant standard 10 outcomes

10.2 The skills required in practice

10.2.1 Implementing health policy

- a. Promote healthy lifestyles by facilitating access to and understanding of health promotion information.
- d. Apply knowledge of relevant current pharmacy-related policy to improve health outcomes.

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

- a. Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health.
- b. Identify inappropriate health behaviours and recommend suitable approaches to intervention.
- c. Instruct patients in the safe and effective use of their medicines and devices.
- f. Provide, monitor and modify prescribed treatments to maximise health outcomes.
- g. Communicate with patients about their prescribed treatment.
- h. Optimise treatment for individual patient needs in collaboration with the prescriber.

10.2.4 Working with patients and the public

- h. Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals.

Activity 5: Integrated therapeutics workshops

Session aims

To draw together the key disciplines of practice, chemistry, physiology/pharmacology and pharmaceuticals into a coherent and relevant learning experience. Integrated therapeutics workshops are placed in all years of the programme, outside of the module structure, and increase in complexity from one year to the next.

How the activity links to other learning activities (including horizontal and vertical integration)

In terms of horizontal integration, these workshops are specifically designed to draw together material that is taught in the four modules of the year; in this example, the fundamental physiology of the respiratory system and the pharmacology of salbutamol (PHAY1003, Body systems and therapeutics 1), the chemistry of salbutamol

(PHAY1002, Chemistry of medicines), formulation of inhaled drugs and pMDI devices (PHAY1004, Making safe and effective medicines) and dispensing and patient counselling aspects (PHAY1001).

Assessment

The content of the Year 1 integrated therapeutics workshops is formally assessed by the inclusion of one question on the PHAY1002 module written examination paper. This is a multi-part question based on one of the three workshops and requires students to integrate their knowledge across each of the disciplines represented by the four Year 1 modules.

Relevant standard 10 outcomes

The following outcomes are addressed by this activity:

10.1 Expectations of a pharmacy professional

e. Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices.

10.2 The skills required in practice

10.2.2 Validating therapeutic approaches and supplying prescribed and over-the-counter medicines.

a. Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health.

c. Instruct patients in the safe and effective use of their medicines and devices.

f. Provide, monitor and modify prescribed treatments to maximise health outcomes.

g. Communicate with patients about their prescribed treatment.

h. Optimise treatment for individual patient needs in collaboration with the prescriber.

10.2.4 Working with patients and the public

h. Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals.

Activity 6: Inter-professional learning with medical students

Session aims

1. To introduce concepts of safe prescribing and therapeutics.
2. To provide an opportunity for hands on prescribing and decision making using scenarios.
3. To provide an opportunity for medical and pharmacy students to interact and understand each other's roles, skills and knowledge in the context of the topic, and learn from each other.

Note: Although students involved in this activity are fourth year students on the last year of our outgoing MPharm programme, a similar approach will be employed for some IPL activities on the new MPharm.

How the activity links to other learning activities (including horizontal and vertical integration)

This particular exercise was developed for the previous version of the MPharm. However, the collaboration between the School and the Medical School that underpins this workshop will also provide the basis for IPL activities with medical students in the new Year 4. A working document on our IPL strategy is provided as Appendix 10.

Standard 10

Assessment

Summative OSCEs assess aspects covered by this exercise, including interacting with another healthcare professional

Relevant standard 10 outcomes

The following outcomes are addressed by this activity:

10.1 Expectations of a pharmacy professional
h. Engage in multidisciplinary team working.

10.2 The skills required in practice

10.2.2 Validating therapeutic approaches and supplying prescribed and over-the-counter medicines.

- a. Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health.
- c. Instruct patients in the safe and effective use of their medicines and devices.

- e. Clinically evaluate the appropriateness of prescribed medicines.
- f. Provide, monitor and modify prescribed treatments to maximise health outcomes.
- h. Optimise treatment for individual patient needs in collaboration with the prescriber.

10.2.5 Maintaining and improving professional performance.

- c. Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour.

Activity 7: Pharmaceutical Technology (Practical) (interim visit)

Session aims

The aim of this practical course is to provide students with the basic theoretical, practical and interpretive skills associated with the preparation of conventional solid dosage forms. Through a series of four practicals and workshops in groups of circa 6 students, students will gain experience in powder characterisation, powder mixing and granulation, tablet and capsule preparation, product characterisation and dissolution testing.

How the activity links to other learning activities (including horizontal and vertical integration)

This practical is the last in a series of four, concerning the manufacture and physicochemical properties of solid dosage forms. The students initially make tablets and capsules of paracetamol over the course of the first two sessions, whilst performing all necessary analytical tests at the required stages of the manufacturing process. The third session involves disintegration and dissolution testing of the batches and the final session involves repeating these tests after two weeks' storage under stress conditions to test stability. There is clear vertical integration with aspects of PHAY1004 (Making safe and effective medicines), PHAY1002 (Chemistry of medicines) and PHAY3103 (Future design, delivery and administration of medicines), as well as horizontal integration with other aspects of PHAY2002 (Medicines from the bench to the clinic) and PHAY2001 (Clinical and professional considerations).

Assessment

The course of practicals is assessed by a group report, which includes a peer review component. The workshops are not assessed but are provided to help with the interpretive aspects of the course, and approaches to group working and report writing. Material covered in practicals may also be examined in the end of module summative written examination.

Relevant standard 10 outcomes

The following outcomes are addressed by this activity:

10.1 Expectations of a pharmacy professional

- e. Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices.

f. Contribute to the education and training of other members of the team, including peer review and assessment.

10.2 The skills required in practice

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

- a. Ensure quality of ingredients to produce medicines and products.
- b. Apply pharmaceutical principles to the formulation, preparation and packaging of products.
- c. Verify safety and accuracy utilising pharmaceutical calculations.
- e. Manage and maintain quality management systems including maintaining appropriate records.
- f. Procure and store medicines and other pharmaceutical products working within a quality assurance framework.
- j. Take personal responsibility for health and safety.

Activity 8: Integrated therapeutics (interim visit)

Session aims

The aim of the two Year 3 integrated workshops is to demonstrate how the modules covered in Years 1, 2 and 3 can link together in the practice of pharmacy and how the fundamentals of science impact on clinical practice, using cystic fibrosis as a theme.

How the activity links to other learning activities (including horizontal and vertical integration)

This workshop takes place within Year 3 of the MPharm degree. It further extends the concepts of the two sets of integrated workshops which students have completed in Years 1 and 2 and is a continuation of the first Year 3 integrated workshop, further elaborating the developing medical history of the same patient. The topic for Year 3 integrated workshops is cystic fibrosis and follows a CF patient's journey. Cystic fibrosis was chosen as it ties in a number of major themes taught across the core modules: PHAY3101; PHAY3102 and PHAY3103. For workshop 1 in particular, this includes:

- Antibacterials/ antifungals (treatment of acute infection, chronic infection) (PHAY3101, PHAY3102)
- Inflammatory responses in respiratory disease (PHAY3101, PHAY3102)
- Immunology, specifically transplants (PHAY3102, PHAY3103)
- Immunosuppressant therapy (PHAY3102, PHAY3103)
- Cancer treatments (PHAY3102)
- Clinical pharmaceuticals and how formulation and dose presentation can influence clinical outcome (PHAY3101, PHAY3103)
- Pharmaceutical calculations (PHAY3101, PHAY3103)
- Role of the pharmacist in all of the above

Assessment

The content of the Year 3 workshops is assessed on the examination papers of each of the three core modules (PHAY3101, PHAY3012 and PHAY3103). The written examination papers for the core modules each contain a section of MCQ questions, four of which are based upon the integrated therapeutics workshop content.

Relevant standard 10 outcomes

The following outcomes are addressed by this activity:

10.1 Expectations of a pharmacy professional

e. Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices.

10.2 The skills required in practice

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

c. Instruct patients in the safe and effective use of their medicines and devices.

f. Provide, monitor and modify prescribed treatments to maximise health outcomes.

g. Communicate with patients about their prescribed treatment.

h. Optimise treatment for individual patient needs in collaboration with the prescriber.

10.2.4 Working with patients and the public

d. Communicate information about available options in a way which promotes understanding.

h. Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals.

Activity 9: Formative OSCEs (interim visit)

Session aims

To familiarise students with the OSCE format in preparation for their summative assessments and to provide formative feedback on their performance to reflect upon. Feedback is provided in a workshop, held one to two weeks after the OSCE.

How the activity links to other learning activities (including horizontal and vertical integration)

Formative OSCEs are offered in all years of the programme, with increasing complexity as the students progress. These are designed to examine the range of activities taught in the practice module at the respective levels.

Assessment

Summative OSCE assessment in the summer assessment period

Relevant standard 10 outcomes

The following outcomes are addressed by this activity:

10.2 The skills required in practice

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

- c. Instruct patients in the safe and effective use of their medicines and devices.
- d. Analyse prescriptions for validity and clarity.
- e. Clinically evaluate the appropriateness of prescribed medicines.
- g. Communicate with patients about their prescribed treatment.

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

- c. Verify safety and accuracy utilising pharmaceutical calculations.

10.2.4 Working with patients and the public

- h. Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals.

10.2.5 Maintaining and improving professional performance

- a. Demonstrate the characteristic of a prospective professional pharmacist as set out in relevant codes of conduct and behaviours.

Activity 10: Extemporaneous dispensing practical (interim visit)

Session aims

This course is designed to give students experience in manufacturing and dispensing dosage forms in accordance with a prescription.

How the activity links to other learning activities (including horizontal and vertical integration)

This series of practicals concerns the extemporaneous dispensing of medicines where a licensed product does not exist, which in practice would be manufactured either by Specials manufacturers (in licensed facilities) or by a pharmacist practising in accordance with Section 10 of the Medicines Act. Some of these products are BP or BPC preparations whereas others require students to devise formulae and methods for themselves. These exercises are placed in PHAY1004 (Making safe and effective medicines) but are very practice-oriented and interface directly with many of the aspects of dispensing and the law that are concurrently taught in PHAY1001 (The role of the pharmacist in healthcare). There is also clear horizontal integration with the Sterile products series of practicals within PHAY1004. Vertical integration can be seen in particular with the second and third year modules PHAY2002 (Medicines from the bench to the clinic) and PHAY3103 (Future design, delivery and administration of medicines), as well as horizontal integration with aspects of PHAY1002 (Chemistry of medicines).

Assessment

This section of the course comprises five practical sessions, followed by a practical assessment exercise.

Relevant standard 10 outcomes

The following outcomes are addressed by this activity:

10.1 Expectations of a pharmacy professional

e. Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices.

10.2 The skills required in practice

10.2.2 Validating therapeutic approaches and supplying prescribed and over-the-counter medicines.

e. Manage and maintain quality management systems including maintaining appropriate records.

j. Supply medicines safely and efficiently, consistently within legal requirements and best professional practice.

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

a. Ensure quality of ingredients to produce medicines and products.

b. Apply pharmaceutical principles to the formulation, preparation and packaging of products.

c. Verify safety and accuracy utilising pharmaceutical calculations.

d. Analyse prescriptions for validity and clarity.

f. Procure and store medicines and other pharmaceutical products working within a quality assurance framework.

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

g. Distribute medicines safely, legally and effectively.

h. Dispose of medicines safely, legally and effectively.

j. Take personal responsibility for health and safety.

Appendix 2 – Documentation made available to the accreditation team for review during the visit

- i. Samples of assessment scripts
- ii. Samples of student work
- iii. Samples of research project reports
- iv. Samples of student portfolios
- v. Module evaluations
- vi. Placement provider/external stakeholder feedback
- vii. Samples of exam papers
- viii. OSCE documents
- ix. Values Based Recruitment (VBR) information
- x. Study abroad programme information
- xi. Information on module and year of study review procedure

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