

MPharm Interim Visit

University of Bradford

February 2015

Master of Pharmacy degree course (MPharm) interim visit

University of Bradford

Report of an interim visit, 10 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 the University of Bradford.

Background

The University of Bradford offers two variations of an MPharm degree; a 4-year course consisting of 4 years of continuous study ('continuous MPharm') and a 5-year course which spreads the same 4-year MPharm over 5-years and includes two blocks of intercalated pre-registration training ('Sandwich MPharm'). Both versions of the MPharm were last reaccredited by the GPhC in the 2011/12 academic year and accreditation was granted for the full 6 years, subject to one condition and an interim visit after 3 years. The condition was:

1. The University must develop a meaningful IPL and PPI strategy to strengthen the curriculum. The team recognised there was some patient involvement and IPL throughout the planned programme but this needs to increase year on year and be articulated in a strategy (this relates to Standard 5).

The accreditation team also made the following recommendation:

- The University should review its staffing provision, with a view to making transitional arrangements to ensure sufficient staff resource during the development and implementation of the new curriculum 2012 (this relates to Standard 9).

The accreditation team also wished to highlight the following area of strength:

Significantly improved facilities with future planned development, and the clear support provided for the students; the team heard from the students that this is appreciated.

In line with the new accreditation methodology, an interim visit was arranged for 10 February 2015 and the following is a record of that visit.

Prior to the interim visit the University submitted documentation to the GPhC and a pre-visit meeting took place by teleconference on 22 January 2015. 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 23 January and 6 February 2015, to allow team members to observe off-site activities in advance of the main visit.

The interim visit

The interim visit itself took place on site at the University of Bradford on 10 February 2015. The event began with a private meeting of the accreditation team and GPhC representatives on 9 February 2015. The remainder of the event took place on site at the University of Bradford on 10 February 2015, and comprised a series of meetings with staff and students of the University, along with observations of a number of teaching and learning activities.

Meeting number	Meeting	Time
	<i>Day 1 – 9 February 2015</i>	
1.	Private meeting of accreditation team and GPhC representatives	17:30 – 19:00
	<i>Day 2 – 10 February 2015</i>	
2.	Presentation by the University of Bradford MPharm staff team on progress to date and meeting with senior staff	07:45 – 08:45
3.	Groups of accreditation team and GPhC representatives observed activities which ran concurrently: Activity 1 - Nutrition, metabolism, reproduction, GIT laboratory practical session (Practical -Year 2) Activity 2 - Receptors TBL Application exercise (Workshop-Year 1) Activity 3 - Medicines optimisation COPD, TBL Application exercise (Workshop -Year 4/5)	09:00 – 10:00
4.	Activity 4 – Optional Studies – Pharmaceutical Production Innovation (Workshop -Year 4)	10:00 – 11:00
5.	Groups of accreditation team and GPhC representatives observed activities which ran concurrently: Activity 5 - Capability in Pharmacy, Debrief from placements WBL (Year 3) Activity 6 - Receptors TBL Application exercise (Workshop-Year 1)	11:00 – 12:00
6.	Meeting with students	12:00 – 13:30
7.	Activity 7 - Senses, thoughts and Movement, Substance Misuse, Student support session TBL (Optional lecture – Year 2)	
8.	Private meeting of accreditation team and GPhC representatives	13:30 – 14:00
9.	Groups of accreditation team and GPhC representatives observed activities which ran concurrently: Activity 8 - Nutrition, metabolism, reproduction, GIT laboratory practical session (Practical -Year 2) Activity 9 - Key Reactions in Chemistry, TBL Application exercise (Workshop – Year 1)	14:00 – 15:00
10.	Private meeting of accreditation team and GPhC representatives	15:00 – 16:00
11.	Feedback to University of Bradford MPharm staff team	16:00 – 16:30

Accreditation team

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

Name	Designation at the time of accreditation event	Meetings attended
Professor Ian Marshall	Accreditation team leader, Emeritus Professor of Pharmacology, University of Strathclyde Proprietor Caldarvan Research (Educational and Writing Services)	1, 2, 5, 6, 8, 10, 11
Mr Peter Curphey (Team Leader)*	Accreditation team leader, Pharmacy Consultant	Pre-visit only
Professor Bill Dawson	Accreditation team member (Academic), Chief Executive, Bionet Ltd	1, 2, 3, 4, 5, 6, 8, 9, 10, 11
Professor Chris Langley	Accreditation team member (Academic), Professor of Pharmacy Law & Practice and Deputy Head of the School of Pharmacy, Aston University	1, 2, 3, 5, 6, 8, 9, 10, 11
Professor Helen Howe	Accreditation team member (Pharmacist), Retired hospital Chief Pharmacist	1, 2, 3, 5, 6, 8, 10, 11
Mr Surinder Bassan	Accreditation team member (Pharmacist), Pharmaceutical Consultant	1, 2, 3, 4, 5, 6, 7, 8, 10, 11

along with:

Name	Designation at the time of visit	Meetings attended
Ms Joanne Martin*	Quality Assurance Manager, General Pharmaceutical Council	Pre-visit only
Mr Damian Day	Head of Education, General Pharmaceutical Council	1, 2, 6, 8, 10, 11
Miss Jenny Clapham	Rapporteur, Quality Assurance Officer, General Pharmaceutical Council	1, 2, 3, 5, 6, 8, 10, 11

*attended pre-visit teleconference, 22 January 2015.

Due to unforeseen circumstances Mr Curphey was unable to attend the interim visit due to ill health. Professor Ian Marshall agreed to step into the team leader role two days before the event. It was sensible for Professor Marshall to act as team leader as he had been closely involved with the event as the rapporteur. Ms Jenny Clapham, the quality assurance officer from the GPhC stepped into the role of rapporteur.

Course provider

Representatives of the University of Bradford MPharm degree teaching team. The team met with the following:

Name	Designation at the time of accreditation event	Meeting attended
Dr David Alldred	Senior Lecturer in Pharmacy Practice (Admissions Tutor)	2, 3, 11
Professor Alison Blenkinsopp	Professor of the Practice of Pharmacy	2, 11
Dr Helen Cook	Senior Lecturer in Clinical Pharmacy (IPL lead)	2, 11
Ms Claire Edwards	(Placement Co-ordinator)	2, 11
Dr Josie Fraser*	Senior Lecturer in Pharmacology (Associate Dean for Learning & Teaching)	2, 11
Mrs Alison Hartley*	Lecturer in Pharmacy Practice (MPharm co-lead Curriculum 2012)	2, 7, 11
Mr Jim Johnston	Lecturer in Workplace Learning (Workplace Learning)	2, 11
Dr Beverley Lucas	Senior Lecturer in Pharmacy Education (IPL/PPI Working Group Chair)	2, 11
Mrs Jayne Marshall*	Head of School Support Administrator	Pre-visit only
Dr Julie Morgan*	Director of Teaching and Learning	Pre-visit only
Dr Ian Naylor	Senior Lecturer in Pharmacology (PPI lead)	2, 11
Mrs Kavita Patel*	Academic Quality & Partnerships Officer	Pre-visit only
Dr Duncan Petty	Research Practitioner in Primary Care Pharmacy	2, 11
Professor Marcus Rattray*	Head of Bradford School of Pharmacy	2, 11
Dr Jon Silcock	Senior Lecturer in Pharmacy Practice (Director of Work-based Learning)	2, 5, 11
Dr Diana Wood*	Senior Lecturer in Pharmacology (MPharm Prog. Director existing prog)	2, 3, 8, 11

*attended pre-visit, 22 January 2015

In addition, the accreditation team met with a group of 12 students, including 1 from Year 1, 4 from Year 2, 5 from Year 3 and 2 from Year 5 (sandwich MPharm).

The visit

In meeting 2, a presentation by senior members of staff built on the information provided in the submission and gave an update on progress since the last visit in 2012. The presentation provided an overview of the programme and covered changes made since the 2012 reaccreditation, and addressed a number of themes related to the programme as detailed below.

Points raised in the presentation, as well as other matters, were discussed with the staff (meeting 2) and with students (meeting 6) and the following narrative incorporates those discussions.

1. Overview of the MPharm degree and progress to date

The School gave an overview of the University of Bradford School of Pharmacy (SoP) confirming it to be one of the oldest and largest SoPs in Britain and scoring 92% for research in REF. The School prides itself on innovation and all staff teaching on the MPharm belong to one of four research groups: Education Innovation Research and Development Group which focuses on curriculum development and the team-based learning approach; Pharmacology and Experimental Therapeutics Group; Medicines Development and Pharmaceutical Sciences Group; and Medicines Optimisation Research which focuses on pharmacy practice and evidence-based interventions and works closely with the University of Leeds and NHS partners. The accreditation team asked the staff team (meeting 2) and the students (meeting 6) for an overview of the new course provision and how it was progressing. The staff team confirmed that students had become more confident and engaged and were keen to question and debate the issues they were being taught. The majority of students were enthusiastic about studying at the University of Bradford and highlighted the team-based learning as a particular benefit.

The School described a numbers of areas where changes and developments had been made including the following:

i. Staffing:

The School has a staff team of 43.18 FTE which includes 53 academic staff, 27 of whom are registered with the GPhC. Since the last accreditation in 2012, there has been a significant turnover in staff with 17 replacement posts, 6 new posts and 3 transitional posts to assist with the introduction of the new curriculum. As a result of these changes in staffing, there has been considerable focus on staff development including fortnightly sessions, regular away-days, peer-mentoring, and performance development planning and review. The School also conducts an annual peer-supported review of teaching and expects all staff to attain HEA recognition (currently 90%). The staff team described the challenges of teaching on both the outgoing curriculum and the new curriculum but felt supported by the University to overcome these challenges and was confident that the transition had been managed successfully. The team asked about the impact of the new curriculum and increased student numbers on capacity. The School confirmed that overall intake number had remained at approximately 200, and there had been significant additional work required to introduce the new curriculum in terms of developing the content and materials. This work had resulted in a challenging few years for the teaching staff, but as it was front-loaded, staff members have now seen a reduction in their workload and the teaching on the new curriculum was described as being less staff-intensive. In addition there has been a reduction in service teaching provided by the School. The School has also appointed a Cross-School Simulation lecturer with a dedicated role in developing and supporting the simulation suite, Anatomage and iStan patient simulators, and a staff member to support TBL processes in the classroom.

ii. *Admissions:*

The standard offer for the MPharm programme is ABB and offers are confirmed on the basis of points (320 points) which also includes AS levels. The School advised that offers are made to approximately 50% of applicants. The School described their current admissions procedure which includes a TBL taster session and a Faculty tour. All members of staff participate in the admissions interviews and students are questioned on their knowledge of pharmacist roles, use of medicines, motivation, and alignment of values to the NHS. The maths test at interview was found to be unreliable and has been replaced by a diagnostic test in week one of the programme.

2. Team-based learning (TBL)

The School described the team-based learning units as comprising 4 stages; the release of a learning pack containing all learning materials; an optional student support session to discuss and clarify any points raised by the students with Year 3 and 4 support sessions including patients; an iRAT and tRAT which take the form of an MCQ test with formative feedback; and finally, application exercise sessions in which students must apply their knowledge. The application exercises cover a range of activities and can be workshop-based or lab-based, for example, clinical use of OTC medicines. Team-based learning is a major focus of the University of Bradford MPharm programme and the team explored the experiences and opinions of the students in meeting 6. The majority of students reported favourably on their experience. Many preferred the TBL approach to the traditional lecture format and identified the benefits of gaining different perspectives and learning from one's peers. The weekly iRAT and tRAT tests were described as being a motivation to complete the work and the student support sessions were seen as valuable. Students described increases in their confidence as a result of TBL. The group sizes were deemed appropriate and the students appreciated being in mixed groups which changed each year. Some students were less favourable in their opinion of TBL, having only been introduced to it after commencing the programme and a clear divide was identified between those that had made an active decision to study at the University due to the TBL strategy and those that had not. On further questioning, the students identified some issues around the provision of learning packs and the iRAT and tRATs which are discussed in more detail in 6 and 7 below.

3. Inter-professional learning (IPL)

A Task and Finish Working Group was set up in December 2013 to revise the School's strategy for IPL and PPI and to ensure that activities were on track. The working group meets three times a year to evaluate activities and their feedback is provided to the MPharm Programme Management Committee and the Pharmacy Leadership Board. The School described the challenges they encountered in rolling out their first strategy due to difficulties in scheduling activities with the Faculty of Health Studies. A new range of activities was developed, scheduled and fully implemented by September 2014 including catch-up activities where required. The current IPL strategy involves learning 'with, from and about' other healthcare professionals through a range of activities. In Year 1, students attend a half-day conference with Leeds Health and Medical students. Year 2 students attend a collaborative session with School of Health students and allied health professionals, and in Year 3, students attend a half-day prescribing event with medical students from Leeds Medical School. Years 1 and 2 also have classroom sessions in which they learn about the different professions and all four years of the programme feature work-based placements with opportunities for IPL and associated reflection. The School reported good relationships with other providers who were keen to involve pharmacists in their own IPL activities, and confirmed that the current agreement with Leeds Medical School will run until 2018. The IPL events accommodate large numbers (circa 800 students) and the School explained that it was easier to schedule single large events than to timetable lots of smaller activities. Each event included a large number of facilitators to enable the students to be split into smaller groups. The students in meeting 6 confirmed that IPL featured in all four years of the programme and that it was beneficial to their learning as they

learnt a lot from other healthcare professionals. The students also experience joint teaching with pharmacy technicians in Year 1 of the programme and described this very positively.

4. Public and patient involvement (PPI)

In meeting 2, the School gave an overview of PPI within the current curriculum describing a blended approach which comprises simulation and classroom training, use of expert patients and actors, and encountering real patients in both classroom and workplace settings. The University has developed a simulated virtual community known as 'Bradton' which is used predominantly with Year 1 and 2 students, and iStan simulators and Anatomage technology are also used. Real patients are introduced from Year 2 and for Years 3 and 4, 25% of units involve real patients. Year 4 students spend time in a GP surgery giving considerable opportunities for both IPL and PPI. The students in meeting 6 described PPI as one of the most important part of their studies. However, most agreed that much of the PPI was through simulation and use of actors rather than with real patients and that more encounters with real patients especially earlier on in the programme would help to increase their confidence with patient interactions. Year 5 (sandwich course) students who had completed both hospital and community placements reported a lot of exposure to patients particularly on the hospital visits and described now feeling confident in dealing with patients.

5. Placements

The School recognises the importance of placements but also described the challenges in getting sufficient buy-in from providers. The School had hoped that all students could attend placements at the same time but due to limited capacity, the work-based placements have had to be spread across a longer period in order to accommodate all students. The accreditation team inquired whether the placement providers underwent training and it was confirmed that this has been offered to training providers, with few so far wishing to participate in training. The School does provide written guidance and will be launching a clinical tutor programme. The School confirmed that placement providers were initially visited by University staff but that they now had a core group of providers so would only conduct a visit to a new provider. During their placements, students are required to complete a workbook and the provider must give the student a feedback score of 3 or above in order for the student to pass the placement. A full group debrief session is held at the University and reflection on work-based learning is also involved. The students confirmed that placements were a good experience and that the programme offered a variety of placement opportunities in both hospital and community settings. These were described as being good preparation for their future careers and enabled them to gain confidence. However, some students reported that the one-day placements were of limited value as these often only offered shadowing opportunities. Furthermore, some providers treated students as a hindrance on these placements.

6. Learning resources and systems for student support

In meeting 2, the School described the systems for student support which included: timetabled support sessions (part of the TBL units) which provide tailored and responsive support; module revision drop-ins; a peer-assisted learning scheme which provides peer support for Year 1 students from students from Years 2-4; 2-tier feedback following mocks with whole cohort feedback and one-to-one sessions as required; and revision sessions. Stage Tutor bulletins are provided to students to advise them of current activities, events, deadlines etc. and staff receive weekly updates on students' support needs. Long loop assessment prevents the loss of knowledge over the summer and the structure of the units involves frequent assessment and immediate feedback. This enables staff to monitor students' progress and identify those who are struggling. The students gave varied feedback on the learning resources and support available. A particular criticism by Year 3 students related to the late provision of reading packs which did not allow sufficient time to prepare for the student support session (one or two days in advance of the session instead of one week). As a result the students did not always identify issues to be covered in the sessions and therefore found them to be of limited use. The

accreditation team understood that material was being developed for the first time for the Year 3 students who complained of being used as guinea pigs for the new curriculum, and consequently they were subject to such delays and last minute changes. Students in the other years were satisfied with the provision of materials and level of support available. Year 3 students reported having fed back to the University on issues relating to timetabling, assessments and the provision of course materials but that changes were slow to take effect and when implemented only benefitted the years below. Students in Years 1 and 2 on the other hand, felt that their opinions were listened to and that changes were made immediately. In relation to other resources, all the students described Blackboard, the library facilities, the provision of e-books, and guidance from RPS and NICE as all being useful and accessible. The accreditation team enquired about the personal tutor system and was told that the quality of support varied depending on the individual tutor with some being readily available and approachable, and with others providing minimal support. Scheduling meetings with personal tutors was identified as a problem by several of the students present. When asked about mechanisms for raising concerns, the students described various mechanisms including speaking to the head of the module, making formal complaints, or attending meetings to give feedback. There is also a student – staff liaison committee with student representatives, the minutes of which are posted on Blackboard. The process of escalating a concern was deemed to be effective and the students were happy that issues were resolved.

7. Assessment and feedback

In meeting 2, the School presented an overview of the assessments used for all four years of the new programme. In each year students are required to pass a drug calculations assessment (70% pass mark), a capability module which is assessed by a portfolio and a work-based learning placement. Years 1 and 2 involve module coursework and end of module exams. Year 2 also includes an end of year synoptic assessment. Years 3 and 4 do not have end of module exams and are assessed through module coursework and an end of year synoptic assessment. Students in all years also have an optionality which is a Student- Selected Assignment for Years 1 to 3 and a Student- Selected Component for Year 4. These can include, for example, aseptics, drug discovery, or overseas research through the Erasmus Scheme. The School also reported making improvements to the assessment process including staff training on developing and evaluating quality of MCQs and EMQs, guidance on the quality assurance of assessments, larger rooms for TBL MCQ tests, separate purpose built rooms for TBL applications exercises, development and refinement of the integrated synoptic assessments and improved OSCE preparation for students in Year 4. Assessment and feedback was also explored with the students in meeting 6. The students described the weekly formative tests they do as part of each unit as being useful in preparing them for the end of year exams and for overcoming nerves in relation to assessments. It was confirmed that feedback on the iRATs was immediate and helpful. On the whole the students were satisfied with the feedback they received on assessments although it was subject to the occasional delay. The team was told that the degree classification for the MPharm was pass/merit/distinction and many of the students agreed that the traditional classification of 1st/2:1/2:2 etc would be preferable.

The Year 3 students raised a number of issues relating to assessments with which they were dissatisfied. These students reported feeling under considerable pressure as they were undergoing weekly iRATs without a break and were then subject to an end of year synoptic exam which, if failed, would require resitting the entire year. The accreditation team explored this further and understood that there is a no resit policy on the synoptic end of year assessments and acknowledged as been accepted at the original reaccreditation in 2012. The Year 3 students also complained of last minute changes to certain assessments which had resulted in them being underprepared and in some cases, failing the assessments. Additionally the students highlighted a lack of model answers and insufficient detail in the feedback they received as being problematic. A further issue which emerged through the discussion with students related to the use of questions for the iRAT assessments. The same paper had been used for two subsequent years and the current Year 2 students had been able to obtain answers from Year 3 students. The accreditation team was concerned about this apparent lack of quality assurance and sought clarification from the staff team. The team was told that in the first year of the new programme, the question bank had not been large enough. They had now introduced a policy to address this and confirmed that each paper would

contain one- third reused questions, one- third reworked questions and one third brand new questions. The order of both questions and answers will be randomised through a computer system. The university explained that the policy is that iRATs and tRATs are not identical year on year and are going to communicate this to students to ensure the students are clear about this policy as there seems to be some misconceptions around this process. Students are fully informed about these assessment regulations and the School ensures they are adequately prepared through extensive formative assessment.

8. *Integrated curriculum*

The School described how the programme is integrated both in relation to the curriculum and the staff teaching teams. Integration is introduced in Year 1 and the programme is fully integrated from Year 2 onwards. The links are both explicit and implicit with reinforcement of links encouraging integration to become the 'norm' for the students. Most classes, materials and assessments are now multi-discipline and also make reference to previous learning. The staff team is cross-discipline and design, write, deliver and review the programme together. Staff agreed that integration has required a huge transition but that all staff is now proactively engaging in the integrated approach. In meeting 6, the students described Year 1 as being a bridging year between A-level and undergraduate study and as a result, the subjects had remained discrete. From Year 2, integration was clear and the students reported that their learning packs always link back to other units. They described learning the raw science and then applying this in the real world and felt they understood the purpose of what they learnt. The students also understood the concept of the spiral curriculum.

9. *Research*

The team explored the role of research within the School with both the staff team and the students. The staff team confirmed that students receive a Stage Tutor bulletin which shares information about staff research projects and advised that there is also a Facebook page. The staff reported that the students are very interested in what research they are doing and often challenge them on current issues during classes. Students are also given the opportunity to undertake their own research during the summer and can also gain research opportunities under the Erasmus Scheme, with 13 students taking an Erasmus placement in summer 2014. The students also described the ways in which staff share their research and the ways in which the research topics are applied to the course with integration of research into the teaching. The students described their tutors as being very knowledgeable about their subjects which gave them confidence to challenge them and ask questions. Students attend sessions on new therapies, conduct a full application exercise on Ebola and have a class on obesity as well as having the opportunity to attend other research events.

10. *Professionalism*

During meeting 6, the students were asked about their understanding of professionalism and how the programme helped to develop them as professionals. They described the importance of how they presented themselves both in terms of attitude and behaviour and in how they approached problem solving. The students agreed that the placements helped to develop professionalism as they were expected to behave as professionals in the workplace. It was commented that within the university setting, staff expect but do not enforce professional behaviour as it is something that should come from within the individual. Talking during lectures was cited as an example of unprofessional behaviour. Becoming a reflective learner is an important aspect in the role of a pharmacist and the students were asked about their experience of reflective learning during the programme. They confirmed that reflection was engrained from Year 1 and that it encouraged them to make the links between study and work. They also identified the importance of reflection in order to learn from mistakes and prevent repeat adverse behaviour. The students saw that there were clear benefits of reflection in preparing them for their future careers.

11. Observation of student activities:

In addition to satellite visits (23 January and 6 February 2015), during the interim visit itself, various members of the team observed a number of activities, some of which ran concurrently. The date of the interim visit was selected to coincide with timetabled activities which would best demonstrate a range of sessions/activities and allow the accreditation team to review examples of student learning experiences and how the MPharm course had progressed. The students (meeting 6) confirmed that the day of the visit was a typical working day. 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. These activities are summarised below and further detail of each is provided in Appendix 1.

Satellite visit 1a: Pain and the musculoskeletal system, TBL exercise (Year 2)

This 2-hour team-based learning exercise is held jointly between the School of Pharmacy and the School of Health and involves MPharm students with students from other health disciplines. The whole MPharm Year 2 cohort attended the session and worked in teams of 4-6 at a workstation to enable access to e-resources. The teams were asked to consider a pain-related scenario, for example, an elderly patient 48 hours post hip replacement. The session was facilitated by seven staff members (three from the School of Pharmacy plus a paramedic, a physiotherapist, a midwife and a nurse) and four students from the School of Health who spent time discussing with the students the perspective each brought to the case. Students were then able to discuss their cases with at least two other healthcare professionals. The students were engaged and recognised the value each professional brought to the cases. It is noted that even though in this session students were not learning alongside students from other disciplines the experience meets the definition of inter-professional education in that students are learning, with, from and about other healthcare professionals and it did demonstrate that the meetstandards 10.1h and 10.2.1e.

Satellite visit 1b: Pain and the musculoskeletal system, TBL exercise (Year 2)

This second 2-hour team-based learning session for the MPharm Year 2 students was facilitated by two School of Pharmacy staff members and a physiotherapist. The MPharm students were joined by a small number of AHP students who were invited to attend the session for revision purposes rather than as a timetabled activity. A single pain-related scenario was examined and students were required to discuss the case in teams and select the most likely cause of pain. The students were clearly engaged and were found to be extremely positive about the team-based learning approach adopted by the School.

Satellite visit 2a: Capability in Pharmacy, WBL Hospital Placement (Year 3)

A work-based learning hospital placement for three Year 3 students was observed by a member of the accreditation team. The main focus was on general pharmaceutical care, in particular multidisciplinary teamwork and patient counselling (including communication skills). The students visited an acute medical ward and were given the opportunity to see and understand the work of a wide variety of healthcare team members. Students met with patients, reviewed GP records and developed a pharmaceutical care plan. The students were reported to be aware of the requirements for security and hygiene, worked well in their teams and supported one another. There was a high level of student engagement and the integration of learning was made clear. The supervision and teaching was excellent and the session was found to meet all the learning objectives and the following 'knows how' outcomes in Standard 10 - 10.1f; 10.2.1e; 10.2.2g,i; 10.2.3j; 10.2.4c; 10.2.5a,b,c.

Satellite visit 2b: Capability in Pharmacy, WBL Community Placement (Year 3)

A second placement for Year 3 students was observed by a member of the accreditation team, this time in a community pharmacy. The community placement includes a focus on pharmacy Enhanced Services; herbal medicines; the clinical checking process, with an emphasis on drug interactions, contraindications, adverse drug reactions and medicines-related warnings; prevention of dispensing errors and furthering knowledge of OTC consultations. The session involved a single student working alongside the pharmacy team with considerable effort and time being given by the pharmacist to support the student and their learning. The areas of practice observed included SOPs, supervised methadone supply, stock management, dispensing and MURs. The student was fully engaged and enjoyed the opportunities to learn. The session met the 'knows how' of the following outcomes - 10.1d,h; 10.2.1e; 10.2.2c,d,e,g,l,j; 10.2.3d,e,l,k,n; 10.2.4a,b,d,e,f,g; 10.2.5a,b,c,d.

Activities 1 and 8: Nutrition, metabolism, reproduction, GIT TBL Application exercise (Practical -Year 2)

This comprised a laboratory session entitled "Salivary secretion and taste" in which students undertake an "Anatamage" (dissection simulator) session on the gastrointestinal tract and experiments on basal and stimulated salivary secretion, taste perception and taste masking. The "Anatamage" simulator is able to build-up or remove each individual part of a human so that students are able to see how the different body components link together. The work was deemed to be relevant but reasonably elementary. The facilities and equipment were first-rate and each session was supported by a lead tutor. The students in the experiment session showed higher level of engagement and responded better than those using the "Anamotage" simulator. The session was found to meet the learning objectives and outcomes 10.1e and 10.2.3b in Standard 10.

Activities 2 and 6 – Receptors TBL Application exercise (Workshop-Year 1)

Two sessions of this TBL exercise were observed by the accreditation team. The sessions both involved large cohorts of approximately 40 Year 1 students (activity 2) and approximately 80 Year 1 students (activity 6). The session began with an oral introduction which highlighted the integration with other elements of the course. The students then worked in teams of between 4 and 6 with the facilitators moving around the room ensuring that the students were progressing with their work. The standard within the groups varied but the team-based learning allowed all to achieve understanding of the topic. The students were positive about the learning style and appreciated the peer learning. The sessions addressed standards 10.1 e, f, g; 10.2.1g; and 10.2.4c.

Activity 3 – Medicines optimization COPD, TBL Application exercise (Workshop -Year 4)

This comprised a Team-Based Learning application exercise on the theme of respiratory conditions, focussing on COPD. Students were allocated to groups which they stayed in for the academic year and the session was facilitated by two staff members who moved between the tables. The students were required to employ appropriate clinical guidelines in the care of patients with COPD in primary and secondary care. The introduction to the session contained good linkage to previous learning and the students' discussions showed evidence of spiral learning and integration between different topics. Following the group work, there was a whole group discussion on the choices made and the facilitators expanded and clarified where necessary. Students appeared enthusiastic and engaged and contributed to the task in hand. They reported enjoying the format and confirmed that it helped to embed their knowledge. As the workshop took place in a large auditorium with circa 100 students, a microphone malfunction meant the feedback session was not as effective as it should have been and the accreditation team noted that better technical support should be available. The team's observations indicated that the following outcomes of were being met - 10.1f, 10.2.1b, 10.2.2c, 10.2.2e, 10.2.2f, 10.2.2h, 10.2.5f & 10.2.5g.

Activity 4 – Pharmacy Production, Innovation, Drug Discovery (Workshop -Year 4)

The team observed this interactive workshop session on “Drug Discovery” during which students were facilitated to discuss the clinical, technical and commercial aspects of drug discovery and then use these to inform decisions regarding allocation of a hypothetical sum of money to a particular disease area. The session involved approximately 25 students and began with an introductory interactive lecture followed by team-based group work. Students presented their choices together with their reasoning to the rest of the group. The session had two facilitators, one of whom was an industry expert. Student engagement was good and all members of the groups were seen to be contributing. The team commented that this optional module appeared to be the only session in the pre-C2012 MPharm programme on drug discovery and could benefit from giving students more pre-workshop information and additional hands-on practice. The session met the following outcomes of standard 10 - 10.1e, 10.1f & 10.2.1b.

Activity 5 – Capability in Pharmacy, Debrief from placements WBL (Year 3)

This session comprised a debriefing and discussion on the Work-Based Learning placements for Year 3 students. The purpose of the session was for students to discuss their placement experiences and key learning points and for the staff to provide advice on how to build on and use this experience going forward. The session began with a staff presentation on the intention of work-based learning and coaching methodologies. Students then shared their experiences and the staff collected the students’ feedback both verbally and on feedback forms for future collation and action. The feedback from students was varied with some complaining of working in offices with limited patient contact and it was clear that follow up with the placement supervisors would serve to enhance the value of the placements for students.

Activity 6 – Receptors, TBL Application exercise (Workshop – Year 1)

See commentary for activity 2 above

Activity 7 - Senses, thoughts and Movement, Substance Misuse, Student support session TBL (Optional Workshop/lecture)

Each TBL unit has an optional ‘Student Support Session’ timetabled to provide academic support for students prior to their unit Readiness Assurance Process (RAP) assessment. The sessions are timetabled approximately one week after the unit learning resources have been released to students and two days before their RAP and are tailored to the learning needs highlighted by the students through the module discussion board and during the session itself. The session began with an explanatory lecture which addressed issues raised by students in advance of the workshop. The tutor drew on their own experiences as a practitioner and there was clear evidence of vertical and horizontal integration of science and practice. The students were engaged and contributed to the session with the number of questions posed indicating both self-learning and group-learning. As the session was designed to address questions and concerns raised by students, it was difficult to establish if all learning objectives were being met. However, the team noted that the session contributed to the achievement of the relevant outcomes of Standard 10.

Activity 8 - Nutrition, metabolism, reproduction GIT Application exercise (Practical – Year 2)

See commentary for activity 1 above

Activity 9 - Key Reactions in Chemistry, TBL Application exercise (Workshop – Year 1)

The TBL process requires provision of reading material two weeks before a tutorial followed by a workshop to address questions recognised in the tutorial session. The team observed this Year 1 workshop in which approximately 100 students worked in groups of 3 to 5 to discuss cardiovascular medicine, penicillins-

synthesis and salt formation. The students were observed to be handling some complex chemical and salt- based concepts with enthusiasm and it was all placed in the context of medicines and patients. Students were engaged and had sufficient time for the slowest learners to appreciate the material. The team's observations indicated that the following outcomes of were being met - 10.1e,f,g, 10.2.1g, 10.2.4c.

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. The principal observation is that looking at the progress that has been made since the last visit, the accreditation team is confident that the GPhC's initial education and training standards will be met. There are no additional conditions or recommendations as a result of this interim visit and the judgement made by the GPhC's visiting accreditation team in 2012 stands.

Feedback on individual standards

- Interim visits cover selected topics and not all standards are discussed. We did not discuss standards 1, 2, 3, 8 and 9 (other than to note staff turnover in the context of staff development and team building).
- Standard 4 (admissions): The School has revised its admissions strategy so it is better focused around professionalism and knowledge of pharmacy as a profession and team-based learning. On the basis of evidence, the admissions maths test has been discontinued and replaced with a diagnostic maths assessment at the beginning of the course.
- Standard 6 (student support): Support and development for students comes in a number of guises. Courses are built around units and each one has a student support session where it is the students who suggest the content. There is a well-used senior student support scheme for 1st Year students and a tiered approach to giving feedback, where all students in a module receive general advice and students scoring less than 50% are eligible for personal feedback. Students can access stage tutor bulletins for up-to-date information about the course and they can access data on their own performance via Blackboard.
- Standard 7 (staff development): The visiting team heard that there had been considerable staff turnover in the last few years and, among other things, 17 staff had left and had been replaced with 17 others. This has been an issue for the School and has meant that staff development and team building has been a key activity. Specifically, there have been staff development sessions every Thursday, a mentor and annual appraisal scheme, a PGCHEP teaching and learning course and annual peer review.
- Standards 5 & 10 (curriculum delivery and learning outcomes):
 - i. Overall, the panel was convinced that the course is appropriately integrated intellectually and that the staff team is integrated as well. Team-based learning has been adopted wholesale and it was acknowledged that implementing it has required considerable effort on the part of staff. In several sessions the team observed that students clearly understood how TBL sessions worked and wasted no time getting to grips with the work. In general the team observed that students were engaged.
 - ii. The team gained a very clear picture about TBL from the students it met. On a positive note, students in Years 1 and 2 were very satisfied: they had made a conscious choice to study at Bradford because active learning and TBL suited their learning styles and their expectations have been met. Students in Year 3 felt differently: they did not know what to expect when they arrived and felt they had been guinea pigs. In particular they felt that learning material was not ready in time for them to benefit fully from it, which placed them at a disadvantage. Year 5 students had an interesting perspective, which was that when TBL was introduced it was 'sketchy' but, in the time they have been away from the University, they could see that things have improved significantly.
 - iii. In summary, now that TBL has bedded in it is working well and is valued by students.
 - iv. The visiting team did note that student feedback collected in November 2014 was not uniformly positive. The feedback report does, however, include a list of follow-up actions for staff, which should address the concerns raised. Many of the points were raised with us during the student session today.

- v. All sessions observed met the objectives stated in the documents given to the visiting team and there is no evidence that standards 5 and 10 are not being met.

Points for further consideration/action:

- The one pressing issue for the visiting team was the preparation of material for the first cohort of students on the new MPharm degree (currently in Year 3) and timetabling for that year. The course team must ensure that material is ready sufficiently well in advance for students to make best use of it. The timetabling issue put to the team was that because material was late on occasions, the timetable became unmanageable and learning had suffered. This cohort of students is disillusioned and anything that can be done to address this should be considered. This must include a review of Year 4 now to ensure that the issues raised with the team are not repeated next year.
- A second point is the perceived reuse of questions/assessments. The visiting team understands that there is now a new policy to reuse no more than a 1/3 of items in an assessment, to revise 1/3 and to include a 1/3 of new items. This policy has been developed in response to the realisation of staff that too many assessment items are being reused because the item bank is not sufficient. The team suggests that the new policy is made known to students
- A third point is that the AV system failed in one observed session, which was otherwise very good. AV support was requested but did not materialise. Normally this would not be raised in a feedback session but working equipment is essential to successful TBL sessions with large groups (as is on demand support).
- A fourth point is that external examiner reports are not entirely positive and their reports contain issues that should be addressed. The visiting team suggests that the issues raised are considered together to improve the external examiner experience and their effectiveness.

Appendix 1 – Activities observed by the Accreditation team

Satellite visit 1a and 1b: Pain and the musculoskeletal system, TBL exercise (Year 2)

Session aims:

There are two sessions running on this date. One session focuses on the students' understanding of pain transmission & processing in the nervous system, and basic pharmacology of analgesics. The other session takes a case of back pain in a 'staggered case' approach, whereby students solve problems around a developing case of back pain, using NICE guidance and considering the patient journey and the need for multidisciplinary teams to manage chronic pain conditions. The inter-professional learning objective is to ensure students have worked with other healthcare profession trainees, in order to discuss the cases/scenarios with a broader perspective.

Learning outcomes:

LO1 Relate anatomical features and physiological and biochemical concepts/principles of the nervous and musculoskeletal systems, eye, ear and skin, in order to: recognise normal historical, physical and laboratory findings; assess the strengths and weaknesses of drug delivery systems and explain their effective use; explain how drugs work; explain the symptoms of disease.

LO2 Appraise the theories and models of health promotion and apply them in order to prevent drug misuse and lifestyle-based skin problems.

LO3 Process multiple-item prescriptions for commonly prescribed medicines used to treat or prevent mental health, neurological, skin, ocular, otic and musculoskeletal problems.

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

- These sessions link vertically to Stage 1 (FHEQ Level 4) units that have dealt with the nervous system, muscular system and the function of excitable cells; plus units that have covered the properties of bone.
- Within the 2nd year, these units link horizontally to earlier units (unit 4 on STM1) that covers basic neuroanatomy & major neurotransmitters.
- Horizontally, when discussing the mechanisms proposed for headache, we comment on vascular explanations, linking to students' knowledge of control of vascular tone from the Transport 1 module.
- Spiralling up from this unit, what we study here leads on to Stage 3 (FHEQ Level 6) "Senses, Thoughts & Movement 2 (STM2)" module Unit 4, which examines key conditions with a musculoskeletal basis, including osteoporosis, osteoarthritis and rheumatoid arthritis, and looks in more depth at the management of these conditions.

How the activity is assessed:

The learning outcomes from this activity will be included in the pool of topics for assessment in the end of module exam and in the Stage 2 (FHEQ Level 5) synoptic assessments.

Relevant standard 10 outcomes:

10.1e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices – knows how

- 10.1g *Contribute to the development of other members of the team through coaching and feedback – shows how*
10.1h *Engage in multidisciplinary team working – knows*
10.2e *Collaborate with patients, the public and other healthcare professionals to improve patient outcomes – knows*

Satellite visit 2a: Capability in Pharmacy, WBL Hospital Placement (Year 3)

Learning objectives:

- Identify other members of the multidisciplinary team and recognise their knowledge, skills and role in the multidisciplinary team
- Effectively gather and convey information to make an appropriate and legible patient care plan
- Identify pharmaceutical issues and develop an action plan to address these issues
- Observe and if possible contribute to counselling a patient(s)
- Peer review the communication skills of the healthcare professional providing the patient counselling

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

- This placement builds vertically upon the Stage 1 (FHEQ Level 4) and 2 (FHEQ Level 5) WBL placements, which focussed on the journey of the medicine and the journey of the patient respectively.
- In addition to supporting the development of the Capability module domains themselves, the WBL placements both support and are supported horizontally by the Prescription Processing teaching sessions in all of the other Stage 3 (FHEQ Level 6) modules.
- They also set the scene and help to prepare students vertically for the final WBL placements, undertaken in Stage 4 (FHEQ Level 7) - for which the overall focus will be on specialist/complex care and medicines optimisation and for Pre-Registration training.

How the activity is assessed:

This WBL placement is a compulsory part of the Capability in Pharmacy 3 module, and must be completed in order to pass the module and progress to Stage 4 (FHEQ Level 7).

Relevant standard 10 outcomes:

- 10.1f *Contribute to the education and training of other members of the team, including peer review and assessment – knows how*
10.1g *Contribute to the development of other members of the team through coaching and feedback – knows how*
10.1h *Engage in multidisciplinary team working – knows how*
10.2.1e *Collaborate with patients, the public and other healthcare professionals to improve patient outcomes – knows*
10.2.1f *Play an active role with public and professional groups to promote improved health outcomes – knows*
10.2.2g *Communicate with patients about their prescribed treatment – knows*
10.2.2i *Record, maintain and store patient data – knows how*
10.2.3d *Develop quality management systems including maintaining appropriate records – knows how*
10.2.3e *Manage and maintain quality management systems including maintaining appropriate records – knows how*

- 10.2.3j *Take personal responsibility for health and safety – knows how*
- 10.2.3k *Work effectively within teams to ensure that safe and effective systems are being followed – knows*
- 10.2.3l *Ensure the application of appropriate infection control measures – knows how*
- 10.2.4a *Establish and maintain patient relationships while identifying patients' desired health outcomes and priorities – knows how*
- 10.2.4b *Obtain and record relevant patient medical, social and family history – knows how*
- 10.2.4c *Identify and employ the appropriate diagnostic or physiological testing techniques to inform clinical decision-making – knows*
- 10.2.4f *Conclude consultation to ensure a satisfactory outcome – knows*
- 10.2.4g *Maintain accurate and comprehensive consultation records – knows how*
- 10.2.4h *Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals – knows how*
- 10.2.5a *Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour – knows how*
- 10.2.5b *Reflect on personal and professional approaches to practice – knows how*
- 10.2.5c *Create and implement a personal development plan – shows how*
- 10.2.5d *Review and reflect on evidence to monitor performance and revise professional development plan – knows how*
- 10.2.5f *Contribute to identifying the learning and development needs of team members – knows*
- 10.2.5g *Contribute to the development and support of individuals and teams – knows*

Satellite visit 2b: Capability in Pharmacy, WBL Community Placement (Year 3)

Learning objectives:

- Discuss the role of the Commission on Human Medicines (CHM) and Medicines and Healthcare products Regulatory Agency (MHRA) in pharmacovigilance/patient safety and how adverse drug reaction are reported in practice
- Understand how the quality and safety of herbal remedies are assessed
- Summarise the accuracy check process and clinically check complex prescriptions in a pharmacy setting
- Understand the factors involved in dispensing errors and how these may be prevented
- Understand what excellent customer care looks like when dealing with patients (during information gathering and provision)
- Reflect on the issues surrounding substance misuse/abuse
- Identify enhanced services provided by the pharmacy

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

- This placement builds vertically upon the Stage 1 (FHEQ Level 4) and 2 (FHEQ Level 5) WBL placements, which focussed on the journey of the medicine and the journey of the patient respectively.
- In addition to supporting the development of the Capability module domains themselves, the WBL placements both support and are supported horizontally by the Prescription Processing teaching sessions in all of the other Stage 3 modules that students are studying simultaneously.

- They also set the scene and help to prepare students vertically for the final WBL placements, undertaken in Stage 4 – FHEQ Level 7 (for which the overall focus will be on specialist/complex care and medicines optimisation) and for Pre-Registration training.

How the activity is assessed:

This WBL placement is a compulsory part of the Capability in Pharmacy 3 module, and must be completed in order to pass the module and progress to Stage 4 (FHEQ Level 7).

Relevant standard 10 outcomes:

10.1d Apply the principles of clinical governance in practice – knows

10.1h Engage in multidisciplinary team working – knows how

10.2.1b Access and critically evaluate evidence to support safe, rational and cost-effective use of medicines – knows

10.2.1e Collaborate with patients, the public and other healthcare professionals to improve patient outcomes – knows

10.2.1f Play an active role with public and professional groups to promote improved health outcomes – knows

10.2.2c Instruct patients in the safe and effective use of their medicines and devices – knows how

10.2.2d Analyse prescriptions for validity and clarity – knows how

10.2.2e Clinically evaluate the appropriateness of prescribed medicines – knows how

10.2.2f Provide, monitor and modify prescribed treatment to maximise health outcomes – knows

10.2.2g Communicate with patients about their prescribed treatment – knows

10.2.2h Optimise treatment for individual patient needs in collaboration with the prescriber – knows

10.2.2i Record, maintain and store patient data – knows how

10.2.2j Supply medicines safely and efficiently, consistently within legal requirements and best professional practice – knows how

10.2.3d Develop quality management systems including maintaining appropriate records – knows how

10.2.3e Manage and maintain quality management systems including maintaining appropriate records – knows how

10.2.3i Manage resources in order to ensure work flow and minimise risk in the workplace – knows

10.2.3k Work effectively within teams to ensure that safe and effective systems are being followed – knows

10.2.3m Supervise others involved in service delivery – knows

10.2.3n Identify, report and prevent errors and unsafe practice – knows how

10.2.4a Establish and maintain patient relationships while identifying patients' desired health outcomes and priorities – knows

10.2.4b Obtain and record relevant patient medical, social and family history – knows

10.2.4c Identify and employ the appropriate diagnostic or physiological testing techniques to inform clinical decision-making – knows

10.2.4d Communicate information about available options in a way which promotes understanding – knows

10.2.4e Support the patient in choosing an option by listening and responding to their concerns and respecting their decisions – knows

10.2.4f Conclude consultation to ensure a satisfactory outcome – knows

10.2.4g Maintain accurate and comprehensive consultation records – knows how

10.2.4h Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals – knows

10.2.5a Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour – knows how

10.2.5b Reflect on personal and professional approaches to practice – knows how

10.2.5c Create and implement a personal development plan – shows how

10.2.5d Review and reflect on evidence to monitor performance and revise professional development plan – shows how

10.2.5f Contribute to identifying the learning and development needs of team members – knows

Activities 1 and 8: Nutrition, metabolism, reproduction, GIT TBL Application exercise (Practical -Year 2)

Session aims:

- To further understanding of the anatomy and physiology of the gastrointestinal tract.
- To investigate some aspects of the control of salivary secretion and the location and function of taste receptors in the mouth.

Learning objectives:

- To understand salivary secretion rate, variation between subjects and factors which influence secretion rate
- To develop an appreciation of the impact of variation in saliva secretion on the administration of different oral dosage formulations of drugs (e.g. sub-lingual, buccal).
- To develop an appreciation of the importance of taste masking in drug formulation and the associated oral hygiene issues.

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

- This session builds vertically on material covered in Stage 1 (FHEQ Level 4) of the programme, particularly Foundation Studies 1 (Molecules to Systems) & Foundation Studies 2 (Life Cycle of Medicines).
- It links horizontally to material covered in other Stage 2 modules, namely Senses, Thoughts and Movement 1 (sensory) and in other areas of the Nutrition and Metabolism and Reproduction 1 module (e.g. food choices, liver physiology). The session also links to prescription processing in Stage 2 (FHEQ Level 5) and future stages, in terms of drug formulation issues.
- Some aspects of the learning from this session are developed further vertically in the Stage 3 (FHEQ Level 6) module Nutrition, Metabolism and Reproduction 2, for example xerostomia.

How the activity is assessed:

The learning outcomes from this activity will be included in the pool of topics for assessment in the end of module exam and in the Stage 2 (FHEQ Level 5) synoptic assessments.

Relevant standard 10 outcomes:

10.1e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices – knows how

10.2.3b Apply pharmaceutical principles to the formulation, preparation and packaging of products – knows

Activities 2 and 6 – Receptors TBL Application exercise (Workshop-Year 1)

No further information was provided. This activity was arranged post-submission to ensure that the accreditation team saw a broad spectrum of student activities during the interim visit.

Activity 3 – Medicines optimization COPD, TBL Application exercise (Workshop -Year 4)

Learning objectives:

- Correctly employ the appropriate clinical guidelines in the care of patients with respiratory disease in primary and secondary care.
- Understand the appropriate management and pharmaceutical care planning of patients with COPD.
- Have an understanding of oxygen therapy in COPD.

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

- This session builds vertically on material covered in modules in Stages 1-4a of the programme, particularly “Human Body in Health and Disease” (Stage 1), “Respiratory, Renal & Cardiovascular” (Stage 2), “Immunity and Infections” and “Clinical Skills” (Stage 3) and “Consultation Skills for Pharmacists” (Stage 4a).
- This module also helps to prepare students for Pre-Registration training and future practice.

How the activity is assessed:

- This session includes a summative AE task, which will contribute towards the overall module mark.
- The learning outcomes from this unit will also be included in the pool of topics for assessment in the end of module assessments (written and OSCE).

Relevant standard 10 outcomes:

10.1f Contribute to the education and training of other members of the team, including peer review and assessment – shows how

10.2.1b Access and critically evaluate evidence to support safe, rational and cost-effective use of medicines – shows how

10.2.2c Instruct patients in the safe and effective use of their medicines and devices – knows how

10.2.2e Clinically evaluate the appropriateness of prescribed medicines – shows how

10.2.2f Provide, monitor and modify prescribed treatment to maximise health outcomes – shows how

10.2.2h Optimise treatment for individual patient needs in collaboration with the prescriber – knows how

10.2.5f Contribute to identifying the learning and development needs of team members

10.2.5g Contribute to the development and support of individuals and teams

Activity 4 – Pharmacy Production, Innovation, Drug Discovery (Workshop -Year 4)

Learning objectives:

- To gain an appreciation of the time scales and activities involved in the process of discovering testing, obtaining approval for and marketing, a new prescription medicine.
- To understand the mix of factors that need to be brought into the decision as to which disease area a pharmaceutical business might invest in research programmes.
- To use a rating system to select a disease area for "Lion Pharmaceuticals".
- To use data from biological tests to appreciate the requirements in a compound which could progress in the research laboratory and to studies in volunteers.
- To practice working as a group, decision making in a group and data interpretation within the context of a complex, inter-related and multi-factorial information base.
- To practice and develop communication skills.

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

- This session builds vertically on material covered in modules in Stages 1-3 (FHEQ Levels 4 to 6) of the programme, particularly "Principles of Drug Action" & "Assessing the Quality of Medicines" (Stage 1 – FHEQ Level 4), body systems modules (Stage 2 - FHEQ Level 5) and body systems and Research Project modules (Stage 3 – FHEQ Level 6).
- This module also helps to further students' understanding of the pharmaceutical industry. It can broaden students' perspectives of potential future career options and can help preparation for Pre-Registration training and future practice, particularly for those students interested in careers in the pharmaceutical industry.

How the activity is assessed:

This module is assessed via:

- Oral presentation "Opportunity Assessment" (20%)
- Oral presentation "Dragons' Den" (40%)
- Written examination (40%)

This session is not summatively assessed in itself but it helps to provide the knowledge that students will need to undertake the oral and written assessment tasks for the module listed above.

Relevant standard 10 outcomes:

10.1e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices – shows how

10.1f Contribute to the education and training of other members of the team, including peer review and assessment – knows how

10.2.1b Access and critically evaluate evidence to support safe, rational and cost-effective use of medicines – knows how

Activity 5 – Capability in Pharmacy, Debrief from placements WBL (Year 3)

Session aims:

- To review students' WBL placement experience

Learning objectives:

- To ensure that students have met the WBL placement objectives (see above)
- To review students' personal learning objectives
- To collect provider feedback on student performance
- To obtain student feedback on placement experience

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

- These de-briefing sessions are an integral part of the WBL placement process. The Stage 3 (FHEQ Level 6) placements, which focus on general pharmaceutical care, build vertically upon the Stage 1 (FHEQ Level 4) and 2 (FHEQ Level 5) WBL placements, which focussed on the journey of the medicine and the journey of the patient respectively.
- In addition to supporting the development of the Capability module domains themselves, the WBL placements both support and are supported horizontally by the Prescription Processing teaching sessions in all of the other Stage 3 (FHEQ Level 6) modules that students are studying simultaneously.
- They also set the scene and help to prepare students vertically for the final WBL placements, undertaken in Stage 4 (FHEQ Level 7) (for which the overall focus will be on specialist/complex care and medicines optimisation) and for Pre-Registration training.

How the activity is assessed:

The WBL placements are a compulsory part of the Capability in Pharmacy 3 module, and must be completed in order to pass the module and progress to Stage 4 (FHEQ Level 7).

Relevant standard 10 outcomes:

10.2.5a Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour – knows how

10.2.5b Reflect on personal and professional approaches to practice – does

10.2.5c Create and implement a personal development plan – shows how

10.2.5d Review and reflect on evidence to monitor performance and revise professional development plan – shows how

10.2.5f Contribute to identifying the learning and development needs of team members – knows how

10.2.5g Contribute to the development and support of individuals and teams – knows how

Activity 6 – Receptors, TBL Application exercise (Workshop – Year 1)

See commentary for activity 2 above

Activity 7 - Senses, thoughts and Movement, Substance Misuse, Student support session TBL (Optional Workshop/lecture)

Session aims:

To provide responsive academic support for students to achieve the unit learning outcomes, which are to build the appropriate knowledge and understanding to be able to:

- Explain how drugs of abuse affect the nervous system with specific examples
- Understand the application of health promotion theories of change that are used in the development of health promotion interventions and the role pharmacists can play in this

Learning objectives:

Please note that these are objectives that are potentially covered, depending what students request more support in.

- Why are drugs abused?
- Which drugs are abused?
- PK properties and routes of admin
- Tolerance and dependence
- Abuse liability, guidance for drug discovery process
- Treatment options for substance dependence
- Counselling patients starting on methadone
- Promoting health and wellbeing

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

- This session builds vertically on material covered in Stage 1 (FHEQ Level 4) of the programme, particularly Foundation Studies 1 (Molecules to Systems) notably pharmacological principles of agonists, antagonists and partial agonists, Foundation Studies 3 (Promoting Health and Wellbeing) & Foundation Studies 4 (Prescription Processing" specifically Controlled Drugs law. For example, students have dispensed methadone in Stage 1 (FHEQ Level 4), focusing on the legal requirements for supply on prescription. We revisit that here in Stage 2 (FHEQ Level 5) with a new focus on the clinical aspects of treating opioid dependence with methadone and a practical class which requires students to reactivate their dispensing skills from Stage 1.
- It links horizontally to material covered in other Stage 2 (FHEQ Level 5) modules, namely Transport 1 (smoking cessation), Nutrition, Metabolism and Reproduction 1 (NMR1) "liver & drug metabolism" and in other areas of the "STM1" module (e.g. Unit 4 nervous system, Units 5+6 analgesics incl. opioids).
- This unit helps to prepare students for Stage 3 where it links vertically to the Stage 3 (FHEQ Level 6) module "STM2" unit on drug misuse, in which learning becomes more complex, focusing on patients with co-morbidities (including mental health conditions), needle exchange and harm reduction vs recovery principles, and pharmacist roles.

How the activity is assessed:

The module STM1 is assessed via:

- TBL assessments – 40%

- End of module exam – 45%
- Synoptic assessment question – 15%

The summative TBL assessments for this unit are:

- 10 x MCQ questions completed individually, followed by the repeat of this test with the student TBL team.
- One application exercise task focusing on the application of this knowledge to a pharmacy practice situation.

This session will help to prepare students to complete these unit assessments. The learning outcomes from this unit will also be included in the pool of topics for assessment in the end of module exam and in the Stage 2 synoptic assessments.

Relevant standard 10 outcomes:

10.1d Apply the principles of clinical governance in practice

10.1e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices

10.1f Contribute to the education and training of other members of the team, including peer review and assessment

10.1g Contribute to the development of other members of the team through coaching and feedback

10.2.1.a Promote healthy lifestyles by facilitating access to and understanding of health promotion information

10.2.1.d Apply knowledge of current pharmacy-related policy to improve health outcomes

10.2.1f Play an active role with public and professional groups to promote improved health outcomes

10.2.2b Identify inappropriate health behaviours and recommend suitable approaches to interventions

10.2.2c Instruct patients in the safe and effective use of their medicines and devices

10.2.2g Communicate with patients about their prescribed treatment

10.2.2j Supply medicines safely and efficiently, consistently within legal requirements and best professional practice. NB This should be demonstrated in relation to both human and veterinary medicines

10.2.3b Apply pharmaceutical principles to the formulation, preparation and packaging of products

10.2.3e Manage and maintain quality management systems including maintaining appropriate records

10.2.3g Distribute medicines safely, legally and effectively

10.2.3k Work effectively within teams to ensure that safe and effective systems are being followed

10.2.4f Conclude consultation to ensure a satisfactory outcome

10.2.4g Maintain accurate and comprehensive consultation records

10.2.4h Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals

10.2.5f Contribute to identifying the learning and development needs of team members

10.2.5g Contribute to the development and support of individuals and teams

Activity 8 - Nutrition, metabolism, reproduction GIT Application exercise (Practical – Year 2)

See commentary for activity 1 above

Activity 9 - Key Reactions in Chemistry, TBL Application exercise (Workshop – Year 1)

No further information was provided. This activity was arranged post-submission to ensure that the accreditation team saw a broad spectrum of student activities during the interim visit.