

# MPharm Interim Visit

Kingston University

February 2016

# Master of Pharmacy degree course (MPharm) interim visit

## Kingston University

Report of an interim visit, 24-25 February 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, 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 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 the Kingston University.

## **Background**

At the previous reaccreditation which took place on 8-9 May 2013, the accreditation team was required to make a decision on the reaccreditation of both the Foundation Degree (FDPCS) delivered jointly with South Thames College, and the MPharm degree delivered at the University. The team agreed to recommend to the Registrar of the GPhC that the FDPCS be reaccredited for a period of 6 years with no conditions. The team agreed that the MPharm should be reaccredited for a period of 6 years for no more than an annual intake of 140 students. This was to avoid the previous unplanned increases in intake which the team considered to have resulted in a significant strain on resources. This was in line with the University's assurance that this would not reoccur. This is related to Standard 9.1a and the relevant guidance on capacity and resources.

The team's recommendation on the MPharm was subject to two conditions:

- 1) The provider must seek derogation from the academic regulations in the area of compensation and condonement. The team viewed that the regulation that permitted one module to be failed at 35% is potentially unsafe for a degree that is professional and leading to further professional healthcare training. This was to meet criterion 5.9. In response, a highly restricted compensation scheme was presented to the GPhC and accepted.
- 2) The provider must articulate a strategy that requires the MPharm curriculum to include a practical experience that increases year on year. This was to meet Standard 5.6. The team considered that the placement provision where students are permitted to organise their own placement experience to be outside the management and quality assurance of the University. The team agreed that the draft plan presented to the team to be a positive step and that the department should progress this forward. The team regarded the planned inter-professional learning activities to represent a positive step forward but must be articulated in a strategy and implemented expediently.

Prior to the interim visit the University submitted documentation to the GPhC and a pre-visit meeting took place via teleconference on 15 February 2016. The purpose of a pre-visit meeting is to help the School of Pharmacy to prepare for the visit, allow for the GPhC and School to ask any questions or seek clarification, and to finalise arrangements for the visit.

## Satellite visits

In advance of the interim visit seven satellite visits took place to allow team members to observe off-site activities in advance of the main visit:

Meeting no.	Date	Time	Location	Activity no.
1.	16 December 2015	09.00	Main Building, Kingston University	1
2.	16 December 2015	13.30	Kingston Hill Campus	2
3.	19 January 2016	09.00	Kingston University	3
4.	19 January 2016	13.00	Kingston Hill Campus	4
5.	10 February 2016	09.00	Kingston Hospital	5
6.	10 February 2016	12.00	Kingston University	6
7.	10 February 2016	13.30 and 14.00	St George's University London	7

## The interim visit

The interim visit itself took place on site at Kingston University 24/25 February 2016.

24 February 2016		Time
8.	Private meeting of the accreditation team	13.15-15.00
9.	Presentation*	16.00-16.45*
10.	Meeting with MPharm team	16.45-18.00
25 February 2016		
11.	Accreditation team members observed Activity 8	09.00-10.00
12.	Accreditation team members observed Activity 9 and Activity 10 which ran concurrently. NB. Activity 11 was cancelled	10.00-11.00
13.	Accreditation team member observed Activity 12	11.00-13.00
14.	Private meeting of accreditation team	12.00-13.00
15.	Meeting between Team Leader and Associate Head of School to discuss Business Plan and staff resources	12.00-12.30
16.	Student meeting	13.00-14.30
17.	Private meeting of accreditation team and GPhC representatives ( including review of all documentation provided )	14.30-16.00

18.	Feedback to Kingston University MPharm staff team	16.00-16.30
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\*The presentation started late as the result of a fire alarm and subsequent evacuation of the building

### Accreditation team

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

Name	Designation at the time of accreditation event	Meetings attended
Professor Stephen Denyer**	Accreditation team leader, Pro Vice Chancellor for Education and Student Experience, University of Brighton	8, 9, 10, 14, 15, 16, 17, 18
Mr Mark Brennan	Accreditation team member (Academic), Director of Pharmacy, and Deputy Head of School of Pharmacy, University of Lincoln	8, 9, 10, 11, 12, 13, 14, 16, 17, 18
Mrs Sandra Hall	Accreditation team member (Academic), Head of Pharmacy Practice, Leicester School of Pharmacy, De Montfort University	8, 9, 10, 14, 16, 17, 18
Mrs Gail Curphey	Accreditation team member (Pharmacist), former PCT pharmacist, Pharmacy Consultant	8, 9, 10, 11, 12, 14, 16, 17, 18
Professor Angela Alexander	Accreditation team member (Academic), Professor of Pharmacy Education, University of Reading	Activities 3 and 4
Professor Helen Howe	Accreditation team member (Pharmacist), formerly Chief Pharmacist, Addenbrookes Hospital, Cambridge	Activities 1 and 2
Mr Javad Ayub	Accreditation team member (Pharmacist, recently qualified), Medical Affairs Manager	Activities 5, 6 and 7

along with:

Name	Designation at the time of visit
Ms Jenny Clapham **	Quality Assurance Officer, General Pharmaceutical Council
Dr Ian G Marshall	Rapporteur, Caldaran Research, Educational and Writing Services

\*\*attended pre-visit teleconference, 15 February 2016

## Course provider

The team met with the following representatives of the Kingston University MPharm degree:

<b>Name</b>	<b>Designation at the time of accreditation event</b>	<b>Meeting attended</b>
Professor Mike Sutcliffe	Dean of SEC	9, 10
Professor Chris Cairns	Head of Department of Pharmacy	9, 10
Professor Raid Alany	Head of School of Life Sciences, Pharmacy and Chemistry	9, 10
Dr Reem Kayyali	Associate Professor, MPharm Course Director	9, 10
Dr Caroline Kim	Senior Lecturer, FDPSC Course Director	9, 10
Ms Thuy Mason	Teaching Fellow, OSPAP Course Director	9, 10
Ms Swati Patel	Senior Lecturer, Level 5 tutor	9, 10
Dr Hamdy Abdelkader	Lecturer	9, 10
Ms Ricarda Micallef	Senior Lecturer	9, 10
Dr Ali Al-Kinani	Lecturer	9, 10
Dr John Fletcher	Senior Lecturer, Level 6 year tutor	9, 10
Dr Gianpiero Calabrese	Senior Lecturer, Admissions Tutor	9, 10
Dr Nick Freestone	Associate Professor	9, 10
Dr Liz Olusegun-Osabo	Lecturer	9, 10
Dr Anil Vangala	Senior Lecturer	9, 10
Dr Mark Carew	Senior Lecturer, Personal Tutor Scheme Lead	9, 10
Mrs Talut Saqi	Teaching Practitioner	9
Ms Karen Butcher	Senior Information Advisor, Library and Learning Services	9, 10
Ms Catherine Cole	Student Support Officer	9, 10
Mrs Farida Butt	Teaching Fellow	9, 10
Mrs Leanne May	Teaching Fellow	10
Dr Ian Beadham	Senior Lecturer, Chemistry	10
Professor Iain Greenwood	Professor of Vascular Pharmacology, St George's MPharm Course Director	10 10
Dr Teck Khong	Senior Lecturer, Clinical Pharmacology	10
Ms Wendy Pullinger	Deputy Chief Pharmacist, St George's Hospital	10
Dr Amr Elshaer	Senior Lecturer, Pharmaceutics	10
Dr Sianne Schwikkard	Senior Lecturer, Chemistry	10
Dr Alastair Mann	Principal Lecturer, Chemistry	10

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In addition, the accreditation team met with a group of 25 students, including 6 from Year 1, 10 from Year 3, and 9 from Year 4; Year 2 students were studying at St George's, University of London at the time of the meeting and were unable to attend.

## **The visit**

### **Presentation:**

On arrival, the team was given a presentation by the Associate Head of School (Head of Department of Pharmacy). The presentation and subsequent discussion built on the information provided in the submission and gave an update on progress since the last visit in 2013. The School had been asked to give a particular focus on the management structure and any changes to resources and staffing, student numbers, entry criteria, progression/attrition rates and student support, articulation of the integrated curriculum and interprofessional education, articulation of the placement provision and overview of the assessment strategy.

### ***The programme***

The MPharm programme is run in conjunction with St George's University of London (SGUL), and the foundation degree leading into Year 2 of the MPharm is jointly delivered with South Thames College. There is also a Kingston University Foundation Year that may allow entry into Year 1 of the MPharm. Each of Years 1 to 3 of the MPharm consists of 4 x 30-credit modules, with Year 4 consisting of 2 x 30-credit modules along with a 60-credit project module. The structure was described as future-proofed in case of the introduction of a 5-year integrated MPharm. Year 1 is made up of foundation science and practice, leading into an integrated approach to body systems in Year 2 and 3, followed by the project element and modules on decision-making and technology to care in the final year. The foundation degree (FDPCS) is designed to cover the contents of Year 1 of the MPharm, but spread over 2 years, and allowing entry into Year 2 of the MPharm. Since the 2013 reaccreditation event, the School has introduced OSCE-style assessments into each year of the course, along with graduate-led OSCE surgeries. Innovative approaches include the introduction of electronic voting systems, simulation activities and electronic submission of work and related feedback. It was stressed in the presentation that the School's approach is one to encourage learning rather than to have a constant round of assessments.

### ***Management structure***

The pharmacy provision sits within the Faculty of Science, Engineering and Computing which is divided into five separate schools. The School of Life Sciences, Pharmacy and Chemistry is in turn divided into four departments each headed by an Associate Head of School, including the Department of Pharmacy, and the closely-associated Department of Pharmaceutical and Chemical Sciences. The team was told that members of these two departments teach into the courses run by the respective departments. In particular, the staffing plan showed several members of the Department of Pharmaceutical and Chemical Sciences contributing to the three courses

under the bailiwick of the Department of Pharmacy, that is, the MPharm, the FDPCS and the OSPAP; the student:staff ratio for Pharmacy reflected this fact. In terms of management responsibility, it was made clear to the team that the Head of the Department of Pharmacy has total responsibility for the three courses in pharmacy, and has budget authority over the Department. The team was told that the two departments work closely together, but that in the case of any potential conflict, the two heads of department would discuss the issue, and if not satisfactorily resolved, the Head of School, still a member of the Department of Pharmacy, would resolve any issues.

### ***Resources and staffing***

The team was provided with a business plan for the Department of Pharmacy with financial predictions up to the academic year 2022/23, along with staffing plans for the three pharmacy courses for the years 2012/13, the year of the previous reaccreditation event, and the current year 2015/16. Analysis of these documents allowed the team to conclude that there will be a decrease in the total number of MPharm students from 2017/18 onwards, coupled with a small increase in tuition fees. In parallel, the business plan showed the appointment of three extra staff members over the next 3 years from 2015/16. It was explained to the team that most staff members that had left or retired since the last reaccreditation event in 2013 had been replaced, with the exception of a professor of medicinal chemistry. The team was told that funds were available for the replacement of the professor and a member of staff on maternity leave. The team learned that the three extra staff members to be appointed over the next 3 years, although appearing in the business plan and staffing list had not yet been approved at Faculty level; the team were assured that the post will be submitted to the Faculty in the Summer of 2016 and were expected to be approved. The appointment of the three extra staff members would bring the student:staff ratio back into line with what was understood at the reaccreditation event in 2013.

The team was aware that at the reaccreditation event in 2013 the then accreditation team agreed that the MPharm should be reaccredited for a period of 6 years for no more than an annual intake of 140 Home/EU students. This was to avoid the previous unplanned increases in intake which the team considered to have resulted in a significant strain on resources. Examination of the student numbers identified a particular pressure point in Year 2 where the cohort that had entered the previous year (minus those students not progressing) would be joined by a cohort of students from the FDPCS course. The team calculated that, taken together with the number of non-EU international students progressing from Year 1, the Year 2 cohort size could approximate to 200 students. The team recognised that the School is not able to accurately predict the number of students who will progress, but did agree that the School should address this potential problem by ensuring that there is sufficient staff in place. The team also recognized that the work associated with the organization, management and quality assurance of the placement provision which the team considered required further development (see commentary below), would also need a concomitant increase in staff resource. Accordingly, it will be a **condition** of continued accreditation that the Department recruit additional staff in line with the business plan presented, on the understanding that student recruitment numbers do not exceed the planned numbers agreed at the 2013 accreditation event.

Although students interviewed told the team that the School provided adequate resources, the team noted in the pharmacy practice area that there was out-of-date reference material and outdated prescription labelling software. Accordingly, it will be a **recommendation** that the staff team remove these outdated items and replace them with up-to-date materials.

### ***Progression rates***

The team had some difficulty in interpreting the progression/attrition rates submitted. The progression rate in Years 3 and 4 was in the 90 percentile, whereas for Years 1 and 2 it was in the 70 and 80 percentiles. Of particular note to the team was that in Year 1 there was a steady increase in attrition from 2102/13 to 2014/15. The team was provided with an analysis of the three cohorts that had started the MPharm from Year 1, not including FDPCS students entering Year 2. Over the 3 years of the analysis, the percentage of students ineligible to progress to the following year of study after a first attempt and a re-sit increased from 11.4% in 2012/13 to 17.6% in 2013/14 and to 27.4% in 2014/15. The teaching team told the accreditation team that it had attempted to determine a reason for this worrying decrease in progression but had been unable to find a satisfactory explanation; it was opined that the phenomenon was likely due to a random cohort effect. The accreditation team was not reassured by this explanation which it considered unlikely given that the three failure rates in question emanated from different cohorts of students. It considered that further exploration of this issue would be warranted.

### ***Entry criteria***

Given the issues identified from the progression figures quoted above, the team was interested to examine the nature of the cohorts for the degree. For the 2014/15 entry, that is, the cohort with the high Year 1 attrition rate, the composition of the cohort was 29% A-level entry, 30% from 1<sup>st</sup> Year BSc course, 16% with CertHE or Foundation Year, 7% graduates with BSc or Masters degrees and 16% others (including international students). For this cohort, the team was told that, at the first attempt, there had been a 51% pass rate for all the examinations taken. Of the 51% of the students who passed all the assessments at the first attempt, 45% were A-level entries, 38% 1<sup>st</sup> Year BSc entrants, 10% students from Foundation Courses and 7% others. From these figures, the School had concluded that A-level students have the best pass rates, even with students offering down to 280 points, the best pass rates were achieved by students transferring to the MPharm after the 1<sup>st</sup> Year of the Kingston Pharmaceutical Sciences degree, but students coming from a Foundation Course had higher failure rates. The team was told that various poorly-performing groups have been identified and that the requirements for admission have been adjusted to exclude entrants from certain courses or institutions.

### ***Integration and teaching innovation***

As described in the Programme section above, Year 1 is made up of foundation science and practice, leading in to an integrated approach to body systems in Year 2 and 3, followed by the project element and modules on decision-making and technology to care in the final year. The team was able to observe a number of teaching and learning sessions that demonstrated both horizontal integration and vertical progression. In the meeting with students, those students interviewed demonstrated an understanding of the value of an integrated approach and were aware of the degree of integration increasing as the programme developed. It was noteworthy that Final Year students were aware of how the programme had changed as more integration had been introduced, and clearly appreciated the fact that, although they had commenced their studies under a less integrated approach, they had been able to benefit from the changes in approach that had fed into their own programme. In terms of innovation in teaching methods, the team observed the use of electronic voting systems which were being used effectively to aid learning and increase student engagement. This was confirmed by the students interviewed who described the value they got from this approach. First year students described the volume of work as somewhat overwhelming and that enforced changes in the timetable had resulted in incorrect ordering of the material presented. Despite this, students greatly valued the quality of the teachers. Workshops delivered by pharmacists from practice were described as being particularly useful, as was peer-assisted learning. The team was particularly pleased to note that the School is in the process of evaluating the effectiveness of the newer methods being employed.

### ***Interprofessional learning***

The team was pleased to note from the submission that the School has made major strides in introducing interprofessional learning (IPL) into the MPharm programme. In particular, students interviewed greatly appreciated and enjoyed the simulation-based teaching and learning conducted with nursing students at the University's Kingston Hill campus. A member of the team was able to observe an IPL session during one of the satellite visits, in which the pharmacy students worked with medical students. It was clear that the pharmacy students were engaged with the activities being undertaken, and appreciated the benefits of working with other healthcare professionals. However, the team expressed disappointment at not being able to observe the scheduled multidisciplinary ward round, a pilot scheme, the timing of which was altered at the last moment making it impossible for a team member to attend. This had been due to the withdrawal from the planned session by a non-pharmacy student. It was explained to the team that although the session was mandatory for pharmacy students, it was only voluntary for the students of other professions involved and that the withdrawal of students could render the session less valuable. Students interviewed were aware of the organizational difficulties associated with this learning experience, but the team considered that the withdrawal of one non-pharmacy student jeopardizing the experience for pharmacy students showed up an element of fragility in the organization of these potentially valuable IPL sessions. The team encouraged the School to work at negotiating the position whereby the activity becomes mandatory for the students of other professions involved. The team was also aware that the small group approach to the ward rounds, with one pharmacy student per group, coupled with the large cohort size, was heavily resource-intensive in terms of staff time. Therefore, the team encouraged the School to ensure that such activities are adequately resourced for future cohorts, to allow the pilot scheme to become an established part of the programme.

### ***Placement provision***

The team members welcomed the opportunity to observe students on both hospital and community placements. They found the students to be engaged with the activities and to value the opportunity to put their skills into practice. In relation to the level of placements, the team agreed that there was a sufficient level of placement provision and the student feedback on their placement experience was positive. However, the team agreed that the current mechanisms for managing the quality assurance of placements could be improved in order to be more effective and robust. The current method appeared to place too much reliance on student feedback as a principal monitor of continued quality. In particular, the team was told that the quality assurance of student-selected placements in community pharmacy was proving to be labour-intensive and that the School had not yet had the opportunity to visit all the establishments involved. The team was also concerned about the adequacy of the training of placement providers. The team agreed that the level of patient engagement on the course is good and there was evidence both at the event and on the satellite visits that the students clearly benefitted from this patient engagement to develop their confidence. Students greatly appreciated the value and organisation of the hospital placements. The team noted that there has been an increase in the use of simulation within the programme and the feedback from students confirmed that this benefitted their learning by giving them an opportunity to develop and practise their skills. The simulation sessions that were observed were found to be popular and effective and students showed interest and enthusiasm.

### ***Assessment strategy and feedback***

The team was told that it had been a policy of the School when redesigning the curriculum to avoid over-assessment of students and to concentrate rather on the student learning experience. The team encouraged the School to continue to monitor progress with the assessment strategy to ensure that it remains fit-for-purpose. Students interviewed told the team that there were tests every 1 to 2 weeks each carrying 2 marks towards their final scores, including presentations, a public health campaign, literature survey results, MCQs, mid-module tests and OSCEs. OSCEs occur in all 4 years of the programme, starting with a 4-station OSCE in Year 1. Students

described feeling well-prepared for OSCEs and for the Assessment of Professional Competence. In terms of feedback, the students interviewed told the team that there had been a big drive in the University to improve feedback which was greatly improved from previously, but still remained somewhat variable; feedback is generally given within 2 weeks of the assessment. Students also described the value of on-line, live video feedback sessions which go over the questions in a test and explain the answers. Alternatively, in Year 1 group feedback can be given in lectures.

### **Observation of student activities:**

For the remainder of the interim visit 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. 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. Additionally, the whole accreditation team met with a group of 25 MPharm students, and asked the students a variety of questions about the course and their experiences to date.

Activities taking place off-site were observed by accreditation team members during satellite visits which took place in advance of the main interim visit. On-site activities were observed during the interim visit itself.

All activities observed on and off-site are summarised below:

- **Activity 1: Healthy Living Campaign (satellite visit)**

The entire level 7 student cohort was divided into 12 groups of 10 students and each group was allocated a particular public health topic to promote. Health topics promoted included mental health, heart health, Winter health, smoking cessation, weight loss and physical activity. The assignment involved creating and delivering a health stand, on their health topic, in the main corridor of the Penrhyn Road campus. In addition, students created a social media presence e.g. a Facebook page, to increase the reach of the health information they were promoting. This also involved the creation of health promotion videos. Following the health campaigns students were asked to capture their event on an A3 poster. This was to create a snapshot of their campaign and their level of engagement with the university population. On the date of the GPhC visit the students delivered an oral presentation to discuss their health campaigns and their success.

No specific objectives that can be mapped to the outcomes were listed but the intent of the session was clear. The students had to demonstrate team working to an agreed PH goal. Earlier events had included a stall in the university corridors, and a poster. These were not being assessed in this session as that work was complete. This was an overview of all that had been planned, implemented and achieved.

The students did see a wider picture to their work. They were able to evidence by references all that they included in their work. They were clear about health policy; and options for patients. The students completed a peer assessment pro-forma to advise the lecturers on the whole team participation in the campaign work. They all actively contributed to the presentation. The lecturer was very skilled in making the students demonstrate their wider learning and understanding. The lecturing team had clearly been involved in all aspects of the work and its assessment over time. Each campaign had involved extensive social media networking and this was also seen

by the supervising team. Wider collaboration in the university and community, city council etc. was demonstrated. The observer noted the assessment on the session which was via a standard set of criteria marked by two lecturers.

The students presented themselves as worthy final year professionals. They had all completed excellent and valuable work. Each team was able to question other teams so the learning on public health was wide.

No mapping was provided by the University but the observations were that the session addressed 10.2.1a,d,e,f; 10.2.2a,b,c,f,g; 10.2.4.a,d,e,f.

- **Activity 2: Clinical Simulation (satellite visit)**

The Simulation placement takes place in the Frank Lampl building on the Kingston Hill campus. The students are given a briefing in the classroom (KHFL1029) before they are taken to the Simulation unit (Lab 6031) to complete the exercises. The Simulation placement involves patient counselling and taking drug histories. It has been designed so that there are four different scenarios for both the drug history and patient counselling exercises. Eight students participated in the session with two tutors facilitating the placement throughout. The students will interact with a patient actor on a 1:1 basis and were expected to complete two drug histories and counsel two patients each; a total of four role plays. The students rotate through the exercises in an OSCE-style format. The students receive general feedback from the actors at the end of each role play. Formal feedback is provided by the tutors during the last hour of each session.

The session met the objectives listed. The students did build confidence and practised their communication skills. This was the first contact with the 'real' clinical environment. To date they had practised on each other. The actors played their part well. They were supportive and gave constructive feedback. The class was for third year students and so was bringing into the session many wider outcomes in Standard 10 than directly related to the objectives listed. So it is possible to list many Standard 10 outcomes. In discussion with the Head of School the observer noted that the School's submission did not offer mapping and hence the Head prepared the observer for this session. All that the Head listed was relevant but the main focus was probably 10.2.1e, h; 10.2.2b,c,g,j; 10.2.3e;10.2.4f,g,h; and 10.2.5a.

The simulation was about the patient and their care, and the underpinning science and rational policy development and implementation was not to the fore. However the wider practice outcomes that are relevant were as listed by the Head, such as ethical dilemmas, pharmaceutical aspects of products; evidence base and medicines information aspects of choices etc. Student engagement was first rate. Each was involved in 4 cases and they all prepared well and fed back with interest and enthusiasm. It was a popular session. The students received feedback from the actors which was done well. The students clearly listened and developed their confidence and approach to the next patient. They also received general feedback at the final team part of the session from the lecturer. There was no formal assessment- this session feeds into the later OSCEs.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 3: Communication Skills (satellite visit)**

This session is designed to develop the students' communication skills as well as to introduce them in a real life situation, and to emphasise that pharmacy is a patient-facing profession. The underpinning philosophy of the Kingston MPharm is that pharmacy is about patients and it is the pharmacist's knowledge and expertise of drugs and medicines that enables them to help people who are ill and help keep healthy people. Students will have an opportunity to speak to real patients; they will practise using communication skills discussed during a previous workshop and lecture. Students will be expected to welcome their patient, make them comfortable and introduce themselves. During the conversation students will be required to obtain relevant personal information and explore the patient's medical and social history, establish how their condition(s) have affected the patient and those close to them, and establish their current medication.

The observer arrived early and whilst waiting in the foyer had a chance to meet some of the patients who were attending the session. They seemed to know why they were there and were welcomed by the Kingston CCG lead for the expert patient programme (EPP). The arrangement to use the EPP has been in place a few years and demonstrated a good relationship with the CCG. The teacher said this workshop followed on from a previous workshop about communication with patients. This session was the third of four and had 30 students in it. There were 5 students to 1 patient.

The first aim listed on the provider's template did not seem relevant to this session but other aims and objectives were met. It enabled students to interact with patients and develop their communication skills. The activity covered many outcomes as outlined in the provider's document. Students had to work in teams and interact with patients in a professional way. Sufficient time was allowed for the students to start to develop some empathy with the patients. The students had a preliminary talk before the patients arrived and were encouraged to develop the question schedule for themselves. Facilitators went round the tables to support them in this task. The students confirmed that the activity related to previous communication sessions and also said they were looking forward to talking to the patients and had heard good feedback from previous students. The group size of five was appropriate to enable all students to take an active part and the students were very engaged when talking to the patients.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 4: IPL Clinical Simulation (satellite visit)**

This session is one of the IPL sessions that MPharm students undertake throughout the course. It is designed to be as close as possible to practice and simulates the work of a recently qualified pharmacist working in hospital. The session does not only help develop the students' clinical skills but also their interpersonal and communication skills in a multidisciplinary environment. The session is not associated with any specific module but acts to permit students to draw together their learning from much of the previous 4 years of learning in an inter professional environment. Although there is extensive feedback in the session, there is no assessment associated with it. However, the session is a component of the student's Academic and Professional Portfolio which must be completed for the Level 7 student to graduate.

The observer noted that the aims and objectives were clearly stated in the briefing given by the nurse lead. In addition to those on the provider's template, the School of Nursing had an additional objective of prioritisation of care, which also applied to the pharmacy students. The activity related to the outcomes in Standard 10. It covered all the objectives outlined. Students received a short briefing before the general IP briefing to explain that the pharmacy students role was not only to undertake the activity i.e. take the drug history, but also to interact with the nurse students and to manage the task while the nurse students were also wanting to do

their roles. They were utilising information from previous learning to apply to the case and also to “teach” the nurse students. Pharmacy students looked somewhat apprehensive at first but got more relaxed as they were immersed into the session. There was a lot of consultation of the BNF for reassurance.

There was one to one feedback during the session both from the nurse and pharmacist facilitators, providing excellent formative assessment. At the end of the session the patients also gave feedback, which was excellent. The patients were well briefed on how to give feedback, highlighting the positive aspects and making constructive suggestions for things that could be changed. One patient said he was reassured by the pharmacy students looking things up in the BNF. There was a final one hour IP feedback session, during which the pharmacist facilitator corrected any statements made by the pharmacy students that were not accurate. The format of the final session was very good as it was in the format of a simulated handover. Some terminology used in the briefing by the nurse was not understood by the pharmacy students and the observer was surprised that they did not ask about this at the time.

There were 6 pharmacy students and about 25 nurse students which simulated real practice. Two pharmacy staff and one postgraduate research (PGR) student attended the session. The PGR student had a comprehensive briefing sheet to assist her in the facilitation role. The simulated ward was very realistic with 8 actors in beds. The phone also rang and pharmacy students had to talk to health care professionals and patients’ relatives. This reinforced various aspects of consent and confidentiality. Scenarios had been written jointly by nursing and pharmacy staff. Currently the 8 scenarios are repeated for each group, but the facilitator said students had been told not to discuss with other groups. The observer noted that more than half of the pharmacy students were not dressed appropriately for professional practice on a ward setting and suggested professional attire would further enhance the realistic nature of the simulated activities.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 5: Hospital Clinical Placement (satellite visit)**

This is one day of a series of four days of practice placement. Students spend one day undertaking activities in the simulation suite, a second day shadowing a pharmacist, preregistration trainee or a medicines management/clinical technician then a two-day placement undertaking a range of clinical activities. There will be 4 pharmacy students participating in the session. There will be one pharmacist supervising the students. The pharmacist may change according to the pharmacy activity rota at the hospital. The students are given a brief at the beginning of the placement day and the supervising pharmacist determines and directs which activities are to be carried out. The hospital placement involves taking a drug history, communication with patients (counselling) and other health care professionals as applicable. Students collect information from the patients’ clinical notes, prescription chart and other sources to prepare a Patient Management Plan (PMP) and any other activities as available in the allocated hospital. Although all students will be completing the same set tasks in each hospital placement, the placement experience may vary from one site to another, which is reflective of the wide role of hospital pharmacists and the priorities of the Trust in which the placement is being carried out. Students are expected to have completed these activities by the end of the placement programme. The students are given a clinical placement logbook in which they are expected to record the activities once completed. The students will receive formative feedback after completing the patient counselling and drug history exercises.

The observer noted that this activity was day one of a 2-day hospital placement. The first 1.5 hours of the placement were observed. Three students were supervised by a hospital pharmacist who also works at the University. Students were required to obtain drug histories using various sources (PODs, community pharmacy and GP surgeries). Students each took it in turns to request drug histories from patients' GP surgeries. Students were then asked to inform another hospital pharmacist of drug histories for input into the electronic records. The principles of medicines reconciliation were discussed and the importance of the reconciliation process in reducing medicine-related errors. The observed aspect of the session met the stated aim of demonstrating effective medication history-taking and medicines reconciliation. Students were then asked to begin formulating a Patient Management Plan (PMP) based around a patient case.

There was obvious rapport between students and supervisor. Students were engaged with activities and upon questioning were able to relate to a previous simulation exercise where they were required to counsel differing types of simulated patients (aggressive, distressed etc). Students felt this had been a worthwhile experience and were looking to put into practice some of these skills during the current placement. No patient counselling was observed during the visit, but the placement supervisor assured the observer that this would take place during the course of the two days. This would enable students to put into practice counselling techniques from the simulation exercise. No assessment was carried out during the observation, however feedback was provided during drug history-taking. Assessment will encompass formative assessment via a PowerPoint presentation of the completed Patient Management Plan (PMP). In addition students are required to complete the Clinical Pharmacy Logbook which is subsequently assessed at end of semester. This includes a structured reflection of the placement experience.

Students' opinions on whether they felt the quantity of placement experience was adequate were variable. One student felt more placement experience in hospital would be welcomed.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 6: Integrated Lecture (satellite visit)**

This is a key introductory lecture as it underpins the clinical screening of prescriptions during dispensing classes or drug charts screening in hospitals in placements in relation for drug interactions. The principles of this lecture are fundamental and are used to underpin learning in the dispensing practicals from first year and are spiralled into dispensing practicals throughout the course in all levels. They also spiral upwards from second to third year in clinical case studies in the clinical workshops in the integrated body system modules, when teaching responding to symptoms in year 3 and 4 and in medication review and medicines optimisation scenarios in the final year. They are required when preparing Patient Management Plans (PMP) and case presentations following clinical placement. Drug interaction recognition when taking a drug history, conducting a medication review and screening prescriptions is a key principle in practice and is assessed in the stations of the OSCE style qualifying assessment of competence exam in third year. The principles covered in this lecture also underpin the teaching of counselling of medications and the need to avoid certain over the counter medicines when taking certain drugs, e.g. aspirin and warfarin or methotrexate, etc. The pharmacokinetic principles covered are also spiralled when teaching therapeutic drug monitoring in year 2 and pathology data interpretation in year 3 e.g. corrected calcium levels and INR monitoring and renal function-monitoring.

The observer noted that the activity was an interactive introductory integrated lecture for Year 1 students. This was a joint lecture. One member of staff introduced the concept of drug interactions and the underpinning mechanisms (pharmaceutical, pharmacokinetic and pharmacodynamic). A second staff member then followed up with the importance of the knowledge of a drug structure, pKa, pH, bioavailability and metabolism in determining and predicting drug interactions. There was clear signposting to other aspects of the programme. The lecturers also highlighted to students how the concepts being introduced would spiral as the years progress. Both lecturers were involved in answering some of the questions posed by students. The activity observed met the session aims and focussed on underpinning science and how this impacted drug interactions observed in clinical practice. Numerous real life examples were discussed including macrolide/statins, tetracycline/Ca<sup>2+</sup>, Mg<sup>2+</sup>, Al<sup>3+</sup> chelation, omeprazole/antacids. This was then related to how the underpinning science could be translated to patient counselling to minimise drug interactions in vivo.

Students were highly engaged throughout, using interactive personal clickers. Although no formal assessment took place during the observation, understanding of lecture content was continually assessed throughout using the personal clicker devices. Each student was given a clicker, by using which they could answer some of the questions asked by the lecturers. The technology was able to highlight proportion of correct/incorrect answers enabling lecturers to go over areas of common misunderstanding. In addition, fastest responders and leader boards highlighted those students who were successful and subsequently awarded with prizes. There were also interactive white boards around the perimeter of the lecture theatre. Students were asked a number of questions which were answered using the white boards e.g. students were asked to define pH, draw a cell membrane etc. Level of student engagement was very impressive; the atmosphere was highly conducive to staff student interaction. In summary, a highly interactive lecture linking science and practise for Year 1 students.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 7: IPL Session (satellite visit)**

Students first attend a lecture that provides an overview of patient safety concepts in a dynamic and interactive manner. This is followed by a two-hour workshop where students will be working in multi professional groups (5-6 students). The activity is not associated with any specific module but act to permit students to draw together their learning from much of the previous and current years of learning in an interprofessional environment. Students will all have had experience of placements in community and hospital so should be familiar with the environment of the case study. Although there is extensive feedback in the session, there is no summative assessment associated with it. However, the session is a component of the student's Academic and Professional Portfolio which must be completed for the Level 6 student to progress to Level 7.

The observer noted that the activity was an IPL session involving pharmacy and medical students (physiotherapy students did not participate as planned). There were 3 supervisors responsible for overseeing the workshop. Students were split into groups of 5-6 and were required to articulate what patient safety meant to them. They were then presented with the Danielle Welsh paracetamol overdose case and were required to conduct a root cause analysis. The case study reinforced the need for Continued Profession Development and robust Standard Operating Procedures to minimise patient harm. Furthermore students felt there was an apparent complacency towards paracetamol as a safe, widely available drug, yet in overdose it can be lethal. Interestingly, the majority of the medics felt that the responsibility for checking the dose of paracetamol was ultimately the pharmacist's responsibility. The session facilitators reinforced that there was a collective responsibility to patient care. The

session then finished with a discussion around the roles and responsibilities of other healthcare professionals. Students were signposted to the NHS careers website for further information. The session met the stated aims.

Students were fairly engaged with the activity and upon questioning the consensus appeared to be that they would welcome more IPL-based activities. They felt the overriding aim of the workshop was to demonstrate the principle of collective responsibility for patient safety and the importance of inter-professional communication in minimising risks to patients. No assessment was observed, although feedback was provided throughout.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 8: Making Medicines (interim visit)**

As the observer also noted with the subsequent dispensing class, attendance appears to be an issue. At the scheduled start of the session only 11 out of the registered 30 students were present, which increased to a maximum of 16 out of 30 when teaching started. The objectives of the session were described at the start, along with a short health and safety briefing. The staff then provided a follow-up to the pre-session tasks, but level of student engagement was poor. Some links were made between the material and other modules although these could have been explained in more detail to aid integrated learning. When the practical dispensing started students were reasonably engaged with the process, but closer supervision of their measuring and weighing activities would have been beneficial.

The second observer noted that the lab was well equipped, clean and tidy, and all materials were out ready at each station. The session was led by an academic and two technicians. Health and safety was explained prior to the class commencing and all students had a comprehensive workbook, with exercises to complete. The practical was to make Mist.Pot.Cit. The lecturer discussed shelf life, expiry dates, licensing etc and the students then had to identify any problem with the prescription. Students were then directed to the BNF or BPC to get the formula and discuss the quantities of each ingredient required. When asked questions by the staff, student engagement was observed to be low. The observer spoke to some students who confirmed this practical related to previous lectures they had had.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 9: Dispensing Practical (interim visit)**

The observer was not present at the start of the exercise so could not comment on how the session was introduced or contextualised. The dispensing class was in traditional format with students working in individual "pods" on workbook tasks and prescriptions. Only about 25 students were present from 41 on the register. Staff members stated that the register was definitive and that there should have been more students present. Students were engaged with their tasks and with the staff. There was a formative feedback session half way through the session before an assessed component. Students were reasonably engaged with the feedback session, although most responses came from an enthusiastic minority. Staff made efforts to engage and encourage students. The observer noted that some of the resource materials were out-of-date, including multiple copies of the cBNF from 2010 and 2011. It was not clear if these were for use by current students, but there were no

newer copies available. One student queried a difference between information in her current BNF and the available cautionary warnings available on the labelling system, and was told by a staff member that the system was out-of-date. The combination of out-of-date texts and software may raise a concern about the resourcing available for this activity.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 10: Community Pharmacy visit (interim visit)**

The first year student on this placement in an independent community pharmacy was on her second placement, her previous placement day having been spent at a multiple. The pharmacy was well-appointed, clean and professional and the student was professional in her dress and attitude. Present were the pharmacist (regular 2 day locum on this occasion), their pre-registration trainee and a dispenser. Both the pharmacist and trainee were ex-Kingston graduates. The trainee was very supportive of the student discussing the activities in her placement logbook and explaining the layout of the pharmacy. The student was asked to pick items required for a prescription and then this was discussed with the trainee, she then went on to dispense and label the item, again with the trainee's oversight. She asked pertinent questions e.g. querying why two boxes with the same drug were different; it was explained that they were from different generic manufacturers. The student reported having benefitted from watching and learning from the pharmacist when they were engaged with patients.

This pharmacy takes about 20 students over 12 months, approximately one every 2 weeks. The pharmacist will complete a feedback form in the logbook about the student's activities and also about their own experience of mentoring the student.

All relevant Standard 10 outcomes were considered to have been met.

- **Activity 11: Multidisciplinary Ward Round (interim visit)**

The session was postponed and therefore could not be observed, but a conversation was held with the session facilitator (a non-clinical geneticist) and the member of staff responsible from the Pharmacy Department which highlighted that this was a pilot being run by St George's Trust Education Department and funded by HESL. The School of Pharmacy has no control over the activity as students book direct through a website and the Trust facilitator confirms with students. The School is only informed at the end of the sessions which students have attended. This is a compulsory activity for the student portfolio but there is no formal assessment. Although the activity is compulsory for the pharmacy students it is optional for all other HCPs, which contributed to the cancellation of the session due to a lack of students from other HCPs signing up for this particular session. This optional aspect proves a challenge with respect to achieving a good mix of HCPs which at any one time could include pharmacy, physiotherapy, medical, nursing, midwives, physicians assistants, and speech and language therapy. It was difficult to ascertain what a typical mix would be, and the example discussed involved two nursing students and one pharmacy student. There are up to six sessions per week available and so far approximately 300 students had taken part, with approximately 130 of these being pharmacy students. Students are able to repeat book on to these sessions if they wish and some of the

pharmacy students had done so. Patients were chosen on the basis of those who had a 'decent' patient history (medical and social) and a 'lot' of drug treatments. It was stated that sessions were sometimes cancelled but the observer could not ascertain how often this happened.

The observer considered that It would be useful going forward If this activity is adopted by the School and there is no longer external funding the school should ensure that it is compulsory for all HCPs involved otherwise the burden of staffing the sessions by pharmacy staff would have a negative impact on overall staff workload. The School should have co-terminus access to the booking database to allow them to control student activities. In addition to the students, the School should also be notified if a session is cancelled. The School should keep a concurrent record of student attendance so they are aware of any non-attendance/non-engagement while they are still able to take remedial action.

- **Activity 12: Workshop in Integrated Clinical Module (interim visit)**

As this was one of the last in a series of workshops, the session had no introduction or contextualisation, but students seemed familiar with the format and went straight to the cafe-style tables to start work. This involved a facilitated discussion by the staff members present (one per table - three in total each with 9 to 12 students) to follow up pre-workshop activity in the module workbook. Students seemed generally to be engaged in the discussion and the interactions felt like a genuine and effective small group tutorial. The observer discussed with staff whether there was any difference in preparation for the session among the students. They agreed that this was a characteristic of these sessions but that engagement in the session usually allowed those that had not prepared to catch up with any missing pre-reading/work. The workshop material was overtly clinical in nature.

All relevant Standard 10 outcomes were considered to have been met.

## **Conclusions**

The accreditation team advised the School that the conclusions from the visit were based on 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 visit comprised meetings at the University on 24/25 February and also the satellite visits made by team members in advance of the formal visit. The team took all activities into account in reaching its conclusions.

The purpose of this interim visit was to:

- (a) monitor the progress made with delivering the University's MPharm degree since the last reaccreditation against the initial education and training standards of the GPhC; and
- (b) to observe a range of educational activities that relate to practice and the student outcomes in Standard 10.

The team also had an opportunity to speak to students on the MPharm programme.

### **Feedback on individual standards**

Interim visits cover selected topics and not all standards are discussed. Standards 1, 3 and 7 were not discussed.

The team had the opportunity to observe a number of activities relating to the remaining standards both at the formal visit and during the satellite visits.

#### *Standard 2 – Monitoring, review and evaluation of initial education and training*

The team members welcomed the opportunity to observe students on hospital and community placements. They found the students to be engaged with the activities and to value the opportunity to put their skills into practice. In relation to the level of placements, the team agreed that there was a sufficient level of placement provision and the student feedback on their placement experience was positive. However, the team agreed that the current mechanisms for managing the quality assurance of placements could be improved in order to be more effective and robust. The current method appeared to place too much reliance on student feedback as a principal monitor of continued quality. The team was also concerned about the adequate training of placement providers.

#### *Standard 4 – Selection of students*

In relation to progression, the team was concerned by the poor progression rates identified over the past two years. The team has not been assured that these rates are the result of a 'cohort effect'. It considers that the causes should be further explored and a strategy established to address a perceived trend.

#### *Standards 5 & 10 – Curriculum delivery and the student experience and Outcomes*

The range of activities observed gave the team an insight into opportunities available to the Kingston students to develop their skills. The level of patient engagement on the course was found to be good, and there was evidence that the students clearly drew on this patient engagement to develop their confidence. The team noted that there has been an increase in the use of simulation within the programme and the feedback from students confirmed that this benefitted their learning by giving them an opportunity to develop and practise their skills. The observed simulation sessions were found to be popular and effective and students showed interest and enthusiasm.

The team recognised that the curriculum is integrated and observed a number of sessions which demonstrated both horizontal progression and vertical integration. This was confirmed by the students who clearly understood the concept of integration and how it helped their learning. The assessment strategy was understood by the students and the team would encourage the staff to keep monitoring progress to ensure it continues to be fit for purpose. The team observed the use of teaching methods such as electronic voting systems which were being used effectively to aid learning and increase student engagement. This was confirmed by the students who described the value of this approach. The team was also pleased to hear that the School is evaluating the effectiveness of the new methods it has introduced.

With regard to inter-professional education, the team observed an IPL session during the satellite visits where the students had the opportunity to work with medical students. The students were engaged with the activities and saw the benefits of working with other healthcare professionals. The team was disappointed not to be able to observe the multidisciplinary ward round which was rescheduled at the last minute. As a result, the team expressed concerns regarding the fragility of the IPE ward

activities, noting that the withdrawal of one non-pharmacy student from a session can jeopardise the activities for the pharmacy students. The team would therefore encourage the Department to secure the engagement of students from other professions and also to ensure the activities are resourced adequately for future cohorts as the current provision is a pilot.

#### Standard 6 – Support and development for students

The staff team demonstrated a clear commitment to supporting the students and mechanisms are in place to provide additional support to students who are struggling. The students confirmed that they felt well supported by the staff team at Kingston and that staff were approachable and available. The team agreed that the support strategies are appropriate but also noted the high number of resitting students and was concerned about the strain this may put on demand for additional support. This issue is revisited under Standard 9 – Resources.

#### Standard 8 – Management of initial education and training

The team was reassured that following restructuring from one department to two departments, teaching was undertaken in a similar manner to before, with contributions from both departments; budgetary authority sits with the Head of the Department of Pharmacy. It was confirmed that any disagreement between departments over teaching responsibilities would be settled by the Head of School and the team was given assurance that the MPharm programme would be fully supported.

#### Standard 9 – Resources and capacity

During its observations of teaching, the team noted the presence of out-of-date reference material and outdated labelling software. The team therefore **recommended** that the staff team remove these and substitute with up-to-date material. The team noted some concern around resourcing through the documentation submitted and through discussion with the staff. The team identified certain pressure points such as in Year 2 where the foundation degree students join the programme leading to larger cohort sizes than the 140 cap applied at the last accreditation. The team recognised that the School and Department cannot accurately calculate the number of students who will progress and instead should address this resourcing problem by ensuring that there is sufficient staff in place. The team also recognised the work associated with the organisation, management and QA of placements which it considered to need further development. It was noted in the business plan that 3 new staff appointments are proposed for 2016/17 which would bring the staff/student ratio into line with what was understood at the initial accreditation. The team was told that these appointments have not been approved by the University although they appear in the University-approved business plan. Hence, it will be a **condition of** continued accreditation that the Department recruit additional staff in line with its business plan, on the understanding that the student numbers do not exceed the numbers planned. As part of this condition, the School and Department must submit an approved business plan with confirmation from the relevant authority that this is current and up-to-date. The GPhC will also require formal notification from the relevant University authority that these appointments have been approved by the University and an update on recruitment must be sent to the GPhC at the end of the current academic year. This condition relates to criterion 9.1 and must be met before the 2017 intake of students.

Finally, the team recorded that the students interviewed came across as intelligent, articulate and mature in their engagement with the team. They clearly appreciated the support they receive from the staff at Kingston, who are enthusiastic and act as good role models.

**Following the above interim visit, the Registrar of the General Pharmaceutical Council agreed with the accreditation team's recommendation that a condition be imposed. The condition must be met before the intake of students at the start of the 2017-18 academic year.**