

# Do Pharmacy Graduates Possess the Necessary Professional Skills?

CHRISTOPHER A LANGLEY, SONITA AHEER

*School of Life and Health Sciences, Aston University, Aston Triangle, Birmingham, B4 7ET, UK.*

## Abstract

Background – Expansion of the pharmacists’ role within the United Kingdom has raised the question as to whether pharmacy graduates are equipped with the professional skills and attributes they will need to fulfil such roles.

Aim – To describe the professional skills and attributes pre-registration recruiters perceive pharmacy graduates should exhibit and to establish whether final year students perceive they possess these skills and attributes.

Method – Five individuals were interviewed from a variety of pre-registration employers; 90 final year students completed a questionnaire (response 69.2%).

Results – The recruiters thought that whilst graduates possess sufficient knowledge, they show weaknesses such as inability to apply theoretical knowledge into practice and the lack of good communication and interpersonal skills. Conversely, a majority of students felt that they did possess the necessary skills to enter pre-registration training.

Conclusion – Schools of pharmacy need to ensure that students have an opportunity to develop key professional skills to assist students in securing pre-registration positions.

**Keywords:** *Knowledge, Pharmacy education, Pre-registration, Professionalism, Skills.*

## Introduction

United Kingdom (UK) pharmacy is currently going through a period of major change. In National Health Service (NHS) hospitals, pharmacists now have major clinical responsibility and “Agenda for Change” (Department of Health, 1999) heralded the role of the clinical consultant pharmacist. A new contract for community pharmacy agreed and implemented in 2005 provides for extensive patient focussed services and a move from remuneration based only upon prescription volume. Since 2004 pharmacists have been able to act as secondary prescribers and a move to independent prescribing took place in 2006. As with other health professions, there is also an increasing emphasis upon professionalism that has followed from recent healthcare scandals such as Shipman (The Shipman Enquiry, 2004a, The Shipman Enquiry, 2004b) and the Bristol Royal Infirmary Enquiry (Bristol Royal Infirmary Inquiry, 2001). All these changes have major implications for pharmacy undergraduate education, particularly in relation to the professional area of the degree.

UK pharmacy education is divided into a four year period of undergraduate study followed, after graduation, by a year of pre-registration training within a clinical setting. Traditionally, professional practice teaching within schools of

pharmacy has been centred on the pharmacy practice teaching laboratory, usually staffed by internal and external qualified pharmacists, who use it to replicate as closely as possible the modern practice of pharmacy. The emphasis has been upon the ability to perform with classes taught in a traditional laboratory setting which reflects the scientific origins of pharmacy. Within classes, academic staff members support the development of clinical skills using role-play as patients or prescribers. The laboratory sessions are usually supported by clinical hospital-based teaching, co-ordinated by hospital teacher practitioners. These involve direct patient contact and clinical decision making in relation to drug therapy. In addition, a number of schools of pharmacy provide some degree of community experience as part of the undergraduate degree.

However, the amount of placement teaching is limited by funding, as unlike most health professional subjects pharmacy in the UK is funded by the Government as a science subject with no additional funding stream from the NHS, by patient availability and by logistics. The rapid evolution of pharmacy from a technical to a clinical profession means that traditional ways of professional teaching need to change. There is a need to reduce the emphasis upon technical performance and develop clinical professional competence.

\*Correspondence: Christopher A Langley, Senior Lecturer in Pharmacy Practice, School of Life and Health Sciences, Aston University, Aston Triangle, Birmingham, B4 7ET, UK. Email: [c.a.langley@aston.ac.uk](mailto:c.a.langley@aston.ac.uk)

All these changes are taking place at a time of an unprecedented increase in the number of undergraduate pharmacy student places in the UK and, therefore, the corresponding output of pharmacy graduates; all of whom will be competing to secure a pre-registration position. Additionally, the current economic climate has limited the ability of employers to increase the number of available pre-registration positions and so competition between students for positions has increased markedly. Therefore, if pharmacy graduates are to secure pre-registration positions of choice, it is vital that they and their schools of pharmacy are aware of the professional skills attributes that pharmacy pre-registration recruiters are looking for.

But what is professionalism in a pharmacy context? One American report stated: “*Professionalism is a difficult concept to describe*” (Beardsley, 1996). A review of published literature has identified a number of approaches to the issue of professionalism within pharmacy education. One study investigated the use of an internet-based course to increase student awareness of the basic professional uses of the internet (Sowinski et al., 2000). Post-qualification, there have been a number of studies introducing the concept of continuing professional development to pharmacists. One study investigated the introduction of reflective practice (James et al., 2002b) and another the professional development needs of community pharmacists (James et al., 2002a).

At an undergraduate level, it has been noted that the changing role of the pharmacist must evoke changes to pharmacy teaching in all areas of the undergraduate curriculum, not just within the practice and clinical arenas. One particular study describes changes to the pharmaceuticals course within an American university to introduce students to the practical relevance of pharmaceuticals in meeting practice-based outcomes (Das and Das, 2002).

One focus on the instillation of professional behaviour is in the inclusion of specific courses at the commencement of pharmacy education. One study described the use of a specific course to socialise pharmacy students (Carter et al., 2000). Another study used a Professional Care Behaviour Survey (PCBS) to demonstrate an improvement in caring behaviour amongst pharmacy students (Galt and Markert, 2002).

Another course of action taken by educational providers is to develop students’ verbal communication skills. In 1994, a study highlighted the importance of including courses within the pharmacy curriculum that ensure the ability of verbal communication skills for both native and non-native speakers (Parkhurst, 1994).

In the light of recent changes to UK pharmacy and pharmacy educational provision, the aim of the present study was to interview key individuals involved in the recruitment of UK pre-registration pharmacy students to establish their views on professionalism and of the skills and attributes possessed by pharmacy graduates. In addition, a survey was undertaken with final year students from one school of pharmacy in the UK to gauge their views on professionalism and their perception on how well they are equipped they are professionally for the pre-registration year.

## Methods

### *Interviews with pre-registration recruiters*

Five interviews were undertaken (March-April 2007) with representatives from different employers. Interview requests were sent to named individuals (known to be involved in the recruitment and/or training of pre-registration graduates) at eight community pharmacy companies, three supermarket pharmacy companies, three hospital trusts and 2 pharmaceutical (industrial) companies. Of these, one community (CP1), two supermarket (SP1 and SP2) and two hospital (HP1 and HP2) representatives replied and were willing to participate.

Interviews used a piloted semi-structured interview schedule, split into two sections: “*Professionalism in pharmacy*” and “*Pharmacy graduates entering pre-registration*”. Interviews were audio recorded and transcribed verbatim.

### *Student survey*

A questionnaire was devised using results from the preliminary analysis of the data from the interviews with pre-registration recruiters and following piloting, was administered to final year MPharm students at the authors’ institution. This final year MPharm cohort consisted of 130 students and all were sampled by distributing and collecting the questionnaire during a timetabled teaching session in February 2008. The questionnaire consisted of one open-ended question and five multiple choice questions.

## Results

### *Interviews with pre-registration recruiters*

When asked what the word “professional” meant to them, all five respondents answered by listing qualities and attributes a person who is deemed to be professional should possess. Many of these were personality traits (see Box 1).

### **Box 1 – Qualities and attributes stated by pre-registration recruiters as being “professional”.**

- Fair.
- Honest.
- Rational.
- Responsible.
- Trustworthy.
- Representatives of supermarket and community pharmacies also mentioned:
- Adhering to the rules and regulations of your organisation.
- Being aware of the law.
- Working within your boundaries.

When asked what “professionalism” meant in the context of pharmacy (or being a pharmacist), responses were quite similar. Both hospital pharmacy representatives stated that being a “*people person*” was an essential part of

professionalism. HP1 and HP2 stated respectively, that “*dealing with people on a personal level*” and being able to “*show empathy*” with patients was essential. SP1 and SP2 also considered it to be important to have good communication skills.

*“Your knowledge of drugs is a complete waste of space unless you can communicate that in a way that is meaningful to a patient.”* (SP2)

When discussing attributes a potential pre-registration student should show at interview, all respondents indicated that some sort of previous work experience in a pharmacy environment would be ideal. HP1 stated that previous work experience shows that the student has “*tried to put into practice what they have learnt thus far*”. Continuing on the theme of having previous work experience, the representative of SP2 stated:

*“It [previous experience] helps... we screen for a degree of clinical skills... can this person think, have they got good analytical skills, can they even apply a code of ethics at this point and make a real sensible decision? We then look at other competencies, like communication... I would like them to have some experience, but I wouldn't discount somebody who works behind a bar, because they have interpersonal skills.”* (SP2)

When asked about specific attributes a recruiter would look for at the interview stage, both hospital pharmacy representatives and one representative from supermarket pharmacy (SP1) stated that they expected students to be good communicators, or to have good communications skills. Both supermarket pharmacy representatives also stated that having leadership and management skills were a desirable quality in a potential candidate for a pre-registration placement.

HP2 commented on the fact that students do not tend to be very well prepared for interviews:

*“I don't think that pre-reg students are prepared as well for an interview for working in hospital pharmacy as they could be. Basic things like finding out a bit about the hospital, finding out about why you want to work in hospital pharmacy. It's absolutely basic but not all students demonstrate that. They can't tell me about hospital pharmacy. They can't tell me what we do.”* (HP2)

Looking at the differences between candidates, the representatives from SP1, HP1 and HP2 all stated that the level of professionalism displayed by applicants for pre-registration placements generally tends to vary. SP1 stated that it is possible to identify to some degree which school of pharmacy particular students are from, by observing their abilities in certain areas. Performing calculations and their ability to communicate are given as examples of situations in which differences between institutions can be seen.

*“...you know that they come from a particular university because they tend to be more open with their communication and some of the others aren't.”* (SP1)

*“...one School produces a lot of very theoretical people... another School have people who are very good at solving problems and there's another School they tend to be good*

*communicators...”* (HP1)

There was quite a difference in responses to questions asking about the level of professionalism graduates possessed at the start of their pre-registration year. SP1 and HP1 commented on the fact that students still want to be “*spoon-fed*”, and this is most likely due to the format of teaching on the undergraduate course. There was a feeling that lectures were the primary method of teaching, whereby information was given, students took notes, and then for exams they memorise this material, instead of applying knowledge and understanding. The modularised format of the undergraduate course has also been commented upon:

*“It's a good way of learning because it breaks things down and you're concentrating on one aspect... they can't then get to grips when they come out to do their pre-reg, that everything is happening in one go, you've got to put it all together.”* (SP1)

When asked if teaching and learning in a multi-professional undergraduate environment (i.e. with other healthcare students) would be of benefit to encourage greater graduate professionalism, responses indicated that whilst it may aid the development of communication skills, it was viewed as not being very practical as each group would want something different out of the session.

To identify any additional professionally-related educational needs a student may have, CP1 stated that they have their own programme that runs alongside the Society's programme.

*“...we'll specifically look at things like counselling, communication, dedication, time management, law and ethics... and then we pick up on the things that they feel they'd like to get into...”* (CP1)

SP1 also stated that they use competencies and performance standards to map where a student is, and this therefore enables them to look at weaker areas and then plan how to address those issues. The representative from HP1 also stated that they give the trainee a good role model, and “*shield them from those who aren't such good role models*” (HP1).

When discussing possible changes to the structure of the pre-registration year, three fifths of the interviewees discussed the “Bradford Model” (a combined degree and pre-registration year over the five year period).

*“...what we have found though with the Bradford programme is that they've done the hospital programme first and they come to us for their second part of the pre-reg, they tend to be a little bit behind the four years one. They've got the knowledge... but for other things, communication wise they're not as much up to speed... I think the Bradford programme is good, I think logistically as a company, if we had to accommodate that for every single university, it would be very, very difficult.”* (SP1)

At this point in the interviews, the representatives from SP2, HP1 and CP1 commented on the pre-registration exam. There was a general view that it is a distraction from what the pre-registration year is or should actually be about; it's about developing the right skills and attitudes to make you “*fit to practice*”, it's not about working for 12 months to sit an exam.

*“My biggest problem with the pre-reg year at the moment is the exam, I can’t see anything in The Society syllabus that hasn’t already been taught and examined at undergraduate level yet we’re repeating it.” (HP1)*

Responses were quite varied when asked if there was any particular knowledge area where pharmacy graduates were particularly weak.

*“I think that skills and attitudes bit we work on in the pre-reg year, the knowledge [from] university is OK.” (HP1)*

*“...I think academically, all the students, the graduates we’ve had, are very good knowledge based, it’s just the experience that we need to be there.” (CP1)*

Finally, hospital pharmacy representatives commented on more specific hospital issues that graduates tend to be weaker in; knowledge of the NHS and its structure was highlighted as an important issue by HP1. HP2 also agreed with this, and stated that students don’t really know “how things work”:

*“...who writes the drug charts... How drugs get to the ward, how you contact people... What’s the nursing hierarchy, what’s the medical hierarchy?” (HP2)*

#### Student questionnaire

Of the 130 questionnaires distributed to final year MPharm students during timetabled teaching sessions, [90 \(response rate 69.2%\) were returned and included in the data analysis](#). A summary of the results are provided in Box 2.

#### Box 2 – Responses from the student survey (n=90).

- The most popular attributes/characteristics used to describe the term “being professional” were categorised as “Behaviour and Attitudes” (57.7%, n=45/78), “Knowledge Related” skills (48.7%, n=38/78) and being “Responsible” (39.7%, n=31/78) (only 78 of the 90 respondents provided an answer to this question).
- The majority of respondents (81.1%, n=73/90) thought that they either had most or some of the necessary skills that are required of pharmacists.
- 85.6% of respondents (n=77/90) indicated that professionalism should be taught during the undergraduate MPharm programme and during pre-registration training.
- A substantial majority of respondents (90%, n=81/90) either agreed or strongly agreed with the statement “There are aspects of professionalism that can only be acquired during pre-registration training”
- 67.8% (n=61/90) stated that the MPharm programme places enough emphasis on professionalism.

#### Discussion

In order to be able to advise patients effectively, relevant and up-to-date knowledge is important. However, healthcare

professionals must also have the ability to convey information appropriately for the recipient. Interviewees from all employing organisations considered the ability to communicate as being an essential professional attribute.

Communication was highlighted by Beardsley back in 2001 as a “critical component of pharmacy education and practice” and went on to state that “schools and colleges of pharmacy must ensure that the graduates display effective interpersonal communication skills” (Beardsley, 2001). Therefore, communication skills can be seen as an essential part of professionalism and one, based on the findings from this study, which has not been fully addressed.

Suggested ways to improve students’ communication skills are to teach within a multi-professional setting or increase the amount of placement-based learning. Interviewed respondents were not convinced of the benefit of multi-professional learning and experience has shown that the potential barriers are difficult to overcome (Wilson et al., 2005). Although many schools of pharmacy have increased over recent years the amount of learning within practice they offer, total levels are still relatively low when compared to other undergraduate healthcare courses. In the absence of any increased opportunities for experience within practice before the pre-registration year, vocational placements (or even part-time/“Saturday work”) are an essential additional opportunity for students to develop professional skills, whereby theoretical knowledge can be applied.

Comments were made by employers about the variability of pharmacy graduates. This is important when considering the types of graduates that are produced from different schools; with no set curriculum, each School has a different idea as to when and how different skills should be developed. The diversity seen between students can be viewed as strength for pharmacy education, as it allows room for the inclusion of specialist areas to be taught but this finding is also likely to be linked to the different teaching methods employed by individual institutions.

Graduates’ inability to be able to apply knowledge seems to be a common theme across all sectors; as a possible solution to this problem, representatives from supermarket and hospital pharmacy commented on the fact that more good quality experience is required during the undergraduate course. Wright and co-workers (2006) suggest that “with pharmacists undertaking more clinical roles, a university based clinical skills lab, which offers free pharmaceutical care appointments to primary care patients based outside of the university, may provide appropriate clinical skills training opportunities” (Wright et al., 2006).

Additionally, the findings from the present study adds weight to the argument that as pharmacists take on more clinical roles within their profession, schools of pharmacy should receive some clinical training funding in order to facilitate pharmacy undergraduate skill development (Wright et al., 2006).

Although it would be unfair to generalise these opinions to account for the views of all pre-registration students’ employers, it can be seen that the responses obtained were similar across these three sectors of pharmacy. However, in contrast to the views of employers, the majority of final year

students sampled thought that they either had most or some of the necessary skills that are required of pharmacists. A further (albeit slightly smaller) majority also stated that they perceive that the MPharm programme places enough emphasis on professionalism. Further research is warranted to investigate the possible reasons for these discrepancies.

### Conclusion

This study has examined the views of a selection of pre-registration recruiters and final year MPharm students regarding professional skills and attributes. Although a variety of attributes were stated from study participants, it was observed that many of these were similar. Therefore, it is apparent that recruiters and students have a similar view as to the professional attributes students should be able to exhibit.

However, whilst interpretations were similar, there appears to be a discrepancy between the perceptions of final year MPharm students of their own abilities, and those of the pre-registration recruiters. The majority of students think that they possess some or most of the skills required to be a pre-registration pharmacist, whereas tutors have stated that many fundamental skills are lacking, including communication skills and the application of knowledge.

At a time where the number of students graduating from schools of pharmacy is greater than ever, coupled with an economic climate in the UK which is resulting in companies looking to reduce their costs, competition between students for pre-registration positions will become even more intense. Based on findings from this study it is clear that schools of pharmacy and pharmacy students themselves need to ensure that undergraduate pharmacy students have an opportunity to develop key transferable skills.

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