# The process of professional socialisation and development of professionalism during pre-registration training in pharmacy

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#### Abstract

The University of Manchester Samuel David Jee Doctor of Philosophy The process of professional socialisation and development of professionalism during pre-registration training in pharmacy March 19<sup>th</sup>, 2014

**Background:** Following the MPharm degree, the pre-registration training year is a critical time where the values, attitudes and behaviours of qualified pharmacists are inculcated. Given the paucity of research, a programme of work was undertaken to explore the process of professional socialisation and development of professionalism in trainees during the pre-registration year.

**Method:** The programme of work, the first of its kind in pharmacy, explored the process of professional socialisation and development of professionalism in trainees prospectively during the 2011/12 pre-registration year. A purposive sample of 20 pre-registration trainee-tutor pairs - 14 from community and 6 from hospital pharmacy – were recruited across North West England. Semi-structured interviews and behavioural professionalism questionnaires were used longitudinally in four rounds of data collection during the training year and with newly qualified pharmacists (NQPs; formerly trainees). A cross-sectional survey was administered to 1706 trainees towards the end of the training year to examine areas explored in the longitudinal study, including behavioural professionalism, supervision and 'patient mattering'. Interviews were analysed thematically using template and framework analyses, and the critical incident technique. Quantitative data was analysed using descriptive and multivariate analyses.

Results: Findings demonstrated that many of trainees' attitudes and values appeared to be fostered during their upbringing and were further shaped by the MPharm degree, laving out professional expectations for pharmacists. At the beginning of training, sector differences were apparent with more formalised inductions in place in hospital than community pharmacies, particularly independents. Previous pharmacy work experience, which all 20 trainees had undertaken during MPharm studies, facilitated the transition into training. Early on in the year, as trainees familiarised themselves with the organisation and working processes they were often supported by pharmacy technicians and other support staff and trainees worked effectively and in a professional manner with them throughout training. The application of clinical knowledge acquired from the MPharm degree was challenging, as recognised by trainees and tutors. With continued practice experience and increased responsibility and patient contact, abilities in applying clinical knowledge and communicating with patients improved, as did trainees confidence. Longitudinal ratings of behavioural professionalism increased significantly during training, as assessed by trainees and their tutors, and this was confirmed in the analysis of a representative sample of 347 trainees that were surveyed (response rate = 24.2%). Survey findings showed how elements of behavioural professionalism such as communication skills were more prone to development compared to, for example, appearance and interpersonal skills. Perceptions of supervision received during the training year were generally positive. The preregistration tutor was a key source of support, as well as role model, throughout the year, particularly in community pharmacy. Hospital tutors had a more distant relationship with their trainees and relied on other pharmacists to supervise their trainees. Tutors were often considered to have the largest impact on the development of professionalism in trainees, particularly in community. When considering aspects of their supervision, hospital trainees rated their tutors significantly higher than those in community in 'articulation' and 'exploration', relating to asking trainees for rationale of actions and encouraging them to pursue learning goals, respectively. Differences between training sites, such as the pharmacy services being delivered and patient mix, were found as were trainees' beliefs that they mattered to patients: community trainees believed they mattered more (e.g. were more helpful) to their patients than hospital trainees. Conclusions: The multiple methods employed in this programme of work revealed experiences trainees faced and contributing factors associated with their professional socialisation and development of professionalism. The findings led to recommendations for pharmacy education and training including: integrating university-based and work-based learning more closely, ensuring consistency in training experiences in different settings and sectors, improving training and support for staff involved in training and setting explicit standards relating to elements of professionalism. These are considered in the context of anticipated changes to the MPharm into a more integrated 5-year degree programme.

## Declaration

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# The Author

Sam grew up in Toronto, Canada and moved to the UK in 2001. He lived in various places, including North Wales and Cheshire, before moving to London in 2005 to study an undergraduate degree in psychology and neuroscience and a diploma in neuro-linguistic programming. After this, Sam moved to Manchester and studied for a Master's degree in psychology research methods where he conducted research into human memory. During his master's degree he worked as a research assistant in the Centre for Pharmacy Workforce Studies (CPWS) at The University of Manchester on a project investigating the utility of appraisals for the revalidation of pharmacy professionals led by Dr. Ellen Schafheutle. Shortly after the revalidation project was completed, Sam started his PhD at The University of Manchester which commenced (full-time) in September, 2010.

Sam has authored and co-authored articles in peer reviewed journals, including the *Pharmaceutical Journal* and *Research in Social and Administrative Pharmacy*, and has presented at a number of conferences including Health Services Research and Pharmacy Practice and the Royal Pharmaceutical Society. He is currently employed as a research associate in the CPWS, investigating the quality of pre-registration education and training of pharmacy technicians in Great Britain.

# Abbreviations

#### Abbreviations

APPE	Advanced pharmacy practice experience
BNF	British National Formulary
BP	Behavioural Professionalism
CFA	Confirmatory factor analysis
GB	Great Britain
GP	General Practitioner
GPhC	General Pharmaceutical Council
IPPE	Intermediate pharmacy practice experience
MEP	Medicines Ethics and Practice
MPharm	Master of Pharmacy (degree)
MUR	Medicines use review
NHS	National Health Service
NMS	New Medicine Service
NPA	National Pharmacy Association
NQP	Newly qualified pharmacist
OSCE	Objective structured clinical examination
OSPAP	Overseas pharmacists' assessment programme
OTC	Over-the-counter
РВ	Professional Behaviour
РМ	Patient Mattering
PRPS	Pre-registration pharmacist scheme
RPS	Royal Pharmaceutical Society
UK	United Kingdom
USA	United States of America

## 1 BACKGROUND

The first chapter of this thesis begins with an outline of the premise of the programme of work that was undertaken, guiding the reader briefly through some of the events that have taken place that has seen healthcare professions such as pharmacy face increasing scrutiny and expectation. The state of pharmacy education and training in the United Kingdom (UK) is discussed, bringing the context of the research area this thesis was devoted to into focus. The importance of researching the professional socialisation and development of professionalism in trainees during pharmacy pre-registration training is also discussed.

Following this, the aims of the literature review conducted and the strategy employed to find and appraise relevant literature are presented. A discussion relating to professionalism and its development in pharmacy is then provided, followed by a summary.

## 1.1 The premise for undertaking this research

Health professions and their members in the UK have faced increasing scrutiny in recent years. High profile cases of serious misconduct, such as those involving Harold Shipman,<sup>1</sup> Bristol Royal Infirmary<sup>2</sup> and, more recently, Mid Staffordshire NHS trust<sup>3</sup> have tarnished their reputation. Investigations and resulting reports into these extreme failures aimed to bring about changes to working practices to raise standards and improve patient care. For example, the regulation of healthcare professionals was noted as an area in need of improvement from the report into the Bristol Royal Infirmary.<sup>2</sup> Following on from this, in 2010, a white paper<sup>4</sup> was published which put forth the need for high quality education and training for the health professions which could be promoted by a newly established Health Education England (HEE).<sup>5</sup> The education and training that healthcare professionals receive is essential to ensure they have all the necessary competences to practise as registrants representing their profession. It serves to socialise neophyte learners into their profession (i.e. professional socialisation), in which, not only the underpinning specialist knowledge is fostered, but also the appropriate values, attitudes and behaviours<sup>6</sup> that allow them to work effectively within the healthcare team and serve patients to a high standard.

Although it has always been important for healthcare professionals to possess high levels of professionalism in order to deliver quality care to patients, the demand for this has never been greater. The public has become more aware of its power to command the operations of healthcare services and that they want their expectations to be met.<sup>7, 8</sup> Pharmacy is moving towards a more patient-centred care role as reports such as that of the Department of Health white paper suggest.<sup>9</sup> Therefore, the professionalism of pharmacists must be of a high standard if the profession is to cope with its changing role in healthcare.

Research into professionalism in pharmacy has only begun to emerge in recent years and there has not been much research conducted in the UK until very recently.<sup>10-13</sup> In order to improve the professionalism of the pharmacy workforce, the profession needs to ensure that individuals involved in delivering pharmaceutical care have received appropriate education and training that

will allow them to conduct their role effectively. Whilst there has been much research conducted surrounding the professionalism of pharmacy students,<sup>14-23</sup> there has been less focus on early career pharmacists, or pre-registration trainees.

The early experiences in the practice setting are particularly important for the professional socialisation and development of professionalism of students / trainees.<sup>21, 24</sup> In the UK, the pre-registration year is likely to be a critical period in the development of professionalism as it bridges the gap between education and practice and it is where socialisation into the profession occurs through exposure to the work environment and qualified professionals.<sup>25</sup> Knowing more about the processes which influence the development of professionalism in pre-registration trainees will help uncover how best to instil professional values and behaviours in trainees which can in turn benefit patients.

## 1.2 Literature review: background

## 1.2.1 Aim

The aim of the literature review was to identify a wide range of literature from healthcare professions that could define the concept of professionalism and offer insights into how an individual develops professionalism during pharmacy education and training.

## 1.2.2 Literature search and identification strategy

Before conducting the review of the literature, the researcher consulted texts<sup>26, 27</sup> which provided guidance on conducting a critical literature review that could capture a range of relevant literature in the field and consider its strengths and weaknesses.<sup>26</sup> In addition, the researcher also sought guidance from a specialist faculty team librarian for pharmacy for advice on searching for literature using the resources at The University of Manchester who advised on suitable electronic databases to use for pharmacy practice research and effective strategies for navigating them.<sup>28</sup> These resources were useful to provide a strong starting point when commencing the review of the literature for the programme of work.

## 1.2.3 Electronic databases

A number of electronic databases that were deemed appropriate for locating articles on professionalism and, later, professional socialisation, in healthcare professions were used (see Table 1.1). Although the researcher wanted to ensure up-to-date and contemporary literature was retrieved, which would be most relevant to modern pharmacy education and training, more historical work was also considered. Where possible, searches were inclusive of literature dating back to the 1960s because some articles initially identified from bibliographic citations in reference lists of papers had articles listed from this period.

#### Table 1.1: Electronic databases used

Cumulative Index to Nursing and Allied Health (CINAHL; 1960 – September, 2013) EMBASE (1974 – September, 2013) Google Scholar (1960 – February, 2014) International Pharmaceutical Abstracts (1970 – January, 2014) PsycInfo (1960 – September, 2013) PubMed (1966 – September, 2013) Web of Knowledge (including Web of Science (1960 – September, 2012) and Medline (1960 – September, 2013)) Scopus (1960 – February, 2014)

The term 'professionalism' along with accompanying keywords was used in order to locate relevant articles on professionalism. Keywords used alongside professionalism included learning; development; socialisation; assessment; student; and trainee. Synonyms of keywords were also used to account for different ways articles could be indexed; for example, when considering how professionalism can be assessed, synonyms of assess were used (measure; examine; appraise; evaluate) alongside professionalism. Keywords were used in multiple fields combined with Boolean operators (e.g. AND; OR; NOT) to search the electronic databases. The use of 'wildcards' was also employed in order to account for the differences in spelling of relevant terms (e.g. socialisation vs. socialization) through using appropriate characters in the electronic database (e.g. 'sociali?ation'; 'sociali\$ation'). Truncation was used to account for differences in the way stem words were completed (e.g. using the keyword 'measur\*' to find 'measure' and 'measuring'). Limiters were used in some cases, particularly in the latter stages of the research, to constrain searches to recent years in order to find up-to-date research (e.g. since 2010). Some broad searches (e.g. learning AND professionalism) were saved for 'auto-alerts' in what turned out to be the most fruitful databases (Scopus & International Pharmaceutical Abstracts). This provided the researcher with automated emails with results of the saved searches.

#### 1.2.4 Additional methods of identifying literature

In addition to searching the electronic databases that indexed a vast number of journals, some journals were accessed and searched directly because they were particularly relevant and useful or not always indexed well. These included *Pharmacy Education*, *The Pharmaceutical Journal* (PJ) and *American Journal of Pharmaceutical Education*. Suitable textbooks, when found through searches in databases, were retrieved from The University of Manchester library. The University of Manchester library search facility<sup>29</sup> was also used to locate relevant books on professionalism.

Websites of government bodies (e.g. Department of Health) and regulatory bodies (e.g. The General Pharmaceutical Council (GPhC)) were visited to consider grey literature, particularly

white papers. 'Snowballing' was also used when reviewing the literature. This involved checking the bibliographies of articles that were read in order to find further literature. Colleagues within the Pharmacy Practice Division at Manchester Pharmacy School also provided the researcher with potentially useful sources they had obtained through their research.

## 1.2.5 Inclusion and exclusion criteria

The researcher did not apply stringent exclusion criteria during the early stages of the literature search process as one may do in a formal systematic review.<sup>26, 30</sup> An approach to literature searching that is more inclusive and does not apply too many strict exclusion criteria can be advantageous so as to not miss potentially useful literature.<sup>31</sup> Whilst this naturally produced more hits when searching for literature in the early stages, time was not wasted on reading papers which were not deemed relevant when conducting a brief appraisal of the title or abstract of the article. For example, non-healthcare professions were not pursued, such as law and the clergy, because they differed greatly from healthcare professions such as pharmacy and medicine. Non-English language articles were excluded, though they represented a very small fraction of search results.

## 1.2.6 Appraisal and synthesis of literature

At the outset of the literature search, the researcher was interested in exploring how professionalism may develop during education and training in pharmacy, as students are socialised into the profession. Naturally, with the topic area being vast, there were numerous papers from different healthcare disciplines that were considered for their relevance and contributory value. Although a breadth of literature was captured, an exhaustive coverage of *all* literature associated with professionalism and its development (which spans many disciplines and theories) was beyond the scope of this research.

Professionalism was searched for first as this was the main focus of the review, but soon spilled over to consider the related concept of professional socialisation, which was relevant to the development of professionalism. The results of the searches were examined according to the titles of the articles, abstracts, and, when deemed relevant, the complete article. The content of articles that had relevance were reviewed to examine what aspects of these broad concepts were explored by the authors (e.g. attitudes; behaviours; identity etc.) and the methodological approach adopted (e.g. quantitative; qualitative; cross-sectional; longitudinal). This served to explore similarities and differences between studies and numerous accounts of the way in which individuals working in healthcare develop professionalism during their education and training.

Literature from other healthcare professions such as medicine and nursing, which were often identified, were examined because of their relative applicability to pharmacy and could serve to inform the way in which the researcher could design and implement a programme of work. In considering literature from disparate professions, within and outside the UK, the researcher used caution in relating findings and implications directly to pharmacy in the UK.

A critical approach to appraising the literature was taken, whereby the relevance, relative quality and strengths and limitations<sup>26</sup> of research studies were examined. Given that the study of professionalism and its development could be undertaken using both quantitative and qualitative methods, the researcher could not apply a specific framework in appraising the work. Qualitative work cannot be assessed the same way as its quantitative counterpart where more transferable templates for assessing the research (e.g. adequate sample sizes; appropriate statistical tests etc.) may be imposed.<sup>31</sup> However, the rigour of such work can still be assessed through an inspection of, for example, the use of appropriate sampling, the use of evidence to support interpretations and the use of appropriate methods of analysis.<sup>32</sup> Given the differences in the epistemologies / methodologies of studies identified in the literature, the researcher was flexible in critically appraising them for their relevance and quality to inform the programme of work.

The literature review process was iterative. Whilst much of the searching for, and perusal of, literature took place during the early stages of commencing the PhD, this process continued throughout its duration. As research ideas were brought into focus the search criteria and keywords were narrowed down to target most pertinent and recent literature. An EndNote<sup>®</sup> library was created to store relevant references and it was continuously updated; duplicates were removed periodically.

### 1.3 Literature review: findings

The findings from the literature review are broken down into sections on the concept of professionalism and the development of professionalism and professional socialisation.

### 1.3.1 The concept of professionalism

This section considers how professionalism has been conceptualised. To begin, some brief information relating to the origins of the concepts of 'professions' and 'professionals' is discussed. Much research has been centred around professionalism, most of the time bypassing the abstruseness of the concepts of professions and professionals. Therefore, prior to the discussion of professionalism, an outline of the nature of a profession and a professional are supplied in order to explore and better understand some of the concepts that underpin professionalism.

Following this, a discussion of the way in which professionalism has been defined in pharmacy is presented by firstly drawing on medicine, the healthcare profession at the forefront of research on professionalism.

#### 1.3.1.1 Professions and professionals

There is some ambiguity surrounding the word 'profession' because it is regularly used in dialogue, generally indicating what an individual does for a living. A profession can be defined as "*a paid occupation, especially one that involves prolonged training and a formal qualification.*"<sup>33</sup> This definition does not, however, consider some of the key features of a profession (e.g. expert knowledge; autonomy) which separate professions from other occupations. Over the years sociologists have attempted to define what a profession is, and how it may differ from other

occupations.<sup>34, 35</sup> For example, Carr-Saunders and Wilson (p.3)<sup>34</sup> defined a profession as: "an occupation based upon specialised intellectual study and training, the purpose of which is to supply skilled service or advice to others for a definite fee or salary."

Historically, sociological research has considered quintessential examples of professions to include clergy, law and medicine.<sup>35-37</sup> Debate around whether pharmacy is a true profession has surfaced in the past.<sup>38, 39</sup> Some authors have commented how pharmacy has not blossomed into a true profession and is more of a 'quasi-profession'.<sup>37</sup> Denzin and Mettlin purported that pharmacy achieved what they refer to as 'incomplete professionalization.'<sup>37</sup> They argued that although pharmacy has developed traits of a profession, it still contains elements of an occupation; in particular they suggested that pharmacy does not follow the constraints of a profession such as "you do not advertise."<sup>37</sup> Since the drugs that pharmacists deal with are essentially 'products' they require advertising to make profits. Perhaps more worryingly was that Denzin and Mettlin commented on how institutions in pharmacy have failed to recruit committed individuals who would be willing to devote their time to the altruistic aims of the profession.<sup>37</sup> They noted that this could be because pharmacy is stuck between two value orientations: business and profession, something which McCormack<sup>39</sup> had indicated previously. The analysis of pharmacy conducted by Denzin and Mettlin is now quite dated and has since been criticised for lacking sufficient data and evidence to support their claims.<sup>40</sup> There is little contention with pharmacy being considered a true profession today.<sup>22, 41</sup>

There are many ways in which to outline the characteristics of a profession, but to maintain the focus of this review it is important to consider how the pharmacy profession and its members are characterised. A useful description of the traits of pharmacy, as a recognised profession, and pharmacists, as professionals, was offered in recent years by a task force on professionalism formed collectively by the American Pharmaceutical Association Academy of Students of Pharmacy (APhA-ASP) and the American Association of Colleges of Pharmacy Council of Deans (AACP-COD) on Professionalism.<sup>42</sup> The traits are comprehensive and cover a number of attributes which are commonly used to define a profession (e.g. an ethic that is binding on the practitioners; a body of knowledge unique to the members) and professional (e.g. ethically sound decision making; knowledge and skills of a profession). The APhA-ASP and AACP-COD<sup>42</sup> considered a profession an occupation whose members share ten common characteristics. The task force also defined a professional (i.e. pharmacist) as a member of a profession who displayed the traits of a professional (see Table 1.2). The traits articulate neatly what it means to be a member of the pharmacy profession.

	Traits of a profession		Traits of a professional
1)	Prolonged specialized training in a body of	1)	Knowledge and skills of a profession
	abstract knowledge	2)	Commitment to self-improvement of
2)	A service orientation		skills and knowledge
3)	An ideology based on the original faith professed	3)	Service orientation
	by members	4)	Pride to the profession
4)	An ethic that is binding on the practitioners	5)	Covenantal relationship with the client
5)	A body of knowledge unique to the members	6)	Creativity and innovation
6)	A guild of those entitled to practice the profession	7)	Conscience and trustworthiness
7)	A set of skills that form the technique of the	8)	Accountability for his/her work
	profession	9)	Ethically sound decision making
8)	Authority granted by society in the form of	10)	Leadership
	licensure or certification		
9)	A recognized setting where the profession is		
	practiced		
10)	A theory of societal benefits derived from the		
	ideology		

In Great Britain (GB), pharmacy professionals include pharmacists and, more recently, pharmacy technicians, who are both members of the pharmacy profession. It is expected that pharmacy professionals will demonstrate the aforementioned traits as a member of the profession. For example, in line with trait 1 (prolonged specialized training in a body of abstract knowledge) noted above, pharmacists will undertake extensive training, through typically completing five years of education and training prior to registration. Although the pharmacy regulator in GB, the GPhC, has not laid out similar traits of professionals as the APhA-ASP and AACP-COD,<sup>42</sup> it does lay out standards for conduct, ethics and performance<sup>43</sup> that outline principles a pharmacy professional must abide by. These are displayed in Table 1.3.

#### Table 1.3: Seven principles of good practice<sup>43</sup>

- 1. Make patients your first concern
- 2. Use your professional judgement in the interests of patients and the public
- 3. Show respect for others
- 4. Encourage patients and the public to participate in decisions about their care
- 5. Develop your professional knowledge and competence
- 6. Be honest and trustworthy
- 7. Take responsibility for your working practices.

The principles in the standards for conduct, ethics and performance<sup>43</sup> map closely onto traits relating to professionals as provided by the APhA-ASP and AACP-COD,<sup>42</sup> highlighting what is required to be a pharmacy professional.

#### 1.3.1.2 Approach to defining professionalism

Professionalism can be considered through a 'macro' (i.e. institutional) or 'micro' (i.e. individual) level. For example, an educational institution can convey levels of professionalism at a top-down level<sup>11, 22</sup> whilst, at the same time, individuals within these institutions can transmit professionalism through a range of behaviours.<sup>10, 21, 22, 44</sup> It should be made clear at this stage that it is the professionalism of an individual that is of interest here and will be the main focus of discussion in this chapter. With brief discussions of professions and professionals providing some background context, the way in which professionalism has been defined will be considered, again drawing on literature beyond pharmacy, particularly from medicine. Professionalism is undoubtedly a rather abstract concept that has proven hard to define over the years. As Arnold and Stern<sup>45</sup> noted, educators, teachers and students can struggle with understanding the concept of professionalism but claim 'they know it when they see it.'

A useful place to start in defining an elusive concept is to refer to a dictionary definition<sup>33</sup> which defines professionalism as *"the competence or skill expected of a professional."* Unfortunately, a simple definition of professionalism such as this does not, unsurprisingly, explain in detail some of the broader issues dealt with in the literature on professionalism which will be discussed in the next section.

#### 1.3.1.3 Defining professionalism

One finding from the review of literature was that there were a number of commentary and opinion pieces on the topic of professionalism in both medicine<sup>8, 46-48</sup> and pharmacy.<sup>44, 49, 50</sup> The prevalence of such writings demonstrates that professionalism is a topic receiving considerable debate. Furthermore, since professionalism is a relatively novel research area, with no universal consensus as to what it encompasses, academics often share their thoughts and opinions on the matter rather than reporting research data. Nevertheless, there were some particularly salient sources that provided well recognised and often adopted definitions for research and assessment purposes. Definitions of professionalism in medicine, which were abundant in the literature, are considered first before considering professionalism in pharmacy. Many of the ways in which professionalism can be defined in medicine apply equally to pharmacy.

In medicine, a great deal of time and resources have been invested in establishing a 'new professionalism'<sup>7, 8, 51</sup> in recent years. Donald Irvine, who has published much work on medical professionalism,<sup>7, 52-54</sup> has suggested that people think of professionalism in three main ways<sup>8</sup>:

- the mastery of technical knowledge and skills
- strong ethical principles and values, such as honesty, respectfulness and reliability
- notions of a calling and of service, in which altruism comes before anything else

This provides a basic overview of professionalism and how it can be conceptualised, however, it is important to go further to consider in more detail some of the attributes of professionalism. One useful definition is that offered by eminent academics in the field, Arnold and Stern (p.19)<sup>45</sup>:

"Professionalism is demonstrated through a foundation of clinical competence, communication skills, and ethical and legal understanding, upon which is built the aspiration to and wise application of the principles of professionalism: excellence, humanism, accountability and altruism."

This definition emphasises the importance of clinical competence, communication skills and ethical and legal understanding as fundamental aspects of professionalism, which in many ways are what is required to practise effectively as a doctor, or equally, as a pharmacist. Many researchers have often approached professionalism as something that is enacted.<sup>55-57</sup> Cohen, for example, notes that professionalism is a way of acting which comprises a set of observable behaviours. He considers humanism as a way of being which manifests through elements such as altruism, respect for others and compassion. Its link with professionalism is that humanism *"provides the passion that animates authentic professionalism (p.1029)."* 

Of particular relevance to this review was to consider definitions of professionalism from the UK. A working party on medical professionalism set up by the Royal College of Physicians conducted a consultation between 2004-2005 whose principle aim was to define the nature and role of medical professionalism in modern society, part of which was to consider ways of defining medical professionalism relevant for the 21<sup>st</sup> century.<sup>51</sup> The definition of professionalism in their resulting report was as follows: *"Medical professionalism signifies a set of values, behaviours, and relationships that underpins the trust the public has in doctors"* (p.14).<sup>51</sup> The document goes on to state (pp.14-15)<sup>51</sup>:

"Medicine is a vocation in which a doctor's knowledge, clinical skills, and judgement are put in the service of protecting and restoring human well-being. This purpose is realised through a partnership between patient and doctor, one based on mutual respect, individual responsibility, and appropriate accountability."

In their day-to-day practice, doctors are committed to:

- integrity
- compassion
- altruism
- continuous improvement
- excellence
- working in partnership with members of the wider healthcare team.

These values, which underpin the science and practice of medicine, form the basis for a moral contract between the medical profession and society. Each party has a duty to work to strengthen the system of healthcare on which our collective human dignity depends."

In a recent systematic review of defining professionalism in medical education between 1999 and 2009, Birden et al.<sup>58</sup> noted that although there is a now vast literature on the topic of professionalism there is no clearly resolved definition or teaching and assessment methods for it. The authors did, however, note that more recent papers that focused on defining and examining

professional behaviours more accurately portrayed the complex and contextual nature of professionalism in medicine. Such papers include, for example, Van de Camp et al.<sup>59</sup> who broke the behaviours of professionalism down into four components: professionalism towards the patient; professionalism towards other professionals; professionalism towards the public; and professionalism towards oneself.

Definitions of professionalism in medicine in relation to doctors are, in many ways, transferable to pharmacists, particularly as the pharmacy profession moves towards a more patient facing role.<sup>9, 60</sup> Consider, for example, a recent description of the role of pharmacists provided by Bond (p.3),<sup>61</sup> describing pharmacists as:

"Experts on the actions and uses of drugs, including their chemistry, their formulation into medicines and the ways in which they are used to manage diseases. The principal aim of the pharmacist is to use this expertise to improve patient care. Pharmacists are in close contact with patients and so have an important role both in assisting patients to make the best use of their prescribed medicines and in advising patients on the appropriate selfmanagement of self-limiting and minor conditions."

It becomes clear that the expert knowledge and skills of pharmacists is a key part of their role in patient care. The complexity of professionalism in pharmacy, as in medicine, appears to be recognised and a number of studies have attempted to define it.<sup>6, 62-65</sup> It has proven challenging, not least because it is a difficult concept to tease apart. As Hammer et al.<sup>22</sup> noted, there are a number of related constructs to professionalism which either overlap or are subsumed by the concept. Some of these constructs include, for example, professional ethics, professional competence, professional identity / image and moral reasoning.<sup>22</sup> This has no doubt hindered the establishment of a universal definition of professionalism in pharmacy, as it has in medicine, and created challenges for the pharmacy profession in defining it.

The regulator of the pharmacy profession in GB, the GPhC, has Standards of Conduct, Ethics and Performance<sup>66</sup> (previously the Code of Ethics<sup>67</sup>) which lay down principles of good practice (see Table 1.3 in section 1.3.1.1). These principles are also the same for pre-registration trainees<sup>68</sup> and pharmacy students – albeit with fewer stipulations – who have a student code of conduct.<sup>69</sup> Although it can be seen that these principles feed into professionalism, the use of the term 'professionalism' is not adopted as it is in, for example, section 2.2. of the Medicines, Ethics and Practice (MEP) publication,<sup>70</sup> produced by the professional body in GB, the Royal Pharmaceutical Society (RPS).<sup>71</sup> Although it can be seen that principles laid out by the GPhC feed into professionalism, the use of the term 'professionalism' is not adopted by the General Medical Council in the UK (i.e. Good Medical Practice<sup>72</sup>). Therefore, it is important to turn to the literature to explore how research has aided our understanding of the meaning of professionalism in pharmacy.

In a recent review paper by Wilson et al.,<sup>63</sup> the ways in which pharmacy professionalism has been discussed and defined in literature between 1998 and 2009 were reviewed. The 58 articles they reviewed (70% of which were of American origin) covered 55 different components of professionalism. They also found that the number of components of professionalism that were

considered in an individual article ranged from between one and 21. This demonstrates the widespread interpretation of professionalism and its underlying attitudes and behaviours. There was, however, consensus in elements of professionalism: 'honesty', 'integrity', and 'trustworthy' were the most common terms used in the literature.<sup>63</sup>

A particularly useful definition identified in the literature of professionalism in pharmacy, that is broad and inclusive, was provided by Hammer (p.456)<sup>6</sup>: *"the possession and/or demonstration of structural, attitudinal and behavioral attributes of a profession and its members."* The structural attributes include elements such as a specialised body of knowledge and skills and autonomy; attitudinal elements include a predisposition, feeling, emotion, or thought that upholds the ideals of a profession; and behavioural elements include behaving in a manner to achieve optimal outcomes in professional tasks and interactions.<sup>6</sup> Whilst this definition serves to capture the broad nature of professionalism, it is useful to delve further into these elements of professionalism through, for example, considering some of the traits of professionalism. In order to do this, we return to the work of the APhA-ASP and AACP-COD,<sup>42</sup> discussed in section 1.3.1.1. In their white paper on professionalism they define professionalism as the active demonstration of the traits of a professional, namely<sup>42</sup>:

- 1) Knowledge and skills of a profession
- 2) Commitment to self-improvement of skills and knowledge
- 3) Service orientation
- 4) Pride to the profession
- 5) Covenantal relationship with the client
- 6) Creativity and innovation
- 7) Conscience and trustworthiness
- 8) Accountability for his/her work
- 9) Ethically sound decision making
- 10) Leadership

Subsequent to this white paper, Hammer et al. published a well-recognised article that outlined aspects of professionalism.<sup>22</sup> Hammer et al. attempted to conceptualise professionalism through referring to components of a bicycle wheel as an analogy (p.3)<sup>22</sup>:

"The center of individual professionalism is a set of core values that includes altruism/service, caring, honor, integrity, duty, and others. The spokes radiating from the hub are behaviors demonstrated by the individual: respect, accountability, empathy, compassion, and others. The tyre itself is what some could consider 'icing on the cake' – dressing professionally, punctuality, acting courteously, exhibiting good grooming habits, and so on."

A white paper authored by Roth and Zlatic<sup>41</sup> extended this analogy of professionalism offered by Hammer et al.<sup>22</sup> and noted that much of the literature on professionalism related to a fiducial relationship (i.e. built on trust) between the patient and pharmacist. When conceptualising professionalism they placed the fiducial relationship that pharmacists have with the patients in the

centre of the bicycle wheel (see Figure 1.1). The spokes represented the traits where behaviours would stem from.



Figure 1.1: Conceptualisation of professionalism traits<sup>41</sup>

Researchers in the UK offered a more recent and succinct definition of professionalism in pharmacy which highlights the expert knowledge that underpins the professionalism of pharmacists and their role in supporting patients' health in collaboration with doctors. Whilst considering the definition of professionalism from medicine from the Royal College of Physicians,<sup>51</sup> Elvey et al.<sup>65</sup> offered the following definition of professionalism in pharmacy, highlighting the profession's expertise in knowledge of medicines in serving patients in partnership with doctors.

"Pharmacy is a vocation in which a pharmacist's knowledge, clinical skills, and judgement (as medicines expert) are put in the service of protecting and restoring human well-being. This purpose is realised through a partnership between the patient and pharmacist, which closely relates to, and supports, the partnership between patient and doctor."

It can be seen from the discussion of literature that there are different ways in which to define pharmacy professionalism, often times by breaking down professionalism into multiple components. Hammer's take on defining it according to broader components, particularly the *"attitudinal and behavioral attributes of a profession and its members"*<sup>6</sup>, is a good way to approach examining its development (discussed next, in section 1.3.2). Indeed, much of the work on examining the development of professionalism is done through considering changes in attitudes and behaviours. Behaviours are often studied, and indeed scrutinised, most as they are more

easily measured against attributes or perceptions of professionalism.<sup>58, 59</sup> Professional behaviours have been central to a prominent definition of professionalism provided by Chalmers (p.10)<sup>73</sup>:

"Professionalism is displayed in the way pharmacists conduct themselves in professional situations. This definition implies a demeanor that is created through a combination of behaviors, including courtesy and politeness when dealing with patients, peers, and other health care professionals. Pharmacists should consistently display respect for others and maintain appropriate boundaries of privacy and discretion. Whether dealing with patients or interacting with others on a health care team, it is important to possess – and display – an empathetic manner."

Professional behaviours or 'behavioural professionalism' has been defined as "*behaving in a manner to potentially achieve optimal outcomes in professional tasks and interactions*" (Purkerson, 1999 cited in Hammer et al., 2000<sup>23</sup>). Amongst other attributes, behavioural professionalism includes being reliable, dependable, communicating respectfully and articulately, and putting others' needs above one's own. Hammer et al.<sup>23</sup> developed a comprehensive list of behavioural items that were used to define and measure behavioural professionalism in a questionnaire (see Appendix 1).

Definitions of professionalism are numerous but there are many shared views on what constitutes professionalism. Considering a consolidated definition of professionalism in pharmacy as "*the possession and / or demonstration of structural, attitudinal and behavioural attributes of a profession and its members,*" as Hammer<sup>6</sup> does, offers a pragmatic way to conceptualise it when considering how it can develop during education and training.

# 1.3.2 The development of professionalism and professional socialisation

This section considers how the development of professionalism occurs. Naturally, the way in which the development of professionalism can occur poses many challenges given that it is a lifelong process and many of the core values, attitudes and behaviours, associated with professionalism can be fostered in one's youth. Moreover, the way in which the development of professionalism can be studied theoretically are numerous with broader theories of socialisation<sup>74</sup> and various learning models having applicability (e.g. experiential learning<sup>75</sup>; situated learning in a community of practice<sup>76</sup>; and, more recently, experience based learning<sup>77-80</sup>). (The researcher did not subscribe to a specific theory on learning in relation to the development of professionalism during pharmacy education and training, as this could have limited the exploration of this process in an underresearched area.)

Professionalism and its learning and development has been explored in other professions. Findings from the literature of other healthcare professions, particularly medicine – at the forefront of research into professionalism – are discussed. This serves to better understand the ways in which professionalism is developed in pharmacy students / trainees during education and training.

With one's upbringing often inculcating the values underpinning professionalism, formal and informal education and training then serve to shape an individual's professionalism towards that

expected of a professional. A short discussion of upbringing and early socialisation is presented first, followed by a longer discussion of the role of education and training. They are considered in the context of socialisation which is a relevant theory to examine professionalism.

#### 1.3.2.1 Upbringing and early socialisation

When reviewing the literature on how an individual (e.g. pharmacy student) develops professionalism it was evident that one's childhood had a key role to play. Upbringing was important in the development of aspects of professionalism from an early age prior to formal education and training. Findings from research in medicine<sup>81, 82</sup> and pharmacy<sup>65, 83</sup> support the view that the values of professionalism can be developed during one's upbringing through adopting humanistic values, such as honesty and empathy, that underpin professional values. Much of this learning takes place in a social context by learning from others during a process of socialisation.

Socialisation is a complex and dynamic process and has been considered from a number of disciplines including sociology, anthropology and psychology. It can be broadly defined as *"the process by which individuals acquire knowledge, skills, and dispositions that enable them to participate as more or less effective members of groups and the society"* (Brim, 1966 cited in Goslin, 1969<sup>74</sup>). Naturally, socialisation begins at the start of human interaction during an individual's infancy and can continue throughout the lifecycle.<sup>74</sup> Socialisation is a life process, but is generally divided into two parts: primary and secondary socialisation. Primary socialisation takes place early in life, as a child and adolescent where Individuals learn about their role within a culture such as gender, ethnicity and religion, roles inculcated mainly by their family.<sup>24</sup> Secondary socialisation refers to the socialisation that takes place after primary socialisation as one encounters new groups that require additional socialisation. For example, when someone starts a job they learn the norms of the working culture and how to function in their role. It is the latter (secondary) socialisation that is of relevance to professional socialisation.

#### 1.3.2.2 Professional socialisation

With the concept of socialisation having been briefly discussed, it is important to consider the process of socialisation of healthcare professionals (i.e. professional socialisation) such as pharmacists. The importance of socialisation in the learning and development of professionals has been recognised and has been a focus of inquiry over the years in fields such as medical sociology. Broad definitions such as those offered by Merton (p.287),<sup>84</sup> in the context of the medical profession, serve to capture the essence of what socialisation involves; it is:

"a process by which people selectively acquire the values and attitudes, the interests, skills and knowledge—in short, the culture—current in the groups of which they are, or seek to become a member."

Essentially, the process of professional socialisation is one whereby students / trainees are transformed into professionals, with the development of the appropriate attitudes and behaviours

(i.e. professionalism) taking place during this process. In relation to the pharmacy profession, Hammer et al. (p.9)<sup>22</sup> described professional socialisation as:

"the transformation of individuals from students to professionals who understand the values, attitudes, and behaviors of the profession deep in their soul. It is an active process that must be nurtured throughout the professional's/student's development. In pharmacy the socialization process begins the moment a student (or potential student) observes or interacts with pharmacists, evaluates what they do, or actively seeks information about the profession. Beliefs, attitudes, and behaviors begin to develop with regard to pharmacists' roles."

Although the process itself may suggest a passive role of the individual being socialised during the process of professional socialisation, one cannot discount an individual's own agency in participating in the socialisation process, they are not simply moulded into the profession as passive individuals following rules.<sup>85</sup> It would, therefore, seem most appropriate to subscribe to the notion that there are indeed contextual (social) and individual (cognitive) elements which work in tandem to support the process.<sup>86</sup>

Medical sociology has considered stages of socialisation that depart from a simple division between primary and secondary socialisation. Shuval<sup>87</sup> posited that professional socialisation consists of three stages: pre-socialisation, formal socialisation and post-socialisation.<sup>87</sup> Pre-socialisation occurs within one's family and schooling. This is followed by formal socialisation which takes place during professional education and training, such as at university, and is where students learn to behave in a professional manner through cognitive and interactional activities. Lastly, post-socialisation occurs after formal socialisation until retirement.

In pharmacy in GB, Willis et al.<sup>83</sup> described developmental stages that are similar to stages of socialisation identified by Shuval in medicine, in understanding how early career pharmacists learn about professionalism. They conducted 10 focus groups with early career pharmacists, pre-registration tutors and pharmacy support staff from hospital and community. It was found that there were three main developmental stages in learning about professionalism: early life; undergraduate education; and, most importantly, experience in practice (with feedback, role play and role models especially important here).<sup>83</sup>

There has been little contemporary research on professional socialisation in the health and social care professions as noted by Clouder in 2003,<sup>85</sup> and such comments, to date, cannot be challenged. Perhaps this is because the process itself is very complex which can be tackled from many different angles (e.g. examining changes in attitudes, values or behaviours – all of which are multifaceted). Whilst the lack of research into professional socialisation is apparent, particularly for pharmacy, there are studies which have looked into the socialisation of neophyte healthcare professionals in medicine,<sup>88,93, 94</sup> nursing,<sup>89-91</sup> dietetics,<sup>92, 93</sup> and physical therapy students.<sup>94</sup> Longitudinal qualitative studies such as those in nursing<sup>89-91</sup> offered the most insights into how individuals were socialised into a profession and developed professionalism.

With a brief overview of professional socialisation and its stages having been described, a closer look at the role of education and practice on socialising pharmacy learners and supporting the development of professionalism will be discussed.

#### 1.3.2.3 Understanding the role of formal education

This section focuses on the role of formal education and how this shapes the way pharmacy students are socialised into the profession and develop elements of professionalism. Formal education here is considered that which is part of the formal curriculum: i.e. that which is stated, intended, and formally offered.<sup>95</sup> The focus here is on the development of professionalism and professional socialisation during formal education in pharmacy in the UK, specifically the four year full-time Master of Pharmacy (MPharm) degree.

Although an individual's basic character may already be formed at the time of admission to the MPharm degree,<sup>96</sup> formal education can serve to inculcate the values, attitudes and behaviours of the profession in students. At the start of formal professional education, some schools of pharmacy, particularly those in the USA,<sup>97</sup> may hold a white coat ceremony, described by one school as when new students are welcomed to the school as 'colleagues dedicated to patient care'<sup>98</sup>; this may support professional socialisation.<sup>97</sup> Oaths to pharmacy may also be given during a white coat ceremony whereby students pledge their service to the profession. Again, whilst this may be more popular in the USA, it has more recently been enlisted by some schools in the UK such as Manchester and Huddersfield.<sup>99</sup> Throughout pharmacy students 'education, the importance of elements of professionalism can be conveyed to students through guidance and standards, such as the student code of conduct for pharmacy students in the UK.<sup>69</sup> Moreover, elements of professionalism (e.g. effective communication) may be taught directly as part of the pharmacy curricula, with most potential for this occurring during the more practice-based modules relating to pharmacy (e.g. role playing during dispensing labs).<sup>10, 14, 15</sup>

Debate over whether professionalism can be taught explicitly through formal education (didactically) is present in the literature. For example, from the medical literature, authors such as Cruess and Cruess<sup>100, 101</sup> support the notion that professionalism can, and needs to, be taught explicitly, particularly since doctors have demonstrated failures in upholding obligations associated with professionalism<sup>102, 103</sup> and been implicated in serious malpractice.<sup>1, 2</sup> The teaching of professionalism in formal education can be done through various means including lectures, smaller group seminars, directed reading and through doing role-playing exercises.<sup>46</sup> However, it is likely that the ways in which individuals learn professionalism in the educational setting also happen beyond what they are taught in the formal curriculum.<sup>95</sup>

In contrast to the formal curriculum are the 'informal' and 'hidden' curricula.<sup>95</sup> The hidden curriculum was a term first coined by Philip Jackson,<sup>104</sup> who observed elementary school classrooms and considered education a process of socialisation. Jackson found that teachers and students must learn the rules, regulations and routines in order to pass through the social institution (i.e. the school) satisfactorily. More recently, this notion of a hidden curriculum, and an 'informal curriculum', has been discussed in relation to medical education and training.<sup>47, 95</sup>

The informal curriculum, is unscripted, predominately ad-hoc, includes the significance of role models, and is a highly interpersonal form of teaching and learning. The hidden curriculum, which is described as a set of influences that function at the level of organisational structure and culture, includes customs, rituals, commonly held 'understandings' throughout medical (or indeed other professional) education.<sup>95</sup> The hidden curriculum has been implicated as a major contributor to the inculcation of professionalism within educational settings.<sup>22, 47, 105-107</sup> Hafferty (p.404),<sup>95</sup> argued that due to the hidden and informal curricula *"there is a fundamental distinction between what students are taught and what they learn."* 

The diversity and complexity of the informal and hidden curricula that can be witnessed in medical education is no doubt different to that in the MPharm degree in pharmacy. Indeed, medical students are exposed to the practice environment early on in their career<sup>108</sup> where much clinical teaching takes place and where integration between theory and practice, through a range of clinical placements, is emphasised in curricula.<sup>109</sup> There are ample opportunities to witness different working environments and practices. There is not a parallel experience for students completing the typical four-year MPharm degree,<sup>10, 110</sup> and most of the teaching and learning takes place within the university setting.

The university setting in pharmacy education lends itself to the professional socialisation and development of professionalism as the process is underway at the beginning of the MPharm.<sup>83</sup> An 'organisational philosophy', which essentially incorporates all aspects of teaching and learning leading to the development of professional attitudes and behaviours in existence within pharmacy schools has been described in the literature.<sup>14</sup> A school may be seen as 'integrated', whereby explicit standards of professionalism are both demonstrated by staff members and recognised and reinforced among students, is present, with much overlap between i) what is intended to be taught, ii) what is actually taught, and iii) what is received by learners. In contrast is a more 'diffuse' organisational philosophy with little overlap between the three.<sup>14</sup> Of particular importance during the MPharm, is the role of qualified pharmacist teaching practitioners to facilitate the professional socialisation of students.<sup>15, 44, 111</sup> In an examination of MPharm curricula in four UK schools of pharmacy, Taylor and Harding<sup>111</sup> reached the conclusion that the importance of professional socialisation, is inadequate and barely acknowledged. In another paper, Harding and Taylor (p.766)<sup>44</sup> noted:

"For pharmacy students, professional socialisation only occurs through interaction with those who embody and practise the profession's cultural values ... the quality and appropriateness of pharmacy education in preparing students for practice is potentially compromised by the shortage of pharmacytrained faculty and a tendency for the bulk of learning to take place in a purely academic environment."

Whilst MPharm education contributes to the professional socialisation of students, it is 'real life' practice experience in the workplace that is arguably where professional socialisation and the development of, and opportunities to demonstrate (i.e. with colleagues and patients) professionalism will truly occur. The medical literature discusses how workplace learning plays a critical role in the development of learners' attitudes, behaviours and skills as they are socialised

into the profession. A number of factors contribute to this development including work environment / culture, supervision, feedback, and, importantly, exposure to patients. Contact with patients during early stages of medical education has been shown to develop biomedical and clinical knowledge,<sup>112</sup> communication skills and empathy,<sup>113</sup> and clinical reasoning.<sup>114</sup>

Unfortunately, there appears to be a dearth of practical placements, exposing pharmacy students to practising pharmacists in practice during the MPharm degree. Research conducted in 2003 by Wilson et al.<sup>110</sup> found that all schools of pharmacy in the UK offered hospital placements, though the amount varied. There was little in the way of exposure to community practice which is the most common place for trainees to undertake pre-registration training; for example 72.1% of trainees in 2011/12 were training in community (GPhC, data from personal communication, May, 2011).

So how effective is the MPharm in socialising students into the profession, allowing them to transition into pre-registration training with suitable skills? Some research has helped answer this. For example, one study suggested that the MPharm degree may not prepare pharmacy graduates well for practice. Findings showed that 31% of pre-registration trainees surveyed in 2001 believed the MPharm degree had little resemblance to the knowledge required in practice and 87% believed that more emphasis should be placed on teaching clinical and practice subjects.<sup>115</sup> A more recent survey of final year MPharm students from 14 schools of pharmacy in 2006<sup>116</sup> appeared more positive, with the majority agreeing that the MPharm prepared them for the performance and professional approach to pharmacist-role tasks (e.g. good clinical knowledge; team-working skill; professional behaviours). However, as these respondents had not entered practice they may have been unable to predict what areas they were truly unprepared for. Such misjudgement has been found in research with junior doctors.<sup>117</sup> Findings from a study by Langley and Aheer<sup>118</sup> showed that there were discrepancies between final year MPharm students' perceptions of their abilities and employers' perceptions of graduates abilities. Most students that were surveyed believed they possessed some or most of the skills required for pre-registration training. In contrast, interviews with individuals involved in recruiting graduates considered communication skills and the ability to apply knowledge to be lacking at the start of preregistration training.<sup>118</sup> The limitation of this research, however, was the inclusion of only one school of pharmacy as opposed to 14 in aforementioned study<sup>116</sup> and therefore the findings lacked generalizability.

Although professional socialisation starts early on in one's career, at the start of professional education,<sup>22, 119</sup> the practice-based pre-registration training year arguably plays the largest and most significant role in this developmental process.

#### **1.3.2.4** The pre-registration training year in Great Britain

This section will consider the role of the pre-registration training year in pharmacy in GB in the professional socialisation and development of professionalism in pre-registration trainees. It should be noted that the labelling of this section as 'GB' as opposed to 'UK' is because Northern

Ireland manages its own system of pre-registration training under the Pharmaceutical Society of Northern Ireland.<sup>120</sup> The focus here is on pre-registration training in GB.

Following the four year MPharm degree, the vast majority of trainees will undertake their preregistration year in a single sector (community or hospital pharmacy). At the start of the preregistration year, trainees are allocated a pre-registration tutor, a pharmacist, who will be responsible for supervising and assessing trainees during the pre-registration year. Assessment involves signing off three 13-weekly progress forms and one final declaration confirming the trainee is deemed fit to join the register. Trainees must also demonstrate competence in 76 performance standards that cover areas of personal effectiveness, interpersonal skills, and medicines and health,<sup>121</sup> supported through their own written accounts documented in a portfolio; these are signed off by the tutor. To register, trainees must also pass a written national registration assessment. Newly registered pharmacists can go on to practise in any sector. (Appendix 2 provides a more comprehensive overview of the current arrangements for preregistration training including how it is delivered and requirements during training.)

In contrast to medicine, where registered doctors go on to complete years of speciality training, with accompanying monitoring and assessment, further training is not mandatory in pharmacy. Furthermore, there are no formal arrangements for continued support or mentorship for learning beyond registration in pharmacy. Therefore, it would seem particularly important for pharmacists to complete pre-registration training with the full range of competences required to practise effectively. It would seem much weight is placed on the pre-registration training year to effectively socialise trainees into the profession and develop professionalism. Naturally this would include developing all the necessary expert knowledge and skills to practise competently in their environment,<sup>42, 65</sup> wherever this may be (e.g. in a small independent pharmacy or a specialist hospital). Furthermore, other elements of professionalism such as responsibility<sup>41</sup> and accountability<sup>42</sup> and more humanistic elements of professionalism including altruism, respect for others and compassion should be fostered.<sup>22, 41</sup>

Research into the pre-registration year and its contribution to the development of trainees' professionalism appears to be lacking. Some research relating to this area was found although it did not address the issue of professionalism explicitly.<sup>122, 123</sup> For example, one study in the early 1990s by Mudhar<sup>123</sup> examined the views of pharmacy graduates, who were carrying out their pre-registration year, about their degree. Respondents believed that vocationally-oriented topics were the most useful, with topics such as pharmaceutical chemistry being of little use. Respondents reported that they benefitted a lot from clinically-oriented topics that they were taught during the degree. Other research investigating the views of pre-registration trainees found that pre-registration tutors may not be considered good role models by some trainees<sup>124</sup> and that tutors may not be involved with the selection of their trainees.<sup>124</sup> The questionnaires used, however, lacked detail and the findings did not reveal much about the process of professional socialisation and development of professionalism of trainees.

One particularly relevant study, relating to pre-registration training, examined hospital preregistration tutors' perceptions about competence (relating to professionalism) of pharmacy graduates and trainees at the time of registration<sup>125</sup> The authors used a questionnaire based upon Stern's definition of professionalism in medicine,<sup>126</sup> including items around communication skills, knowledge and skills and accountability. Results included, for example, that the majority of tutors believed graduates did not know how to communicate effectively with patients or other healthcare professionals, demonstrate good knowledge in their area of work, or be able to handle ethical decision making appropriately. In contrast, most tutors believed graduates knew how to communicate with tutors and the immediate pharmacy team effectively, understand and follow legislation relevant to pharmacy practice, treat all patient information as confidential, show respect for others and show compassion and empathy. By the time trainees could register following training, the vast majority of tutors believed that trainees would be competent in the aforementioned areas of practice, in addition to a range of others. There were, however, a few exceptions. For example, only 34% of tutors agreed trainees would be competent in demonstrating leadership at registration. This study demonstrated the utility of the training year in socialising trainees and facilitating their development of recognised elements of professionalism. However, it was an examination of perspectives of hospital tutors only, and did not explore processes over time that may lead to this development during pre-registration training. Another study by Christou et al.<sup>127</sup> compared a small number of hospital trainees and their tutors' ratings of trainees' competence on seven aspects of professionalism (e.g. communication skills; pharmacy practice knowledge) – largely similar to that in the aforementioned study<sup>125</sup> – at the start and towards the end of pre-registration training. Competence was seen to improve from both trainees' and tutors' perspectives, though tutors always rated their trainees higher then trainees rated themselves.<sup>127</sup> This study was, however, with a small sample from one region and was limited to the hospital sector.

Recent research in GB explored how professionalism is learned in early career pharmacists using focus groups, and this has relevance to understanding more about the process of professional socialisation and development of professionalism during pre-registration training.<sup>64, 65, 128, 129</sup> Participants included early career pharmacists between one and two years post-registration, pre-registration tutors and support staff (non-pharmacists: pharmacy technicians, dispensers and healthcare assistants). Findings from this research showed that the settings where professionalism was learned varied. Settings included the educational context, where much of the scientific knowledge considered to underpin professionalism<sup>130</sup> were seen to be learned; early life and upbringing, and, most importantly, early professional training and practice. Findings from this research also highlighted the importance of materials such as the MEP and the performance standards for pre-registration trainees<sup>131</sup> which provided guidelines for pharmacy practice; the importance of this were expressed by both pre-registration tutors and pre-registration trainees.

Communication skills were considered to be developed a lot through practice. Various comments from participants were made that made reference to communication and the development such skills. For example, newly qualified pharmacists may not use patient-friendly language. Having

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feedback was noted as an important element in the learning process to reflect on the ideal behaviours that should be carried out in practice. Interestingly, from the viewpoint of early career pharmacists, support staff were not considered to be role models whereas other pharmacists in the workplace, such as the pre-registration tutor, were. Some support staff did, however, make reference to the fact that they, along with the pre-registration tutor, helped the pre-registration trainee learn to communicate with patients which could have served the function of being a role model. There was also mention of negative role models witnessed in the practice setting, but these appeared to be recognised as 'negative' and their behaviours were seen as poor examples not to follow.<sup>65</sup> Organisational and contextual influences on professionalism were also examined in this study. The results from the focus groups made it clear that the workplace environment could have an impact on professionalism. Workload pressures, such as working out of hours in hospital pharmacy and meeting customer expectations in community pharmacy, were seen to affect professional behaviour and could cause some individuals to act unprofessionally. Also working with a range of patients, some who may be quite threatening, could also be deleterious to how professional someone behaves.<sup>65</sup>

#### **1.3.3 Summary: moving towards a programme of work**

Although the literature presented in the previous sections was not an exhaustive presentation of all of the research in this area as a whole (the scope of the topics considered can cover much more than literature from pharmacy and other healthcare professions), a number of common themes materialised. For example, one of the most noticeable findings in the search of literature on professionalism was that there was more available in the field of medicine than pharmacy. There was also more literature originating from the US compared to the UK.

Research identified in the literature relating to engendering professionalism often came in the form of case studies of individual schools of medicine<sup>132, 133</sup> and schools of pharmacy.<sup>134-136</sup> These studies were often conducted by academics within the school where the research took place. The sample of participants would typically include students in the early years of their medical or pharmacy education. There did not appear to be as much research conducted on qualified practitioners such as doctors and pharmacists; instead the focus tended to be on students and those in training. Perhaps this is because practitioners are less likely to be inculcated with professional values later in their careers and also because recruitment of practitioners in research can be difficult. <sup>137, 138</sup> In contrast, students and trainees undergo a vast amount of development in their formative years towards becoming a practitioner.<sup>65, 82</sup>

The small number of research studies that have been conducted around professionalism in pharmacy have often focused on exploring how professionalism can be defined.<sup>6, 10, 62</sup> Though a universal definition of professionalism may not be set in stone, research has shown considerable overlap in the constituents of professionalism that are pertinent in pharmacy (e.g. expert specialised knowledge; professional behaviours such as effective communication).<sup>10, 23, 62, 65, 139</sup> Other studies considered assessment methods (e.g. questionnaires),<sup>23, 140</sup> and factors that may facilitate or impede its development (e.g. role models).<sup>13, 15, 21, 22</sup> The research conducted on

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professionalism in pharmacy was typically not longitudinal, and therefore it was hard to ascertain how systems of instilling professionalism in education and training affect students over time.

In GB, the MPharm degree, has commonly lacked practice-based experience for students,<sup>10</sup> therefore the pre-registration year is likely to be a critical period in the development of professionalism as it bridges the gap between education and practice and it is where socialisation into the profession occurs most. It is in practice where interactions with healthcare professionals (who can act as role models<sup>82, 83, 141, 142</sup>) and patients<sup>112, 114</sup> – both central to one's professional socialisation and development – will take place. For a long time, pre-registration training has remained a rather nebulous 'black box'<sup>143</sup> that learners pass through with the end goal of preparing them for professional practice. There has been a lack of thorough evaluations into its efficacy to socialise trainees into the profession and develop professionalism. More research into the pre-registration year in pharmacy is needed to see how professionalism is fostered in pre-registration trainees as the profession moves towards a more patient-centred role.<sup>9</sup> It is also important to investigate the differences in professionalism development across the different settings where pre-registration training can take place as literature findings often related to the hospital sector.<sup>125, 127</sup>

The number, and quality, of role models working alongside trainees is likely to vary. Evidence from research in medicine and pharmacy has found that role models are very influential in the development of professionalism in students and residents in practice.<sup>13, 96, 144</sup> In the informal practice setting (as opposed to the more formal educational setting), pharmacy pre-registration trainees are likely to develop skills related to professionalism through being exposed to role models. Depending on the sector in which trainees are placed (e.g. in a hospital or community pharmacy), the numbers, as well as the types of role models besides tutors, are likely differ. For example, a pre-registration trainee working in a hospital pharmacy may come across many more pharmacists and, additionally, a range of doctors and other healthcare professionals. A trainee in a small independent community pharmacy may only work alongside one or two pharmacists, and support staff. Other factors may contribute to the development of professionalism during pre-registration training, such as the opportunities to be involved in patient care, although this concept has not been explored.

Given the paucity of research about pre-registration training with regards to professional socialisation and the development of professionalism, an appropriate step forward is to explore this. Although this critical period of development has been considered retrospectively in previous research,<sup>20</sup> the amount of detail and emphasis placed on how professionalism is being learnt has been lacking. It is important to explore the development of professionalism prospectively over a period of time (i.e. longitudinally) to gain a better understanding of the elements of professionalism that are prone to change over time and how changes may occur. Thus, the researcher was motivated to research professional socialisation and the development of professionalism, particularly behaviours (as has been the focus of many authors,<sup>23, 45, 55-57, 59</sup>) in

pre-registration training in pharmacy. The programme of work that was developed to research this topic is discussed in the next chapter.

# 2 PROGRAMME OF WORK

This chapter provides an overview of the overall aims of the programme of work and the design and general approach to undertaking the two work streams that composed the programme of work. Details of the ethical approval granted for each work stream also presented. This is followed by a brief discussion of the philosophical stance adopted which plays a role in approaching a research study.<sup>145, 146</sup>

## 2.1 Overall aim of the programme of work

To investigate the process of professional socialisation and development of professionalism in trainees during pre-registration training in pharmacy. In order to address the overall aim, two separate work streams were devised, outlined in the following sections.

# 2.2 Work stream 1: a prospective longitudinal mixed methods study

There were two overarching aims for work stream 1:

- to investigate the process of professional socialisation and development of professionalism in pharmacy trainees, over the course of the pre-registration training year and early practice from the perspective of trainees and their tutors; and
- to explore any similarities / differences in the process of professional socialisation and development of professionalism in trainees during pharmacy pre-registration training across different organisations and sectors.

In order to address these aims, a prospective longitudinal design was considered most appropriate. The longitudinal aspect of the design offered a number of advantages in this study and these included being able to:

- explore accounts of experiences in practice during different stages
- explore temporal changes in, for example, roles and responsibilities
- return to participants to discuss findings from previous rounds of data collection

Qualitative and quantitative methods were used to collect data in this study as this offered a means of triangulating data sources that can unite quantitative and qualitative findings<sup>145</sup>; results from each method can complement each other to address the research aims and objectives. Combining qualitative and quantitative methods longitudinally has benefits, for example, it can be possible to interpret quantitative data with more insight.<sup>147</sup> Moreover, following up qualitative work with a larger quantitative study (which was done in work stream 2) can help generalise findings.<sup>147</sup>

There were four rounds of data collection in this study (denoted 'Round 1' to 'Round 4' in Figure 2.1). Each round of data collection typically spanned three weeks. Semi-structured interviews and questionnaires were used as tools for data collection (see section 3.2 in Chapter 3). A paired approach to collecting data was adopted which allowed the research to explore the process of


Figure 2.1: Diagram of the research design and data collection in programme of work

professional socialisation and development of professionalism from two perspectives: one being more personal and self-reflective (trainees), and another from a salient individual closely involved in trainee supervision (tutors).

The first round of data collection took place at the beginning of the pre-registration training year to gain insight into the transition trainees underwent from the MPharm degree into training. The second and third round of data collection were undertaken around the time of the completion of 13 week (trainees only) and 39 week progress reports to explore the process of professional socialisation and the development of professionalism at pertinent stages in the pre-registration year. Collecting data around the time of the completion of progress reports seemed advantageous because trainees and their tutors may have been more aware of trainee progress allowing them to reflect on interview questions and provide more informed responses. The final round of data collection (round 4) with newly qualified pharmacists (NQPs; former trainees) only took place after trainees had qualified as pharmacists. This allowed the researcher to explore any changes occurring in the final stages of training as well as the transition trainees faced as they progressed to practising as NQPs.

# 2.2.1 Ethical approval and considerations

NHS ethics approval was required at the time for this research as it involved the study of NHS staff on NHS premises (in the case of trainees and tutors working in hospital pharmacy). The research met criteria for proportionate review and was approved by the proportionate review subcommittee of the NRES Committee North East – Newcastle and North Tyneside 1 on 25<sup>th</sup> July, 2011 (Appendix 3).

The researcher ensured, from the first contact, that participants were aware of their right to withdraw at any time and detailed study information was contained in a participant information sheet (Appendices 4 and 5). Participants were given ample opportunity to understand the nature, purpose, and anticipated consequences of their involvement in the research so that they could give informed consent<sup>148</sup> (Appendix 6). The researcher obtained informed consent from all participants and kept adequate records of when, how and from whom consent was obtained. Participants were reminded that interviews were anonymous and confidential, that their participation was entirely voluntary and that they could withdraw at any time. Data handling and storage was done in accordance with The University of Manchester policies and procedures.

# 2.3 Work stream 2: a cross-sectional survey study

The overall aim of work stream 2 was to examine changes in behavioural professionalism from a large representative sample of community and hospital trainees at the beginning to near the end of pre-registration training and gather trainees' views on supervision received and their perceptions of how they believed they mattered to patients.<sup>i</sup>

<sup>&</sup>lt;sup>1</sup> A patient mattering scale was used as a measure to tap into aspects of trainee engagement with patients.

In order to address the aim of work stream 2, a cross-sectional paper-based survey was developed. This was informed by the findings from work stream 1 which revealed the importance of, for example, supervision and patient involvement as conducive to the process of professional socialisation.

The survey was administered to trainees near the end of the 2011/12 pre-registration training year with a reminder was sent approximately two weeks after (see Figure 2.1) to increase response rate (see and section 4.2.4).

# 2.3.1 Ethical approval and considerations

University ethics approval was required to conduct the research. An application was made to The University of Manchester ethics committee in May, 2012 full ethical approval was granted on 20<sup>th</sup> June, 2012 (Appendix 7).

An invitation letter (Appendix 8) with information about the study was provided to potential participants along with the questionnaire. The information in the invitation letter outlined the nature of the study and that consent would be implied by returning the questionnaire to the researcher, which was not compulsory. Participants were given ample opportunity to understand the nature of the research before being contacted with a reminder letter (Appendix 9), if they did not return the questionnaire, sent approximately one week after the first mail out. Data handling and storage was done in accordance with The University of Manchester policies and procedures.

# 2.4 Philosophical perspective

Philosophical perspectives can be considered *'the worldviews that define the nature of the world, the individual's place in it, and the possible relationships to that world and its parts'* (Schuh and Barab, 2007:68).<sup>149</sup> Creswell (p.8)<sup>145</sup> uses the term 'worldview' to define what others may have named 'paradigms' or 'epistemologies and ontologies' and defines a world view as:

"A general orientation about the world and the nature of research that a researcher holds. These worldviews are shaped by the discipline area of the student, the beliefs of advisers and faculty in a student's area, and past research experiences. The types of beliefs held by individual researchers will often lead to embracing a qualitative, quantitative, or mixed methods approach in their research."

A researcher's worldview has an effect on the decisions they will make in adopting a research methodology.<sup>145, 146</sup> The researcher's own background in psychology – a diverse discipline where disparate methodologies are adopted to study a range of phenomena – is recognised as influential in the worldview from which the programme of work was conceived. Additionally, the background of the supervisory team – both pharmacists with considerable applied health service research experience – is acknowledged as another influential factor. The applied nature of the work undertaken can be attributed to the background and past research experience of the researcher and supervisory team.

Naturally, the worldview from which this research was devised was also shaped by a review of literature in the area of professional socialisation and professionalism which exposed the number of ways in which this phenomenon can be studied: both qualitative and quantitative methods have been applied. A mixed methods approach, benefitting from the depth of detail and exploration of new concepts and phenomena<sup>150</sup> with qualitative methods, combined with a more standardised, quantitative, component was seen to be the best option. The use of both qualitative and quantitative and quantitative methods together can increase the overall strength of a study compared to either method alone.<sup>151</sup>

Quantitative methods in social science, fall under a more positivist paradigm, and purists of these methods believe that observations in the social world should be treated in a similar fashion to physical phenomena measured in natural sciences.<sup>145, 146</sup> Qualitative methods are usually considered to be more interpretavist, or constructivist, and go against assumptions of positivist views, arguing that reality is socially constructed.<sup>145, 152</sup> A mixed methods approach, using both quantitative and qualitative methodologies, takes an almost dual philosophical stance;<sup>152</sup> this is known as pragmaticism.<sup>153, 154</sup> This paradigm considers both qualitative and quantitative methods as compatible.<sup>154</sup> In the case of this research, the use of mixed methods acknowledges the constructivist nature of individuals' experiences (relating to pre-registration training) whilst also attempting to obtain a more objective, standardised view on a social construct (behavioural professionalism) through the use of questionnaires.

## 2.5 Subsequent chapters in thesis

There are three chapters that follow. Firstly, in Chapter 3, is the presentation of work stream 1: a prospective longitudinal study of the professional socialisation and development of professionalism in trainees during pharmacy pre-registration training in 2011/12. Chapter 4 presents work stream 2: a cross-sectional survey of pre-registration trainees towards the end of the 2011/12 pre-registration year. Chapter 5 presents the overall discussion of the programme of work, considering its strengths and weaknesses, implications of findings and suggestions for future research and recommendations for pharmacy education and training.

# 3 WORK STREAM 1

This chapter presents the work undertaken for work stream 1. A prospective, longitudinal mixed methods study was conducted that investigated the professional socialisation and development of professionalism from the perspectives of 20 trainees and their tutors from community and hospital pharmacy across the North West of England. The aims and objectives are outlined first before going into detail about the methodology that was employed. The results, according to themes formulated from the analytical framework, relating to the developmental process of trainees through changes in roles, abilities and support, is then presented. Summary points are provided at the end of the different results sections to highlight the key points raised from the preceding findings. The chapter concludes with a summary. A more comprehensive discussion of the implications of work stream 1, along with those of work stream 2, is given in a discussion: Chapter 5.

# 3.1 Aims and objectives

There were two overarching aims for work stream 1:

- to investigate the process of professional socialisation and development of professionalism in pharmacy trainees longitudinally, over the course of the preregistration training year and into early practice from the perspective of trainees and their tutors; and
- to explore any similarities / differences in the process of professional socialisation and development of professionalism in trainees during pre-registration training across different organisations and pharmacy sectors.

In order to address these aims the following objectives were set:

- to explore the abilities trainees were learning / developing at different time periods during pre-registration training;
- to explore perceived changes in trainees' ability to practise as a professional pharmacist at different time periods during pre-registration training;
- to explore factors that may facilitate or hinder professional socialisation and the development of professionalism in trainees during pre-registration training; and
- to explore how trainees' work colleagues are viewed in terms of professionalism and how they may influence trainees.

# 3.2 Methods

## 3.2.1 Data collection: semi-structured interviews

Professional socialisation, or elements of it, have been examined qualitatively and quantitatively. The more in-depth longitudinal studies from nursing, for example, have chosen to explore the process of professional socialisation using interviews<sup>89, 90</sup> and diaries.<sup>90</sup> The use of qualitative methods was appropriate for this study because the professional socialisation of trainees, and their development of professionalism has not been researched in the pre-registration year in much detail. Qualitative research is well suited to address research areas that are poorly understood as it allows rich data to be extracted and can provide a more detailed understanding of social phenomena.<sup>150</sup> According to Burman (p.50),<sup>155</sup> qualitative methods such as interviews:

"Can permit exploration of issues that may be too complex to investigate through quantitative means. That is, given the latter's aim to simplify phenomena, they can misrepresent the nature of the questions under investigation."

Different qualitative methods were considered, such as using focus groups, case studies, diaries and observations. Focus groups can be useful to capture the views of a group of individuals in a single session which, logistically, is very beneficial.<sup>156</sup> Focus groups can also allow the researcher to consider group interactions in a focus group.<sup>157, 158</sup> However, this method was ruled out because this option sacrifices the amount of detail that can be captured from individual experiences.<sup>158</sup> It would also hinder the possibility of collecting paired data from each trainee and their tutor. Furthermore, some individuals in a focus group may dominate a discussion, limiting others from contributing.<sup>158</sup> Practically speaking, ensuring all trainees and their tutors took part in a focus group would be difficult because it is difficult to find a time to suit all participants and absences can frequently occur.<sup>156</sup> Whilst the use of diaries can be useful to collect rich data on salient experiences directly from respondents in real time,<sup>159</sup> The level of commitment required was considered too excessive given that participants would be expected to take part in a lengthy longitudinal study.

A case study approach<sup>160</sup> was considered to gain a very detailed view of the professional socialisations in a small number of trainees at a select number of training sites. However, although this approach may give a detailed account of the happenings with a small number of training premises, it would not account for common themes amongst a larger number of sites or allow comparisons to be made between sectors such as community and hospital pharmacy. Also, as the researcher aspired to be able to work towards generalisable findings (e.g. using a survey), the case study approach would not be as conducive to this pathway as using another method, such as semi-structured interviews.

Ethnographic approaches,<sup>161</sup> such as observing trainees in the workplace, were also considered. However, a number of issues with observing trainees periodically to explore their development would arise. Such issues include, capturing only a 'snapshot' of one's working behaviour and attempting to reach conclusions based on this. The possibility of the Hawthorne effect,<sup>162</sup> where one's behaviour may change due to being observed, and also the time commitment required by the researcher to visit and observe the different tasks undertaken by a trainee in different settings.

The interview approach was selected because there was a great amount of detail to cover in a topic such as professional socialisation and the development of professionalism. Trainees and their tutors were recruited together as pairs and the process of professional socialisation and development of professionalism was explored from two perspectives by interviewing trainees and their tutors separately. Due to this method of triangulation, there was more of a focus on the development of behaviours which were considered through breaking down professionalism into different components (see section 3.2.1.2). A semi-structured approach to conducting the interviews was adopted to allow the researcher to digress and probe with questions beyond the set interview questions.<sup>150</sup> A semi-structured approach to interviewing allows the researcher to adapt the questions to the interviewee, and one does not have to persevere through an interview schedule that does not resonate well with an interviewee.<sup>155</sup>

The researcher was well versed in conducting semi-structured interviews through attending training courses and undertaking semi-structured interviews with pharmacists in pharmacy practice research previously. This was yet another favourable reason for selecting this approach to data collection.

## 3.2.1.1 Critical incident technique

Whilst conducting the semi-structured interviews the critical incident technique (CIT)<sup>163</sup> was utilised to draw out incidents of professional and unprofessional behaviour performed by trainees. The CIT was described by Chell (p.56)<sup>164</sup> as:

"A qualitative interview procedure which facilitates the investigation of significant occurrences (events, incidents, processes, or issues) identified by the respondent, the way they are managed, and the outcomes in terms of perceived effects. The objective is to gain understanding of the incident from the perspective of the individual, taking into account cognitive, affective and behavioural elements."

The origin of the CIT method can be traced back to the Aviation Psychology Programme of the United States Air Force around the 1940s where it was used to investigate flying behaviours in pilots. Flanagan (p.335),<sup>163</sup> one of the main proponents of the method and involved in its development, described a critical incident as *'any observable human activity that is sufficient in itself to permit inferences and predictions to be made about the person performing the act.'* The CIT method aims to facilitate participants' recollection of events through gathering specific details about an incident, such as the situation which led to the incident, the actions or behaviours of the main person in the incident, and the results of the behavioural actions.<sup>165, 166</sup> Data collection methods used with the CIT include the use of record keeping, questionnaires and, most commonly, interviews.<sup>163, 166</sup> Exploring the types of critical incidents taking place in a setting can help one to understand more about the different activities taking place and the tasks an individual is involved in. The units of analysis can be either at an individual or organisational level, which allows a research to explore concepts such as culture.<sup>164</sup>

Flanagan pointed out that the use of the CIT should not be prescriptive with rigid rules; it can be used flexibly to meet the demands of the situation at hand.<sup>163</sup> It is clear that the CIT has been adopted in many different studies, and has become a popular research tool in healthcare research<sup>166-166</sup> including pharmacy.<sup>128, 169, 170</sup> The CIT has been used to explore professionalism in pharmacy by identifying incidents of unprofessional attitudes and behaviours of pharmacy students in order to investigate the concept of professionalism.<sup>171</sup> More recently, the CIT was employed in a study on professionalism in early career pharmacists in Great Britain,<sup>65</sup> and it was useful to provide examples of professional and unprofessional behaviours in pharmacy. In the present study, the use of the CIT, through asking participants for examples of professional and unprofessional acts carried out by trainees, could infer the types of activities trainees were actively engaged in at different stages of the training year. Furthermore, it helped identify how professionalism may develop through time, by examining the incidents recalled by participants at different time periods. The longitudinal design employed, with several points of data collection, helped ameliorate issues with recall as events could be recalled from more recent events spanning only a few weeks or months as opposed to a full year of training.

Advantages of the CIT method include having a rich source of data from the perspective of the participant, incidents which they consider most relevant to the phenomenon being discussed.<sup>172</sup> CIT is also very useful for investigating an under-researched area,<sup>173</sup> such as the topic of this study. Naturally, as with all methodologies, there are some disadvantages to the CIT methodology including the reliance on respondents to recall incidents from memory which some participants may struggle with.<sup>164, 172</sup> Moreover, if an incident happened a long time ago, from the point of interview, a participant may attempt to reinterpret the incident, which may not always be an accurate account of what occurred; though this was mitigated with the longitudinal design. However, when comprehensive details of an incident are given, it may be assumed that the recalled events are quite accurate.<sup>163, 166</sup> In this study, attempts were made, by emailing participants ahead of an arranged interview, to encourage them to note incidents of professional / unprofessional, or critical learning events that occurred during the interim period between interviews. It is also recognised that given the nature of the research topic interviewees may be consciously selective of the critical incidents they describe and therefore they may not be wholly representative of all critical incidents occurring during training and early practice.

#### 3.2.1.2 The interview schedules

A total of six (related) interview schedules were used for conducting semi-structured interviews: four for each round of interviews with trainees / newly qualified pharmacists (Appendices 10-13) and two with tutors (Appendices 14 and 15). The interview schedules were created iteratively during the research process. Initially, prior to the first round of interviews with trainees and tutors, one interview schedule was created for use with trainees. This was adapted slightly so it would be applicable to tutors. Subsequent interview schedules built on preceding ones. Interview schedules for trainees and tutors covered the same topics, to allow for comparisons, but the wording of questions differed.

The formulation of the interview schedules used in this research were based on the substantive literature around professional socialisation and professionalism as well as the research aims and objectives. Having an understanding of the factors associated with professional socialisation, as found in disciplines such as medicine and nursing, allowed the researcher to develop the interview schedules. The interview schedules used during the pre-registration training year can be broadly classified into different sections which focused on:

- learning and development;
- work colleagues and support; and
- preparedness to practise as a professional pharmacist.<sup>ii</sup>

These broad areas allowed the researcher to cover appropriate aspects of pre-registration training which would capture the professional socialisation of trainees and development of professionalism.

In brief, the section on learning and development was examined through considering any transitional changes occurring (e.g. from MPharm to pre-registration training), the changing role and responsibilities of the trainees, and changes in their abilities with patients and colleagues, as well as improvements in trainees' clinical knowledge. The division between these abilities was drawn from other research which has also unpacked professionalism in a similar fashion.<sup>59, 62, 174</sup> Furthermore, the availability of a number of instruments<sup>23, 140, 175, 176</sup> that sought to measure professionalism (as a composite of different factors) were studied which helped partition different elements of professionalism to develop specific questions about the construct.

The section about work colleagues and support covered issues related to the work environment and hidden curriculum,<sup>47, 95, 177, 178</sup> such as the professionalism of colleagues, role models and general support and feedback trainees received during training. Questions about preparedness for practice teased apart the skills that participants believed were lacking in trainees in order to carry out the role of a professional pharmacist.

When devising interview questions, open ended questions, which precipitated more detailed responses from interviewees, were used. This also allowed the researcher to have discussions with the interviewee in a semi-structured manner and to use prompts within the interview schedule where necessary. Attempts were made to avoid the use of closed questions, which elicited 'yes' / 'no' responses, where possible. The researcher was also aware of leading questions – phrased in a manner that tends to suggest a desired answer.<sup>150</sup>

The CIT element of the interviews schedules involved asking trainees and tutors to provide examples of incidents where trainees were effective or ineffective in their practice, whilst probing for professional and unprofessional behaviour demonstrated by trainees.

<sup>&</sup>lt;sup>ii</sup> Defined in this research as a pharmacist who possesses the attitudes and behaviours expected by the profession and can carry out the role professionally – considering the aspects of professionalism discussed in the interview.

Pilot interviews were conducted in June, 2011 with four hospital pharmacy trainees, a community pharmacy trainee and an experienced pharmacist working as a divisional teaching practitioner in community pharmacy. In these interviews the researcher asked questions from a provisional topic guide in detail, putting forth the questions and inviting open discussion about their comprehension and applicability. The interviews went well with interviewees understanding the questions and finding them relevant to the topics being discussed. Feedback they provided led to adjusting the wording of a few questions to improve clarity.

## 3.2.2 Data collection: questionnaires

The aim of the questionnaire was to obtain a standardised measure of professionalism for trainees from the perspectives of trainees and their tutors at different points in the training year to track its development as objectively as possible. By doing so alongside the use of semi-structured interviews it would be possible to see if professionalism was perceived to increase. Although different methods of assessing professionalism, or elements of it, exist<sup>179</sup> (e.g. observations<sup>180</sup>) much research from different professions has approached assessing it through the use of questionnaires.<sup>23, 179, 181-183</sup>

Rather than attempting to construct a professionalism scale for use in this research, it seemed more appropriate to consider using one that had already been used and validated. The general consensus from reviews of instruments that have assessed professionalism is that current instruments need to be tested more for their validity and reliability in order to make progress, and that there is no strong need to develop more instruments.<sup>182, 184, 185</sup>

The key consideration in selecting an instrument was to have one that could be completed by trainees and tutors, could be completed in a brief period of time, and one that could potentially be used longitudinally. The review of the literature (section 1.3) helped to filter down a number of questionnaires that could be used to examined professionalism in pharmacy.<sup>23, 140, 186-189</sup> In particular, there were two potential candidates for use in this research as they met the basic criteria for selection, and had been used in pharmacy. The first was Hammer's professionalism instrument consisting of 25 items which load onto the following four factors (subscales; number of items in parentheses):

- 1) Interpersonal / Social skills (10)
- 2) Responsibility (9)
- 3) Communication skills (4)
- 4) Appearance (2)

This instrument can serve as self-assessment of professionalism as well as peer assessment depending on the instructions given. It was used originally by Hammer et al. <sup>23</sup> to measure professionalism in pharmacy students in the USA participating in practice-based placements from the perspective of pharmacy students and preceptors (pharmacists that supervise pharmacy students during placements). The questions in the questionnaire ask participants to rate themselves (for students) or their student (for preceptors) on a number of professional

behaviours. This is done on a five point scale: from 1 ('needs significant improvement') to 5 ('excellent').

The other instrument that was strongly considered was developed by Chisholm et al.<sup>140</sup> It was developed to self-assess professionalism. The items within the questionnaire were decided on through group discussions with pharmacy students, faculty and pharmacists and were guided by tenets of professionalism<sup>139</sup> adapted by Hammer et al.<sup>22</sup> to fit in with pharmacy rather than medicine. A final 18-item instrument was created after conducting factor analysis on the results from a survey of first year pharmacy students and recent graduates. The factors of the instrument were 'excellence', 'respect for others', 'altruism', 'duty', 'accountability', and 'honor and integrity,' i.e. the same as the tenets of professionalism.<sup>22</sup> The instrument developed by Chisholm was tailored for self-assessment only, and would have required significant modifications to be suitable for use with trainees and tutors. Moreover, some items seemed to tap into attitudinal elements of professionalism which, again, would only be suitable for self-assessment (e.g. 'I would take a job where I felt I was needed and could make a difference even if it paid less than other positions') or items which related to pharmacy students and would not applicable to pre-registration trainees (e.g. 'I complete my assignments independently and without supervision').

The behavioural professionalism assessment by Hammer et al. (2000)<sup>23</sup> was selected for use in this study because it measures 25 behaviours that could be assessed by both trainees and tutors. Consent to use the questionnaire in this research was given by the main author, Dana Hammer. Amendments were made to the original questionnaire (Appendix 1) allowing it to be applicable to this research. A questionnaire for trainees (Appendix 16), used in rounds 1 to 3, and a separate questionnaire for tutors, used in round 1 and round 3 (Appendix 17) were developed following a number of amendments.

Firstly, the instructions had to be changed as the original wording in the questionnaire used 'student' so this was revised in order to make it comprehendible for use with trainees and tutors. The last sentence in the instructions, about having no basis for judgement (i.e. 'N' responses), was removed because this response option was not made available to participants. Retaining this response would create difficulties in cross comparisons of the results between different trainees and across time, so removing it would force respondents to select a rating between 1 and 5. (Participants were asked to respond to the best of their ability based on their experiences (in the case of trainees) or what they had witnessed (in the case of tutors). A final statement advising respondents to base their ratings on overall impressions of their own, or their trainee's, behaviour at that stage in the training year was included.

The wording of the 25 items was changed because 'student' was written at the beginning of the items (e.g. 'Student is reliable and dependable, *i.e.*, can be counted on to fulfil responsibilities and meet expectations.'). 'Student' was changed to 'l' for use with trainees or 'trainee' for use with tutors for all items. The tense of the items was changed to present tense. Words, such as 'utilizes' in item 8, were changed to the British spelling: 'utilises'. The word 'empathic' in item 4 was changed to 'empathetic'. Some details following item 8 were removed: 'acts in a manner that

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shows recognition that he/she is a guest at the practice site as a professional student.' This was because it was not applicable for use with trainees.

The questionnaire used with NQPs (former trainees) in round 4 (Appendix 18) differed somewhat from that used in rounds 1 to 3. The instructions were modified and an additional rating column that allowed NQPs to rate themselves at the present time (a few months into practising as pharmacist) and also retrospectively (at the beginning of pre-registration training). This was done so that perceptions of behavioural professionalism in round 1 could be compared to perceptions of behavioural professionalism in round 4, in light of the full experience of pre-registration and early practice as a pharmacist.

As with the interview schedules, the questionnaire was piloted with the trainees in hospital and community and the senior teaching practitioner at The University of Manchester as part of a validation process to ensure the questionnaire was comprehendible. This was done after the interview schedules were piloted. All participants were positive about the utility of the questionnaire and believed it covered a range of behaviours related to professionalism and that it was fit to use longitudinally as well. They believed the instructions and what was being asked were clear and comprehendible.

## 3.2.3 Sampling

The sampling procedure carried out in this study was based on qualitative sampling techniques. Although mixed methods were used, there was more emphasis placed on the qualitative elements of the research to explore the process of professional socialisation and development of professionalism through interviews as opposed to the quantitative component examining behavioural professionalism alongside interviews. There was essentially a trade off in this instance between representativeness (associated with probability sampling in quantitative research) and saturation (associated with purposive sampling in qualitative research).<sup>190</sup>

The aim of sampling in qualitative research is to acquire a sample which can throw light on the research questions being explored, as opposed to attempting to generalise findings to a wider population, as in quantitative research.<sup>191</sup> It is therefore common to purposively select a sample of participants in qualitative research, where units of a sample are chosen because they possess characteristics which the research is interested in studying.<sup>192</sup> The sampling frame from which the non-random, purposive sample<sup>191</sup> was drawn included trainees and tutors in North West England, the researcher's location. In line with the aims of the research, the aim of the sampling procedure was to acquire a sample of trainees and their tutors from different sectors of pharmacy. Due to trainees' different work environments and experiences during pre-registration that have an impact on professional socialisation, seeking interviewees from the different work sectors (hospital pharmacy and community pharmacy) seemed appropriate.

Though, not in line with quota sampling techniques<sup>150</sup> which seek to specify precisely the number of people to recruit based on stratifying the population,<sup>150, 192</sup> an approximate number of participants from different settings (community: multiples of different sizes, supermarkets,

independents; hospital: teaching; district general) were targeted which would provide insights into pre-registration training across sectors. Moreover, attempts were made to obtain a heterogeneous sample which included men and women and different ethnicities.

The 'snowballing' method, which involved asking those recruited to the study to identify others they knew,<sup>192</sup> was also employed to recruit further participants to this study. Consideration was given to the types of participants made available with this method to maintain a diverse sample; the snowballing method can compromise this if one is not cautious.<sup>192</sup>

# 3.2.4 Sample size

Qualitative researchers have not attached the same level of importance to sample size as their quantitative counterparts.<sup>193</sup> However, in general, there should be an adequate sample of participants to reach data saturation, whereby no new themes emerge from the data.<sup>194</sup> It has been shown that data saturation can be reached by around 12 interviews if one is exploring a phenomenon with a relatively homogeneous group,<sup>194</sup> though more may be needed if one wishes to explore how two or more groups differ on a given dimension.<sup>194</sup> Another suggestion, by Morse<sup>195</sup> for selecting a sample size is that researchers use at least six participants to examine the essence of experience.

Although there appears to be no set formula for determining an appropriate sample size for this (and most other) qualitative research, it was initially proposed that six trainee-tutor pairs of participants from hospital and nine pairs from community (three pairs from different settings: multiples, supermarkets, independents) would be sufficient to meet the aims and objectives of the research. However, trainees conducting training in multiples make up much of the population of trainees and there was much variation in multiples, from small to very large, so more trainees were considered. It was expected that between 15 and 20 trainee-tutor pairs would be a reasonable sample size for this study. This number would satisfy recommendations<sup>193, 194</sup> for exploring experiences of all trainees as well as differences that may exist between the two main sectors community and hospital pharmacy.

# 3.2.5 Inclusion / exclusion criteria

Participants were recruited in pairs of trainees and their tutors who met the following inclusion criteria:

- pharmacy pre-registration trainees who completed the MPharm degree in the UK and were training in hospital or community pharmacy in North West England in 2011/2012; and
- pre-registration tutor pharmacists currently acting as a tutor to a recruited trainee and practising in hospital or community pharmacy in North West England in 2011/2012.

The exclusion criteria were those that do not meet the inclusion criteria, such as trainees completing pre-registration training following an Overseas pharmacists' assessment programme (OSPAP), or trainees completing a sandwich course, split post or joint post as a mode of training.

# 3.2.6 Recruitment strategy

A number of potential participants were identified via contacts known to the research team in the Pharmacy Practice division in Manchester Pharmacy School at The University of Manchester. Invitation letters / emails were provided to the contacts, who then forwarded these to colleagues and relevant individuals at their place of work and through professional networks, inviting them to participate in the study with the researcher copied into communication. These emails also included a participant information sheet (Appendices 4-5) and consent form (Appendix 6). Potential participants were asked to contact the researcher if they were interested in participating in the study to arrange an interview and clarify any questions they may have. If there was no response then a second email was sent by the researcher as a reminder.

One contact at the university was able to disseminate information about the study to trainees during a regional training day. Another contact at the university was able to post an advertisement about the study with the researcher's details on the Northwest Local Practice Forum website.<sup>196</sup> The pre-registration training premises section of the GPhC website<sup>197</sup> was also utilised in order to collect the contact details of additional training sites to approach. The researcher then made telephone calls to these sites and asked to speak to the tutor to inform them about the study and to subsequently send information sheets if they showed an interest in the research.

In order to reach tutors and trainees, management staff within larger organisations were typically approached first to gain access to tutor and trainee contact details. In smaller organisations, potential participants were often contacted directly to inform them of the research and to invite them and their trainee to take part (the tutor was targeted as the preferred choice for initial contact). In some cases the trainee was approached first if, for example, the tutor had not been available to speak or where a training day was taking place in which case trainees were informed of the study by a colleague of the researcher known to the trainees. After the information was sent to potential participants at least one follow up reminder took place if there was no response. As an incentive, a £40 Amazon gift voucher was offered to trainees as an incentive for completing all four rounds of the study; tutors were not offered a gift voucher. In order to account for any loss of participants during the study, the research sought to over-recruit the number of participants that were considered necessary.

## 3.2.7 Data analysis: semi-structured interviews

Interviews were transcribed verbatim and transcriptions were created using Express Scribe transcription software and Microsoft Word 2007/2010.

Two approaches were adopted to analyse the majority of the qualitative data, underpinning a thematic analytic approach to the analysis of the data. These methods to analysing the qualitative data (template analysis and framework analysis) are described in sections 3.2.7.1 and 3.2.7.2, respectively. The two approaches are very similar, mainly differing on the use of charts (framework analysis). The researcher did not regularly undertake 'charting', though this approach

to synthesising the data was employed at times when deemed useful. The majority of the data was analysed using template analysis.

Critical incidents in the interview data were analysed separately from the rest of the data after they were identified, isolated and consolidated. The approach to analysing critical incidents is described in section 3.2.7.3.

Data analysis was done iteratively with each round of interviews being analysed and reviewed by the researcher's supervisory team periodically before moving onto the analysis of subsequent rounds of interviews. After the first round of interviews were completed, a surface-level analysis of the data followed transcription of the data. This allowed the researcher to consider amendments which could be made to the interview schedule in subsequent rounds. This process was carried out for all interview rounds so the preceding interviews fed into interviews that followed; both in terms of finalising the interview schedule and in refreshing the researcher's memory on discussions that took place with the trainee, or tutor, in the previous interview(s).

The more in-depth analysis (i.e. 'analysis proper') started during work stream 1 and continued beyond all four rounds of data collection. It would have been preferable to thoroughly analyse each set of interviews prior undertaking the next set. However, the resource intensive nature of transcribing and analysing numerous interviews and arranging further interviews was very demanding, limiting the possibility of this to occur during the timeline set by the pre-registration year. The qualitative analysis software package QSR NVivo 9.2 was used to assist with the analysis conducted.

## 3.2.7.1 Template analysis

Template analysis is an approach to analysing qualitative data thematically. A thematic analysis aims to establish themes in the data which has been defined by Boyatzis (p.4)<sup>198</sup> as:

"A pattern found in the information that at the minimum describes and organizes possible observations or at the maximum interprets aspects of the phenomenon. ... The themes may be initially generated inductively from the raw information or generated deductively from theory and prior research."

In thematic analysis the researcher may go through coding data into categories and then into themes and subordinate sub-themes and it has been described by Boyatzis (p.4)<sup>198</sup> as "*a process to be used with qualitative information. It is not another qualitative method but a process that can be used with most, if not all, qualitative methods…."* 

The main approach to the analysis of interview data was used through template analysis. King (p.21),<sup>199</sup> one of the major proponents of this method describes template analysis as *"a related group of techniques for thematically organizing and analysing textual data."* A list of codes known as a template is created by the researcher which represents themes identified in the data.<sup>199</sup> The formulation of the template is steered by a priori theories, but the list of codes can change as the researcher analyses the data. The template is commonly organised in a hierarchical manner in

which relationships between themes are defined.<sup>199</sup> King<sup>199</sup> discussed some modifications that may take place with an initial template including:

- Insertion where new codes are added to the template when a novel issue arises that was not considered in the initial template;
- Deletion where initial codes are deleted because they were not utilised; some codes may overlap with others and then be deleted;
- Changing scope where a code is defined too narrowly or broadly and has to be reformatted; it could be moved up or down a level within a hierarchical coding list; and
- Changing higher-order classification where a lower order (position in hierarchy) code is moved from under one higher order code to another higher order code.

The creation of a final template generally takes place after the data has been extensively reviewed. It is even possible to continue refining definitions of codes indefinitely,<sup>199</sup> but research and time constraints can hinder such extensive refinement. A template can be considered in the 'final' stage if all the text relating to research questions are coded within the template;<sup>199</sup> the final template can therefore account for the different themes emerging upon data saturation.

The template provides a platform from which to code data but the interpretation of the data is still a step that needs to be taken. Additionally, the researcher needs to consider negative cases,<sup>32</sup> those individuals whose views / experiences contrasted with other individuals, to improve the guality and trust in the gualitative investigations;<sup>200</sup> this was done throughout the analysis process. The coded data should be interpreted to suit the specific aims and content of a particular study.<sup>199</sup> Strategies to help with the interpretation include considering the frequency of codes occurring in different transcripts to gain an idea of any relationships between certain issues (e.g. tutor involvement in training support) and different respondents (e.g. hospital pharmacy vs. community pharmacy). Whilst interpreting the findings one must also be selective, and focus on identifying themes most central to the phenomena being investigated. At the same time a balance must be struck and one must be open to including themes which may not fit neatly inside the original scope of investigation. Furthermore, one must consider the relationships between themes beyond a linear template; themes can link with, and permeate into, other themes. Researchers should be free to use strategies such as maps, matrices and diagrams in the formation of their interpretations of the data<sup>199</sup>: matrices were used in some cases as discussed in section 3.2.7.2 on framework analysis.

Template analysis is a flexible and easily adoptable approach to qualitative data analysis which allows it to be adopted by researchers with different epistemological positions. The use of qualitative software can also be employed when using this approach to thematic analysis which adds to its appeal in practical application. The downside of this methodology is with the paucity of literature available which employed this technique.<sup>199</sup>

It was a useful technique to use in this research in which an a priori list of codes was derived from the interview schedule which was already broken down into different categories. The interview guide is considered a good starting point for developing an initial template, such that the main areas of questions can serve as higher order codes with subsidiary questions as lower order codes.<sup>199</sup> In this research there were a number of different issues considered and several higher order categories were used to break down and store the qualitative findings into higher order codes (known as 'nodes' in NVivo 9.2). Figure 3.1 illustrates one such hierarchy of codes used in the analysis of the semi-structured interviews.

Higher order	Lower order				
<ul> <li>Work colleagues</li> <li>Role modelling</li> <li>Influence of others</li> <li>Observing others</li> </ul>					
Figure 3.1: An example of coding structure in template					

## 3.2.7.2 Framework analysis

As with template analysis, framework analysis can be used as an approach to analysing qualitative data thematically. The use of framework analysis was also used in this study to compare some themes, such as summaries of roles, longitudinally in matrices. This approach to thematically analysing data was originally developed for use in applied policy research.<sup>201</sup> As with other analytical tools, framework analysis is used for the classification and organisation of data according to themes, concepts and categories emerging from the data.<sup>192</sup>

As Srivastava and Thomson (p.72)<sup>202</sup> note, *"Framework analysis is better adapted to research that has specific questions, a limited time frame, a pre-designed sample and a priori issues."* The use of the framework technique in assisting with the thematic analysis of data in this study seemed appropriate according to these criteria.

Framework analysis<sup>201</sup> has five key stages: familiarisation; identifying a thematic framework; indexing; charting; mapping and interpretation. All stages are closely connected and result in coherent themes being identified which represent the data. It has been used in similar research and will be a useful tool in the analysis of the interview data in this research. The five steps of the technique can be briefly outlined as follows:

- 1) *Familiarisation:* The researcher familiarises themself with the data by listening to audio recordings and reading through transcripts and generally immersing themselves in the data.
- 2) *Identifying a thematic framework:* The researcher constructs a thematic framework developed through a priori theories and from the data itself (more inductively) from which to code the data; number codes can be created which relate to name of a particular

element of the thematic framework (e.g. 1.1 = role models, where the category '1' = work colleagues).

- 3) Indexing: The researcher then 'indexes' the transcripts through applying the thematic framework to the data. So, for example, if conducting indexing on a transcript paper, the research can place the relevant thematic code in the column next to the text. So you may put '1.1' in the column next to a statement about role models. Software packages can also be used to carry out this process electronically.<sup>192</sup>
- 4) Charting: The research creates a chart (table) with a theme and subtheme headings making up the columns and participants used as rows; this forms a data matrix.<sup>192</sup> An abstracted and synthesised version of the text is then placed into a cell within the chart and the source of the text is referenced.
- 5) *Mapping and Interpretation:* The researcher begins to pull together the key characteristics of the data and interpret the data set as a whole. This would have been facilitated already by the indexing and charting stages which helped to understand the different concepts, associations and explanations of phenomena from the data.

Through the use of template analysis in thematically analysing the data within NVivo 9.2, the first three steps of the framework approach to analysing the data were effectively completed. Furthermore, step five, which is revolves around interpreting the data, can be done using template analysis; albeit the processes leading up to this stage are different than framework analysis. Still, there appears to be a close relationship between the two approaches in using a combination of a priori and inductive approaches to coding and analysing the data. Where the framework differs from template analysis in particular is in the use of charting where data is synthesised and displayed in a matrix. The use of charts when, for example, comparing a summarised account of trainees' roles across time, utilised the framework analysis approach, and recognises this methodological source as the basis of this approach.

The researcher did not consistently use charts to organise the data as charting can be a time consuming component of framework analysis. Charts were used in cases in which it was advantageous to view summarised findings in a matrix format, for example, comparing trainees' roles at different time points across all participants.

## 3.2.7.3 Critical incident technique

The analysis and categorisation of critical incidents recorded can be based on theoretical models, or conceptual frameworks or formed through inductive interpretation.<sup>164, 172</sup> The analysis of critical incidents in this study used a more deductive approach which enabled incidents to be classified according to a framework in place. The classification process in this research was first broken down dichotomously by professional and unprofessional behaviour from the perspectives of participants. This happened naturally as participants were asked to provide examples of these types of behaviours within the interview which helped direct the elicitation of examples from participants. Subsidiary classification could then be formed based on the nature of the critical incidents being described (e.g. working with aggressive patients; providing an excellent service).

Trainees were the units of analysis,<sup>164</sup> though wider consideration was given to the sector in which the trainees worked to consider differences in incidents experienced across sector.

As Flanagan (pp.343-4)<sup>163</sup> stated in his seminal work on CIT, *"The purpose of the data analysis stage is to summarize and describe the data in an efficient manner so that it can be effectively used for many practical purposes."* The researcher sought to use the examples of unprofessional and professional behaviour effectively to describe the types of activities trainees were involved in over different stages in their training, as well as during early periods in practising as pharmacists. This helped consider some of the developmental changes they underwent as the nature of the incidents changed.

## 3.2.8 Data analysis: questionnaires

Besides analysing the data with descriptive statistics (e.g. means and standard deviation) the data was also analysed using analysis of variance (ANOVA) to examine differences between trainees' and tutors' scores on professional behaviours in the questionnaire and differences across time (i.e. data collection round). There were only a relatively small number of questionnaires completed by participants (120 in total: 80 from trainees and 40 from tutors). The small sample size of 20 trainees and their tutors (i.e. n = 40) would not meet many requirements for more advanced statistical tests, such as multilevel modelling (useful for longitudinal, repeated measures designs<sup>203</sup>) and showing significant results would prove difficult if effects were small.<sup>203</sup>

The data was first screened for missingness and violations of assumptions. Missing data was not a problem because the researcher administered the questionnaire to participants face-to-face and could ensure the questionnaire was completed in full. However, one tutor from hospital was removed from the analysis as she had not worked closely with her trainee and did not complete most responses to the first questionnaire administered at the beginning of pre-registration training (i.e. round 1). In one hospital training site, a tutor left after the first questionnaire was completed and he was replaced. The tutor that replaced him completed the second questionnaire in round 3. The data from these two tutors were combined so a complete set for the tutor in this site could be used. One NQP did not complete the questionnaire in round 4; her results for this were imputed using regression to avoid all of the data being lost (listwise deletion) in the analysis.<sup>204</sup> There were issues with normality of the data, however, the ANOVA tests used are robust in the face of departures of normality.<sup>205</sup> Furthermore, parametric tests such as ANOVA have more versatility in analysing complex designs and are suitable for analysing for non-parametric data such as ordinal likert-type scales.<sup>205</sup> Two-tailed hypothesis testing was used with a significance level ( $\alpha$ ) set at 5%  $(p \le 0.05)$ . Error bars in figures represent 95% confidence intervals. The statistical software package IBM SPSS Statistics v20 was used to analyse the data.

# 3.3 Results: presentation, participants and interview setting and duration

## 3.3.1 Presentation of findings

The findings of this study have been broken down into different components relating to the professional socialisation and development of professionalism of trainees and newly qualified pharmacists (NQPs) and, as such, sections have been broken into those relating to 'trainees' and those relating to 'NQPs'. Findings from trainees and tutors are presented together in the trainees section.

In many sections a division between hospital and community pharmacy is made due to the substantive differences that emerged between these two sectors. Presenting the findings from each sector separately serves to highlight the differences in training experienced by trainees across sector that impacted upon their professional socialisation and development of professionalism. Differences in findings between settings within community and within hospital were not apparent and thus retained together under their respective sector. A division between trainees and NQPs is also made to differentiate between the findings related to the professional socialisation and development of trainees, which stems from findings from trainees and tutors during rounds 1 to 3 of data collection, versus NQPs, which stem from round 4 data collection.

Narratives have been used to report the key results relating to each section with the use of quotes and critical incidents as evidence to support the conclusions reached from the qualitative analysis. Due to the scale of this study, with 119 interviews being completed in total, the presentation of quotes were limited and selected for their suitability and strength in conveying the views of participants. The presentation of critical incidents was used to highlight examples of incidents involving trainees which served to highlight activities they were involved in. This helps with illustrating the type of role that trainees conducted at different stages of the pre-registration training year as well as the way in which trainees were engaging with patients and demonstrating elements of professionalism.

Interviews were transcribed verbatim, however, some parts of the quotes used within the results were edited to increase the readability and reduce the length of the quotes and critical incidents presented. This included the removal of utterances such as 'hmm' or 'erm'. Table 3.1 displays the different punctuation that were used and what they represent.

Symbol		Symbol used for:
Ellipses		Removal of a section of transcript – where this appears as a new paragraph, text from the interviewer was also removed
Square brackets	[]	A word or string of words added by the author for clarity
Dash	-	The end of a sentence where one speaker is interrupted and the beginning of a sentence of the other speaker
Laughter	(laughs)	A moment when a speaker laughed when speaking
Interviewer	I	Text relating to the interviewer
Trainee / tutor / NQP	Т	The text relating to the interviewee, which could have been a trainee, tutor, or NQP (formerly a trainee)

#### Table 3.1: Punctuation and annotation used in quotes and critical incidents

In order to differentiate between the presentation of quotes and critical incidents, the use of shaded boxes were used as a backdrop for critical incidents. A distinction between reports of perceived professional (grey boxes with black font) and unprofessional behaviour (black boxes with white font) was made.

An example of a incident where a trainee demonstrated **unprofessional behaviour** as noted by a trainee or tutor will be displayed in a box like this

An example of a incident where a trainee demonstrated **professional behaviour** as noted by a trainee or tutor will be displayed in a box like this

# 3.3.2 Participants and interview setting and duration

The following results sections outline the codes used to identify participants, participant characteristics and how participants are identified in the findings, and information about the setting for the interviews and their duration.

## 3.3.2.1 Identifying codes

Before presenting the table of participants and their demographic data, a list of identifying codes for participants that were formulated will be considered. This provides a means for identifying some of the key demographics (e.g. position, sector, interview round) of participants when

referring to quotes in the report. Table 3.2 displays the different codes that were us	ed in
conjunction to form the identifying codes for participants.	

Table 3.2: Participant identifying codes				
Code	Code representation			
TR	Trainee			
TU	Tutor			
1-20	Pair number			
_CLM	Community – large multiple (≥ 26 branches)			
_CSM	Community – small multiple (4-26 branches)			
_CI	Community – independent (≤ 3 branches)			
_CS	Community – supermarket			
_HDG	Hospital – district general			
_HT	Hospital – teaching			
_1	Round 1 interview			
_2	Round 2 interview			
_3	Round 3 interview			
_4	Round 4 interview			

The coding used underneath quotes was done in this manner to quickly identify the role of the interviewee (trainee vs. tutor); the trainee-tutor pair (1-20); the sector: with the division of community and hospital made with the first letter (C or H) and subsequent letters distinguishing the type of setting within the sector (C: LM, CS, I; H: DG; T); and lastly the interview round (1-4).

For example, when viewing a quote with an identifying code of TR1\_CLM\_1, this comes from a **tr**ainee (TR), in pair **1** (1) that trained in a **c**ommunity – large **m**ultiple ( \_CLM) in a round **1** interview ( \_1).

In round 4 the trainees had registered to become NQPs and some worked in a new setting. For consistency, the same identifying code was used to identify these participants.

## 3.3.2.2 Participant characteristics

Characteristics of trainees / NQPs and tutors are provided in this section along with the identifying codes described in Table 3.2 in order to identify participants. A total of 20 trainees and their 21 tutors (one tutor left and was replaced) took part. Table 3.3 provides an overview of the key characteristics of participants as a summary. Table 3.4 displays more detailed demographic data of all trainees and tutors.

#### Table 3.3: Key characteristics of participants

- 14 trainees and their tutors were from community pharmacy
- 6 trainees and their tutors were from hospital pharmacy
- Mean age of trainees was 22.7 with a standard deviation of 0.98
- Mean age of tutors was 38.7 with a standard deviation of 9.67
- 11 trainees (55%) and 11 tutors (52%) were female
- The largest ethnic group was White British for trainees (65%; n=13) and tutors (71%; n=15)
- Trainees completed an MPharm from one of seven schools of pharmacy in GB.
- Trainees completed prior work experience (outside of MPharm) prior to preregistration training, mostly as a shop / counter assistant in community pharmacy; this ranged from two summer placements to 6.5 years (part time)
- Tutoring experience of tutors ranged from nil to 10 years

#### 3.3.2.3 NQPs

The final interview that was conducted in this study was carried out after trainees had completed their pre-registration training and registered as pharmacists. Therefore at the time of the final interview (round 4) many NQPs had started working in a different pharmacy branch and, in a number of cases, a different pharmacy organisation / hospital than they had trained in. Table 3.5 provides the information relating to roles held by NQPs, the sector and setting they had started working in (and whether this was in the same organisation / hospital as during pre-registration training) and work status.

In the case of those working in community pharmacy, the distinction between branch and organisation was made because a NQP could have moved to a new pharmacy branch but could have been working for the same organisation and therefore would have been used to work processes.

#### 3.3.2.4 Interview setting and duration

The majority of interviews that were conducted during the pre-registration training year (interview rounds 1 to 3) took place within the individual's place of work in a consultation room, staff room, or office. Two interviews with one tutor were completed in a meeting room in The University of Manchester as he considered this more convenient. Round 4 interviews conducted with NQPs were conducted over the phone as many had moved to a different location. Considering all interviews with participants over the four rounds of interviews, they lasted between 16 and 50 minutes.

Table	3.4: Trainees and	d tutors rec	ruited			
Pair	Sector	Role	Age	Gender	Ethnicity	Participant identifying code
1	Community - large	Trainee	23	Μ	White - British	TR1_CLM
	multiple	Tutor	38	М	Asian - Pakistani	TU1_CLM
2	Community - large	Trainee	22	F	Asian - Indian	TR2_CLM
2	multiple	Tutor	37	М	Asian - Indian	TU2_CLM
3	Community - large	Trainee	22	М	White - British	TR3_CLM
	multiple	Tutor	27	F	White - British	TU3_CLM
Д	Community - supermarket	Trainee	25	Μ	White - Other	TR4_CS
7		Tutor	41	F	White - British	TU4_CS
5	Community -	Trainee	22	F	Chinese	TR5_CI
0	independent	Tutor	38	Μ	Asian - Indian	TU5_CI
6	Community - large	Trainee	23	Μ	Asian - Indian	TR6_CLM
0	multiple	Tutor	30	Μ	Asian - Indian	TU6_CLM
7	Community -	Trainee	22	М	White - British	TR7_CS
1	supermarket	Tutor	60	F	White - British	TU7_CS
0	Community -large	Trainee	23	F	White - British	TR8_CLM
8	multiple	Tutor	37	М	White - Arabic	TU8_CLM
		Trainee	23	F	White - British	TR9_HDG
9	District general	Tutor	33	М	White - Other	TU9a_HDG <sup>a</sup>
	noopilai	Tutor	45	М	White - British	TU9b_HDG <sup>b</sup>
4.0	District general	Trainee	23	F	White - British	TR10_HDG
10	hospital	Tutor	32	F	White - British	TU10_HDG
	District general	Trainee	22	М	White - British	TR11_HDG
11	hospital	Tutor	44	F	White - British	TU11_HDG
10	Community -	Trainee	22	F	Asian - Indian	TR12_CS
12	supermarket	Tutor	32	F	White - British	TU12_CS
		Trainee	22	М	White - British	TR13_HT
13	Teaching hospital	Tutor	42	F	White - British	TU13_HT
	Community - small	Trainee	22	F	White - British	TR14_CSM
14	multiple	Tutor	58	F	White - British	TU14_CSM
	Community small	Trainee	24	М	White - British	TR15_CSM
15	multiple	Tutor	33	М	White - British	TU15_CSM
	Community - large	Trainee	23	F	Asian - Indian	TR16_CLM
16	multiple	Tutor	53	F	White - British	TU16 CLM
		Trainee	22	F	White - British	TR17 HT
17	Teaching hospital	Tutor	35	F	White - British	TU17 HT
		Trainee	22	F	White - British	TR18 HT
18	Teaching hospital	Tutor	29	F	White - British	TU18 HT
	Community	Trainee	22	M	White - British	TR19 CI
19	community – independent	Tutor	47	M	White - British	TU19 CI
	Community	Trainee	25	F	Asian - Pakistani	TR20 CI
20	Community - independent	Tutor	28	M	Asian - Pakietani	TU20 CI
		TULOI	20	IVI	ASIAN - FARISIANI	

<sup>a</sup> This tutor left after round 1 and was replaced by TU9b\_HDG.
 <sup>b</sup> This tutor replaced TU9a\_HDG and completed an interview & questionnaire in round 3.

Participant identifying code	Role	Sector + setting	Same pharmacy organisation / hosp as in training?	Same pharma branch as in training?	Work status
TR1_CLM	Relief pharmacist	Community - large multiple	No	No	Full-time
TR2_CLM	Relief pharmacist	Community - large multiple	Yes	No	Full-time
TR3_CLM	Pharmacy manager	Community - large multiple	Yes	No	Full-time
TR4_CS	Duty pharmacy manager/second pharmacist	Community – supermarket	Yes	No	4 days / week
TR5_CI	Duty pharmacy manager/second pharmacist	Community – independent	Yes	Yes	Full-time
TR6_CLM	Locum pharmacist	Community pharmacies	No	No	Full-time
TR7_CS	Pharmacy manager	Community - supermarket	No	No	Full-time
TR8_CLM	Pharmacy manager	Community - large multiple	Yes	No	Full-time
TR9_HDG	Band six pharmacist	Hospital - district general	Yes	/	Full-time
TR10_HDG	Band six pharmacist	Hospital - district general	Yes	/	Full-time
TR11_HDG	Band six pharmacist	Hospital - district general	No	/	Full-time
TR12_CS	Duty pharmacy manager/second pharmacist	Community supermarket	Yes	Yes	Full-time
TR13_HT	Band six pharmacist	Hospital - teaching	Yes	/	Full-time
TR14_CSM	Locum pharmacist	Community pharmacies	No	No	4 days / week
TR15_CSM	Locum pharmacist	Community pharmacies	No	No	Full-time
TR16_CLM	Relief pharmacy mana	Large community multiple	Yes	No	4 days / week
TR17_HT	Band six resident pharmacist	Hospital - teaching	No	/	Full-time
TR18_HT	Band six resident pharmacist	Hospital - teaching	No	/	Full-time
TR19_CI	Locum pharmacist	Community pharmacies	No	Sometimes	3 days / week
TR20_CI*	N/A	N/A	N/A	N/A	N/A

#### Table 3.5: NQPs: current positions, pharmacy setting and work status

\*The last interview with this trainee could not be completed because this participant had not registered by December 2012 or started work as a pharmacist. She was therefore not interviewed in round 4.

# 3.4 Results: Interview and questionnaire data

## 3.4.1 Role transitions

This section considers the transitional periods experienced by trainees as they entered preregistration training following the MPharm degree as well as the experiences of NQPs as they entered practice following training. This section also explores the development of the roles and responsibilities of trainees during pre-registration as well as their role as NQPs following registration as a pharmacist. It provides the context in which trainees develop in other areas such as abilities with patients and work colleagues / healthcare professionals. As there were notable differences found between community and hospital pharmacy a division between these sectors was made in this section and in many subsequent results sections.

## 3.4.1.1 Community pharmacy

## Trainees

At the beginning of the pre-registration training year trainees had to adjust to a new role of working as a full time pre-registration trainee which was very different from being a student or working in pharmacy previously as a shop / counter assistant, for example. Some trainees appeared to settle in more quickly because they had worked at the same premises during work experience prior to starting. Others had worked for the same organisation previously, but not in the same site, so although the work colleagues and layout of the pharmacy were different when starting some of the general operations and processes occurring in the pharmacy were the same. The quote below illustrates the transitional experience of a trainee that had worked for over a year in the same workplace which enabled him to integrate into the pharmacy team relatively easily and potentially acquire more responsibilities early on in the training year:

"I've obviously worked here for quite a while and came in sort of like proactive, and sort of giving you things to do as opposed to just you know, obviously she knew I was a pharmacy student so she was quite big on getting bits of training done for me so, I sort of had a pretty good knowledge of how everything works." (TR7\_CS\_1)

Formal inductions were in place in most community pharmacy organisations to facilitate the transition into training and inform trainees of company policies and working practices and the structure of the training year. Large multiple pharmacies had inductions as well although these were typically week-long programmes run by a central training team for all trainees. The small multiples (n=2) and independents (n=3) taking part in this study did not have a formal induction process. Instead trainees were inducted more informally in the pharmacy which involved showing the trainee how to deal with stock and the computer system to familiarise them with working practices.

During the early weeks of training, the role of trainees across all training sites appeared to be similar to that of a pharmacy technician or dispenser. Trainees noted that, in terms of defining their role and the tasks they carried out in the pharmacy, they felt like another member of staff or a pharmacy technician as opposed to a pre-registration trainee because they were becoming acclimatised to the pharmacy setting and working processes. Trainees in community were often involved with different work in the pharmacy to integrate themselves into the working practices of the pharmacy. This could see them help with the management of stock and other shop keeping tasks. For most trainees, there was little in the way of contact with patients in the early weeks of training. This was reflected in some of the examples of professionalism demonstrated by trainees that were provided by trainees and tutors, such as the one provided by a tutor, below, describing how her trainee provided help to a customer in the supermarket.

"I had a customer who was very, very pleased with his service last week and actually it wasn't to do with pharmacy, but he's spent the last four years working in a perfume shop, and it was a lady wanted, you know we didn't have the perfume she wanted and so she asked if she could - asked what would be similar. And I don't know anything about that sort of thing, so I went and got him. And although it wasn't a pharmacy-related query, you know the same sort of helpful asking questions and then suggesting things based on what she said was, you know, the same sort of thing you would get with pharmacy. And she was - when she left, she said, 'Oh, I'm so pleased. It's been such excellent service. Thank you very much,' which is great, you know." (TU4\_CS\_1)

A few tutors appeared to consciously want to ease the trainee into the role of working with patients. In one community pharmacy a tutor noted that she avoided putting the trainee in a patient facing role early on. This is in contrast to another community pharmacy tutor's approach which saw the trainee having more patient contact in the early weeks of training:

"Within that short period of time, because actually what we tend to do is actually get them more interfaced with patients, to talk to them on a simple basis. So we have the healthcare counter, and obviously get them to talk about cold, and flu, and those sort of things first, before they start explaining methotrexate, or any the more complex drugs to patients." (TU6\_CLM\_1)

After having worked in their pharmacy organisation for around four months (i.e. around the time of round 2 interviews) trainees in community pharmacy described how they felt well settled in their pharmacy and had gained increased confidence since the early stages of training. This was the case for all trainees, including those that may not have had extensive, or recent, experience of working in a community pharmacy, such as the following trainee quoted below:

"When I first came I only had sort of maybe ten/twelve weeks doing community pharmacy so I was - and I wasn't very fresh; it was like over a year since I'd last worked so it was all a bit different. It's a different store, different people, different SOPs, different companies that have a different way of doing things; different computer system. So I started off very basic and now I'm pretty comfortable with everything." (TR3\_CLM\_2)

The role of trainees changed over time. Round 1 interviews showed that the role of the majority of trainees in community pharmacy was similar to that of a pharmacy technician or dispenser. At round 2 the role of trainees had progressed and had become more varied and often involved interacting more closely with patients which appeared to facilitate their understanding and application of professionalism. The changing role was evident by some of the more comprehensive descriptions of patient interaction which extended beyond customer service, which could be likened to, for example, services provided in a retail business. As illustrated in the critical incident below, one trainee was involved in a situation with a patient which involved reading signals from a patient visiting the pharmacy. He appeared able to read the patient's body language and could see she was embarrassed by the condition she was suffering from and thus decided to take her to a private area to discuss her health concerns. He was able to demonstrate elements of professionalism including confidentiality, through bringing her to an isolated place, and compassion, by understanding and respecting her embarrassment. As the patient showed

appreciation in the way he handled the situation he was able to learn more about how to handle similar patients who approached him conveying similar body language.

"Saturday, a lady came in. She had thrush. It's a very common thing, overthe-counter. It's minor drugs but to them it's a big deal and they don't want to discuss it openly in public. It's the sort of thing that will happen once every couple of years and they're really embarrassed about it because obviously it's in your private parts. So I saw that because when she asked me she was blushing and she was looking over her shoulder; it was Saturday and it was Christmas shopping. So I said, 'Listen, do you want to go to a private area and discuss this?' It was simple in that I knew that I was just going to pick the product off the shelf, ask her a few questions and then let her go. But I took her into a room, discussed a few things and then came back, gave her the product. And that way she felt comfortable and she didn't have to discuss her minor ailment in front of other customers." (TR6\_CLM\_2)

At round 2, some trainees talked about the feelings of having increased responsibility within the pharmacy and the expectation bestowed upon them from pharmacy staff members as they progressed through their training. A few trainees also noted that they had been involved with helping other staff members in the pharmacy, such as new counter assistants recently employed in the pharmacy. Staff were beginning to utilise the pharmacy knowledge and skills trainees possessed in some cases. One trainee, for example, commented that these incidences improved his confidence:

"[I feel] more like a pre-reg. 'Cos I think the rest of the staff are asking me a lot more questions now which gives you a lot of confidence I think." (TR15\_CSM\_2)

It was evident from speaking with trainees in round 3 interviews that their confidence was increasing further and their roles and responsibilities were moving further towards that of a pharmacist. They were often getting more involved with patient queries and helping answer queries from colleagues and many were beginning to check prescriptions for clinical issues which could be overseen by the pharmacist.

"[My role has] progressed a little bit from where we were. Like I was mentally taking on more of a backseat kind of observant pharmacist role and that's kind of what's happened as part of the requirements for my year; I've had to become that person, you know - the pharmacist. If someone wants a pharmacist, I'll go out and I'll chat to them, answer the phone. You know, the pharmacists here are happy for me to do that." (TR19\_CI\_3)

There was a consensus from the tutors in terms of the changing role of trainees within the pharmacy throughout the year, from the point of starting more like a technician and progressing to the role of a pharmacist. Around the time of round 3 interviews, most tutors said they were encouraging their trainees to act like a pharmacist and they wanted the pharmacy staff to approach the trainee for questions they may have to facilitate this developing role.

"It's got to this stage now where I say to the [staff], 'Don't come and ask me go and ask [trainee].' She knows she can come and ask me if she needs to but I said to her, 'You've got to start really behaving like a pharmacist now, at this stage." (TU14\_CSM\_3) A few trainees noted that their role had progressed such that they helped other staff and, in some cases mentioned that they were delegating basic tasks, as exemplified by a quote taken from an interview with one trainee:

"[My tutor] told me to like delegate tasks and tell some of the other girls - and pass on tasks and get them to do things. Initially I found that quite hard because when you come and you're learning from everybody else, then to start doing that, that's quite difficult." (TR16\_CLM\_3)

It appeared that some trainees could have played a larger role within the pharmacy, but by doing so this could impinge upon the role of the pharmacist. Not having the opportunities to practise as a pharmacist fully (e.g. undertaking clinical checks) under supervision during pre-registration training would mean trainees would have to wait until being qualified to act out the full role of pharmacist, without supervision. A few trainees spoke of the implications this had on their development: they could not feel as though their role was that of a pharmacist as they could not practise like one without actually being one. This position was exemplified by one trainee who commented that she did not feel like a 'full-on' pharmacist towards the end of training

I: "What role do you think you have here - is it like a pharmacist? Or" -

T: - "No. Probably a glorified dispenser with a bit more knowledge probably (laughs). Yeah, [tutor] likes to be in control. He likes to be the pharmacist. So, yeah. Probably a bit more than a dispenser but I wouldn't say a full-on pharmacist." (TR8\_CLM\_3)

#### NQPs

All community pharmacy trainees that were interviewed as NQPS continued working in community pharmacy. As with the beginning of pre-registration training, the transitional period of starting work as a pharmacist was also challenging for NQPs. There did not, however, appear to be any consistency in terms of a process of induction that NQPs underwent in starting to practise as a pharmacist. In the case of one NQP, taking up a position as a pharmacy manager in a supermarket pharmacy, he received a month of manager training, but it was not pharmacy-specific training. Managers from the customer services division and bakery attended the same training. A few NQPs described having some help and support from another pharmacist who helped familiarise them with the pharmacy. For example, one NQP, working as a relief pharmacist, described how he received some support from another pharmacist for the first couple of weeks he was working within a large community pharmacy.

There were mixed views about the ease in which the transition from training into practising as a pharmacist was. If NQPs continued to work in the same pharmacy where they had trained they benefited from being familiar with staff and working operations within the pharmacy. This was similar to how some trainees found the transition into pre-registration training easier if they had completed work experience at the training site before they started training. One of the NQPs who had continued to work in the same pharmacy organisation, but in a different pharmacy branch, commented on some of the benefits in working in the same organisation but noted some of the differences, such as the services provided, in her new pharmacy:

"I think obviously it was with the same company so you get to know all the different things in the store, that type of thing, and all the systems that are in place, that type of thing. The only thing lacking obviously was it's a different type of store, so sort of dealing with the methadone, doing all of that wasn't so prominent in my pre-reg as it is here. I soon picked it up, anyway." (TR8\_CLM\_4)

It appeared that NQPs that had moved to a new site appreciated the contrasts between different pharmacy settings and would have liked a wider variety of pharmacies to practise in during training. This was exemplified in an interview with one NQP who worked in a quiet pharmacy during pre-registration training. He explained how he would have liked to have worked in other branches to expose him to different working environments before qualifying as he was now working in a much busier pharmacy and had to think and react quickly:

"Our pharmacy [during pre-registration training] was very straightforward. We didn't really - we did a lot of prescription collection so if there were any issues you could sort of see them coming. But with the one I work in now in [community pharmacy multiple], it's a bit more sort of think on your feet. We do like twice the amount of work so I wouldn't say we have a lot of things going wrong but when something does go wrong it tends to go wrong very badly. And because you're so busy it sort of like compounds everything." (TR7\_CS\_4)

The nature of the setting in which trainees worked factored into opinions on the effectiveness of training. For example, one described how his pre-registration training site was very busy which prevented him from gaining reasonable experience in responding to patient queries, and now as a pharmacist he was learning how to deal with these on his own. On the other hand, a few NQPs considered working in a busy pharmacy during training beneficial. For example, one NQP reflected on the positive elements of working in such an environment, such as developing skills of working under pressure. Still, this NQP noted, as did a number of others, that as she could not carry out the full role of a pharmacist as a trainee, it could not prepare her for this eventuality.

"It was such a busy branch I got a lot of experience and I got a lot of experience with how to work under pressure, but I don't think anything can prepare you for going and being the pharmacist by yourself, unless you work with another pharmacist. Because you're not going to know - on your pre-reg year you can't know what it's going to be like because you can't actually be the pharmacist, if that makes sense." (TR16\_CLM\_4)

NQPs described how they faced new responsibilities as pharmacists and that they were now the one in charge of the pharmacy. A number of NQPs felt they would have liked some more responsibility during pre-registration to carry out the role of a pharmacist rather than deferring to the pharmacist, though they recognised the difficulty in doing this for legal reasons and for encroaching on the role of the pharmacist. For example, one NQP stated that she was happy with her experience of working with people and developing better communication skills but talked about the lack of experience in clinically checking prescriptions which she now had to carry out as a pharmacist.

It was evident from the descriptions of roles provided by many NQPs working in community pharmacy that the nature of the work they conducted had changed from when they were pre-

registration trainees. They had become more involved with handling patients' enquiries in their new role as pharmacists. "I am dealing a lot more with queries as well - so patient queries." *(TR12\_CS\_4)* 

# NQPs were also tasked with the responsibility of clinically checking prescriptions and querying any prescriptions which were considered erroneous or problematic. An example of one NQP dealing with a clinical problem on a prescription by himself, which he perceived to be an incident in which he acted professionally, was discussed (below). This illustrates the central role NQPs had in handling any issues with prescriptions.

"On Wednesday, for example, I faced a challenge with a prescription. There were two types of antibiotics - two different antibiotics but the same kind - two penicillins - on the prescription. So to be honest, for example, if I was a pre-reg I would just pass it on to my tutor and he'd explain it to me, but we didn't face this in my pre-reg year so I'd never seen it before. So I got slightly confused and I sort of opened the BNF [British National Formulary] - couldn't really find anything in there, which you don't really expect to - but it's natural - every pharmacist turns to the BNF first! But then I rang the doctor up and I just said, 'I want to clarify that this is intended, where you've put the two penicillins on,' and he clarified it and it was fine, yeah." (TR6\_CLM\_4)

Some NQPs, particularly those with pharmacy manager positions, were involved in delivering a range of enhanced and/or advanced services as part of their role. For example, one NQP talked about his role in promoting services to people and getting involved in medicines use reviews (MURs) and new medicine service (NMS) in his role as pharmacist, services which were witnessed but not conducted as a trainee.

"I'm not so much dispensing at the moment but sort of promoting services to people. For example, now that the flu season's there, we're trying to make people aware of that service. I've been doing the flu service to people whenever we can - I mean, obviously we're really pushed on our targets and MURs and NMS, so yeah, it's a mixture of things really but not so much dispensing because we don't have that many items at the moment." (TR4\_CS\_4)

The challenges facing NQPs working in different settings as a relief, or locum, pharmacist may be more profuse. Some of the challenges noted by these NQPs included adjusting to different pharmacies working procedures and working at an effective speed, and dealing with prescriptions that had been misplaced.

"If I'm working in a certain place and the systems aren't really in place that I would have [used] in other shops – you can't find, stuff goes wrong, the prescriptions have gone missing; promises have been made to patients which haven't been followed and then you're coming in as the locum pharmacist and you're being expected to deliver these pharmacies, even though it wasn't you pharmacy-ing kind of thing." (TR15\_CSM\_4)

## 3.4.1.2 Hospital pharmacy

## Trainees

Trainees in hospital experienced many of the same challenges as trainees in community pharmacy, such as adjusting to full time employment following finishing their MPharm degree. As with community pharmacy trainees, those training in hospital were able to integrate into the environment quite well, but a couple of trainees highlighted some of the difficulties faced when starting working as a pre-registration trainee in their hospital. For example, one trainee talked about how members of staff (e.g. technicians and pharmacists) had their own groups which were quite 'cliquey' which made it difficult for trainees to integrate. Another trainee felt comfortable with the transition into training as he had done a summer placement in the pharmacy department previously and was familiar with many of the staff and how the pharmacy operated.

"[Starting pre-registration training] wasn't too much of a shock because I'd sort of, I'd done the summer placement here last summer so I sort of knew a lot of the staff and I knew sort of roughly kind of how everything works so it wasn't to bad coming back into it. ... It was like a gentle start." (TR11\_HDG\_1)

In all hospitals, inductions were in place. These were longer than the induction periods for community pharmacies, typically lasting one month. Trainees would be introduced to the different members of staff in the pharmacy department and begin working in the dispensary and visiting different wards. As was the case in community pharmacy, during the early weeks of training, the role of trainees across all hospital training sites appeared to be similar to that of a pharmacy technician or dispenser, exemplified by a quote from one tutor.

"He's been getting to know the department, spending time in the different areas of the department, getting to know the different things that are happening. But he's been working in the dispensary as well. So he's working like a technician in the dispensary." (TU13\_HT\_1)

After the induction period, and by round 2, all hospital trainees began to spend more time on hospital wards and worked with more pharmacists, and spent less time in the dispensary working with pharmacy technicians and assistant technical officers (ATOs).

"Day to day, well, in the mornings we usually go to a ward with one of the pharmacists and initially we were just sort of shadowing them but now we might have a go at doing some of the stuff ourselves and get it checked by them; things like constructing drug histories from patients, or often just clinically checking the prescription for safety and that kind of thing." (TR10\_HDG\_2)

Some additional tasks, relating to the role of the pharmacist, for example, occasionally undertaking some medicines reconciliations, were also carried out by trainees with appropriate supervision. However, it was evident from the interviews that trainees experienced limited patient contact and interaction during the early stages of training. Trainees typically worked in the dispensary and occasionally helped conduct medicines reconciliations on the wards after shadowing another pharmacy professional conduct them.

A couple of trainees explained how they spent considerable time shadowing different pharmacists, but depending on the pharmacist they were working alongside they would take on differing amounts of responsibility on the ward rotation. Unlike community pharmacy, trainees in hospital did not work with their tutor very often unless the tutor was responsible for the ward that the trainee was placed for a rotation.

By the third round of interviews, hospital trainees were working much more on wards with pharmacists. Some trainees were given responsibility of looking after a ward, or part of a ward, with the supervision of a pharmacist. This allowed them to conduct the work of pharmacists whist being overseen by pharmacists on the wards.

"I think really, as it stands at the moment, it's probably been pretty steady throughout the year, really. I suppose maybe his role out on the wards may have changed - changing as we speak, really, because it's at that stage of the year where he should be doing more of the clinically checking and sort of like the clinical pharmacy activities out on the ward, still under the supervision of the pharmacist but maybe taking a little bit more responsibility sorting the problems out, picking up the problems and sorting them." (TU11\_HDG\_3)

Most of the trainees were involved with warfarin counselling as one trainee pointed out, perhaps because trainees were in a position to perform warfarin counselling which would free up pharmacists for other work:

I: "So do you do a lot of that then - warfarin counselling?"

*T*: "Yeah, the pre-regs do. We're kind of like the 'go-tos' because we've all been signed off [as competent to do this]. Obviously pharmacists can't be bothered to do it because it takes about half an hour so they just get any of us and ask us to go." (TR18\_HT\_3)

Trainees did not have the same kind of responsibility as pharmacists so they were still lacking this experience and would not gain this experience until after becoming a registered pharmacist. Comments from some trainees in hospital were similar to some of the trainees in community pharmacies, stating that it was hard to feel fully prepared to practise as a pharmacist until one actually starts practising as one.

"I think we need to just be thrown in the deep end and see how we react and cope with it really. That's the only way you can learn as well. You can do as much looking in books and things like that as you want, but I think the only way to properly learn and actually behave like a pharmacist is actually just getting into the role." (TR13\_HT\_3)

## NQPS

All trainees in hospital went on to take up a position as a pharmacist in hospital; three in a different, and three in the same, hospital where they trained. NQPs underwent a form of induction, which varied in length, to help familiarise them with their new role when they started working as a pharmacist. For example one NQP said he had a shorter induction which lasted only two weeks whereas two others said they had an induction period lasting eight weeks as part of

becoming a resident pharmacist. Half of NQPs talked about how it was challenging to suddenly be faced with working as a pharmacist, even after an induction period.

"After two months we got let loose it was ... quite intimidating really. I knew where to find everything; it was just that you were looking everything up. I didn't really have that knowledge there." (TR18\_HT\_4)

It was evident from the interviews with NQPs that practising as a pharmacist was still a considerable change from pre-registration training for all of them, including those who stayed at the same hospital. As with many NQPs from community pharmacy, NQPs in hospital believed it was hard to appreciate what it is like to practise until one starts practising, illustrated by the following quote from one NQP:

"So yeah, [pre-registration training] has helped me but at the same time I don't think anything can prepare you for the feeling of I'm actually totally responsible for everything that I do now. Like, you know, we got told about it but nothing can actually prepare you for that feeling." (TR17\_HT\_4)

All NQPs described being satisfied with their pre-registration training. They believed training gave them good experience of pharmacy practice in hospital apart from one who believed that trainees in her hospital were too sheltered and were not given much responsibility except for in the dispensary. NQPs did, however, reflect on how they would have liked to have had more responsibility, such as monitoring / managing a ward for a longer period of time.

> "It definitely did, yeah, it definitely did. I mean, in pre-reg I probably would have liked more of a ward - my own sort of ward and more responsibility more early on because I only had that for the last month for my pre-reg. I probably would have liked that a bit more earlier on to sort of prepare myself a little bit more. But no, it definitely did, it definitely did." (TR13\_HT\_4)

NQPs working in hospital were doing ward rotations in different specialities but they held more responsibility on the wards than they did as a pre-registration trainee as they were responsible for signing off drug charts and were more involved in helping with the treatment of patients on wards. Some NQPs also talked about being closely involved in tasks such as discharging patients from the hospital. They were also generally busier as pharmacists than trainees. The main challenges noted by NQPs working in hospital pharmacy related to time management and making final decisions.

"It's time management more than anything. Because you want to give your like all to the ward but you can't because you've got a lot of rotational stuff to do, and the rotational stuff is going on your CV, if you know what I mean, at the end of the day. So I found that really hard because I was giving my wards loads of - much more time - aseptics really." (TR9\_HDG\_4)

Being a NQP with new found responsibilities, such as having to use professional judgements and make final decisions was also challenging. This experience was similar to NQPs in community, and could initiate instances where lapses in professionalism may occur, as perceived by some NQPs. For example, one NQP described an incident where she displayed unprofessional behaviour - showing poor judgement - by providing a drug to a doctor for a patient without knowing adequate details of the drug and the patient it was to be given to.

"Yeah, literally it happened yesterday. We have a system called the I01 - I don't know if you've ever heard of it. It's an incident report basically, like a serious report that you get against yourself if you've done something wrong. It's not too serious but, you know, you're not really supposed to hand them out lightly and I got my first one yesterday because on my last night shift, there's a drug called lloprost, which I didn't know much about and a doctor rang me up and said he needed it; it was an emergency. And the drugs aren't licensed so I couldn't really check the dose and I just gave the vial. And I was talking to a pharmacist the next day and she basically I01'd me for it because - I didn't do anything wrong but the reason she gave me it is because I gave out a drug that I didn't know anything about. I didn't know why he was giving it - and to make it even worse, I didn't even record the patient who he gave it to; I just handed over the vial to an A&E doctor. So yeah, I got an I01 for that. So I've definitely learned now that if I don't know what the drug does or what it's for, then I need to find out. And then, annoyingly, there was a guideline on our protocol all about the drug but I didn't even look for it so that's probably why I got in trouble, for doing that." (TR18\_HT\_4)

## 3.4.1.3 Summary points

- Some trainees faced challenges in adjusting to their new role in full time employment following the MPharm degree
- There were month-long inductions in place in hospitals; formal company-wide inductions for large multiple and supermarket community pharmacies; informal inhouse inductions in place for small multiple and independent community pharmacies
- Difficulty in transitioning into pre-registration was attenuated by past work experience in pharmacy
- At the beginning of training the role of trainees appeared similar to a pharmacy technician or dispenser
- As trainees progressed they were more involved in working with patients, apparent through critical incidents of professional / unprofessional behaviour and descriptions of tasks conducted
- Tutors in community encouraged staff to approach the trainee with queries as they gained more experience to support their transition in role into one similar to a pharmacist
- Opportunity to take full responsibility, similar to that of a pharmacist, as a trainee was limited and trainees would still have to defer tasks to a pharmacist
- Some NQPs faced challenges in adjusting to their new role as pharmacist as they faced increased (full) responsibility and accountability
- Difficulty in transitioning into practice as a NQP was attenuated by experience in the same pharmacy or organisation due to similar working processes

# 3.4.2 Development and application of clinical knowledge

The knowledge of elements of pharmacy practice including, for example, clinical knowledge (i.e. understanding the actions and uses of drugs, doses, interactions, and knowledge of appropriate medicines for various diseases) underpin the necessary competencies which have established pharmacy as a profession. The development and application of clinical knowledge is a key component of practising as a professional pharmacist as one needs appropriate knowledge to underpin practice when, for example, counselling a patient on their medicines. The development and application of clinical knowledge to underpin practice beyond registration. It forms an important part of the professional socialisation process in which a professional must demonstrate the necessary skills, attitudes and behaviours expected by a member of the profession.<sup>6, 84</sup> The role of the MPharm in knowledge acquisition is presented in the first section followed by the role of past work experience.

Findings from all interviewees are presented together rather than separating them out by sector in these two sections. This is because prior to pre-registration training the education and past work experiences were similar across all trainees in that they all completed an MPharm degree, and they all had some experience of working in a pharmacy. The final section on the role of pre-registration training and post-registration practice (section 3.4.2.3) focuses on findings from all rounds of interviews to consider the developmental influences and changes occurring during pre-registration and early career experiences as NQPs and is separated by sector.

## 3.4.2.1 The role of the MPharm degree

Most trainees said they believed that the MPharm degree provided them with a wealth of knowledge and theory of pharmacy but lacked the practical skills in which to carry out the role of a pharmacist, hence the training year would fill those gaps in competence. According to some trainees, the focus of the MPharm appeared to be on inculcating students with the appropriate pharmacy knowledge and helping them understand what is expected from them in practice.

"So I think [the MPharm] teaches you a lot of clinical stuff and pharmacy [work experience] teaches you more about people skills and how to apply it". (TR20\_CI\_1)

It was noted by a few trainees early on that as the MPharm was completed a couple of months prior to starting pre-registration training, the difficulty facing them was remembering some of the useful knowledge learned during the MPharm so they could apply it in their new role.

"I'd had a six week break and yeah I kinda crammed it all in at the end and now I've sort of forgotten it all ... I need to start learning it again." (TR1\_CLM\_1)

In discussing the role of the MPharm in preparing trainees for pre-registration training, a number of trainees said that the practice-based modules appeared to be the most helpful in preparing them. This included classes such as dispensing labs and some trainees also talked about the utility of role plays or objective structured clinical examinations (OSCEs) which helped them improve their communication skills. However, a couple of the trainees that commented on the
benefits of role plays said that the number of opportunities to partake in these classes was limited. Furthermore, one trainee commented that role plays were somewhat unrealistic and appeared to be more hypothetical, not quite like authentic encounters with patients in a pharmacy.

Trainee interviews during the first round also highlighted the disparity between what is taught and learnt at university and what actually happens in practice (i.e. how one applies their knowledge). This was a common theme that came up in interviews with a number of trainees. Some tutors flagged similar issues to the trainees regarding the disparity between university and practice as well. One tutor (quoted below) noted that university is more theoretically-based and that it is in practice where you experience 'true dispensing' and the medication patients are taking which, in a number of cases, contains interactions. The dispensing of medication, as learned during the MPharm, may be more black and white, but in practice it can be considered a grey area.

"The problem you tend to find is because uni tends to be so sort of theoretical although I know now it's far more practice-based - you've still not experienced really true dispensing and what patients are on. And it's understanding, whereas yes, at uni they might tell you, 'No, you would never give this, this, and this together.' that in practice it happens and it happens quite a lot. And it's a case of understanding when you get involved and how you get involved and if you need to get involved." (TU16\_CLM\_1)

## 3.4.2.2 The role of past work experience

All trainees had previous experience of working in a pharmacy which they said had prepared them well for the pre-registration year. Some trainees did not feel satisfied with the limited opportunities of working in practice through placements at university and noted how useful it was to gain work experience outside the university curriculum. Working in practice was where behavioural expectations taught during the MPharm degree seemed to be fully appreciated and applied according to many trainees. It was also a place where practical skills in dispensing were carried out regularly and improvements in these skills were developed. Work experience in pharmacy also helped trainees with their development of communication skills in dealing with colleagues, other professionals and patients as well as working in a team as illustrated by two trainees:

"I think my work experience has had probably a significant impact on the way I act professionally and my confidence in talking to patients and people, like other members of staff and things like that. So I think maybe my work experience has helped me with like my interpersonal skills...." (TR17\_HT\_1)

Past work experience in pharmacy was considered valuable by trainees but it should be noted that not all experiences were viewed positively. Some criticisms of past work experience included it having a main focus on dispensing with less time spent with patients, seeing a limited range of patients on weekends during the part time work experience and, as illustrated by the quote below, being exposed to some unprofessional behaviour of colleagues:

"[Locums] were just turning up late, not dressed appropriately... not really wanting to do much work really or not wanting to speak to patients, or not speaking to patients appropriately really." (TR8\_CLM\_1)

# 3.4.2.3 The role of pre-registration training and post-registration practice

# **Community pharmacy**

#### Trainees

During round 1 interviews, trainees talked about the kinds of skills they were lacking at the early stage of their pre-registration training. Almost all trainees said they lacked confidence in their level of clinical knowledge possessed and how it could be applied to patients in practice. Despite this, there was evidence that it was improving, even during the early weeks of training. Some trainees described how they developed their clinical knowledge in practice through being exposed to different situations repetitively which allowed them to recall and apply prior knowledge and assimilate new knowledge, such as correct dosing of different medicines, more easily.

"I'm more of a practical learner, so they can drill, they can say it so many times a day and it still wouldn't really sink into me but when you come into work then you know it's more relevant and you know you need to do it so yeah you get it drilled into you at university but then as soon as you come working it comes second nature really." (TR3\_CLM\_1)

Tutors seemed happy with trainees' level of clinical knowledge, more so than trainees felt about their own clinical knowledge. Still, tutors appreciated that trainees needed the opportunity to apply their clinical knowledge during interactions with patients, something the pre-registration year could offer as illustrated by the following quote:

"They know all the sort of theory behind of why we do everything, but coming to the end it's actually - that's what they struggle with, is that interface. So it's the interface of applying all that knowledge and everything they've got to actually helping a patient, or applying it to a prescription they've received and there's problems. That's where the undergraduates - the graduates tend to struggle with their pre-reg, and that's the developing of the skills and then talking to prescribers, talking to other pharmacists, to patients. So you have to train all of that knowledge in, to make it easy to understand." (TU6\_CLM\_1)

Most trainees in community pharmacy were allocated study time of about five hours per week, but a few did not and simply studied when the pharmacy was quiet or when they had permission. Study time served as a means to assimilate new clinical knowledge, and allowed trainees to reflect on some of the new information they encountered while working. Additionally, many trainees often described how they took it upon themselves to learn independently early on in the training year. This included using notebooks to write down information which was new to them, or doing some self-study in the evenings.

By the second round of interviews, trainees explained how they had progressed and developed their clinical knowledge and further improved practical skills such as dispensing. The combination of working in a pharmacy and applying knowledge possessed as well as being able to study omissions in knowledge during study time was valuable. Some trainees often consulted the BNF during study time to improve their understanding of dosing and the ages of the users of particular drugs. The BNF could also be used when a trainee would appraise a prescription that they

received. Furthermore, many tutors continued to ask trainees questions about issues such as interactions that helped develop a trainee's knowledge in dealing with clinical problems.

*I: "Okay how about your knowledge base? Like pharmacy specific knowledge and some of the practical skills of" -*

T: - "Yeah I think that's got better because just like by dispensing the drugs and that, like [tutor] will say, 'What's that one used for?' and if I don't know I go and look it up. So I think doing it that way you learn more ....." (TR14\_CSM\_2)

Although there were reports of improved clinical knowledge and abilities in applying this knowledge to practice, one trainee, quoted below, described how there were limited clinically complex cases available to deal with in her pharmacy. This reduced the need for possessing a wide range of clinical knowledge as it was not regularly utilised; this issue of the paucity of complex clinical cases was also insinuated by a few other trainees:

"We don't do that wide of a clinical range here so I think that some of the stuff you did at university is now not relevant.

• • •

"In this store - the scope of what we do here is quite limited ... we're not next to the surgery or anything. So, as I say, there aren't that many clinical problems to deal with." (TR8\_CLM\_2)

The majority of trainees were part of a pre-registration training programme which saw them undertake additional training courses, run through the employing organisation, or through external training providers such as Numark and Buttercups. This additional training served to develop trainee knowledge on different topics which may be applicable to treating patients with different health conditions presented in the community pharmacy setting.

Although the stronger themes from the data were centred around trainees believing they did not possess the relevant clinical knowledge to carry out the role of a pharmacist during the early stages of the training year, there were some other findings that stemmed from a small number of trainees. For example, one trainee (TR5\_CI) highlighted the issue of confidence – a phenomenon that other trainees may be experiencing but did not reflect on. This trainee talked about the difficulty she had in asserting herself if, for example, she was spoken to irreverently by patients she had consulted. She also talked about the anxiety about making an error and telling patients wrong information because she did not feel as though her clinical knowledge was at a high enough standard to deal with patients effectively.

*"I think I'm a bit too soft (laughs). ... Sometimes I don't speak up for myself. I just don't speak up sometimes. Like if a patient is being horrible to me, I don't stand up for myself. I just let them blah-blah-blah-blah-blah - have a go at me.* 

"I'm afraid of making an error and telling [patients] wrong information." (TR5\_CI\_2)

By the third round of interviews, many trainees talked about how clinical knowledge was being further developed through handling patient queries. Working with patients made clinical

knowledge more relevant and rooted in real practice. Also, many trainees commented on the improvements in clinical knowledge which were helped by exam preparation for the upcoming registration assessment, taking place approximately one or two months after round 3 interviews.

I: "And like your clinical knowledge - has that come on since last time?"

T: "I think just through studying and revision really so like now that I'm close to the exams it's like you can't pick up and learn a lot more." (TR19\_CI\_3)

One trainee did, however, suggest his clinical knowledge may have become worse after spending a number of months working as a trainee in his pharmacy. This may have been linked to the issue of not utilising a vast range of clinical knowledge, raised in the previous round of interviews, as minimally complex cases were commonly being dealt with.

"So in university you sort of learn about certain conditions. If they don't come up here you're not going to be learning about them." (TR3\_CLM\_3)

Most trainees acknowledged they still had gaps in clinical knowledge, but there was more acceptance that they could not know everything there was to know and that they could use resources and get help when necessary.

"At the end of the day I'm not going to know everything. At the end of the day, I look it up. I think that's the good thing about pharmacy. It's like even with doctors, they don't know everything. They look it up, they ask us, we ask them." (TR15\_CSM\_3)

As noted previously, tutors were happy with the levels of clinical knowledge possessed by their trainees at the beginning of pre-registration training and these sentiments remained consistent. They too recognised growth in confidence as trainees progressed and had more experience of applying their knowledge in practice.

"I mean, you see that - you see them develop because they come out of university and, all right, yes, clinically they know a hell of a lot, they really do, but it's knowing how to put it into practice and that's what develops over the 12 months." (TU16\_CLM\_3)

#### NQPs

The majority of NQPs in community pharmacy believed that their clinical knowledge had continued to improve since becoming a pharmacist. They were more deeply involved in examining medicines and looking for any clinical interactions with drugs. NQPs were now involved in clinically checking prescriptions more regularly (without being double- checked, and signed off, by their tutor) which developed further clinical knowledge through repetition. It was pointed out by one NQP that he was also exposed to a wider range of drugs prescribed by doctors in different areas through his locum work.

"Now you're working every day, you obviously notice things a lot more because you're checking prescriptions constantly and you notice things. My clinical knowledge has also grown because I work in so many different areas doctors prescribe completely differently. It's only like a small change but in [location removed] they prescribe co-codamol, codeine and paracetamol, which is like their main go-to painkiller; whereas seven miles/six miles down the road in [location removed] it's co-dydramol, which is dihydrocodeine and paracetomol. Now, dihydrocodeine, see, has been shown to be a lot more addictive than codeine. Now, I know they're only a small distance away but their painkiller that is their go-to painkiller is completely different. There's a complete difference. So that's also a problem because you go into completely different places and some of the stuff I've heard of but I've never seen in use." (TR19\_CI\_4)

Some NQPs were involved with delivering new services and developing their practical skills in providing these services as well as developing the associated clinical knowledge to deliver them. Although some NQPs were involved in delivering a range of different enhanced (e.g. supervised administration of methadone) or advanced (e.g. MURs) services, a few commented on their lack of experience in delivering these during pre-registration training, such as the following NQP, now working as a pharmacy manager:

*I:* "So now you're working as a pharmacist, is there anything you think should be changed about pre-reg training to kind of better prepare you?"

T: "There should be more to do with trying to get services. So down here we're doing new services to do with travel vaccines, where we're actually injecting people with typhoid and yellow fever and stuff. I mean, that's quite a big thing, so there should have been more in your training year how to set up a new service - how to advertise it. MURs as well - they're difficult to get people to do. There should be more towards recruiting people to do that. More the service side of it and making money side of it." (TR3\_CLM\_4)

# Hospital pharmacy

#### Trainees

Trainees in hospital, as with trainees in community pharmacy, lacked confidence in their possession of sufficient clinical knowledge, perhaps being overwhelmed by the variety of medicines they witnessed in the dispensary and on occasional ward visits. The development of clinical knowledge in specialist areas, however, occurred in trainees, even during the early weeks of training during short visits to wards. Some trainees in hospital commented on their development of the knowledge of different drugs. For example, one trainee described the wide range of drugs and the complexity of drugs being used in hospital as opposed to community pharmacy where trainees did not come across many new drugs.

"It's different when you're doing it in practice, in community you have a more limited range. You've got you know the same drugs, wider strengths. Here you've got all the injections and all the hospital-specific things so you do get a much wider range in hospital pharmacy so that's why I feel I've improved." (TR10\_HDG\_1)

Tutors believed that trainees possessed considerable clinical knowledge and reasonable skills in, for example, dispensing but that they still had to develop a lot more throughout the training year. They needed to apply what they had learnt during the MPharm degree to the practice setting. One tutor described the pre-registration training year as a big learning curve, where the application of knowledge attained from university occurred.

"Obviously it's a big learning curve, pre-reg, because they've got all the knowledge from university - it's just being able to apply that to practice. (TU17\_HT\_1)

As trainees progressed through the year, they were working on wards a lot more after the induction period and were constantly learning new information in an applied setting. They could witness patients being treated and examined, the medicines being given to patients and assimilate this information further during study time or, in some cases, during home study. They were developing new specialised clinical knowledge during ward rounds in different clinical areas. For example, one trainee talked about his improvement in pharmaceutical knowledge in prescribing and dosing for children following a rotation on a children's ward, and increased knowledge of palliative medicine after a rotation in palliative care.

"In terms of pharmaceutical knowledge I've improved. 'Cos I did, I've done a rotation on sort of children's ward and that sort of improved my knowledge of prescribing in children, sort of the doses that the regular prescribed medications are given in children and what would be sort of normal doses and what would be abnormal. And then I did a rotation in palliative care. So I gained an insight into sort of end of life sort of care there and the doses and kind of drugs that they used." (TR11\_HDG\_2)

The potential limitations in developing clinical knowledge due to the hospital site was noted by one trainee. Although no other trainees reflected on their setting being a potential factor in facilitating or hindering opportunities to witness different scenarios, such comments from this trainee suggest the setting was conducive to the trainee's development in, for example, dealing with diverse clinical cases.

"Well it's only a small hospital so maybe limited with respect to the scenarios that I've seen. Maybe if I was in a bigger sort of teaching hospital I'd see more scenarios - more sort of surgery-type stuff and gastroenterology-type stuff. We don't really have that here." (TR10\_HDG\_2)

All trainees working in hospital showed signs of working more independently and having more control over the activities they did in the hospital in comparison to community trainees. Hospital trainees had more flexibility in managing their learning and could use study time to prepare for ward rounds or research areas of knowledge they did not feel confident in when they had study time. Local and regional training days were in place for hospital trainees which provided them with an opportunity to meet with other trainees and learn new information. These training days were geared towards the registration assessment. In one site there was a BNF club in place for trainees which was useful for building competence in using the BNF and learning more about how different health conditions were treated.

"Yeah, I think I've gained quite a bit. We have a BNF club every week with different pharmacists. Me and the other pre-reg, basically we take a chapter out of the BNF and they have questions on it set for us and we have to do those questions beforehand; obviously read that chapter and do those questions ....." (TR9\_HDG\_2)

With regards to dispensing skills, trainees in hospital spoke of using dispensing logs which would be signed off for them to be qualified as a dispenser. They could then move onto to working through an accuracy checking log of checking 1000 items accurately.

By the third round of interviews with hospital trainees, as with trainees in community pharmacy, they still recognised gaps in clinical knowledge. However, this was met with less anxiety compared with previous interview rounds. As with trainees in community pharmacy, the registration assessment preparation helped improve clinical knowledge towards the end of the training year. Tutors were content with trainees' abilities in practical skills such as dispensing and also their clinical knowledge at this stage in the training year. However, there was still room for improvement in trainees' clinical knowledge in hospital pharmacy as one tutor pointed out:

"He has a good knowledge but obviously he's still - he has the knowledge I would expect for somebody at his stage, if you know what I mean. And he knows - he probably has it a bit better and he certainly has - but I think obviously because of his experience, if it was a very complicated patient, he wouldn't have that experience as yet. But then neither would a pharmacist, a qualified pharmacist. You still have to gain that experience over time." (TU13\_HT\_3)

In hospital pharmacy, tutors were able to gauge clinical knowledge as applied in OSCEs that took place in a university as part of a regional training day in the latter part of the training year. This was beneficial as tutors could not always witness trainees' skills through working directly with trainees as was the case for tutors in community pharmacy.

"I have seen an improvement in her clinical knowledge .... She did her mock [registration assessment] yesterday and she passed both papers. She got about 90 per cent .... So from that point of view, I think she's done well. And actually she did - they do the OSCE at the university and she did really well." (TU10\_HDG\_3)

#### NQPs

As with NQPs in community, those in hospital were more involved in clinically checking prescriptions rather than dispensing and as such they felt that their clinical knowledge improved further because they were more involved in the process of examining patients' medicines for interactions and dosages. The clinical knowledge NQPs were developing did, however, appear to be contingent on the wards NQPs were working in, and this would vary across NQPs as they worked in different specialties.

"So obviously my knowledge of surgery and general surgery and I'm on spinal surgery as well, so definitely my knowledge around this topic has definitely improved. Definitely antibiotic prescribing in certain conditions - because obviously you only get certain conditions with certain antibiotics - for example surgery, they'll get a certain infection therefore I treat it with certain antibiotics in different conditions so I obviously do that. So I've got a lot more clinical knowledge around obviously surgery. Different - well, when I rotate in January obviously my clinical knowledge will grow depending on where I rotate to really. But, for example, my knowledge of heart care hasn't increased compared to pre-reg but my surgical knowledge has increased because that's where I've been." (TR13\_HT\_4)

# 3.4.2.4 Summary points

- The MPharm equipped trainees with a good understanding of the clinical knowledge but lacked the practical application of knowledge in practice
- Work experience prior to pre-registration training was considered very useful by trainees a helped to familiarise trainees with the pharmacy environment and processes such as dispensing
- Early on, trainees were not confident in their clinical knowledge and being able to use and apply it in practice in order to provide advice to patients, though their tutors had more confidence in their level of knowledge
- Study time throughout the training year was useful to synthesise some of the new informat being acquired through exposure in pharmacy practice though study time was inconsistent across training sites
- Trainees in hospital had more flexibility in their learning with regards to study time and selecting pharmacists to shadow
- Trainees in hospital learned more about specialist drugs used in different hospital wards
- Clinical knowledge was continuously being applied in practice through, for example, witnessing prescriptions and drug charts in repetitive practice
- By the third round of interviews trainees began focusing on preparing for the registration assessment, which became their main focus; this was seen to develop clinical knowledge
- As NQPs, clinical knowledge was still improving in both sectors through repetitive practice and working with more patients and clinical queries

# 3.4.3 Development of professional attitudes and values

Although the development of professional attitudes and values were not the main focus of this research, rather, the development of their professional behaviour was, some questions were still posed to trainees about any changes in attitude and / or values occurring as a result of pre-registration training. This section considers how some of the core values of professionalism (e.g. honesty) and professional attitudes developed before, during, and after pre-registration training from the perspective of trainees / NQPs who had the insights into these more 'internal' elements of professionalism. This was tackled effectively through questioning trainees about the perceived importance of professionalism, as has been done in other research.<sup>206</sup>

# 3.4.3.1 Upbringing and MPharm education

This section relates to the first round of interviews where participants were asked about the role of their upbringing in shaping their attitudes and values. The findings from the first round of interviews from trainees in community and hospital pharmacy are considered together. One's upbringing appeared to be a major factor in engendering and building a foundation of the values of professionalism at an early age. Individuals' parents reinforced many of the core elements of

professionalism, such as being respectful, honest, and caring, during their childhood and adolescence.

"I think my parents always sort of drilled it in to, stuff like, be honest and be respectful, that type of thing." (TR8\_CLM\_1)

Religion also appeared to play a role in appreciating and fostering some of the core values of professionalism as noted by two trainees. They talked about religion and its role in shaping their attitudes and values of elements of professionalism (e.g. honesty and empathy). According to these trainees, the teachings of religion can inculcate such attitudes and values, as illustrated by one of their comments:

"Yeah I think, religion, religion might come into it as well...to be honest like, I would say I'm from a moderate - my family's moderate - we're all Muslim, followers in Islam right, and with all religions, professionalism to a certain extent is part of it. Even Christianity, Hinduism, all that, you know the core principles like honesty, respect, show empathy. All that is part of religion, so if someone's practising their religion they're automatically being professional ... ." (TR6\_CLM\_1)

The patient oriented aspects of professionalism (e.g. confidentiality; ethical practice) which are more pertinent for patient centred professionalism in healthcare seem to be instilled during the MPharm degree and in practice. Classes in communication and demonstrating elements of professionalism, such as empathy and compassion, appeared to be largely absent in the MPharm degree. When these elements of professionalism were explained (e.g. delivered didactically) within the curriculum they were generally considered to be ineffective, as illustrated by the following quote:

"No there's nothing about how to treat people or anything like that, it's just literally it's the knowledge ... But there isn't anything like how to deal with an awkward customer it's just, there is an ethics part to it, there is an ethics part, it's sort of mandatory, because there is like a whole guide to ethics and it's set up by the GPhC. But there's nothing really on how to deal with patients." (TR1\_CLM\_1)

# 3.4.3.2 Pre-registration training and post-registration practice

# **Community pharmacy**

#### Trainees

A different way of thinking about the job role as a trainee, as opposed to being a student, and the identity associated with this was a noticeable theme in the data. Interviews with some trainees highlighted this newly adopted 'professional mind-set' which occurred upon starting out as a trainee in the pre-registration training year. This mind-set, which was evidently adopted by some trainees, appeared to raise trainees' awareness of the importance of the pre-registration training year in allowing them to develop and behave as a professional pharmacist. For example, one trainee working in an independent pharmacy expressed how he felt that he was not 'just another

*member of staff*, compared to when he was in part-time, or summer, employment as an assistant in the pharmacy, and that he had more responsibility and had to take the role more seriously:

"Now I'm not just another member of staff, 'cos this year is going to lead into being something different. I am going to, I'm aiming to be the pharmacist, the person who has the responsibility, so I can't just be another, you know, I have to take it a bit more seriously." (TR19\_Cl\_1)

In later rounds of interviews with trainees, attitudes towards professionalism were explored further. This was done through questioning whether elements of professionalism were still important and whether trainees faced any disillusionment about the nature professionalism as witnessed through further experience during pre-registration training. Trainees stated that they did not consider any of their attitudes towards professionalism and its importance to have changed during pre-registration training. They believed it was always important to demonstrate professionalism in practice and maintained that they had not changed their attitudes regarding this. They appeared to maintain professional conduct and there were also no concerns over trainees' attitudes towards their work according to their tutors. There were, however, some changes in a small number of trainees' attitudes towards professionalism and how it was acted out in practice. For example, one trainee described the somewhat cynical outlook towards patients that evolved through many encounters with patients during training.

"I've become - at the beginning I empathised, and now through it I've realised that ... in certain situations no, you don't, you don't empathise because it doesn't matter what you say to that person - they're going to be, if you empathise or you don't empathise they're not going to care. They just want what they want and if they don't get it, it doesn't matter." (TR19\_CI\_3)

Many trainees were beginning to hold the view that they may not always be able to uphold a professional demeanour in the workplace and that occasional lapses in professionalism could happen. As they progressed through training, and perhaps through witnessing some lapses in their own and fellow colleagues professionalism, they had an appreciation of the context-dependent nature of professionalism.

"I think everyone slips up once in a while but that's like human nature, where you bring in like external stuff, like problems you have in your own life and you have a bad day ....." (TR15\_CSM\_3)

#### NQPs

NQPs in community pharmacy believed they possessed the right attitudes which allowed them to demonstrate softer patient care elements of professionalism during pre-registration training, when the opportunities arose, and also now as a pharmacist.

"We're still caring for the patient the same as what I was doing [during preregistration training]." (TR12\_CS\_4)

NQPs believed that it was more important for pharmacists to consistently demonstrate and uphold elements of professionalism (e.g. compassion; respecting confidentiality). They often related the importance of demonstrating professionalism in practice with being in a senior position within the

pharmacy. For example, one NQP talked about setting an example for the rest of the staff by conducting himself in a professional manner.

"Yes, it's as important and even more because being the pharmacist and being the manager, you know, it's important that you kind of set an example to the rest of the staff and you hold and conduct yourself in a manner that the staff and patients will respect you, and also feel kind of more confident in the advice and information that you're providing them with. So it's more important, being the pharmacist, to act in a certain manner than it is for a dispenser or anyone else I think." (TR16\_CLM\_4)

The importance of acting in a professional manner as a pharmacist may also relate to the worry associated with losing one's job through unprofessional conduct. A couple of NQPs commented that behaving in an unprofessional manner could jeopardise their job.

"If you're not acting the right way in pharmacy, you know, you can actually get struck off. It can be really bad. As a pre-reg, you're only trying to impress the people you're working with. You don't get tested against it as such. They sign it off at the end of the year. But as a pharmacist you can make an actual mistake and you behave in the wrong way, then it's your job on the line rather than just your career, you know as a pharmacist and pre-reg sort of thing." (TR3\_CLM\_4)

Some challenges in acting in patients' best interests were raised within a couple of interviews with NQPs. The conflict of interest that may be experienced between acting with patients' best interests in mind and meeting business targets was noted by one NQP, which could be experienced by other NQPs working in community pharmacy

"The targets it's getting away from - because actually the first responsibility you have is to serve the public and the health aspect of it ... I don't mind dealing with use review people but only if it's going to be beneficial. Like I said, a few times a good thing has come out of it where you've referred them on to a doctor to get something changed or you find out a side effect and you've helped them deal with it. But, you know, usually it's just a review and they sign over for like thirty quid. And then no one's getting anything out of it, apart from the business ...." (TR3\_CLM\_4)

# **Hospital pharmacy**

#### Trainees

As with some community trainees, two trainees in hospital appeared to adopt a professional mindset, and appreciate the importance of the pre-registration year as a path to become a professional. This was initiated at the start of pre-registration training, as illustrated by the following quote from a trainee in round 1:

"I know that's what I'm trying, the purpose of this year is for me to become competent in all these areas ....." (TR10\_HDG\_1)

The importance of the training year appeared to be well recognised by all trainees more generally in terms of it being a year where they could apply themselves to various tasks. For example, one trainee highlighted the reality that they would soon have to carry out the role of a pharmacist after training, thus it was important to push themselves into doing different tasks.

"I've learnt that when people ask me to do stuff, even if I'm a bit scared, I just have to do it 'cos I'm gonna have to it one day. So I was asked to take a drug history from a patient and it was my first one and I wasn't sure but I just thought I had to do it and [name removed], my mentor, was supervising me, so it was fine but I was kind of, I felt I wanted to kind of say 'no' but I did it." (TR17\_HT\_1)

When revisiting the topic of changes in professionalism attitudes and values with trainees in later interviews there was no evidence that there were any differences from when they started. All trainees still held the same attitudes: that possessing and demonstrating professionalism was important for practice as a trainee. They also maintained that they still held the same values of professionalism which were instilled during upbringing.

#### NQPs

The views of NQPs working in hospital were similar to those working in community pharmacy. They, too, believed that it was more important to demonstrate professionalism as a pharmacist than as a trainee as the responsibility and accountability associated with being a pharmacist had increased.

"I think maybe the professionalism develops through pre-reg, even though we weren't that professional, but it's just because you didn't have any responsibility - you know, if we wanted to take a two-hour lunch break we did because we could, whereas you wouldn't do that now because obviously you have wards to cover. But I think you learn about being professional as a pre-reg but you don't really practise it that much. You know what you're supposed to do." (TR18\_HT\_4)

As with NQPs from community, according to NQPs from hospital, they felt they possessed the right attitudes from the start of pre-registration training and now as a pharmacist.

# 3.4.3.3 Summary points

- Core elements of professionalism in line with important values (being compassionate and respectful) of professions can be inculcated during one's upbringing
- Some trainees believed religion played a role in fostering elements of professionalism (e.g. honesty; respect)
- Attitudes towards the training year, interpreted as an emerging 'professional mindset', were described by some trainees who showed a strong appreciation of the importance of the training year
- Professionalism and the elements composing it were consistently deemed important by almost all trainees as was the demonstration of professionalism; a few trainees showed some signs of cynicism as to its importance in some instances with patients
- The demonstrations of professional behaviours was considered more important as pharmacists than as pre-registration trainees

# 3.4.4 Development of professional behaviour: qualitative findings

A differentiation of behavioural professionalism, between patients and colleagues, has been made in other research in pharmacy<sup>62</sup> and medicine.<sup>59</sup> This provided a useful framework for teasing apart from of the professional behaviours being developed by trainees and NQPs in this study. The development of professionalism in terms of professional behaviour with patients, work colleagues and other healthcare professionals were examined with qualitative interviews to provide more context and detail to the experiences of trainees from trainee and tutor perspectives. This provided a more complete view of the development of trainees' demonstration of professionalism. The use of examples of behavioural incidents, utilising the CIT, were especially useful in illustrating the development of professional behaviour discussed in this section.

# 3.4.4.1 Involving patients

This section considers trainees' development of professional behaviour involving patients during the pre-registration year and into early practice as NQPs.

# **Community pharmacy**

#### Trainees

There appeared to be trepidation in some trainees about working with patients at the beginning of the pre-registration year. For some of these trainees these ambivalent feelings could be explained through the fact that they did not have much patient contact during past work experience.

The interactions that trainees had with patients in the early stages were not generally in depth (e.g. providing advice about prescription medicines) and were more service-oriented (e.g. greeting and taking in a prescription, or handing out common over-the counter (OTC) products). It was a common finding that most trainees believed they were quite good at communicating with patients when they did deal with them. They clearly believed that their professional skills in communicating with patients, which incorporated elements of professionalism in verbal communication (e.g. empathy, altruism, respect), was at a good standard. However, trainees felt that they lacked the clinical knowledge and the ability to deal with clinical problems when confronted with a patient, due to the limited experience of applying clinical knowledge in a practical setting (discussed in section 3.4.2). A number of comments from trainees illustrated this belief of being adept in working with patients more generally but that clinical knowledge, and experience in applying it, was lacking which would limit the success of helping a patient:

"Cos you can't, I don't how to put this but once your knowledge grows more then you're more able to help people yourself. But whereas when you don't know as much you're gonna get a lot of help from someone else that can help you and help the patient." (TR12\_CS\_1) Although there was the belief by trainees that they could work effectively with patients in a professional manner, incidents of acting in an unprofessional manner were recalled by a small number of trainees. One example, provided below, was recalled by a trainee who raised his voice when speaking with a patient on the telephone. He was subsequently criticised by his tutor following the incident. He was able to reflect and learn from this experience.

"I was on the phone to a lady ... she was asking me about something, so I gave her the information and then she rang back and started calling me a liar and things because she asked me what was in it, and I said, these are the ingredients, and then I think she must have misconstrued, but she basically rang back a day later or so and called me a liar etc. and then raised her voice. But she's a bit deaf so I apparently, unintentionally, raised my voice. Not in an aggressive manner but, she, because she was struggling.

"But if I could do that to her without noticing it made me think about future conduct etcetera 'cos you can't raise your voice to people it's not appropriate to ever raise your voice to someone." (TR19\_Cl\_1)

On the whole, tutors held the belief that their trainee demonstrated appropriate professional behaviours in the pharmacy and when exposed to patients. Examples of the demonstration of professional behaviour, particularly relating to acting with confidentiality when around patients, were provided. For example, one tutor provided an example of an incident in which her trainee was able to respect the confidentiality of a patient when attempting to provide advice to a patient. The trainee also appeared to understand the limits of her knowledge by referring to the pharmacist when she was doubtful in answering some more difficult questions.

"I've seen her doing an OTC consultation for some thrush products, where she basically took the customer to the other side of the counter away from because a crowd tends to gather at one side of the counter - and just took them away and just went through all the questions with them. But when she realised there was a bit more to it, she then came and got me, just to come and help her, basically, with some of the more technical questions. So she knew how far to take it on her own and when to refer, basically; and when to respect the patient." (TU12\_CS\_1)

Tutors generally believed that their trainee needed to improve in their abilities in working with patients, perhaps showing more appreciation of the intricacies of communication. They believed their trainees were lacking confidence: terminology used by many tutors in describing their trainees. The ability to convey the correct information to patients in the appropriate manner was something noted by many tutors as being a skill that trainees needed to develop:

"You've got, you know, middle-aged people that want to be talked to politely, but actually this is where they struggle on what level to pitch it at and make that assessment of that person, of, 'Okay, this is their capability, and I need to talk this way with them.' But it comes - I suppose it comes with practice of going through as many people." (TU6\_CLM\_1) Although it was difficult for most tutors to recall any unprofessional incidents involving trainees' encounters with patients, an issue of a trainee infringing upon maintaining patient confidentiality was recalled by one tutor, outlined below.

T: There was one thing that I did pick up and I did actually give her feedback that I wasn't satisfied and it certainly wasn't something that I'd expect to see again - and that was discussion about a patient's medication while the patient was still in the store. You never do that. The last thing you want the patients to think is that you're talking about them in the dispensary. You know, patients aren't well. That's why they come here. You know, the last thing they want is to leave here paranoid as well. So certainly that was something that she's been picked up on and that I've had to speak to her about.

I: And then you just basically told her?

T: Yeah, just spoke to her. Spoke to her. She was - there was another pharmacist on at the time and I spoke to the both of them. (TU5\_CI\_1)

In the second round of interviews, trainees talked about their improved ability to deal with patients as, in the case of most trainees, their contact with patients increased. Moreover, the ability to recall incidents where professional behaviour was demonstrated with patients improved and more examples were provided. Improving knowledge of the working of the pharmacy and day-to-day experience with patients was facilitating trainees' ability to serve patients. Many trainees commented that they had built up their level of confidence with patients which related to increased clinical knowledge possessed. This helped trainees deal with queries and communicate with patients about their health concerns. The following trainee talked about his increased confidence in himself and in his encounters with patients following a positive review from his tutor who commented on his clinical knowledge.

"I think I have good confidence with patients, like my clinical knowledge wouldn't be, well [tutor] said at the review that it was quite good which I didn't, well I didn't disagree with, it's just that I didn't think a good sound basis for clinical knowledge but he said it is quite good so it just means I have more confidence in myself." (TR15\_CSM\_2)

At round 2, there was evidence of trainees becoming more involved in the care of patients. A few trainees talked about their experience in consulting patients which had occurred in the past couple of months prior to the second interview, typically about the use of inhalers. As such, many trainees believed they were becoming exposed to a wide range of patients in their pharmacy as well. Therefore, trainees had to learn how to deal with disrespectful patients at times. There were a number of incidents raised by trainees which involved working with awkward or aggressive patients in a professional manner in the community pharmacy setting, such as the following example.

"Last week when I said that lady was shouting at me down the phone, she was annoyed because some medication hadn't been delivered for somebody and she was promised that it would be delivered and I tried to put the point across to her that we never promised, firstly, that things would be delivered because we can't guarantee that we get the prescription. She was being really awkward. She said to me, she actually said to me, 'The medication will be here tonight.' As in, you know, making the point, it will be here, you will get it here. And I was like I can't guarantee anything but obviously I didn't shout down the phone at her. And then I know I did well because when I put the phone down one of the dispensers said to me I, 'dealt with it really well,' because you have to stay calm. If I had shouted back at her nothing would have been resolved and we probably would have had a complaint against us so you're not going to achieve anything that way." (TR16\_CLM\_2)

Although improvements in abilities with communicating with patients were noted by trainees and tutors, a few trainees did recognise areas for improvement in working with patients such as one who described being 'tongue-tied' when communicating with some patients due to not possessing the right knowledge to deal with queries:

"I think like still, obviously my clinical knowledge needs to improve and I dunno like. Like even still I can improve in how I speak to people and deal with people. Like sometimes I'll go out and I'll get a bit tongue-tied like, and they'd look at me like I'm stupid (laughs), not like I'm stupid but I think I speak too fast to them so I get them a bit confused, so I need to like learn to like slow down when I'm speaking to people as well which I think is getting better ....." (TR14\_CSM\_2)

Another trainee working in a supermarket pharmacy brought up a time when he discussed a patient's illness and may have embarrassed the patient by stating their ailment loudly at the healthcare counter. As the trainee could clearly see the patient was upset by this behaviour, it made him realise that he needed to be more discrete about the discussion of patients' ailments in public.

"One day there was a gentleman that came up to the counter and I was working on the counter, and he quietly said that he wanted something for haemorrhoids. At first I didn't grasp what he was saying and then I was thinking, and I just, as soon as I realised I said it out really loudly, 'You mean you want something for your haemorrhoids?' And then he just looked at me, shocked, and I was like, 'Oh, God! I shouldn't have said that.' Because there was a crowd gathering and this is quite an embarrassing thing to talk about. And I just thought that, yeah, that wasn't professional really." (TR4\_CS\_2)

By round 3 interviews trainees progressed in their abilities to communicate successfully with patients. This was evident based on comments from trainees and tutors as well as the examples of professional behaviour demonstrated. For example, one tutor provided an example of her trainee's professional behaviour which involved working with an aggressive patient who wanted medication without a prescription. The trainee, along with a technician, was able to explain how medication cannot be provided without a legitimate prescription and provided her with some options to obtain the medication which helped to reduce her aggression.

"There was one lady who got very - a customer unknown to us, to be honest - but she got aggressive when we couldn't give her any medication without a prescription. There was [trainee] and another member of staff. Actually the two of them went down and talked to her and sort of listened to her and just tried to calm her down. They dealt with it as best they could and she did eventually leave. But they calmed her down as best they could.

"He explained obviously we couldn't do it without a prescription, gave her options of how she could get the medication she needed, and just sort of stopped her being so aggressive." (TU3\_CLM\_3)

. . .

Contrary to the successful interaction between a trainee and patient described above, there were still some instances of unprofessional behaviour highlighted in the third round of interviews. For example, one trainee (below) described dealing with a customer who was intimidating as he was in a bad mood and she felt she did not deal with him effectively. The trainee provided the patient with some medication that was not suitable as the patient had a bleeding stomach.

"I had a customer a little while ago that came in and said - he just came in casually and said, 'Do you do anything for a bleeding stomach?' and I said, 'No, we don't.' And he asked for some paracetamol and some codeine or something. I asked him the question then I gave it to him and he took them away. Then [tutor] said to me, 'But he's just told you he's got a bleeding stomach. That's like an alarm sign and you just let him go.' But he was like a really huffy-puffy customer, all, 'Oh, the doctors don't do anything, blah-blah,' so I just stood there quietly, like I didn't really know how to - I think in that particular situation the customer scared me a bit because I've never met him before, I don't know how he's going to behave. And then later [tutor] said to me, 'But he just told you' - he has regular medication used for that condition that he'd told me about, so he's getting the best that he could from the doctor. We can't dispense anything else. But he said maybe I should have said to him that he needs to go back to the doctor, even though he's a regular - like [tutor] knew who he was. That's why he didn't intervene. But yeah, some things like that sometimes I'll miss." (TR20\_CI\_3)

Many trainees believed that they had improved their ability to communicate information to patients in a way that they could understand. For example, one trainee talked about how he used to tell patients very comprehensive information about their medicines but he had since realised that people would not be able to assimilate all of this and it was better to be selective and provide only most important information. He was better at tailoring the information to different patients as well:

"I used to ... there'd be like fifteen things to tell them and I'd tell them all fifteen things and then you sort of realise you can - five of them applied and then three of them didn't matter at all and there's one really important one, so you just sort of say the important one and take it from there." (TR7\_CS\_3)

Some trainees did, however, acknowledge that communicating and getting the right message across to patients was an area that could still be developed during the final months of training. Improvements in trainees' ability in working with patients was noticed by all tutors as their

confidence increased. It was improving as clinical knowledge improved and familiarity with patients increased, which enhanced the trainees' abilities to communicate, as noted by one tutor:

"I think her confidence has grown. She now has confidence in what she's telling the patient in that, yes, she feels that it's right so she's happy to use her own judgement. Obviously if she's unsure about anything, then she knows when it's all right to sort of bring somebody else in." (TU16\_CLM\_3)

Although tutors were happy with the overall ability trainees possessed in working professionally with patients, a few noted some areas which could be improved. For example, one tutor commented that his trainee could do more to improve her service through smiling and demonstrating more altruism. Another tutor talked about the difficulty his trainee faced in working with aggressive patients:

"He's dealt with a lot of aggressive ones, you know, nice ones. I mean, luckily we don't have many aggressive but, yeah, how to - probably aggressive he does struggle hard to actually deal with it at the end, to get an outcome. But, I mean, that's why I get involved. But I'd probably look at that as probably with time or with experience ...." (TU1\_CLM\_3)

Through reflecting on patient contact during the pre-registration training year, the majority of trainees were happy with the opportunities they had with working with patients and most believed there was a diverse range of patients that visited their pharmacy. For example, one trainee talked about the location of the pharmacy he was working in, in the town centre, which meant there were a variety of patients with different cultural backgrounds visiting the pharmacy. A couple of trainees did, however, comment that the diversity of patients visiting their pharmacy was rather limited

"A lot of the people that come here, it's the same sort of people and, I don't know, so for clients are like a little group of clients coming in and they all - it's a lot of like addicts and things. Maybe we could practise with different people .........." (TR3\_CLM\_3)

A few trainees talked about building rapport with regular customers after working in the same pharmacy for a long period of time. This helped them build a strong relationship with some patients and change the way in which they communicated with them (e.g. on a more personal level). They felt more confident and were able to offer a better service to such patients because of the closer relationship.

"I think a lot of it's to do with seeing the same people, so it's your regulars that you're better with. If you've got new patients and you don't know them, I don't know, also how they are with people, then you're not as confident.

...

"Yeah. You develop a bit of a rapport - even with the ones that you don't get on with; you know how to deal with them as well. Yeah, so I think that's something you work on all the time." (TR20\_CI\_3)

#### NQPs

In round 4 interviews, NQPs reflected on pre-registration training. Many felt they had not actually had lots of experience with patients as a trainee compared to as a pharmacist. Some attributed this to the pharmacy being very busy which limited opportunities for patient contact because they would be occupied with other tasks, such as dispensing. The pharmacist would be more involved in handling patient queries and counselling.

"As a pre-reg, you're not an actual pharmacist and you can't speak to [patients]; they know you're a trainee so they're maybe not as, yeah, respectful of you. When you're a pharmacist they listen to you more. It's easier to do it because they're more - they know your role and you know what you're expected to do and it's easier to explain I think." (TR3\_CLM\_4)

NQPs dealt with patients more as they were the pharmacist and had to respond to queries which were directed at them. Although this was the case for the majority of NQPs, one (locum) NQP, in contrast, described how he did not have as many opportunities to deal with patients compared to his time as a trainee as he was now very busy checking prescriptions. As a pre-registration trainee he had dedicated days where he would work on the counter and interact with patients.

"I got more opportunities to talk with customers when I was a pre-reg because of the setting of the store. At the moment I'm not getting to see a lot of the customers because when I go into pharmacies I'm just doing the pharmacist's job in the back - checking because it's quite busy and you need to get the prescriptions out and I get called up whenever the counter assistants are stuck. Yes, but whereas in my pre-reg I had dedicated days on over the counter when a patients did come in for medicines and stuff." (TR6\_CLM\_4)

Continued improvements in communication were noted by a number of NQPs as they gained more experience in working with a range of patients. For example, the following NQP described being able to convey information in a better way through increased contact with patients as a pharmacist.

*T*: "I feel like I can put the information across in a better way now to patients, in ways where they'll understand or they know the reasoning as to why you're not going to give them something. Or just - I can just put it across to them a lot better now so that they understand really."

I: "Okay. I mean, how do you develop that kind of skill?"

T: "I think it's just dealing more with customers; you kind of know the kind of things that you need to say now and the way that you've got to put it across, because it does depend on how you say it as well as what you say." (TR12\_CS\_4)

A few NQPs gave examples of dealing in a professional manner with a challenging customer in their role as pharmacist. For example, one NQP discussed an incident where she dealt with a challenging patient who wanted to collect a prescription which was not ready to collect, something that would have been dealt with by the pharmacist during training.

"There were once when a lady came in to collect her medication, and we provide a service where we order medication for customers and then they just have to come and collect it on a specific date that we tell them - and she came in to collect hers early and she wasn't happy with the fact that we were telling her that it's too early, and she wanted to come and collect her next prescription early as well. So basically we had to tell her that her medication isn't due and she'll have to come back - well, the next time she comes to collect it, she'll have to come a week later, which she really wasn't happy about. And she kicked up a big fuss about it saying that if we didn't give her her medication early, then she's going to blow the whole thing out of proportion and all the rest of it. So I had to deal with her. And she basically was saying that "If you don't do what I say" then she's just going to blow it out of proportion. So I had to get it across to her why we couldn't give it her early. So in that situation I did have to put my foot down and basically say we can't do it early - but put it across in a way where I wasn't just trying - I wasn't being stubborn but I had to give her a reason as to why we couldn't do it early. So I really had to do it in a way where it came across as me being professional and not just being stubborn." (TR12\_CS\_4)

Another NQP explained an encounter with a patient in which he conducted an MUR. He felt he was able to demonstrate elements of professionalism (e.g. care and compassion) during this exchange.

"I did an MUR and found out the patient was still in quite a bit of pain and told them to go back to the doctor because the pain medicine wasn't, well, it's not the strongest thing you can be on.

"I was listening to the patient quite well and what I could do for her and how I could help really and, yeah, just what the best option for the patient was." (TR1\_CLM\_4)

Many of the NQPs were working in a different pharmacy / environment compared to preregistration training and therefore the patient mix was different and the ways of working with the patients were different. NQPs had to learn how to adjust to this themselves. One NQP reflected on this noting that the patients during pre-registration training were typically older and retired and the pharmacy was a lot quieter resulting in shorter waiting times for prescriptions. In his current role he was working with patients in 'tough jobs' and was faced with disgruntled patients frustrated with delays in receiving their medication.

"You know, we tend to get a lot of people who sort of have tough jobs as opposed to the type who are generally retired. So there tends to be different ways to approach things. Whereas with [pre-registration training site name] you might have a few stock phrases to whip out on the odd occasion, I've definitely seen a lot more angry people at [current pharmacy name]. But, as I say, it's because we're a lot busier." (TR7\_CS\_4)

The responsibility in handling patient queries, with a new set of patients, not encountered routinely during training, could pose new challenges as a pharmacist. One NQP described an encounter with a patient in need of antipsychotic drugs. He had to make a number of phone calls

to a GP and an acute care team in this instance and lost track of his handlings with the patient; he considered his actions unprofessional.

"I did have a prescription a couple of weeks ago where I ended up making about half a dozen phone calls and I sort of thought about it later and I thought, "Well, if I'd thought about that to begin with then I probably would have trimmed that down to about two or three calls. "The guy I was dealing with ... he was on like a week's medication of sort of like an antipsychotic and he was getting managed by like some acute care team, and then there was a breakdown in communication between his GP and his acute care team so he ended up with no medication. But he didn't know what he was on. He didn't know whether he was meant to be just on it for a week or long term or what have you. So I sort of phoned the acute care team - I couldn't get in touch with the GP. Then I ended up phoning the acute care team back again about when he told me about something else I sort of thought, "Well, I should have just got the entire story off him before." But it was more a case of you he didn't really think of - he was on three different things and he was a completely new patient for me so I was just dealing with the two he had a prescription for. So I had an issue with them: sorted the issue with them out and then I was just handing it out to him and he said, "What about this third medication?" so I had to call them back ......"

NQPs working as relief, or locum, pharmacists would experience working with different sets of patients in new environments regularly. One NQP working as a locum talked about the different ways he talked to patients as a result of working in a range of different places as a pharmacist. The way of speaking to patients, and the accepted communicative styles changed across different areas.

"I think because you're working in such a wide variety of areas - you know, different parts of the [location removed] are different, even different beliefs and things. You know, when I go into areas that are quite densely populated with a certain culture, I have to be careful with what type of preparation I recommend. You know, when I go to a very Muslim area, I can't be saying, "Oh, yeah, take the capsules" just because most capsules contain gelatine. Or in certain areas any rectal preparations are seen as very faux pas - you know, they don't want to - it's seen as the most disgusting thing in the world and then you have to avoid those. The pre-reg is good but it can only do so much." (TR19\_CI\_4)

# **Hospital pharmacy**

(TR7\_CS\_4)

#### Trainees

Most hospital trainees believed they were adept at working with patients in a professional manner in the early stages of pre-registration training. When the (limited) opportunities arose, they felt they communicated and demonstrated elements of professionalism (e.g. empathy, respect, compassions), just as community pharmacy trainees said.

"I would say in terms of sort of professionalism and sort of talking to patients and that kind of aspect and, all the sort of professional things like empathy and confidentiality, all that kind of thing, I would say I would be ready to go with that as I am now." (TR11\_HDG\_1)

Though their role did not allow them to deal with patients regularly during the early stages of training, as they were often more focused on dispensing, a couple of hospital trainees gave examples of their professionalism displayed when they conducted medicines reconciliations. The following trainee was able to appreciate elements of professionalism in working with a patient, such as confidentiality and demonstrating a polite and confident demeanour which could help patients have trust in them:

"I was doing a medicines reconciliation the other day to a patient and they were sort of quite an elderly patient, and I sort of needed to speak a bit louder and sort of respect their privacy as well. You know just always polite to them, try to keep my confidentiality 'cos there's obviously, there's six people around there, in a ward or in a bed, and if you're trying to speak to one patient you need to sort of don't shout it out and you need to sort of keep their confidentiality, you know keep everything confidential." (TR13\_HT\_1)

In contrast to the successful encounter above, a poor professional approach when working with a patient was noted by another trainee, below.

"I remember when I went on the ward with [tutor] like and I went to talk to the patient really happy and [tutor] was like 'You need to be a bit', 'You', 'Like these patients are', 'cos the ward where [tutor] works, all the patients are with it. 'Cos she's on [obstetrics and gynaecology] they're not ill, like generally they've just come in for an operation so you know they're fully aware, so, and you know a lot of them have had like miscarriages and stuff so she was like, 'You need to be a bit', you know. 'Don't be too happy and bouncing in and"' -

I: - "So you have to be particularly sensitive there?"

T: "Yeah so she's got to be aware of like what they've been through." (TR18\_HT\_1)

Tutors in hospital could not share much information on this topic because they did not work closely with their trainee. They acknowledged the limited patient contact early on in the training year. One tutor noted that it would be hard to comment on abilities with patients because the trainee did not have opportunities to deal with patients at this early stage of the training year:

"You can't comment on patient contact because it hasn't really happened yet ....." (TU11\_HDG\_1)

As trainees progressed in the pre-registration training year there were more opportunities for them to deal with patients on wards. This experience on the wards and exposure to patients through, for example, conducting medicines reconciliations regularly and independently, led to increases in confidence with patients and development of communication skills. It was easier to elicit examples of professional behaviour with patients by the second round of interviews as it did with interviews with those with community trainees, likely due to more patient contact. For example, one trainee talked about reading implicit messages from a patient, a methadone user, on the ward and showing care and compassion in his encounters with the patient:

T: "There was this addict who was in who I needed to get their methadone usage from the community pharmacy and I was like, 'Is there any other medication you are on?' And he was like, 'No'. And I knew he was on methadone so I was like, 'I need to know if you're on this other medicine, don't worry about it, just tell me what dose you're on,' and things like that."

I: "So he was embarrassed to say he was on it?"

T: "Yeah he didn't really want to say it because he obviously knew it was related to the heroin he was on, so I just kind of put it to him like really gently, just saying, 'I know you're on this medicine, I'm just really wondering what dose you're on so that we can give it to you when you're in hospital'. And he was a lot better about that." (TR13\_HT\_2)

The increased frequency of interactions with patients could also pose challenges for trainees as they progressed in the training year, generating potential incidents where trainees displayed unprofessional behaviour. For example, in the following critical incident recalled below, one trainee described having difficulty in counselling a schizophrenic patient on warfarin and considered her actions in that situation to be unprofessional. She was unable to engage and communicate with the patient; the patient did not want to speak with her and in the end the trainee removed herself from the situation by walking away and asking a pharmacist to help the patient.

*T: "I tried to counsel a schizophrenic patient on warfarin and that didn't go very well (laughs)."* 

I: "Okay. What happened there?"

T: "Well, I just asked - I explained to her what I was going to be talking to her about with regards to the warfarin, and then I said something along the lines of, 'So it's going to take about twenty minutes - is that okay?' and she just went, 'No.' I said, 'Okay, then. Bye.' (laughs) So it was nothing dramatic or anything but she just didn't want to talk to me, so that was fine. But, yeah, I have spoken to more patients now." (TR18\_HT\_2)

By the round 3 interviews, trainees noted the increased confidence in speaking with patients which was linked with increased opportunity and responsibility to deal with patients on wards.

"The more sort of opportunities you get to do sort of medicine reconciliations and things like that, I think the more empathetic you can be and, yeah, I think the more responsibility we've been given, definitely. I think that's just going to improve because hopefully we'll get our own bay on a ward and hopefully that will actually improve as well." (TR13\_HT\_3)

Tutors, too, talked about the confidence of trainees increasing a lot throughout the training year based on their encounters of working with trainees and feedback received from other pharmacists that worked with their trainees.

"Yeah, her mannerisms have always been good. She's more confident now with speaking with the patients." (TU17\_HT\_3)

All tutors commented on improvements overall with confidence but some noted that the trainee's communication skills still needed to improve, which would happen with continued practice:

"I suppose as an undergraduate you have limited patient contact and these skills develop over the course of the year. The more exposed you are to dealing on a one-to-one basis with patients, the more your skills develop ....." (TU9b\_HDG\_3)

All trainees were happy with the opportunities they had with patients and most believed there was a diverse range of patients that visited their hospital, illustrated by a quote taken from an interview with one trainee.

"I was on intensive care the other day and they have patients, which are completely sedated so you can't speak to them, so you need to obviously approach it in a different way - ring their GP, speak to their family members, etc., etc. Patients who are on, say, methadone, which is for people with heroin addiction and things like that, you obviously need to do the [medicines reconciliation] in a very different way; you need to ring up their support workers and key workers and things like that and make sure they have their methadone in hospital. Obviously there's elderly patients, like the guy I said with the inhalers - he had a hearing aid in as well so you need to obviously speak to him in a different way because he was hard of hearing. There's a wide variety ... ." (TR13\_HT\_3)

#### NQPs

NQPs in hospital felt more confident in their abilities to communicate effectively with patients and deal with them in a professional manner than as trainees. NQPs saw more patients and learned how best to speak with patients and talk about their medications effectively through more experience on wards. For example, one NQP talked about the increased number of hours spent on wards and more patient contact as a consequence.

"During my pre-reg I only had a couple of hours on the ward each day, whereas now in my new role I spend all day on the wards, so I have a lot more sort of patient contact than I did during pre-reg so with that obviously comes time to gain more experience and develop sort of existing skills." (TR11\_HDG\_4)

NQPs had more confidence in approaching patients since the last interview, and felt more capable to deal with them more effectively and in a professional manner, which could be linked to the fact that their identity had shifted to a 'pharmacist' and not a 'trainee'. For example, one NQP talked about now being able put into action her decisions in her new role, which was not an option as a trainee.

"Yeah, I'm definitely more confident because you know that you have the authority to make decisions so if you're, say, speaking to a patient about a difficult matter - say methadone - as a pre-reg, no matter what you say you can't back it up because you're not actually allowed to do anything, whereas now I'm a lot more confident to approach people with solutions because I know that I can actually implement them. So yeah, especially with patients it is a lot

more easier I think to deal with issues and talk to them really because you know that you can actually do something for them." (TR18\_HT\_4)

Some NQPs in hospital talked about how they improved their ability in how they worded their speech to patients with more practice.

"I think I've developed ways in which I can talk to patients, which, I don't know, just the words that I choose and the way that I speak to them, you know, that I approach somebody - I developed all those skills during pre-reg and now I feel quite confident to approach any patient, and even like different colleagues on the ward. I'm trying to think of an example but - I suppose when I was a pre-reg it's quite difficult to approach somebody who's older than you or whatever. But now, I don't know, I've just developed little things I do when I go and speak to them so yeah, I think it definitely prepared me for those sorts of moments." (TR17\_HT\_4)

Some incidents of the encounters with patients were offered by NQPs, in which they believed they demonstrated professional or unprofessional behaviour according to different elements of professionalism (e.g. respect, confidentiality, care etc.). These highlighted the nature of their encounters with patients as pharmacists. An example provided by one NQP illustrated an incident in which she demonstrated professionalism, through the way in which she empathised with a patient and used her professional judgement in giving methadone to a patient after understanding their needs.

"A patient came in out of hours and we have a policy at the hospital where we can't initiate methadone out of hours because obviously you can't check what they were taking before they came in so it's just a patient's word - you know, if they, say, were taking a load, do you give it them? So I went to see the patient - it was probably about three in the morning, and I decided, based on her situation and how she was struggling, to give her a small dose of just 20 mil, which is the minimum - normally it's 30 so I did give her a low dose. So I think that was definitely concerning the patient because she was struggling and just through not giving her anything till the morning probably would have been more harm to her and the staff. Yeah, I think things like that really. I think you need to go with your - you can't just always be following guidelines because it depends on the patient themselves.

"I documented everything I did and date-stamped it and timed it. So if anything did happen in the night, I just made sure that I could justify my actions and make sure that what I decided was right." (TR18\_HT\_4)

Another NQP believed she handled an encounter with a difficult patient, at the point of discharge, unprofessionally:

"The other day actually... I was trying to sort out this woman's discharge ... and I probably didn't need to go and speak to her so I was trying to be a good pharmacist by just going to speak to her, just to say, 'This is what I'm ordering - is that okay?' kind of thing but she just wouldn't stop talking and she was talking to me about the most random things ... she was, oh, she was just a bit of a hypochondriac. ... Anyway, in the end I just gave up and I had to - I was like, 'Okay, right, I've got to go now - bye.' You know, I had to shut down the conversation. ... I was annoyed at myself at the way I acted at the end of that conversation that day." (TR17\_HT\_4)

## 3.4.4.2 Involving colleagues and other healthcare professionals

This section considers trainees' development of professional behaviour involving pharmacy colleagues and other healthcare professionals (e.g. nurses; doctors) during the pre-registration year and into early practice as NQPs.

#### **Community pharmacy**

#### Trainees

The ability to work with colleagues in the community pharmacy was not a problem at round 1 according to trainees. In terms of abilities in working with colleagues and working as a team overall trainees felt comfortable and often considered working with colleagues in the pharmacy very much like working in past jobs (including those not in pharmacy; e.g. retail). All trainees had experience of working in pharmacies before and dealing with the different staff in a pharmacy so this was not a novel experience. One trainee did not seem to separate the process of working with colleagues in the pharmacy to that of building relationships with people throughout his life and that his relaxed attitude allowed him to work well with his colleagues:

"Yeah work colleagues, to be honest right, I've, every, through all my stages in life I've never really struggled to get on with people right. I've sort of, to be honest I'd say I'm a bit of a laid back person, so I do get on with everyone." (TR6\_CLM\_1)

Tutors corroborated what trainees said in almost all cases. They agreed that trainees were effective at working with colleagues in the team and dealt with them in a professional manner. From an early stage tutors often described the trainees as popular and that they had good abilities at getting along with staff well. There were, however, comments about a sense of arrogance was noted by two tutors in relation to their trainee's behaviour towards staff. For example, one tutor commented that his trainee did not always show respect to staff:

"I would say he's not too bad at the moment to be honest. Respect obviously to himself and probably the senior technician, maybe to the other ones, maybe probably lacking the respect ...." (TR1\_CLM\_1)

It was not very common for trainees to begin speaking with healthcare professionals outside of the workplace such as individuals at GP surgeries and elsewhere. This ability appeared to have room for improvement in some trainees. When phoning a doctors surgery, for example, it was common for trainees to speak to the receptionist rather than the doctor.

As time progressed, relationships with staff developed and were strengthened, perhaps due to working many hours with colleagues in the intimate working environment of a community pharmacy. It was evident from conversations with trainees that a number of them appeared to have developed strong friendships with colleagues in the pharmacy and this was conducive to a

less formal atmosphere whereby staff could 'banter' or share a joke with each other. Such behaviour was, however, reserved for moments away from patients, such as in the dispensary.

"Yeah, it's great in that everyone gets along. You can have a laugh kind of thing. But we have a rule of like not talking about anything personal when there's patients in the pharmacy." (TR2\_CLM\_2)

There was only one instance which diverged from findings from other trainees; one trainee was involved in a conflict with his tutor. The trainee was unhappy with the way in which his tutor had handled a situation in which she yelled at him for not fulfilling a request she made. The tutor wanted the trainee to provide help in the pharmacy quickly but he was in a different part of the supermarket and returned later than necessary. This incident changed the trainee's views of his tutor, negatively affecting his relationship with her, which precipitated a sense of tension between them. He commented how he had become more 'cautious' around her since the incident:

"I think I'm more cautious now with her, you know; when I work with her I do think twice when I say something or when I have to do something - whether that's going to be fine with her." (TR4\_CS\_2)

Findings from the second round of interviews, many trainees began to get more involved in dealing with healthcare professionals outside of the pharmacy organisation. This would be through, for example, speaking to doctors' receptionists on the phone which was more common than dealing with doctors themselves.

There were several trainees who worked in a community pharmacy that was attached, or in close proximity, to a doctor's surgery. This typically forged the working relationship between the pharmacy and the surgery and would allow the pharmacy staff, including the trainee, to work more closely with staff at the surgery. The level of contact the trainee would have with healthcare professionals was, however, variable, and much of the contact between the trainee and the surgery would still be mediated through a receptionist.

It was evident from round two interviews that a few trainees were beginning to get involved with the delegation of some tasks to pharmacy staff at this stage in the training year, though this typically involved getting help with the dispensing workload. This delegation, whilst not commonplace or frequent, related to their progressive role (discussed in section 3.4.1). For example, the following trainee commented that he delegated to fellow staff occasionally when he faced a heavy workload:

# "Sometimes I delegate. Sometimes you have to because I work in the corner of the dispensary; I can't just let the workload pile [up] on me." (TR6\_CLM\_2)

By the third round of interviews, all trainees believed they were continuing to work well with the pharmacy team as they had reported in the previous round of interviews. There were only a couple issues, noted in previous rounds of interviews, with the way in which two trainees (TR1\_CLM and TR4\_CS) dealt with staff. After the issues were addressed, these trainees said they noticed improvements in their working ability with colleagues and they realised the

importance of strong working relationships with fellow staff. This transformation was evident from the interview with one of these trainees:

"It just came to my attention that certain people had actually said certain things about me - that I wasn't really a team player as such. And I think, you know, I'm trying to focus on that a lot more now. I thought that, you know, if I do what I'm meant to be doing - if I follow my job description then that's fine but I think -I'm just realising now that there's a lot more to it and people's views are extremely important. I think, you know, when you go to university, you know, people think that it's a really science-based course and there's a lot of science - which is true - but then when you come out into the real world and you have to realise that you've actually got a team behind you, and it's really important to make sure that everybody gets the right message and everybody is following you. And I think in that aspect, you know, I have learned a lot but I still feel there's a lot, lot more to learn." (TR4\_CS\_3)

Tutors were in overall agreement that trainees continued to work well with colleagues. Where there were some issues in the trainee's behaviour with staff (i.e. TR1\_CLM and TR4\_CS), the issues were resolved.

Although a number of trainees were involved in communicating with doctors' surgeries - usually with receptionists - fairly regularly, as stated in the previous round of interviews, more trainees were engaged with such tasks at this stage in the training. One trainee explained how he had been gaining more experience in speaking to surgery staff and doctors since the last interview as he had gained more pharmacy practice experience and skills in, for example, querying prescriptions:

"Yeah, often you have to ring up surgeries for certain things, like a prescription's not arrived or there's something wrong with it or a query on it, you have to get in touch with people at the surgery. I've done more of that. But like just speaking to more people.

"I think the last time we met I'd not spoken to a doctor, maybe not, or I'd spoken to only one. I've spoken to a few since then." (TR3\_CLM\_3)

The increased confidence in dealing with queries and calling doctors' surgeries, often associated with increased clinical knowledge, was also witnessed and noted by tutors.

"He's more used to talking to doctors and reception staff and things like that so he's very confident." (TU3\_CLM\_3)

There was more evidence of some trainees beginning to delegate dispensing tasks to other members of staff at this stage in the training year as their role developed within the pharmacy team. Though, the role of delegator was still primarily the role of the pharmacist, some trainees mustered fellow staff members to help them with some tasks when in need of help. Delegating tasks was difficult for trainees because they started at the bottom of the hierarchy of staff in a way. It is possible that pharmacy staff may not respond well to the change in authority of trainees as they move through the hierarchy towards becoming a pharmacist. Tutors shared similar views to trainees about becoming involved with management and delegation of tasks within the

pharmacy. The difficulty in delegating at the training site was noted by a tutor who illustrated the awkward scenario which may be encountered if the trainee were to start delegating:

"I think that's with all pre-regs, you know. It's just difficult. I mean, I think it's difficult when you've come in as a pre-reg to sort of turn round to somebody and say, 'Will you count those scripts please?" (TU14\_CSM\_3)

#### NQPs

The dynamics of working with fellow staff had changed considerably for most trainees who began working in a different environment. NQPs now had the responsibility to lead fellow staff as a pharmacist. One NQP reflected how it was as though he had a senior position whereas when he was a trainee he was noticeably more junior:

"Yeah, I mean because now I'm a pharmacist, like I'm sort of on top of like in the chain of command, if you get me, so they're supposed to listen to me, whereas as a pre-reg it was the other way round. So that's definitely changed." (TR1\_CLM\_4)

Experience in managing staff was something that NQPs said they were often lacking during preregistration training.

"What I'm sort of getting my head round is the management aspect of things. Nothing really sort of prepares you for that; I mean, I can do like the clinical pharmacy aspect of it - dispensing prescriptions - but it's all the sort of managing people and, you know, sort of dealing with people who know absolutely nothing about pharmacy." (TR7\_CS\_4)

The nature of the work did appear to differ depending on whether the NQP had taken a role as a pharmacy manager or relief pharmacist / locum in that the latter positions did not usually involve managing the running of the pharmacy or management of staff. For example, one NQP working as a locum pharmacist described how he was not heavily involved with managerial tasks, although he did some delegating which was similar to the other NQPs described in their role as a locum pharmacist.

"There will always be a senior dispenser or an ACT who knows the running of the general place and they all kind of have a system in place where if there's a locum pharmacist in they do the specific tasks that might be different to whenever the regular pharmacist's in. But when it's a locum pharmacist they all have their set tasks to do and I think that makes a smooth run a little bit. So I'm not really delegating as such." (TR15\_CSM\_4)

TR5\_CI and TR12\_CS, who continued working in the same pharmacy where they trained, settled in well with their new positions which involved delegation and staff management. However, the difficulties involved with managing staff in a pharmacy where a NQP had trained was raised by one NQP, perhaps because they had started near the bottom of the staff hierarchy:

"It took me a couple of weeks to kind of stamp my authority almost - you know, people were questioning, because it brought different questions and different things, like if it's okay - and because there's a wide range of pharmacists there, I had my different points of view to them. ... So that was difficult, for them to kind of accept that I'd moved up now and my decision was final on certain things, you know, when I was the only pharmacist. Because I'd always been - because there'd always been somebody else above me and, you know, my point of view, it didn't matter as much." (TR19\_Cl\_4)

Most NQPs said they had more dealings with doctors' receptionists as a pharmacist and possessed the clinical knowledge to do this successfully as they were dealing with patient queries and had responsibility to chase up any issues with GP surgeries when necessary. It was reported by one NQP, who continued working in the same pharmacy as in pre-registration training, that the doctors had gained more trust in her advice; she was able to build further on this working relationship which she had established over the course of pre-registration training.

"The doctors in the local area, especially in the surgery next door, the two doctors actually they call me when they've got a problem and they actually ask for my advice. So I can see that they actually have a trust in me, which I'm really grateful about because I'm only newly qualified." (TR5\_CI\_4)

With the increased responsibility as a pharmacist it appeared that some NQPs found it difficult to deal with encounters with doctors which involved querying the drugs they prescribed.

"Once I remember there was, just sort of, I queried a dose with one of the GPs and the funny thing was it was just paracetamol that, you know, I would have thought that everybody knew how to dose certain ages for children and it was a bit high a dose for that age range and so I just spoke to the GP. I think it's the fact that it's paracetamol, which you're probably expecting everybody to be really clued up but he kind of - I think he probably felt - he might have felt that it was a personal attack on my behalf that, you know, 'Don't you think that I know how to prescribe paracetamol?' kind of thing, and I had to explain that, 'That's not the issue here - I just wanted to check that was the dose that you wanted to give.' So it wasn't anything personal ...." (TR4\_CS\_4)

# Hospital pharmacy

#### Trainees

Similar to community trainees, hospital trainees felt comfortable working with staff as it was similar to building working relationships with staff during past work experience. For some, dealing with work colleagues in the pharmacy was particularly easy as they had worked at the site previously. In the early stages (round 1) trainees worked a lot with pharmacy staff in the dispensary but they did have some contact, albeit to a lesser extent, with other healthcare professionals on wards such as doctors and nurses. In general, the trainees in hospital felt comfortable in dealing with other healthcare professionals outside of their immediate colleagues in pharmacy, but one noted the anxiety about the impending interactions with other healthcare professionals in the future:

"I think speaking to other healthcare professionals like doctors and also I've heard that the hospital consultants can be quite demanding and as a junior pharmacist that's gonna be really tough and I'm gonna have to be really confident in my knowledge to stand up to them and say 'No', if they're asking me something that, isn't, that I don't agree with or whatever. So that, I'm worried about that but I haven't had to deal with that yet." (TR17\_HT\_1) Tutors often described the trainees as popular and that they had good abilities at getting along with staff.

"Within the department itself she seems to be settling really well. She, you know, quite chatty; will talk to people, and knows when to ask for help and that kind of thing. So it all seems fine so far (laughs)." (TU10\_HDG\_1)

The following weeks and months after induction saw trainees working with a wider range of healthcare professional on a more regular basis which led to increased confidence in approaching them which was more evident when discussing their abilities.

Trainees were not in a position to begin to delegate tasks by the second round of interviews, much like community pharmacy trainees. They were still only in the first half of their training year and had difficulty in delegating tasks, except occasionally when in the dispensary.

"Up on the wards I've not really delegated tasks but in the dispensary I've delegated stuff. If say I need to go up to the ward and I'm doing something I could ask someone if they could finish it on my behalf for me while I go away, just things like that really. That's the only delegation that I've done up to now." (TR11\_HDG\_2)

By the third round of interviews, trainees were continuing to work well with the pharmacy team and were collaborating with HCPs more and fitting into the interprofessional team as their responsibilities in the hospital increased and the role changed

"I suppose like ward clerks and other doctors and stuff. I've got more used to talking to them and approaching them and sort of seeing them as more a member of the team rather than 'them and us' sort of thing." (TR10\_HDG\_3)

Trainees were more involved in working with other healthcare professionals such as doctors towards the end of the training year, thus their confidence and communication skills in dealing with them had improved.

"I've had more experience sort of speaking to doctors and nursing staff and other staff on ward level. So I'd say communication skills and sort of confidence and things has developed there since I last saw you. But in terms of working relationships in the department, I don't think they've really changed." (TR11\_HDG\_3)

According to tutors, trainees were gaining confidence in approaching other staff. Trainees continued to work well with departmental staff and improved their working relationships with the wider healthcare team, including nurses and doctors.

"I think she's got more confidence to actually approach other people now rather than wait for them to approach her and ask her. And they've done things like team leaders in the pharmacy so she's been the one in charge, which I think she's hated but I think it's helped her ...." (TU18\_HT\_3)

There was also evidence that trainees were delegating more now but this was, again, limited to minor tasks in the dispensary as was found in round 2 interviews.

#### NQPs

The NQPs working in hospital were not involved with as much management and delegation as NQPs in community pharmacy.

"As a band six you don't really do that much sort of managerial things. I mean, delegation - every single ward has obviously a pharmacist and a pharmacy technician as well so obviously you work closely with that pharmacy technician as well as any other co-pharmacists. So, I mean, we delegate out work on the wards so obviously I'll do some things and then the pharmacy technician will do other things as well, but there's not managerial - it's more sort of the workload." (TR13\_HT\_4)

NQPs appeared to be more involved in interdisciplinary working as a pharmacist as they worked more closely with the wider healthcare team in the hospital. The different working dynamic experienced as a pharmacist, compared with being a trainee, was something felt by some NQPs, which related to their new found responsibility and role. As a pharmacist, NQPs felt that other healthcare professionals saw them differently now and not as a student, as one NQP articulated:

"So when I was a pre-reg they saw me as like a student but now they see me as a pharmacist. Like the way they speak to me is very different. But the way I act with everybody on the ward I wouldn't say is that different because I just treat them how I would want to be treated - like I'm always polite, that kind of thing." (TR17\_HT\_4)

NQPs may also be more involved in any contentious issues between other healthcare professionals in relation to the treatment of patients as pharmacists. For example, one NQP also pointed out that they were dealing with more conflict with other healthcare professionals as a pharmacist because of the more responsibility they held:

"We have these meetings every Tuesday to see how we're getting on as a [residents], like as a big group and we literally spend an hour getting told off for everything we've done out of hours, but no one ever says, 'Oh, you know, you did a good job.' So I think the environment - I don't know if it is the same for all hospitals but here they're very strict on wanting to be the best and they don't want any mistakes so they literally just basically grill you all the time. I mean, there are staff that you do get along with, like in dispensary some people you do get along really well with but then it's the managers of the dispensary who seem to blame the pharmacists for everything and we blame the dispensers for everything, so there's definitely a lot more conflict I think as a pharmacist than as a pre-reg." (TR18\_HT\_4)

# 3.4.4.3 Summary points

- Trainees felt their ability to behave in a professional manner was adequate from the start of training; they believed abilities to communicate suitable advice (i.e. counselling)
  - if the opportunity arose - was hindered by lacking appropriate clinical knowledge
- Tutors recognised the limited confidence in trainees' ability to communicate effectively with patients early on in the training year
- As trainees progressed (by round 2), increased confidence in abilities to communicate and respond to patients was recognised by trainees as their opportunities to engage with patients were seen to increase, though many still recognised room for improvement

- By round 3, trainees and tutors noticed continued improvements in trainees' abilities to communicate with patients and they were much more involved in working with patients as their roles progressed and they gained more responsibility and independence
- The ability to work effectively and share information in the healthcare team was facilitated by continued practice experience and application of clinical knowledge
- Hospital trainees had much more exposure to other healthcare professionals, often working alongside them on wards in the latter stages of training
- Community trainees had limited exposure to a range of healthcare professionals, though more opportunities were presented to those working in a pharmacy adjoined with a surgery; the most contact community trainees had with other healthcare professionals was over the phone
- Community trainees had more continuity in working with patients and thus had more opportunities to build relationships with patients than hospital trainees
- Good abilities to work in a professional manner with staff was noted by trainees and almost all tutors from the beginning of training
- Friendships with colleagues were formed early on and behaviours amongst staff could differ from those with patients
- The geographical location of the pharmacy in which trainees and NQPs worked was influential in the types of patients that visited the pharmacy and influenced the ways of communicating with them
- As NQPs, opportunities in communicating with, and counselling patients, were more widely available as their role became that of a pharmacist
- As NQPs the dynamic of working relationships changed considerably and NQPs were more heavily involved in management, delegation and patient care
- NQPs in hospital were more imbedded into working collectively within a large interdisciplinary team; NQPs in community often had more management responsibility within a small team

# **3.4.5 Development through support, guidance and feedback**

This section considers the individuals in the workplace that were available to support trainees during pre-registration training as well when they became NQPs. Support was considered through exploring the different members of staff in the workplace that were closely involved in helping the trainee at different stages during training as well as when they moved into practice as a NQP. As well as this, the more formal guidance contributing to the development of trainees facilitated by, for example, performance standards<sup>131</sup> as well as the informal and formal feedback provided to trainees is considered in this section.

The findings in this section are not always presented linearly (i.e. from the beginning (round 1) to towards the end of training (round 3)). This is because there were recurring themes running

through each round of interviews and general comments made, for example, about performance standards, could not be explored developmentally in the same fashion as roles or behaviours.

# 3.4.5.1 Community pharmacy

# Trainees

With the workplace of community pharmacies being relatively small, trainees in community pharmacies worked with all the staff in the pharmacy and were able to receive help from all of their colleagues. The time spent with the colleagues differed slightly, such as time spent with counter staff versus dispensers and / or pharmacy technicians. Many trainees noted that the help they received could come from all members of staff because they had more experience than them and had a good understanding of pharmacy operations and SOPs.

"It's better to kind of start from the bottom and work your way up in a sense so you how things work 'cos otherwise if I'm just standing there checking all the medicines and stuff like that then you know I won't be able to do anything else." (TR2\_CLM\_1)

In one community pharmacy, the trainee and tutor described the working relationships with staff akin to a 'family' which demonstrates how strong the relationships amongst colleagues within community pharmacy can become, likely due to working together regularly with close proximity.

"I think people have been working with each other for so long that they're just accustomed to each other so it's like they're a family, so obviously now I'm here I am fitting in as well ....." (TR16\_CLM\_1)

Although it appeared all staff helped the trainee collectively, there was evidently a big role for preregistration tutors in helping and supporting the trainee early on as they settled into the workplace. All trainees talked favourably of their tutor at the early stages of the training year. Some trainees commented on how their tutor played a central role in assisting them.

"[Tutor]'s been the most helpful 'cos she 'actually the pharmacist, she knows most of the stuff and she's the one, that she's, I've got to liaise with her more than I have anyone else." (TR3\_CLM\_1)

In the second round of interviews, trainees in community pharmacy described how they were still supported by all of their colleagues when they required help, though the need for help was attenuated as trainees progressed in the training year, through to towards the end of the training year.

"I don't ask for help as much now because I do know a lot now." (TR4\_CS\_2)

Towards the end of the training year, trainees maintained that their tutor was still acting as the main source of support as they had previously settled into the pharmacy and acquired the necessary skills which were developed through the help of other staff. Trainees said the other staff were still supportive and helpful but it was evident that their role in helping the trainee had diminished through time as the trainee became competent in dispensing and made significant contributions to the working operations of the pharmacy.

The tutor, as a pharmacist, had more advanced clinical knowledge and skills in comparison to other staff which were more important for trainees to assimilate. The importance of pharmacists and, in particular, the pre-registration tutor in supporting the development of trainees in terms of improving their clinical knowledge and tailoring their patient care and general 'people' skills, was evident based on descriptions from trainees. The pre-registration tutor was considered by trainees to play a major role in shaping their development during the training year.

"Everyone's still very supportive but I think my tutor is now telling me more of what I need to focus on and try and improve on.

"Yeah, 'cos from the beginning she was just trying to get me into a role of me being in a pharmacy. So what kind of things need to be done in a pharmacy but now I think she is guiding me more towards being a pharmacist and what kind of things I'll need to improve on to get there." **(TR12\_CS\_2)** 

There was congruence between comments made by trainees and those made by tutors in terms of the role of the tutor in helping the trainee. Tutors recognised that they were there as the main source of support for the trainee during the pre-registration year and that they had the responsibility for the trainee's development. The tutor could also facilitate the dynamics of the working relations within the pharmacy as trainees gained confidence, through, encouraging pharmacy staff to approach trainees when they had queries. This appeared to be an approach to supporting the development of trainees that a few tutors adopted and spoke of. For example, one tutor previously talked about how a role-reversal occurred during the training year, whereby staff initially helped the trainee and answered questions but they subsequently went on to query the trainee and treat them more like a pharmacist in the latter parts of the training year:

"A lot of my staff have worked in the pharmacy for years, so they're used to having trainees come along and they know what's involved in the training role. So, you know, towards the beginning of the year they're helpful and show the trainee different aspects of the job; but then, as the year progresses, they will go to the trainee with problems and ask them...." (TU4\_CS\_1)

Some tutors talked about their active role in encouraging the trainee and it was apparent from the data that most tutors took this approach to allow their trainee to gain the most out of the training year and develop skills necessary for practice, such as ability to communicate effectively with patients. The tutor needed to put the trainee into the 'firing line', according to one tutor, in order for them to gain the necessary experiences with patients:

"It is the tutor's responsibility to ensure that their trainee is constantly and persistently in the firing line - and that is the patient-professional interface. There's no point in having your pre-reg in the dispensary all throughout the 12 months. It's a pointless exercise." (TU5\_CI\_3)

Some tutors also spoke about providing their trainee with opportunities to deal with less frequent activities occurring within the pharmacy, such as conducting patient consultations in a consultation room, so the trainee experienced a range of activities within the pharmacy setting. They appreciated these incidents would help them in the future as a pharmacist. For example,

some opportunities to deal with patients more in-depth, in a consultation room for a medicine use review, was noted by several tutors.

"I'd say I probably would bring her in on a few MURs - that's something which I'm looking at doing - just so as she can actually sit in and see how I communicate with the patients. But she sees how I communicate with the patients on a daily basis anyway." (TU20\_CI\_3)

Although the role of the tutor was quite central in supporting trainees in community, there were a couple of instances where trainees felt that their tutor was not always there to help them. One tutor acknowledged that she had spent less time than was ideal with her trainee, and this was recognised by the trainee (TR4\_CS). She explained this was due to it being a busy pharmacy and being responsible for many different activities within the pharmacy. This affected her commitment to supporting the trainee and providing feedback. However, she did state that she provided her trainee with opportunities to learn new skills and experiences of working with a variety of patients as illustrated by the following quote:

"I mean, it's always difficult because, especially being a busy pharmacy, there's always so many other things going on that it's difficult to spend as much time as you want to with the trainee. You know, I would have ideally liked to have spent more time with him - and I probably don't give as much positive feedback as I should. But those are probably the main things. But I feel we've given him quite a lot of opportunities to learn the different things so he's had quite a variety of experience and worked with lots of different people, which is good for him as well." (TU4\_CS\_3)

Tutors served to guide the trainee during the training year with performance standards serving as a framework to support this. The close working relationship between the trainee and tutor in community pharmacy allowed tutors to point out possibilities for evidence to help complete and sign off performance standards.

"[Tutor's] observing a lot that I do and, but so far it has been what I've remembered and I've wanted to put down as evidences. But she's also said that if she comes across anything that would be useful then she'll let me know. ... she also said that she's seen me do a lot of things in the pharmacy which, just based on, she'll be able to sign me off on some performance standards but she can't do that until I've written it up as evidence. So that's why she couldn't sign me off on more on the last review." (TR12\_CS\_2)

Performance standards were perceived as an important part of the pre-registration training year by trainees and tutors alike. They provided structure which training objectives could be hung and laid out the competences which trainees were expected to achieve by the end of the training year. There did, however, appear to be some ambiguity around the way in which standards were phrased, again from the perspectives of trainees and tutors.

"I think a lot of them are really vague, that's one thing. And the other thing is it doesn't really, as I said that I really think that I lack a lot of practical skills at the moment and these don't really focus on that...." (TR4\_CS\_1)

"I just think sometimes they're a little bit petty, you know. And sometimes if you don't fully appreciate what they're actually looking for then I just wonder sometimes. But you have to have a framework to assess somebody's performance. So that's fair enough." (TU19\_CI\_1)
This lack of clear expectations for achieving standards could lead to considerable variation in the way in which they were met. One trainee considered the issue of the simplicity of the standards that could allow a trainee to get multiple standards signed off in a given day depending on how they wrote their evidence.

"A lot of [performance standards] are quite simple and quite basic. A lot of them you're covering day to day you know. I mean picking up a prescription, if there's a query with it you're ringing the wholesaler or the doctor ... It covers twenty of them, depending upon the way you write it. You know some people write it in a very closed quick fashion. But if you actually go through the step by step process, how you did it and say everything properly, you can get twenty ...." (TR19\_CI\_1)

Given the equivocal nature of the performance standards, there may be subjectivity and room for different interpretations of the standards and requisites for achieving them which, depending on the individuals involved in observing and signing off standards, could lack emphasis on pushing for high standards and the demonstration of good behavioural professionalism.

Although performance standards directed trainees towards learning goals and could be used to monitor their progress and competence development, the use of feedback also aided trainees' development. Trainees in community pharmacies worked closely with their tutor and they were the provider of the majority of informal (i.e. 'on the spot') and formal (i.e. during meetings) feedback which was mostly verbal. Some trainees commented that other members of staff would occasionally provide informal verbal feedback about how they were performing, but, again, this was more as a means to correct tasks carried out and it was not consistent. Feedback was considered more negatively oriented, picking up on any actions that the trainee performed wrongly

"[Tutor] said that she thought everything was fine and she would let me know if there was any concern. But I feel - and certainly, having talked to a lot of people, they also agree - that it's one thing pointing out the negatives when you're not doing right, but you also need to hear, you know, the things where you're actually pretty good at so that you would know whether you're going the right way or not." (TR4\_CS\_3)

This approach, of focusing on addressing when trainees did something poorly, had the potential to instil a sense of complacency as one trainee noted:

"I just assumed that if people aren't saying horrible things to me about something I've done then I must be doing something right." (TR16\_CLM\_1)

The issue of focusing on what was done incorrectly, and not providing consistent positive feedback and encouragement could hinder the possibility of striving for high standards. A couple of tutors alluded to not pushing beyond set, average standards which seemed consistent with what was occurring in the majority of community pharmacies.

"I mean, that's thought for the future for me, to think about should I be pushing it higher, basically, than what it is ...." (TU12\_CS\_3)

It was expected that more comprehensive feedback would be provided during appraisal meetings between the trainee and their tutor which contributed towards signing off performance standards and completing 13-weekly appraisals / progress reviews laid out by the GPhC as part of the completion of the pre-registration training programme.

A small number of trainees noted that they had the opportunity to sit down with their tutor more formally, for example, on a weekly basis, to discuss their progress which allowed time to receive some more formal feedback. However, half of trainees stated they were not receiving much feedback during the pre-registration year. Trainees commented that feedback was not regular, often provided in appraisals and only occasionally whilst working.

Feedback on patient interactions, which came later in the training year as trainees' roles progressed, was given to trainees but it did not generally go into detail about the professional behaviour demonstrated during these encounters.

"[Tutor]'s never really commented on how I should act with a patient or anything." (TR2\_CLM\_2)

Trainees talked about how the feedback they received was generally about the contents of *what* was said rather than *how* it was said.

"[Tutor] doesn't comment so much on how I've said things, no - more on what I've said." (TR20\_CI\_3)

Comments from tutors about the nature of the feedback given to trainees echoed what trainees said about it. Feedback was typically more about *what* the trainee had said in communicating information to a patient a given situation and not *how* they delivered the information.

*I:* "So the feedback that comes into her about contact with patients, it's more about what she's saying rather than how she's saying it?"

*T:* "Yeah, what she's saying rather than how she's saying it, yeah. I'd say more to that, yeah." (TU20\_CI\_3)

It was apparent from interviews with some tutors that there was some expectancy that trainees probably knew about the importance of professionalism already.

"I think he just gets it, you know. It's like the normal attributes, and given the situation in which he works, you know, you either get it completely or you don't. But I think [trainee] does get it appropriately - or the vast majority of it. So I possibly haven't had a stimulus that would make me want to teach him about that. Like there is the potential to teach him something so often but he already knows, so it would be patronising." (TU15\_CSM\_3)

#### NQPs

The ways in which NQPs were supported during the early stages of their practice were explored. Though NQPs were now without a formal supervisor (i.e. pre-registration tutor) in the work place, surprisingly, almost all NQPs working in community pharmacy described not feeling isolated at work. One NQP, working as a locum pharmacist, did, however, point out that he felt isolated sometimes.

NQPs in community often referred to fellow staff within the pharmacy if they required help with anything, because in most cases the pharmacy support staff had considerable pharmacy

experience. The support staff could also be a resource for learning how to deliver services which may not have been delivered at the pre-registration training site. For example, one NQP talked about the new services he encountered as a NQP and his experience of conducting his first MUR which caused anxiety:

"The dispensers who have been working in the field for a while and they're like accredited to do certain services. I watch how they do them because I didn't do many of the services in my pre-reg - all I did was like methadone and needle exchange so it wasn't really at the forefront of the patient curve. ... Like first MUR you're a bit nervous. I didn't really know what to say, but as time progresses you just tend to learn from it really." (TR15\_CSM\_4)

Several NQPs also talked about referring to a more senior manager within the organisation for help and support. For example, one NQP working as a relief pharmacist talked about being able to get help and support from the pharmacy manager of the store if needed, or the area manager.

"The pharmacy manager I could turn to. Also the area manager - we have his number in the pharmacy and also I've got his email address so...." (TR2\_CLM\_4)

A couple of NQPs also talked about calling the National Pharmacy Association (NPA) on occasion when in need of help.

As NQPs, there was an absence of feedback because of the more senior position held as a pharmacist compared to a trainee. There were a couple of NQPs who worked alongside another pharmacist on occasions, e.g. as a second pharmacist, who received some feedback when they started. However, the feedback did not appear to be comprehensive or particularly constructive.

"At the beginning when I first became a pharmacist, when I had the overlap for two weeks with the pharmacy manager, he still gave me feedback then.

...

"[The feedback was] about the jobs that I was doing and if I did have any problems with customers or anything like that. Once I'd dealt with it he basically said, 'You did perfectly fine.' So in that sense, at the beginning I did - I used to get a bit of feedback from the manager but not as much now because I'm more settled into the role." (TR12\_CS\_4)

#### 3.4.5.2 HOSPITAL

#### Trainees

A large part of the induction programme during the early weeks of training involved learning about the dispensing process in the pharmacy department. Thus, trainees worked with, and were supported by, lots of technicians and some pharmacists in the main dispensary. Contact with the pharmacist in the dispensary was not common because the tasks trainees conducted related more to dispensing.

Opportunities to work alongside other healthcare professionals were available for trainees in the early stages of training, in a 'shadowing' capacity. The pre-registration tutor was the main point of contact for trainees and could be referred to as a general source of help as well as a guide for

directing their development during the training year through, for example, arranging allocated times to shadow pharmacists. Although the pre-registration tutor was an important contact for trainees, it was evident that trainees had to be more self-directed in meeting their learning goals than in community pharmacy. They worked in a large environment and not alongside their tutor, and the training appeared to have less structure, in comparison with community.

"Yeah I think it's very self-directed here, so all our timetables are just sort of empty and we need to approach pharmacists on the morning or in advance and just say right 'Today I'd like to come to the ward with you if you're not busy', and 'Yeah that's absolutely fine' and they'd come. So we need to actually approach them in advance." (TR13\_HT\_1)

Although trainees in hospital did not often work directly alongside other trainees there appeared to be many benefits of working at the same hospital as other trainees as a few mentioned. Having another trainee allowed trainees to discuss their experiences on different wards and share information prior to starting a rotation. They would also learn about the key people to speak to in the different wards, as well as share tips for the registration assessment. This was described by a trainee in one of the interviews with her:

"We all compare how things are going on the wards, and if somebody's had a maybe a less well-organised rotation, by the time it comes to it being your rotation, you know like who you need to speak to and how." (TR17\_HT\_2)

As was the case in community pharmacy, performance standards served as a framework to help guide learning goals by trainees. Although performance standards were considered quite time-consuming by some trainees, they were generally considered a good guide for directing trainees towards learning goals.

"[Performance standards are] motivating me to do things on the wards like volunteering to do a drug history or volunteering to phone the GP, whereas otherwise I might be less likely to do that because I might just think oh I'm a pre-reg I don't need to do that yet."

"I guess it means that I know that when I've done all of those performance standards it means that I've got all of the skills that the GPhC thinks I need to be a pharmacist so it will make me more confident knowing that I've done it, if that makes sense." (TR17\_HT\_1)

. . .

The utility of performance standards were also recognised by tutors. They were seen to serve to guide trainees to help them develop into a pharmacist by demonstrating what has been learned and achieved as one tutor noted:

"[They're there] because you can give someone a pre-reg experience and then there's nothing really to actually hang tags on to say that you've achieved or learned something that's important to know." (TU9a\_HDG\_1)

Although TU9a\_HDG made the argument that professionalism was built into performance standards, the articulation of the different elements of professionalism and explicating (e.g. with clear explanations and / or examples) was considered lacking by some. Comments about performance standards from a number of trainees and tutors in hospital echoed what those in

community had stated; the nature of standards could often be quite simple and therefore open to interpretation or, as one tutor noted, the standards were quite 'outdated' and perhaps ill-placed:

"I think some of them are a bit outdated and others are a bit too random." (TU18\_HT\_1)

One tutor, familiar with professionalism research, described the tenuous relationship between the performance standards and professionalism (in round 1 interview) and the need for clearer standards (in round 3 interview):

"I think they are. They don't necessarily cover everything. They probably don't cover as much professionalism as you would like, if you are looking at professional skills. So things like empathy, I don't necessarily think is covered particularly well - those things. There's only the one I can think of which is about how do you handle difficult situations; how do you handle conflict. But there's not a lot about being assertive. There's a lot of skills that you mentioned as being professionalism that there's not specific standards for all of them and I think probably it would be better if we did have more of them." (TU13\_HT\_1)

"It's quite interesting that there isn't actually a standard in there about, "Competent in liaising with doctors." You know, there aren't actually standards on that. When we talked about it, there isn't actually something that says that. So there's things like about handling conflict or handling different situations but there isn't actually a standard about, "Competent when dealing with medical staff / can deal with other healthcare professionals." You know, you'd think there should really be that standard." (TU13\_HT\_3)

In the second round of interviews trainees described how they began working on wards a lot more since the initial periods of training and were working with more pharmacists as well as other healthcare professionals. The role of the tutor was similar to how it had been at the early stages of the training year. The tutor still acted as a useful point of contact and could support the trainee when necessary. As with tutors from community pharmacy, two tutors talked about pushing their trainee into new situations to expose them to a wider set of experiences. However, as tutors in hospitals did not work with trainees often they could not oversee this process. This finding was exemplified in particular by a quote from one tutor who talked about seeking evidence from the trainee about situations she had experienced which may have been perceived to be difficult, such as responding to awkward patients.

"When she started I said to her, 'You're going to have to - you have to put yourself in these situations.' And through her evidence and working together, you know, I've said I'm not signing her off on certain things until she's got evidence of being on like the reception desk in the pharmacy dispensary and answering phones, and actually putting herself into situations where she might come into conflict or might have awkward patients - and just putting her in that situation." (TU18\_HT\_3)

Other pharmacists played critical roles in supporting trainees directly on wards. These supervising pharmacists on wards also provided them with informal verbal feedback and, in some cases, written feedback, for example in the case of completing medicines reconciliation training:

"Like when I was doing the drug history training, I was observed interviewing people and then they'd actually give me feedback on it. There was a whole section as well to actually write the feedback; think of different ways to ask the questions, and depending on the patient you may need to rephrase it." (TR10\_HDG\_2)

Feedback received from pharmacists did, however, appear variable depending on the pharmacist who was supervising them, so there was a lack of consistency with feedback recognised by trainees.

*T*: "So when I give evidence to my tutor - so she hasn't witnessed me doing it – but she asks me about the situation and gives me feedback on that."

I: "So day to day you're getting feedback from the pharmacists?"

T: "Yeah, it depends who you're working with. Some of them are not as forthcoming with you. But the ones who are just sort of way - there's one pharmacist in particular who's very into sort of encouraging our development and she won't ever give us an answer; she'll say, "You tell me." (TR10\_HDG\_2)

As with community pharmacy trainees, trainees in hospital felt feedback was centred more around *what* was said to the patient, but not exactly on the softer elements of professionalism as a couple of trainees noted. As with trainees from community pharmacy, hospital trainees talked about feedback relating to the content of communication with patients and not how information was communicated. Thus the feedback covered the clinical details that needed to be transmitted and not the softer patient care skills associated with professionalism.

> I "It does focus more on the clinical aspects, yeah. But I think if I was really like if I acted really rudely or, I don't know, not compassionately, I'm sure they'd say something eventually." (TR17\_HT\_3)

As the tutor did not work directly with the trainee often in hospital, they would rely on receiving feedback on the trainee from colleagues. Feedback from colleagues was useful, for example, for corroborating evidence of achieving performance standards which could be signed off, commonly during 13-weekly review meetings.

"In the appraisal we would probably talk about it and we would talk about - in the fact that we've talked about, you know, "If you thought that counselling was important for the patient but the patient wasn't interested, how would you handle that? How would you make sure that that information gets to the patient if you think it's important but they're not open to it?" And so we've talked around those kinds of issues and we've tried to do that." (TU13\_HT\_3)

In the third round of interviews, tutors reflected on their role and confirmed that they did not often work with the trainee directly during the pre-registration training year. Tutors reflected on the utility of feedback from other pharmacists which fed into signing off performance standards

"I would try and get feedback from individual pharmacists beforehand. And the fact is when I get each piece of evidence and he's described what he's done, I will ask him questions around that and say, 'Well what would you have done for this?' 'Why would you have done that differently?' And we try and go through and try and target all the different things he's going to have to get." (TU13\_HT\_1)

Although the tutor did not work with the trainee directly, they had opportunities to meet their trainee during, for example, appraisals and to reflect on incidents that the trainee had encountered through reviewing evidence contributing to performance standards or other situations which the trainee raised. There was a sense of reliance on the part of tutors in hospital that other pharmacists would be closely involved in supervising and monitoring trainees and that they would write testimonials as evidence of trainees' accomplishing different performance standards.

"I've not actually been witness to what he's been doing on the wards. But, again, like I said previously, we have had evidence that he is doing that on the wards because that's been signed off by another pharmacist." (TU11\_HDG\_3)

As was noted by tutors in community pharmacy, there was a consensus that trainees had professionalism values and there was no need to intervene in changing their behaviour.

"Professionalism, I don't think she's got a problem with that. Attitudes I think you can get that a lot with some of the pre-regs, though. But, I mean, nothing to be concerned about ....." (TU17\_HT\_3)

Evidence of not pushing up standards, as was found with tutors in community pharmacy, was present in interviews with some tutors as well.

"If people are portraying those attributes [relating to professionalism], it wouldn't be something that we would formally discuss with them because we would already know that they are working to an acceptable professional standard. Should they not be, then that's when we would be discussing them with them." (TU9b\_HDG\_3)

Tutors talked about how trainees should already be aware of these things and relied somewhat on the degree instilling them, but there was no talk of the feedback during actual practice experience that would be given from her to the trainee

"I mean, there's obviously issues around patient confidentiality and turning up on time for work and, you know ,that kind of thing. But those are all covered at induction anyway. And to a certain extent, from somebody coming out of a four-year degree in pharmacy, you would expect them to already know about that anyway. (laughs) And I've certainly never had to sort of discuss it with her." (TU10\_HDG\_3)

#### NQPs

None of the NQPs working in hospital felt isolated in their working practices. The help available for NQPs working in hospital seemed more widely available than those in community pharmacy because they worked within a larger team of pharmacists and other healthcare professionals

"I can turn to anybody really. I have a couple of pharmacists on my team, who I can turn to. But sort of any of the pharmacists really I can give them a bleep and they will be able to help me if I have a problem." (TR11\_HDG\_4)

A couple NQPs, working as residents, pointed out that pharmacists positioned slightly above them, such as the second year resident, or band seven, pharmacists were particularly helpful to them. "Some of the band sevens are really, really helpful as well. They've finished their diploma so they really know what they're talking about and they have taught me a lot." (TR17\_HT\_4)

There was an absence of feedback on performance for NQPs in hospital, unless there were serious concerns about it. They did not receive any feedback in how they were conducting themselves in a constructive way, such as with their professional demeanour with patients or colleagues, illustrated by the following quote:

"You don't really get that much feedback regarding your patient encounters, to be honest, or your professionalism - you don't really get any at all, being a pharmacist, really. So like you just need to judge it yourself and it's more of a trial and error thing." (TR13\_HT\_4)

#### 3.4.5.3 Summary points

- Pharmacy technicians had an important role to play early on in hospital where trainees were often inducted to the hospital whilst heavily working in the dispensary
- There was a central role for the tutor during training, particularly in community
  pharmacy where they worked directly with trainees regularly and had more
  opportunities to provide informal feedback, direct the trainee's learning, and encourage
  staff to approach the trainee with queries as they progressed
- Trainees in hospital supported by a range of pharmacists and worked alongside a range of healthcare professionals as they progressed
- Tutors in hospital relied on feedback from other pharmacists about the progress of their trainee
- Performance standards were considered a useful guide for learning and provided structure to the training year, though standards were often considered to be ambiguous
- Many trainees considered feedback to be limited and it lacked emphasis on the importance of elements of professionalism provided to trainees
- NQPs in community typically received support from support staff in the pharmacy if they required help or they would refer to their pre-registration tutor, or a senior manager within the organisation if their query could not be answered by colleagues
- NQPs in hospital appeared more well supported, receiving an induction to their hospital setting and working alongside a range of senior pharmacists in close proximity
- NQPs in both sectors were generally not receiving any feedback on their performance

# 3.4.6 Development through staff professionalism and role modelling

This section considers trainees' and tutors' perceptions of the professionalism of members of staff in the workplace and their ability to model appropriate behaviour which trainees could observe and emulate. The findings in this section are not always presented linearly, from the beginning (round 1) to towards the end of training (round 3). This is because there were recurring themes running through each round of interviews and general comments made, for example, about role models, were applicable throughout the training year.

#### 3.4.6.1 Community pharmacy

#### Trainees

At the beginning of the training year, almost all trainees believed that their work colleagues possessed all the competencies necessary for their role and that they possessed attributes of professionalism and behaved professionally in their role. Tutors, too, considered the members of staff they worked with to behave professionally. One tutor stated how it was important for the trainee to work with other pharmacists and learn from them, rather than focus solely on learning from her:

"The idea of the year is not necessarily to turn them into a clone of me, but to get them to be able to think for themselves as to what they would do in different situations. So working with a variety of pharmacists is quite good because it gives them an opportunity to see different viewpoints, and he can then, by the end of the year, he can make up his mind as to what he would do in different situations." (TU4\_CS\_1)

Trainees considered all, or most staff were considered role models through having lots of experience in the role and demonstrating appropriate professional behaviour through, for example, communicating with patients. They helped model appropriate behaviour for trainees, which trainees described assimilating through observation.

"I mean even when you're just looking at the counter assistant and you know and just dealing with certain enquiries, how, you know what do they do if they ask for a medication, what are the necessary questions to ask, and things like that, so it does all help. Obviously I kind of done my counter assistant course but it's good to kind of watch and then you recall things like oh yeah, yeah I remember learning that so it's good." (TR2\_CLM\_2)

A couple of trainees did, however, comment that not all staff could be considered good role models in their pharmacy. For example, one trainee did not feel inspired by counter staff due to their work ethic and how they appeared to treat their job in pharmacy like any other job. Another trainee commented that counter assistants were not considered good role models, as, according to him, they lacked some of the necessary knowledge required to help patients adequately.

Although tutors spoke positively of their staff as potential role models to model appropriate behaviour for trainees, some issues with the behaviour of staff were noted by several tutors. Instances of staff chatting, or bantering, too much, and potentially losing concentration, were noted but ultimately staff were seen to appreciate that they were in work to serve patients and look after their best interest. Although there may have been occasional lapses in the professional behaviour of staff through, for example, chatting too much, it did not appear detrimental to the quality of care towards patients as the behaviour was not frequent and did not occur in front of patients. One tutor in a community pharmacy stated that he would not have recruited a preregistration trainee if the pharmacy staff were not at a good standard:

### "To be honest if staff weren't up to scratch I don't think I would have taken a pre-reg in my place." (TU1\_CLM\_1)

According to trainees, the pre-registration tutor was, in particular, considered a salient role model for the trainee due to their status as a pharmacist, a role the trainee was in the process working towards in the pre-registration year. It appeared that tutors had a good understanding of the importance of setting an example and being a role model for the trainee given their important position in supporting trainees during pre-registration training.

"I've definitely been a lot more conscious having [trainee] around of how I am doing things and - yeah, pretty much everything, just trying to set an example that she should basically be following, yeah." (TU12\_CS\_3)

Some trainees, when asked about who they considered the main role model in their pharmacy, did, however, mention members of staff other than their tutor, highlighting the potential for other staff to have a significant impact on a trainee's development. This included a trainee stating that one of second pharmacists was someone he looked up to because the way she explained information to patients was really good, and that she tailored the information to different patients. Two other trainees commented that a dispenser and a counter assistant were particularly good role models from which they could learn a lot from through observation. For example one remarked that the counter assistant in her pharmacy was a good role model due to her knowledge of OTC products and the way that she dealt with patients:

"The counter assistant I think she knows how to deal with the patients. Her knowledge of over the counter products is very good.

"Her knowledge is very good of over the counter products. Also she can communicate, she can like have a laugh with the patient as well which I'm sure the patient appreciates as well." (TR12\_CS\_1)

When revisiting the topic of the professional conduct of fellow staff, in subsequent interviews, trainees were again still content with the staff they worked with as demonstrating appropriate behaviour and most served as role models. When discussing whether there were any occasions that colleagues may have behaved in an unprofessional manner, some trainees mentioned that some minor issues were witnessed. Such incidents raised by a few trainees included staff members raising their voice to a difficult customer or not respecting confidentiality by speaking about patients with other colleagues. Such events were, however, not considered a concern as they were encountered infrequently. Trainees that talked about incidences of poor, or less than ideal, behaviour of other staff generally believed that it could naturally happen in certain context, such as working with a challenging patient when stressed.

There were mixed views as to the potential influence staff members could have on trainees. Several trainees recognised that their work colleagues could potentially have a negative impact on the way they worked such as becoming more relaxing and less productive.

### "You don't want to be running around off your feet when someone else is not." (TR3\_CLM\_1)

A few trainees did, however, comment that they would not be adversely affected if jobs were being done poorly. It seemed that professional judgement of appropriate/inappropriate behaviour to model was necessary to recognise good practice to model in situations where unprofessional behaviour was embedded in the culture of the pharmacy, though it had not been experienced for any of the trainees working in community pharmacy. Tutors shared the views with trainees that there were no serious issues. Furthermore, tutors acknowledged that occasionally some slips in behaviour could happen but they would not be anything serious. The prevalence of unprofessional behaviour amongst staff appeared as though it could be controlled within the pharmacy as the pharmacist would be present during any such incident and thus they would be able to intervene where necessary or speak with the staff member implicated afterwards.

"The staff are professional. When it comes to patients, they are professional to the patients, but it's like anywhere; if they're not happy they will whinge about it or say, 'Oh, that person's horrible' or blah-blah-blah, you know. But yeah, they're quite - if they weren't it'd be picked up on straightaway because [tutor], he's very, very good at what he does and he notices things, and if staff were being unprofessional at any point he would notice it and stamp it out. So, yeah, they are quite good here." (TR19\_CI\_3)

When speaking about pharmacy staff as role models some tutors noted the reality that not all staff would be able to serve as strong role models and the trainee would have to show prudence in deciphering good from bad behaviour displayed by different individuals.

"There have been disruptive - there are individuals that work over at the medical centre that have ... personality problems. They, again, aren't necessarily perfect role models for [trainee]. I mean, you're going to encounter that. it's part of life. whichever pharmacy you end up working in, you'd have to be extremely lucky if every single member of staff is highly professional ....." (TU15\_CSM\_3)

According to trainees, role models were considered those who were experienced in their role and had a good way of working with patients and staff displayed through their general demeanour and manner.

"They've got a lot of experiences. They know how to deal with - yeah, like they've had a lot of - they've been involved in lots of different situations. Some people have worked in different places. And because it's a really busy shop as well, there's lots of different things that happen." (TR16\_CLM\_3)

#### NQPs

Most NQPs, apart from TR5\_CI and TR12\_CS were working in different pharmacies from the one in which they completed their pre-registration training. There were no changes in the perceptions of the professionalism of colleagues in the opinion of TR5\_CI and TR12\_CS. Other NQPs were able to offer their perceptions of the professionalism and conduct of a new set of staff within the pharmacy(ies) they worked. The responses to questions which asked about the professionalism of staff the NQPs worked with were positive with most NQPs happy with the behaviour they

witnessed while working. Only some minor issues such as being a bit abrupt with patients, occurred from time to time but were not serious breaches of professional conduct.

The NQPs working in new location(s) were also able to compare the colleague(s) they worked with to those they worked with in pre-registration training. It appeared that the different pharmacy settings and work environments engendered a different way of working. For example, one NQP working as a locum pharmacist pointed out that there were different ways of working with patients which depended on the location of the pharmacy:

"Most of the places the people seem quite professional. There are some - what you perceive as professional in one place is seen as completely - it may be seen as unprofessional in another because different areas, different socioeconomic backgrounds, different patient groups. Like [location removed] is a very poor area, very, very poor - it's one of the most deprived areas in the country. So the way they greet customers or talk to customers is a little bit more casual than, say, when I was working at [pre-registration training location]. ... So different places I behave differently." (TR19\_CI\_4)

Although a number of NQPs acknowledged they could still learn from other members of staff. It was, however, more difficult for NQPs to identify role models in their workplace as they had become more senior within the pharmacy and previously the salient role model was typically their tutor. One NQP stated that there had only been one role model for him: his tutor during pre-registration training.

"Yeah, the only role models that I've worked with, there's only been one role model, my tutor because he's - I've never really worked - as a pharmacist you hardly work alongside pharmacists or shadow them. You're doing your own thing." (TR6\_CLM\_4)

#### 3.4.6.2 Hospital pharmacy

#### Trainees

Trainees believed that the staff they had encountered at the beginning of pre-registration training behaved in a professional manner which supported a positive environment for which the trainee could develop in. As with trainees in community, hospital trainees could observe and assimilate skills from a range of staff as everyone was considered to perform their job well and served as a good example to trainees.

"There's no one who I would say would be a bad role model who would be sort of a bad person to sort of you know kind of thing." (TR11\_HDG\_1)

Trainees in hospital, as with those in community, often noted that their tutor was a particularly salient role model for them even though the working relationship in hospital was not as close as that in community.

"I think more of a role model is sort of my sort of tutor maybe because she's like, I know [tutor]'s like really high up in the sort of pharmacy and she's been [incomprehensible] so I'd like to sort of do things like that so I think so more pharmacists are more role models 'cos that's what I sort of want to become sort of thing." (TR13\_HT\_1)

No serious issues with the professional conduct of staff were mentioned by trainees. Minor issues were, however, noted. This included, for example, the way in which some pharmacists dressed at one hospital site which was recognised by the two trainees based there. It was a surprise to them and it did not meet their expectation of pharmacists in formal wear. Other issues related to how members of staff behaved with each other. For example, issues with the demeanour of pharmacy technicians was raised by one trainee who suggested that technicians were more informal than the pharmacists she had come across, though this was in the absence of patients.

"I feel bad saying it, but then the technicians maybe are less formal and they're not, like when we're in the dispensary there aren't any patients around so we have a bit of fun you know just because you don't have to be as professional. But then when you're doing your actual work, everyone's very focused on that but like in between times there are times when people are less professional if that makes sense." (TR17\_HT\_1)

Some minor issues with staff conduct were raised by several tutors. Instances of staff talking too much, or bantering, excessively, as pointed out by community tutors, were noted. The context dependent nature of professionalism in practice was noted by a couple of tutors as illustrated below:

"I think, because pharmacists are stressed or anything that's going on, there may be times that people don't act as you exactly would want to. And I think you're right; actually there are times you'd think that you've not done exactly as you would have wanted to do because it's whatever circumstances." (TU13\_HT\_1)

If there were concerns over the conduct of staff in the organisation action could be taken to prevent this from adversely affecting the trainee, though the method for doing this was not as direct as it was in community pharmacy. For example, one tutor from a hospital pharmacy described how he would avoid pairing a trainee with a member of staff that did not act professionally or act as a good role model:

"If I had doubts about their professionalism and I didn't think that they would actually be a decent role model, then I would hesitate in actually allowing the pre-reg to be attached to them." (**TU9\_HDG\_1**)

As trainees progressed in the training year, by round 2 interviews, trainees had the opportunity to work with different pharmacists who served to model appropriate behaviour on wards, such as when working with doctors.

"Yeah, I think you learn like how to act and, you know, if you're in a difficult situation like if a doctor's not listening to you or something, I think it's quite good just to see how [pharmacists] handle it and you do pick things up for if you ever get in that situation." (TR18\_HT\_3)

Additionally, trainees were exposed more regularly to other healthcare professionals such as doctors and nurses and trainees' perceptions of the professional conduct of these staff were favourable as with staff they had worked with previously.

"I feel competent in the dispensary so I feel, but obviously to a certain extent I'm still getting some help in dispensary if I need it. Like if I can't a product on the shelf or whatever. But according to my learning I'm getting more learning and development, mostly like doctors or pharmacists actually on the ward and specialist nurses cos they're actually testing you a lot more and questioning you on the wards a lot more." (TR13\_HT\_2)

"When I serve on a specific rotation I go and see the pharmacist who covers that specific ward ... the pharmacist might leave me with the doctor, so I can go an work with all the doctors, like consultants. In cardiology I went and saw the consultant and I actually went into a pacemaker being fitted ... I suppose always the first lead is always the pharmacist on the ward, but then when you're up there they can speak to people for you, like doctors, or you can actually speak to the doctors and nurses and like specialist nurses as well." (TR10\_HDG\_2)

Towards the end of training year, trainees and tutors maintained consistent views of staff as role models apart from some slips in professionalism which may occur. It was apparent that tutors in hospital did not have the same level of control over the conduct of staff that the trainee may encounter compared with tutors working in community pharmacy. If necessary they could avoid enlisting a member of staff deemed to be a bad influence for supervising a trainee, but they could not oversee who the trainee would encounter on a regular basis and intervene as easily. A couple of tutors commented that it was, to an extent, the responsibility of the trainee to use their professional judgement and learn from positive role models and not be influenced so much by poor behaviour witnessed.

"I think you do think more about it when they're on the ward and when they're with you but it's also that other people are acting as role models for her as well, which you can't necessarily control, and she's got to use a bit of her own professionalism and, you know, as to who should be a role model and who shouldn't." (TU18\_HT\_3)

As with community trainees, role models for hospital trainees were considered those who were experienced in their role and had a good way of working with patients and staff displayed through their general demeanour and manner.

"Loads of the senior pharmacists - I really look up to them, just because their knowledge is so vast and they're so confident, and they just really know their stuff about everything, so I definitely look up to them." (TR17\_HT\_3)

#### NQPs

As with NQPs working in community pharmacy, NQPs in working in hospital had similar views about the professionalism of the staff they worked with being acceptable, and that they did not have any concerns over any conduct they witnessed.

Three NQPs continued to work in the same hospital as during pre-registration training and their views did not change since the round 3 interview near the end of the training year. Three NQPs moved to work in a new hospital and had the same opinion of staff in their new hospital as they had in the hospital in which they trained.

"The environment on the ward is very much the same. I haven't really noticed any differences there. I don't know about the actual pharmacy itself, though. I think the pharmacy department [here] has slightly an older crowd [than the pre-registration training hospital] - you know, there's more mature pharmacists there and I think that affects things - yeah, I think it is maybe slightly more professional - well, whatever that means but that's the impression I guess." (TR17\_HT\_4)

NQPs in hospital appeared to have more role models because of the nature of the work, working with a range of different pharmacists more senior to them. They could still acquire skills in how other pharmacists communicate with patients and other healthcare professionals and how they demonstrate professionalism, as illustrated in the following quotes.

- *I: "So you're still like learning from the other pharmacists?"*
- *T:* "Yeah, definitely. Everyone really." (TR9\_HDG\_4)

"Yeah, some doctors ... I see the way they sort of deal with patients and think, you know, 'They've done that really well.' I can learn from that when I go and sort of - next time go and see that patient or other patients." (TR11\_DG\_4)

#### 3.4.6.3 Summary points

- Trainees and tutors believed their colleagues possessed all the competencies necessary for their role and that they demonstrated professionalism and acted as good role models
- The pre-registration tutor was considered the most important role model for the majority of trainees in community and hospital pharmacy
- Trainees were learning how to behave through observing their colleagues / role models
- Trainees and tutors understood that staff may occasionally have lapses in professionalism from time to time; unprofessional behaviour would be more commonly witnessed amongst staff out of the view of patients
- Some tutors in hospital noted that trainees would need to use their judgement in what was deemed good / bad behaviour and what could be emulated
- Tutors in community pharmacy had more control in managing the behaviour and culture of the pharmacy as they managed the staff; in hospital, tutors could not govern the behaviour of the various staff the trainee may be in contact with
- NQPs were satisfied with the way in which their colleagues conducted themselves and that they had the right skills for their role
- NQPs in hospital had more role models (e.g. senior pharmacists) present to witness and learn from; NQPs in community worked with fewer staff and were often the only pharmacist, so it was harder to identify role models

## 3.4.7 Development of professional behaviour: quantitative findings

Behavioural professionalism (BP) questionnaires (Appendices 16-18) were administered to participants at the end of each interview round; trainees / NQPs completed four and tutors completed two. This section considers the analyses that were conducted on the data obtained from the questionnaires. Analyses include a comparison between trainees' and tutors' scores from hospital and community pharmacy at the time points they all completed the questionnaires (round 1 and 3) as well as an examination of the development of self-assessed BP from the trainee / NQP perspective.

#### 3.4.7.1 Ratings of behavioural professionalism

Before considering the differences in aggregate BP scores between trainees and tutors and between sector, descriptive data relating to all trainees' self-assessed BP across the four subscales and overall across all subscales (aggregate) of the BP questionnaire in rounds 1 to 4 are presented. This is displayed in Figure 3.2. Tutors' ratings of their trainees' BP in round 1 and 3 are displayed in Figure 3.3.



Figure 3.2: Behavioural professionalism across four subscales: Trainees' self assessed ratings





### 3.4.7.2 Comparing aggregate behavioural professionalism across sector, position and time

An analysis was undertaken to compare differences in aggregate behavioural professionalism scores (max = 125) across sector (community vs. hospital), position (trainee vs. tutor) and time (round 1 vs. round 3). Table 3.6 displays the descriptive statistics for community and hospital trainees and tutors for rounds 1 and 3 where they both completed the BP questionnaires.

			Round 1		Round 3	
Sector	Position	n	М	SD	М	SD
Community	Trainee	14	97.88	8.57	109.50	10.13
	Tutor	14	98.64	11.68	110.57	8.19
Hospital	Trainee	6	103.58	4.91	114.17	2.56
	Tutor	6	94.00	10.30	106.60	4.83

Table 3.6: Descriptive statistics of	questionnaires from round 1 and 3
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A 2x2x2 (sector x position x time) mixed ANOVA was conducted. This revealed that there was a main effect of time ( $F_{(1,35)}$  = 30.553, p <.001). There were no other main effects or interactions (ps >.05). With the only significant difference being time, Figure 3.4 shows the differences between scores at round 1 and 3 for trainees, tutors and both trainees and tutors.



Figure 3.4: Changes in behavioural professionalism: Trainees, tutors and both

## 3.4.7.3 Differences across time points 1 to 4 for trainees / NQPs in community and hospital

This analysis considered the changes in behavioural professionalism across the four rounds of data collection completed according to self-assessed scores from the perspectives of trainees / NQPs. Table 3.7 displays the descriptive statistics from these data.

Table 3.7: Descriptive statistics: self-assessed behavioural professionalism from rounds 1 to 4

		Round 1		Round 2		Round 3		Round 4	
Sector	n	М	SD	М	SD	М	SD	М	SD
Community	14	97.88	8.57	102.82	10.51	109.50	10.13	114.93	7.17
Hospital	6	103.58	4.91	106.29	7.198	114.17	2.56	113.00	4.47

A 2x4 (sector x round) mixed ANOVA was conducted to examine the differences between trainees in community and hospital across the four rounds. There was a significant difference across time points ( $F_{(3,54)} = 23.166$ , p < .001) showing increases from round 1 to 4. There was no significant interaction between time and sector ( $F_{(3,54)} = 1.745$ , p < .169). With the only significant difference being time, Figure 3.5 displays the changes in behavioural professionalism scores across the four rounds for community, hospital and, all trainees / NQPs.





A conservative Bonferonni correction was used to examine differences between time points for all trainees / NQPs. There was a significant difference between round 1 and 3, round 1 and 4 as well as round 2 and 3 and round 2 and 4 (all ps <.001). Differences between round 1 and 2 and round 3 and 4 were not significant (ps >.05).

### 3.4.7.4 Differences between round 1 scores and reflection on round 1 scores

A *t*-test was conducted on ratings of professionalism at round 1 and at round 4 where they reflected on their scores at round 1. This analysis considered 19 trainees, because trainee 20 did not complete the final questionnaire. Trainees rated themselves higher when providing ratings of behavioural professionalism at time point 1 (M = 99.87; SD = 1.86) compared to time point 4 when reflecting on round 1 (M = 91.89; SD = 2.65),  $t_{(18)} = 3.536$ , p = .002, mean difference = 7.97, CI [3.27, 12.71]. This difference is displayed in Figure 3.6.



Figure 3.6: Differences between BP scores from round 1 (present) and reflecting on round 1 at round 4 (reflect)

#### 3.4.7.5 Summary points

- Community and hospital trainees and their tutors perceived trainee BP to increase during pre-registration training (from round 1 to round 3)
- There were no significant differences in the way in which trainees and tutors, or those in community and hospital, rated trainees' BP across time
- There was a significant effect of time as trainees / NQPs rated their BP continuously higher from round 1 to 4
- Trainees rated themselves higher in BP at round 1 compared to when they reflected on their BP at round 4

#### 3.5 Summary of work stream 1

Chapter 3 discussed work stream 1 which investigated the process of professional socialisation and development of professionalism in pharmacy trainees longitudinally, over the course of the pre-registration training year and early practice, from the perspective of 20 trainees and their tutors. This study highlighted how trainees develop into pharmacists and how pre-registration training supported their development of clinical knowledge, attitudes and behaviours which would be expected of practising pharmacists. This section summarises the key findings. A wider discussion relating to work stream 1 and 2 will be provided in Chapter 5.

The first section on role transitions showed that hospital trainees received longer and more comprehensive inductions than those in community. Whilst those trainees working in the larger multiples / supermarket pharmacies received short company-wide inductions, trainees in smaller multiples and independents typically had an informal induction in the pharmacy where they were introduced to working processes in the pharmacy by colleagues.

The early stages of pre-registration training did not typically involve much patient contact in either community or hospital pharmacy; trainees' roles were similar to those of dispensers or pharmacy technicians. Gradually trainees took on more responsibilities and their roles developed more towards that of a pharmacist where they were involved in helping other pharmacy staff, working more closely with, and counselling, patients, and undertaking clinical checks of medicines which were reviewed by pharmacists. It was, however, difficult for trainees to experience complete responsibility akin to a pharmacist and many noted they would have liked more experience of taking on more responsibility for longer to prepare them for future practice. As NQPs they described facing challenges in adapting to their newly found accountability and responsibility.

Though trainees lacked some confidence in their clinical knowledge, tutors believed that their trainees possessed good clinical knowledge when they started training. The opportunities for trainees to apply this knowledge in practice had been limited in the past and thus the training year was considered fertile ground by both trainees and tutors for this knowledge to be applied and developed. Confidence grew, from both trainees' and tutors' perspectives, as trainees were regularly applying their knowledge and acquiring new knowledge in practice. Community trainees were becoming familiar with OTC medicines and a range of commonly prescribed medicines in primary care; trainees in hospital were developing clinical knowledge in specialist medicines they witnessed on ward rotations. As NQPs, clinical knowledge continued to improve through repetitive practice and more involvement in clinical checking and working more closely with patients.

Trainees felt they were able to communicate informally in a professional manner early on, however, the ability to provide suitable advice and counsel patients, as expected of pharmacists, was considered to be lacking from their perspectives and their tutors'. As their clinical knowledge improved, confidence in being able to communicate with patients improved as trainees' exposure to patients increased during the year. Trainees' parlance in conveying information became more comprehendible to patients. Trainees' abilities to work with colleagues were considered to be strong early on, and these relationships and ways of communicating were qualitatively different from those with patients; some trainees drew comparisons of working with pharmacy staff with other work experiences outside of pharmacy (e.g. in retail). Trainees in hospital did, however, have more opportunities to work alongside larger multidisciplinary teams and to experience interprofessional working with nurses, doctors and other healthcare professionals. Trainees in community worked closely with a small pharmacy team and had contact with GP surgeries, often through reception staff rather than directly with doctors.

Trainees believed they possessed the core elements of professionalism which were engendered, in large, during their upbringing. Their attitudes towards the importance of professionalism were always strong and they recognised the importance of demonstrating professional behaviour (e.g. empathy and respect towards patients and colleagues) throughout training and as they moved into practice, where professionalism became even more important to uphold as they were pharmacists.

Quantitative findings that examined behavioural professionalism showed improvements in ability to demonstrate professional behaviours progressively at each round and this was recognised by both trainees and tutors. There were no significant differences between the ratings of trainees and tutors, nor between participants from community and hospital. There were significant differences in ratings in round 1 compared to reflecting on round 1 (rated in round 4), which may be linked to overestimations in behavioural professionalism early on.

Trainees were supported by a range of staff during training. Early on trainees from community and hospital pharmacy were often supported by technicians and other pharmacy support staff as they familiarised themselves with dispensing and working practices. Trainees' and tutors' perceptions of the professionalism of individuals working alongside the trainee were favourable and many were considered to be potential role models. Trainees often considered pharmacists, in particular their tutor, the most important role model. The role of, for example, pharmacy technicians was, however, not discounted and their ability to model appropriate behaviour was recognised by trainees, particularly in the early stages of training. The tutor was a central role, particularly in community pharmacy where they worked closely alongside the trainee, often guiding their learning through active quizzing and in a number of cases informal feedback on the spot. In hospital, tutors served more as a contact point for trainees as they often worked alongside a range of other pharmacists during their rotations. Feedback was variable across training sites, and some trainees felt that it was lacking. Feedback was not focused around aspects of professionalism, rather it was more about ensuring that trainees were doing something correctly, or not wrong / poorly, and not necessarily pushing for exemplary professionalism. The performance standards were a very useful guide which directed learning during training, though they were sometimes viewed as rather vague and not necessarily tapping into the essence of professionalism, at least not explicitly.

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As NQPs, those in hospital appeared to have much better support as they worked alongside more senior pharmacists who they could turn to for help. Though many in community pharmacy did not explicitly state they felt isolated, it appeared that they were to an extent, and did not have the same level of support as those in hospital. There was some reliance on other staff (e.g. technicians) when developing skills in, for example, new services their pharmacy offered, and in a number of cases NQPS in community mentioned their pre-registration tutor could be called if they needed help.

The findings from work stream 1 explored how trainees were developing into pharmacists. This was done through exploring the context in which this occurred, the roles trainees adopted, the underpinning clinical knowledge they developed, and the professional behaviour they elicited during training and into early practice. Some quantitative evidence also confirmed the development of professional behaviour in a more standardised fashion. Whilst this study was able to provide detailed insights into the professional socialisation and development of professionalism, it could not generalise the findings to the wider population of trainees – one of the limitations of the methods and small sample size in this work. It was of interest to explore how professionalism was perceived to change as a result of pre-registration training in a larger sample of trainees and also explore how trainees perceived their supervision and involvement with patients which appeared to be closely linked with their development. This led to the development of a survey administered to a large sample of trainees discussed in Chapter 4, which follows.

### 4 WORK STREAM 2

This chapter of the thesis covers work stream 2. This involved administering a cross-sectional survey to pre-registration trainees based across a large number of training premises across GB. This work was conducted in the summer of 2012, towards the end of the 2011/12 pre-registration training year: the same pre-registration year work stream 1 was conducted in. This chapter presents the aims of work stream 2, the methods and analysis used, the results and a summary. A more comprehensive discussion of the implications of work stream 2, along with those of work stream 1, is given in an overall discussion: Chapter 5.

This work stream is closely linked to work stream 1, where a group of 20 trainees and their tutors were recruited to a longitudinal study exploring the process of professional socialisation and the development of professionalism as reported in Chapter 3. As the development of pre-registration trainees had not been examined in great detail previously, work stream 1 revealed factors that seemed important in their professional socialisation and development of professionalism through collecting longitudinal, in-depth qualitative data. Changes in the ability to demonstrate professional behaviours during pre-registration training and shortly after registration were collected using a slightly adapted validated behavioural professionalism scale.<sup>23</sup> Results showed changes in behavioural professionalism could be ascertained with the scale, though the statistical power to detect potential differences between, for example, sector, were severely limited due the small sample size.<sup>203</sup> Therefore, recruiting a large sample from which to conduct analysis would address this. Additionally, work stream 1 highlighted key factors that appeared important to the professional socialisation and development of professionalism of trainees: supervision and support, and engagement with patients. This helped with formulating different topics to explore in a questionnaire survey administered to a representative sample of trainees in work stream 2.

The findings from work stream 1 informed the design of a questionnaire to obtain measures of trainees' perceptions of the supervision they received and their engagement with patients, along with a measure of ability to demonstrate professional behaviours. Further justification for the inclusion of the measures used is addressed when discussing the different sections of the questionnaire.

#### 4.1 Aims and objectives:

The overall aim of work stream 2 was to examine changes in behavioural professionalism in trainees from the beginning to near the end of their pre-registration training and gather trainees' views on supervision received and their perceptions of how they believed they mattered to patients.<sup>III</sup>

<sup>&</sup>lt;sup>iii</sup>A patient mattering scale was used as a measure to tap into aspects of trainee engagement with patients.

More specifically, the objectives were:

- to examine how behavioural professionalism, according to a self-assessed 25-item professional behaviour scale, was perceived to change over the course of preregistration training;
- to examine how trainees rated the supervision they received from individuals that had a significant impact on their development of professionalism during pre-registration training;
- to examine the extent trainees believed they mattered to patients during the preregistration year; and
- to explore the relationship between changes in behavioural professionalism, clinical supervision and mattering to patients with variables such as the pharmacy sector trainees works in.

#### 4.2 Methods

The following sections provide information about how the final questionnaire was designed along with how it was administered. Considered first is how the content for the questionnaire was decided upon. This is followed by an overview of the literature search that was carried out for existing scales and a breakdown of the questionnaire, according to its different sections. Justification for the scales that were selected for each section and details of any amendments made are described alongside this. After this, information about the pilot work undertaken, the sample, and survey administration procedures are provided.

#### 4.2.1 Early stages of questionnaire development

The development of a questionnaire, when done correctly, is a resource and time intensive task.<sup>207</sup> Questions must be carefully crafted for their utility and comprehension and one must also bear in mind the length of time respondents may take to answer questions.<sup>208</sup> Designing a questionnaire often involves consultations with stakeholders in order to develop a range of questions which are suitable for addressing the topic of interest. Pilot work would also need to be carried out to consider how individuals, reflecting the population of interest, understand what the questions are asking and know how to respond.

Given that the researcher was heavily involved collecting and analysing work stream 1 data, developing a questionnaire from scratch during this time (when the questionnaire was due to be administered) was not feasible. Although one element of the questionnaire, the behavioural professional instrument, was ready to implement in a larger sample, because it was used in work stream 1, there were other topics of interest to pursue in the questionnaire. Therefore, a literature search for suitable existing scales on areas relating to supervision and engagement with patients, was conducted.

When searching for suitable scales, their validity and reliability were considered. Broadly, the concept of validity concerns whether a test measures what it claims to measure.<sup>209</sup> The validity of

tests is often partitioned into three forms: content, criterion and construct, with the latter two associated with more in-depth psychometric testing and development.<sup>217, 218</sup> Content validity relates to how well a measure has been constructed and concerns the degree to which a test examines the domain of interest.<sup>210, 211</sup> It encompasses face validity, whether items on a measure appear related to a domain of interest,<sup>212</sup> and will typically rely on expert judgements in assessing the content of a measure.<sup>210</sup> Reliability is linked to error; if one thinks of reliability in terms of a test with high reliability, it will be accurate, and produce less measurement error than a test that is not reliable.<sup>210</sup> There are different approaches to examining reliability including test-retest, parallelforms, inter-rater reliability, and internal consistency.<sup>210, 213</sup> Internal consistency is more applicable to cross-sectional surveys and describes how well items in a scale correlate with one another.<sup>214</sup> Internal consistency is commonly measured through Chrobach's alpha ( $\alpha$ ).<sup>215</sup> Although the number of items in a scale can influence the result of alpha,<sup>216</sup> a commonly used cut-off point for acceptable internal consistency is a Cronbach's  $\alpha$  of .7.<sup>203, 210</sup>

The complexity of all of the elements of validity and reliability poses challenges for researchers to develop valid and reliable measures; the process is very labour intensive. It was decided that existing measures that fit in with the research objectives would be more feasible than attempting to develop a new measures. Many would argue that using existing scales is a good course of action as opposed to developing new ones.<sup>217</sup> It also makes comparing findings between studies easier.

#### 4.2.1.1 Literature search for existing scales

The search for relevant scales was not limited to the pharmacy profession because there may not have been a suitable scale developed in pharmacy. The search also included literature from nursing and medicine because, as found in the literature review for work stream 1, these disciplines provided a wealth of information on cognate topics.

The electronic databases shown in Table 4.1 were used to search for suitable scales. Additionally, *Pharmacy Education*, which is not well indexed in electronic databases, was searched on the journal's website.<sup>218</sup>

A range of keywords (e.g. 'supervision'; 'patient involvement'; 'questionnaire'; 'student') and their truncated versions (e.g. supervis\*) which were relevant to the topic area were used in the search. Combinations of keywords and their synonyms were used in the searches and these were done using multiple fields to combine keywords with Boolean operators.<sup>30</sup>

#### Table 4.1: Electronic database searches

EMBASE (1974 – March/April 2012) Scopus (1966 – March/April 2012) International Pharmaceutical Abstracts (1970 – March/April 2012) Web of Knowledge (including Web of Science (1945 – March/April 2012) and Medline (1950 – March/April 2012) Google Scholar (any date – March/April 2012) Pharmacy Education (2000 - March/April 2012)

The search results were examined according to the titles of the articles, abstracts, and, when deemed relevant, the complete article.

#### 4.2.2 Questionnaire design

A paper-based questionnaire (Appendix 19) was developed through the use of existing scales and additional demographic-related items. The questionnaire was divided into five sections. An overview of the scales used in the first three sections of the questionnaire, as well as an explanation of the adaptations made, are detailed in this section. This is followed by details of section 4 and 5 of the questionnaire which gathered comments and demographic-related information from respondents.

The scales used within the questionnaire were validated for use in previous research, each demonstrating good content validity and internal consistency reliability. In addition to good validity and reliability, the scales were selected based on their applicability to the research objectives and their brevity, to avoid overburdening participants. Minor amendments were made to make the measurements more appropriate for this research sample. The questionnaire consisted of five sections entitled: Professional behaviours (section 1); Individuals involved in your development of professionalism (section 2); Mattering to patients (section 3), 'Comments' (section 4) and 'About you' (section 5).

#### 4.2.2.1 Section 1: Professional behaviours

This scale, originally developed by Hammer et al.,<sup>23</sup> measures how well a pharmacy student is able to demonstrate behaviours associated with professionalism, ranging from 1 ('need significant improvement') to 5 ('excellent') on a Likert-type scale. This instrument appeared to be the most comprehensive instrument to measure professional behaviours in pharmacy. As it was used in work stream 1, further justification of the selection of this instrument is provided in Section 3.2.2 of Chapter 3.

The instrument showed good content validity,<sup>217</sup> through a rigorous process of devising items, as well as external validity,<sup>219</sup> tested through comparisons of student and preceptor (i.e. supervisor)

scores. The authors conducted principal component analysis (on the instrument) which resulted in a four factor structure composed of 25 items (see Appendix 1). The four factors / subscales were:

- 1) Interpersonal / social skills (10 items)
- 2) Responsibility (9 items)
- 3) Communication skills (4 items)
- 4) Appearance (2 items)

The instrument demonstrated good reliability within the four subscales (average Cronbach's  $\alpha$  = .904) and overall (Cronbach's  $\alpha$  = 0.973).<sup>23</sup>

In order to use this scale in the questionnaire for work stream 2 some amendments were made. Amendments to the scale were made initially for use in work stream 1, which apply to the scale used in work stream 2, and these details can be found in Section 3.2.2 of Chapter 3. Further amendments had to be made to the questionnaire used in work stream 1 so it could be used in work stream 2. As with the questionnaire used in round 4 of work stream 1 (Appendix 18), an additional column was inserted in order to gain retrospective scores on professional behaviours (i.e. at the beginning of training). This was done so that changes in behavioural professionalism could be examined through comparing 'now' scores (which the original scale set out to examine) and retrospective scores. Furthermore, the instructions were adjusted to provide more detail about what was required of participants; previously the researcher presented the questionnaire to the participant in person in work stream 1 and could explain this. Finally, the tense of the item statements in bold were altered so they were comprehendible for both 'at the beginning of training of training' ratings (e.g. 'I am reliable and dependable' was changed to 'Being reliable and dependable').

For the purpose of this study, this section of the questionnaire will be referred to as the Professional Behaviour (PB) scale.

#### 4.2.2.2 Section 2: Individuals involved in your development of professionalism

Findings from work stream 1 highlighted the importance of a range of individuals in facilitating the development of trainees through, for example, actively supporting trainees, modelling appropriate behaviour and providing feedback. Differences were found between training sites and, particularly between community and hospital pharmacy, in terms of support and feedback received. For example, it was apparent that the most salient role model was not necessarily the pre-registration tutor; other pharmacists or support staff were found to play a central role in fostering trainee development. Insights into the way in which support was operationalised was also teased apart qualitatively, showing how, for example, trainees may be asked questions to improve their knowledge or encouraged to face new situations. Investigating trainees' perceptions of how aspects of support were received during pre-registration was another area that was deemed an

important area of exploration in a larger sample. Therefore, a suitable measure which considered how staff supported trainees was sought.

One instrument was found to be particularly complementary for these purposes: the Maastricht Clinical Teaching Questionnaire (MCTQ).<sup>220</sup> The MCTQ was developed by Stalmeijer and colleagues from Maastricht University in the Netherlands. The MCTQ aims to evaluate the performance of an individual clinical teacher in the workplace from the perspective of medical students. Respondents are asked to rate their level of agreement on a Likert-type scale ranging from 1 (fully disagree) to 5 (fully agree) on a series of statements about the individual(s) involved in their supervision during hospital rotations. It gives an indication of the quality of teaching and supervision provided.

The questionnaire was developed through theoretical constructs of cognitive apprenticeship<sup>221</sup> as an instructional model for situated learning with six methods to support learning: modelling, coaching, scaffolding, articulation, reflection and exploration.<sup>222</sup> Preliminary work on the development of the MCTQ was done through conducting focus groups with medical students in one study<sup>222</sup> and developing an instrument which was administered to educationalists, doctors and senior medical students<sup>223</sup> to receive responses about relevance of the items in the instrument which led to modifications. In a subsequent study Stalmeijer and colleagues<sup>220</sup> administered the MCTQ to fourth- and fifth-year medical students and conducted validity and reliability assessments. As a result of these analyses, the final MCTQ<sup>220</sup> consisted of 14 items (see Appendix 20 for original items). Confirmatory factor analysis (CFA) produced a good fitting five factor model composed of:

- 1) Modelling (3 items)
- 2) Coaching (3 items)
- 3) Articulation (3 items)
- 4) Exploration (2 items)
- 5) Safe learning environment (3 items)

The MCTQ showed good content and construct validity, through a long process of design<sup>222, 223</sup> and testing models with confirmatory factor analysis,<sup>220</sup> and high internal consistency (reliability) across the five factors (mean Cronbach's  $\alpha$  = .90). It has been used in other research in veterinary medicine with success, though an additional item was added and the factor structure differed somewhat.<sup>224, 225</sup>

As the MCTQ was developed for use within the medical profession, some amendments were made for the purpose of this present study in order to make it more suitable for use with the pharmacy pre-registration trainee population. Firstly, the instructions preceding the response section were created to advise respondents how to complete this portion of the questionnaire.

As pre-registration trainees could have received a varied amount of supervision from different individuals within their workplace (which was found in work stream 1), two columns were added next to the items to allow the respondent to select, and rate, up to two individuals who they

believed had a large impact on their development of professionalism. Trainees were asked to think about two people they worked with during the pre-registration training year that they believed had: 1) the largest impact; 2) the second largest impact, on their development of professionalism ('person 1' and 'person 2', respectively). If they believed there was only one person who had a large impact on their development of professionalism they were asked to provide ratings for Person 1 only. Respondents were asked to make their selections of person 1 and 2 based on these individuals' impact on their (as trainees) development of professionalism, in relation to the preceding Professional Behaviours section of the questionnaire. The original MCTQ did not require such instructions as it was administered for the purpose of surveying responses about clinical teaching of one individual (see Appendix 20).

The wording of the rating scale was also changed. The terms 'fully agree' and 'fully disagree' were changed to 'strongly agree' and 'strongly disagree', respectively, to be more in line with the common wording of the polar ends of Likert scales examining levels of agreement. The wording of some statements were also changed to be applicable to pharmacy. For example, statement three, 'Served as a role model as to the kind of doctor I would like to become' was changed to 'Served as a role model as to the kind of healthcare professional I would like to become'. The term 'healthcare professional' was used as opposed to pharmacist because it was found, in work stream 1, that a range of non-pharmacist role models (e.g. pharmacy technicians; doctors) could be present in the workplace. The penultimate statement, 'Was generally interested in me as a student' was also changed to 'Was generally interested in me as a trainee.'

Permission to use this scale for the research was granted by Renee Stalmeijer, the main author involved in developing the scale.<sup>220</sup> For the purpose of this study, this section of the questionnaire will be referred to as the Supervision scale.

#### 4.2.2.3 Section 3: Mattering to patients

Work stream 1 outlined the extent to which trainees were involved with patients at different time points during pre-registration training, showing how this evolved over time. It was found that patient interaction was critical for trainees to appreciate elements of professionalism (e.g. empathy, altruism) and indeed develop appropriate professional behaviours. This was evident from critical incidents relating to professionalism that were exemplified, often involving work with patients.

It was considered important to try to examine how the level, or depth, of trainee engagement with patients occurred during pre-registration training in a large sample of trainees. This could include time spent with patients and the nature of the contact: for example, simply taking in / giving out prescriptions versus conducting counselling. Naturally, capturing this kind of information from all trainees would be difficult; survey questions would have to be applicable to all pharmacy settings and the nature of work with patients could differ. For example, hospital trainees would often see patients on wards, particularly during medicines reconciliations, as opposed to community trainees who would deal with patients over-the-counter or in consultation rooms. Moreover, although time spent with patients may be indicative of the extent to which trainees worked with

patients and developed corresponding patient care skills, it may not capture the type of interactions taking place (e.g. handing out medicines versus communicating at length with patients). Furthermore, attempting to quantify the frequency and type of encounters in a questionnaire may be too reductionist, yielding data that would not truly reflect how involved trainees believed they were with patients.

The complexity of this area posed issues for the researcher in selecting a suitable measure though one scale was found which was deemed appropriate: the Mattering Scale , developed by Guirguis and Kreling.<sup>226</sup> Guiguis and Chewning<sup>227</sup> suggested that mattering to patients could contribute to students' development of their pharmacist identity and pharmacy students who feel they matter to patients may be likely to interact with patients more regularly. The Mattering Scale measures the extent to which an individual (pre-registration trainee for the purposes of this research) feels they matter to their patients (e.g. question three: 'How important do you feel you are to patients?'). The concept of mattering is based on a global belief that patient interactions can shape attitudes about an individual's importance to a patient.<sup>228</sup> Respondents answer a series of questions which tap into this concept using a five-point Likert scale ranging from 1 ('not at all') to 5 ('a great deal').

Guirguis and Kreling<sup>226</sup> developed a measure of patient mattering which was based on a five-item General Mattering Scale (GMS) created by Marcus and Rosenberg<sup>229</sup> and also informed by other research by Guirguis and colleagues.<sup>227, 230</sup> The GMS was adapted by Guirguis and Kreling<sup>226</sup> so that it was suitable for use with pharmacists and pharmacy students. Additionally, two items that asked about making a difference and being helpful were added. The resulting Mattering Scale consists of seven items (see Appendix 21 for original items). This scale was used by Guirguis and Kreling to assess mattering in a survey of pharmacists from Wisconsin, USA.<sup>226</sup>

The Mattering Scale has since been used with fourth year pharmacy students from the University of Wisconsin-Madison School of Pharmacy.<sup>228</sup> The content validity of the Mattering scale seemed strong with the extensive pilot work conducted and the subsequent surveying of pharmacy students demonstrated good internal consistency (reliability) with a Cronbach's  $\alpha$  of 0.82.<sup>228</sup> Patient mattering was found to be a single factor within a CFA.<sup>228</sup>

The instructions to respondents preceding the Mattering Scale were developed for the purpose of this study so that respondents were asked to provide their views on their involvement with patients during the pre-registration training year overall. As this scale was developed for use in pharmacy, and there were no issues present with the phrasing of items or how they could be rated, no amendments were made to scale items.

Permission to use the patient mattering scale was given by the main developer, Lisa Guirguis. For the purpose of this study, this section of the questionnaire will be referred to as the patient matter ('PM') scale.

#### 4.2.2.4 Section 4: Comments

An open-ended comments section was provided for respondents so that they could provide any comments about their pre-registration training, or recommend changing anything about the training year. This section would allow respondents to share opinions on their pre-registration training experiences which may not otherwise be picked up within the different sections of the questionnaire.

#### 4.2.2.5 Section 5: About you

This section asked respondents for demographic information including gender, age, ethnicity, as well as other information including degree course studied (MPharm or OSPAP), and at which university, and training setting. A question about religiosity was also included, derived from work by Gebauer and colleagues,<sup>231</sup> as religiosity was a theme that emerged from work stream 1 as an influential aspect of the development of professionalism during one's upbringing. Although there are a number of ways in which one can collect respondent characteristic information such as this, it was decided that formulating the response options on similar research studies, with similar populations, such as the cohort studies conducted by Willis et al.,<sup>232</sup> was suitable.

#### 4.2.3 Survey preparation

The following sections (4.2.3.1 through 4.2.3.4) consider the work that was done in preparation for the administration of the survey (section 4.2.4). This includes the pilot work undertaken and sampling strategies employed.

#### 4.2.3.1 Pilot work

The questionnaire was reviewed iteratively by the research team during the process of its development. In June, 2012, the different scales, with a focus on the Supervision and PM scales, were discussed with five trainees during their third interview as part of work stream 1. They were already familiar with the statements about professional behaviours after completing the professional behaviours questionnaire throughout work stream 1. The discussion consisted of asking trainees whether they would be able to respond to questions about the individuals in their workplace that had an impact on their development of professionalism during the training year, how much they believed they mattered to patients and whether they could rate themselves on professional behaviours retrospectively, at the beginning of the pre-registration training year and again at present: near the end of the pre-registration year.

In addition to this, the final copy of the questionnaire was piloted with two community pharmacy teaching practitioners with pre-registration tutoring experience and two hospital pre-registration training facilitators at The University of Manchester. Some minor comments were provided by the two hospital pre-registration training facilitators which related to the way in which the questions from the patient mattering scale were presented. They suggested it would be useful to include the word 'overall' as part of an instructional sentence: '...provide your ratings of how much you

believe you mattered to patients [overall] during the pre-registration training year for each statement...'. This suggestion was adopted.

The final questionnaire was also piloted with two PhD candidates conducting research in pharmacy practice to ensure they comprehended the questions and believed the layout was appropriate and easy to follow.

#### 4.2.3.2 Sample inclusion and exclusion criteria

Pharmacy pre-registration trainees who had completed an MPharm degree and who were nearing the completion of their 2011/2012 training year met the inclusion criteria. The 20 trainees that had participated work stream 1 were excluded as were those who had completed an overseas pharmacist assessment programme (OSPAP).

#### 4.2.3.3 Sample size

The population of trainees carrying out their pre-registration training year in Great Britain over 2011/12 was 2608 (GPhC, data from personal communication, May, 2011). Additional information about the degree these individuals had studied was not available, preventing the exclusion of people who had not studied an MPharm degree at the sampling stage. As there were 20 trainees that took part in work stream 1, the sampling frame consisted of 2588 trainees: 1866 in community and 722 in hospital.

A sample size calculation was carried out<sup>233</sup> to decide upon an adequate sample size that was representative of the population. Using a 5% margin of acceptable error, 95% confidence level and an over estimated response distribution of 50%, the formula presented in Figure 4.1 was used to calculate the sample size. *N* is the population size, *r* is the fraction of interested responses, *n* is the sample size, *E* is the margin of error and  $Z(^{c}/_{100})$  is the critical value for the confidence level, *c*.

This provided a minimum sample size of 335 participants. However, there was a large number of variables in the questionnaire: 25 items in the PB scale, 14 in the Supervision scale and seven in the PM scale. Together with demographics such as gender, age, ethnicity and sector, there could potentially be about 50 items included in a statistical model. As such it was decided that having a larger sample size would be more appropriate as this will always be a better representation of the population and can prevent overfitting data to a statistical model.<sup>234, 235</sup>

 $x = Z({}^{c}{\!\!}^{}_{100})^2 r(100 - r)$   $n = {}^{N \times \prime}{\!\!}^{}_{((N-1)E^2 + \times)}$  $E = \text{Sqrt}[{}^{(N-n)\times \prime}{\!\!}^{}_{n(N-1)}]$ 

Figure 4.1: Sample size calculation (extracted from Raosoft, 2004<sup>233</sup>)

Using the general rule of thumb of approximately 10 responses for each potential variable (10:1 ratio),<sup>236</sup> a sample size of 500 was agreed upon. Therefore, using a conservative estimate of the response rate as 30%, a sample size of 1667 (500 = 30% of 1667) participants was targeted for the survey.

A conservative response rate of 30% was decided upon because the timing of the survey coincided with the end of the pre-registration training year and trainees were likely to be busy preparing for a registration exam due to take place at the end of June. Furthermore, it was not possible to address the surveys to a named person at the training premises because this information was not provided by the GPhC (see below) which could further affect response rates.

#### 4.2.3.4 Sampling procedure

Pre-registration trainees were identified through a database of pharmacy training premises that had current trainees completing their training during 2011/2012. This database was provided to the research team by the GPhC following a written request and approval from a governance and assurance officer. A stratified random sample of community and hospital training sites, with current pre-registration trainees, was extracted from the database. The reason for sampling according to sites, as opposed to pre-registration trainees, was twofold. Firstly, the GPhC would not provide the research team with personal details of pre-registration trainees, quoting 'legal reasons'. As such, the survey had to be addressed to 'pre-registration trainee(s)' rather than to a named individual. Secondly, in a number of instances, particularly in hospital, there were more than one trainee in a site. Therefore, with a simple random selection of trainees across the full population there would be instances where only some trainees within a particular site would be selected. Providing every trainee at the site equal opportunity to complete the questionnaire was considered more favourable than requesting only a select number of trainees to complete the questionnaire, which would be difficult given that personal contact details were unknown. If a site with many trainees were only sent, for example, two questionnaires it may have been that only the most willing and interested trainees would fill in the questionnaire, creating a bias in the responses. Although this can occur with non-responses from some trainees, the potential for this was addressed through the sampling procedure employed.

#### Stratification

#### Hospital

Hospital trainees represented 710 of the 2588 trainees, 27% of the overall population. Therefore they should represent 27% of the sample taking part in the survey. Thus, 135 (.27 x 500) trainees from hospital were needed. In order to get 135 hospital pharmacists, with an estimated 30% response rate, the survey needed to be administered to 450 hospital trainees. The 710 trainees were spread amongst 229 hospital sites across Great Britain. The average number of trainees training within each hospital was three (range 1-14). As there were roughly 3 trainees at each site, 150 sites, and the trainees corresponding to these sites, were randomised to produce

approximately 450 trainees across the sites. A random selection of 466 trainees from 150 sites was obtained using IBM SPSS Statistics' 'select random cases' function, with each site having an equal chance of being selected. (Rather than deleting 16 trainees at random, all 466 were kept.)

#### Community

A total of 1878 trainees were in the community stratum, representing 73% of the overall trainee sample. In order to obtain 73% of the sample of 500 respondents as community trainees, a total of 365 (.73 x 500) community trainees were needed. With an estimated 30% response rate the survey needed to be administered to 1217 community trainees. The vast majority of sites had one trainee (mode / median = 1). A random selection of 1240 trainees from 1217 sites was obtained using IBM SPSS Statistics' 'select random cases' function. As with the random hospital sample obtained from the random selection process, all 1240 cases were retained.

#### **Overall sample**

The total number of trainees that were sent the survey was 1706: 1240 community trainees from 1217 sites and 466 hospital trainees from 150 sites.

#### 4.2.4 Survey administration procedure

A survey pack was sent to each training site containing a copy of the questionnaire, with a trackable ID number (Appendix 19), an invitation letter and a participant information sheet (Appendix 8). In cases, particularly in hospital, where there was more than one trainee at the training site, a cover letter (Appendix 22) was created and positioned at the front of the documents inside the survey pack. This cover letter asked the recipient of the survey pack to distribute the contents to all trainees at the site. (An adapted reminder letter (Appendix 23) was also created for these purposes.)

#### 4.2.4.1 Initial mail out

The first mail out was sent to 1706 trainees on 29<sup>th</sup> June, 2012. The number of responses received was lower than anticipated 10 days following the first mail out; only 202 (11.8%) returned the questionnaire. As a result, the researcher began telephoning a random selection of training sites across community and hospital to enquire if trainees had received the questionnaire and if they needed a reminder. Due to the resource-demanding nature of calling these sites, and the short time available to do this task, roughly 7% of non-responders were contacted. As a result of making telephone enquiries, the researcher was able to identify contacts at some sites whose names could be used to address the survey package to. Furthermore, it was possible to determine whether some trainees needed a reminder to be sent or whether they still had a copy of the first survey. Phone calls were made on 12<sup>th</sup> July, 13<sup>th</sup> July, and 16<sup>th</sup> July, 2012.

#### 4.2.4.2 Reminder

A postal reminder, which included the same documentation as the first mail out, was sent on 18<sup>th</sup> and 19<sup>th</sup> July, 2012. Further attempts to contact trainees at their training site was made by the

researcher the following week (w/c Monday, 23<sup>rd</sup> July, 2012), continuing from the previous attempts before the reminder was sent, with the aim of improving responses. This was less successful as some trainees had now finished their training or were on leave. One week after the reminder was sent, no further contact was made.

#### 4.2.5 Data analysis: quantitative analysis

#### 4.2.5.1 Data screening

Initial screening of data led to the removal of respondents that did not meet the inclusion criteria, i.e. a respondent had not completed an MPharm or did not undertake pre-registration training during 2011/12. Of the 413 respondents, 35 were former OSPAP students and thus met the exclusion criteria for main analyses. There were also four respondents who failed to report the degree they studied (MPharm or OSPAP) and they were removed because it was not known if they had completed the MPharm. Additionally, there were five Bradford sandwich students who completed and returned the survey and they were also removed from the main analyses as they did not meet the inclusion criteria and had only completed a six-month placement in their third year of a five year integrated MPharm degree. The removal of all of these respondents reduced the sample size to 369.

After considering the data set with 369 respondents, it was decided that some additional cases should be removed. There were 10 respondents that had completed either a split (n=6) or a joint (n=4) post. These respondents were removed because they had worked in two different work environments and thus many of their responses would not be linked to a particular setting or experience. Moreover, as there were only 10 individuals who undertook such training, their removal would not adversely affect the remaining sample size (n=359).

Before conducting analysis of the data, they were screened according to widely use recommendations provided by Tabachnick and Fidell,<sup>237</sup> consisting of three main steps: checking for accuracy of data entry; dealing with missing data; and assessing data to explore if they met necessary assumptions. Some respondents had high amounts of missing data, and outliers (standardised scores beyond  $\pm 3.29$  on a variable are potential outliers<sup>237</sup>) and they were removed.<sup>238</sup> A total of 347 cases were available for analyses.

The data was analysed using IBM SPSS Statistics v20. A range of descriptive and multivariate analyses, detailed in the results (section 4.3), were used to examine the data. A particular focus was given to comparing community and hospital pharmacy as work stream 1 indicated there were substantial differences in the way training took place between these sectors.

When there were instances of few missing data they were deleted listwise, a conventional approach due to the issues arriving with pairwise deletion of cases from variables which results in different sample sizes and standard errors.<sup>239</sup> Mean and standard deviation scores were rounded to two decimal places; percentages were rounded to one decimal place. The significance level set for the statistical analyses was p=.05. Upper and lower bound confidence intervals given in text or in figures were set to 95%.
### 4.2.6 Data analysis: qualitative analysis

Content analysis was adopted as an approach to analysing the comments in the questionnaire due to their limited richness and complexity compared to, for example, an interview transcript. There would be less data and context to derive 'latent' content of the themes, relying on interpretation.<sup>158, 240</sup> Content analysis is a flexible approach to qualitative analysis which can be described as a family of analytic approaches that range from interpretive analyses to systematic, strict textual analyses (Rosengren, 1981 cited in Hsieh and Shannon, 2005<sup>241</sup>).

Each comment, or parts of it (if there were different issues were raised within an individual comment), were coded allowing counts of themes to be summed to derive frequencies. Researchers may conduct statistical analyses on such data<sup>240</sup> to analyse trends, however, as not all respondents left comments, this would limit the representativeness of the comments and thus limit the utility of statistical analysis. Moreover, there would be non-response bias,<sup>211</sup> and those that took the effort of leaving comments may not be representative of other respondents. Organisational research has found biases in comments made, with negative comments being more common and wordier.<sup>242, 243</sup> Although applying statistical analyses could be problematic, the use of content analysis for identifying, organising and indexing text, as suggested by Berg,<sup>158</sup> was adopted to provide frequencies of coded themes succinctly in tables.

As comments could be made about a range of issues, a more inductive approach was adopted in analysing the data initially before categorising similar comments together more deductively. All written comments provided by respondents were typed into the main IBM SPSS Statistics data set verbatim as part of the data entry process. After data entry of all questionnaires was complete the comments were transferred to a Microsoft Excel spreadsheet for coding, along with ID numbers, an identifying code for sector and the corresponding comments.

As well as considering comments from all trainees, comparisons were also made between community and hospital for any notable differences. When coding was complete, frequencies for the themes were derived to provide a numeric summary of the comments. The frequencies related to the number of times themes were present in the data; one respondent could contribute to multiple themes if their comments were more comprehensive.

The nature of the statement preceding the comment box ('If you would like to make any comments about your pre-registration training year or recommend changing anything about the training year please do so in the box below.') would likely elicit negative and positive comments and recommendations for changes to pre-registration training. As such, suggestive comments were coded according to their content, which were mapped onto subordinate themes of recommendations for changes to pre-registration training. Comments were also coded according to their valence (i.e. positive; negative), to gain a sense of satisfaction / dissatisfaction of training received. Valenced comments were also coded according to themes relating to recommendations of changes to pre-registration training. For example, when a comment highlighted a perceived flaw, it could be considered as something that could be changed. However, more generic valenced comments that were not as constructive could not be utilised in this way.

# 4.3 Results

This section provides the descriptive statistics and statistical analyses relating to each of the five sections in the questionnaire (questionnaire section headings in parentheses) in the following order:

- Respondent characteristics (About you)
- PB scale (Professional behaviours)
- Supervision scale (Individuals involved in your development of professionalism)
- PM scale (Mattering to patients)
- Comments (Comments)

Many results are presented such that there is a distinction between respondents from community and hospital, consistent with work stream 1. The statistical analyses were conducted with a particular focus on differences between community and hospital pharmacy, though other variables, such as gender, were also considered.

# 4.3.1 Response rate

The number of questionnaires received pre-reminder was 262 (15.4%). The number of questionnaires received post reminder was 151 (8.9%). This brought the total number of questionnaires received to 413, giving an overall response rate of 24.2%.

# 4.3.2 Respondent characteristics

After screening the data (4.2.5.1) according to inclusion / exclusion criteria (4.2.3.2), a total 347 respondents were considered: 230 (66.3%) from community and 117 (33.7%) from hospital. In this section, the characteristics of these 347 respondents, as obtained through the 'About you' section of the questionnaire, are examined.

### 4.3.2.1 Descriptive statistics

Table 4.2 displays the descriptive data relating to information including gender, age, ethnicity, religiosity, university attended and training setting. The majority of respondents were female (68.3%). Most respondents were in the early twenties, with a mean age of 24. Respondents had a range of ethnic backgrounds but the most common were White British (35.2%) followed by Asian Indian (23.1%). Concerning religiosity, where respondents rated how important their religious beliefs were to them, the majority (67.7%) of respondents suggested their religious beliefs had importance (i.e. rated between 2 and 7). Just over one quarter of respondents (26.5%) responded with a 1 ('not at all') or selected the option for not having any religious beliefs. Respondents had studied their MPharm degree at one of 23 schools of pharmacy in the UK. More than half of respondents (66.3%) undertook their training in community pharmacy. Most (53.5%) did their training in a large multiple pharmacy (>100 stores), with independent pharmacies being the second most common setting in which training was undertaken (21.7%). A total of 33.7% of respondents had trained in hospital, fairly evenly split between teaching hospitals.

### 4.3.2.2 Statistical analyses

A combination of chi-squared tests of independence and t-tests were used to examine the relationships between gender, age, ethnicity, religiosity and sector (community and hospital) to consider how trainees across sector may differ in terms of these characteristics.

### Gender

There was no significant relationship between one's gender and the sector in which they trained  $(X^2 (1, N=347) = 0.260, p=.610)$ ; males and females were represented fairly equally within community and hospital pharmacy.

### Age

An independent t-test showed there were no significant age differences between trainees in community and hospital ( $t_{(337)}$ =1.549, p=.122).

					()
Gender		n (%)	School of Pharmacy		n (%)
	Male	110 (31.7)		Aston	13 (3.7)
	Female	237 (68.3)		Bath	16 (4.6)
	missing	0 (0.0)		Bradford	16 (4.6)
Age				Brighton	10 (2.9)
	20-25	301 (87.8)		Cardiff	12 (3.5)
	26-30	33 (9.6)		De Montfort	14 (4.0)
	31-35	6 (1.7)		Hertfordshire	12 (3.5)
	>36	3 (0.9)		Keele	11 (3.2)
	missing	4 (1.2)		Kings College	11 (3.2)
	Mean (SD) = 24.11 (2.65)			Kingston	9 (2.6)
Ethnicity				Liverpool John Moores	23 (6.6)
	White British	122 (35.2)		Manchester	22 (6.3)
	White Irish	16 (4.6)		Medway	16 (4.6)
	White other	7 (2.0)		Nottingham	31 (8.9)
	Black Caribbean	3 (0.9)		Portsmouth	24 (6.9)
	Black African	22 (6.3)		Reading	7 (2.0)
	Black other	1 (0.3)		Robert Gordon	18 (5.2)
	Mixed White & Black African	1 (0.3)		Strathclyde	13 (3.7)
	Mixed White & Asian	2 (0.6)		Sunderland	11 (3.2)
	Mixed other	5 (1.4)		UCL <sup>b</sup>	18 (5.2)
	Asian Indian	80 (23.1)		UCLAN	3 (.9)
	Asian Pakistani	25 (7.2)		UEA	17 (4.9)
	Asian Bangladeshi	10 (2.9)		Wolverhampton	2 (0.6)
	Asian Other	8 (2.3)		missing	18 (5.2)
	Chinese	28 (8.1)	Training setting		. ,
	Other	13 (3.7)		Community	
	missing	4 (1.2)		Large multiple (>100 stores)	123 (35.4)
Religiosity <sup>a</sup>	-			Medium-to-large sized multiple (26-100	11 (3.2)
				stores)	· · ·
	1	16 (4.6)		Medium sized multiple (5-25 stores)	21 (6.1)
	2	13 (3.7)		Small chain (2-4 stores)	15 (4.3)
	3	19 (5.5)		Independent	50 (4.4)
	4	28 (8.1)		Supermarket	10 (2.9)
	5	44 (12.7)		Total	230 (66.3)
	6	35 (10.1)		Hospital	
	7	96 (27.7)		Teaching	59 (17.0)
	Do not have any religious beliefs	76 (21.9)		District general	50 (14.4)
	Prefer not to say	18 (5.2)		Specialist	8 (2.3)
	missing	2 (0.6)		Total	117 (33.7)
				missing	0 (0.0)

#### Table 4.2: Demographic-related information

<sup>a</sup> Religiosity scale ranges from 1 (not all) to 7 (very much). <sup>b</sup> Formerly London School of Pharmacy.

### Ethnicity

Ethnicity was split into a dichotomous variable: 'White British' (White British respondents) and 'Other' (all other ethnicities). A significant relationship between one's ethnicity and the sector in which they trained was found ( $X^2$  (1, N = 347) = 23.053, p < .001). There were differences in the numbers of White British and other ethnicities across community and hospital pharmacy. White Britons were under-represented in community, whereas other ethnicities were over-represented; the reverse was true in hospital where other ethnicities were underrepresented. This relationship is displayed in Figure 4.2.



Figure 4.2: Ethnicity of trainees in community and hospital pharmacy

### Religiosity

Given the way respondents rated themselves on the religiosity scale, with high proportions either not having religious beliefs or considering it 'very much' important, it was split into a dichotomous variable: 'not important' (rating of 1 or not having any religious beliefs) and 'important' (respondents with a rating between 2 and 7). Religiosity and sector had no significant relationship.

# 4.3.3 Professional Behaviour scale

### 4.3.3.1 Descriptive statistics

Table 4.4, on the following page, shows the descriptive statistics from the Professional Behaviour (PB) scale. Mean scores and standard deviations relating to 'at the beginning of training' (PB1) to 'now – near the end of training' (PB2). Differences between PB2 and PB1 are provided for trainees in community and hospital sectors and for all trainees, combining both sectors. Difference ratings are provided to display the change in PB from PB1 to PB2. Ratings for individual items, the four subscales of the PB scale (interpersonal / social skills; responsibility; communication; appearance) and overall PB ratings (total aggregate) are displayed. As a reminder, the rating scale ranged from 1 ('I need significant improvement in this area') to 5 ('I demonstrate excellent skills in this area').

### 4.3.3.2 Internal consistency of PB scales

Before progressing with the statistical analyses of the PB data, the internal consistency of the items were examined to ensure they were related, and could therefore be grouped together in an analysis. Overall, the PB scale showed good reliability (Crobach's  $\alpha$  = .92 and .94 for PB1 and PB2, respectively). The items that were due to load onto the four subscales of the PB scale were examined for internal consistency to ensure the items being grouped together correlated well with one another; the findings are shown in Table 4.3.

Table 4.3: Internal consistency of PB subscales for PB1 and PB2					
			onbach's α		
Subscale	Items in subscale <sup>a</sup>	PB1	PB2		
Interpersonal / social skills	4,5,10,11,13,15,16,17,20,21	.85	.87		
Responsibility	1,3,7,8,9,14,19,22,25	.85	.84		
Communication skills	6,12,18,24	.77	.77		
Appearance	2, 23	.54	.42		

<sup>a</sup> see Table 4.4 for item details.

The internal consistency of three subscales was good according to a .7 cut off for Cronbach's  $\alpha$  values. <sup>203, 210</sup> The two items relating to appearance produced low Cronbach's  $\alpha$  values. This may be due to this subscale having only two items which can be problematic for the formation of latent constructs.<sup>244</sup> Although the Cronbach's alpha estimates of internal consistency were low, which can happen with too few items,<sup>216</sup> there was still a significant positive correlation between the items (*r* = .347, *p* < .001) and there was no difference between respondents' scores on the items according to a paired t-test (*t* (346) = .844, *p*=.399).

		Сог	Community (N=230) <sup>a</sup>		Но	Hospital (N=117) <sup>a</sup>			All (N=347) <sup>a</sup>		
	ltem	PB1	PB2	Difference (PB2-PB1)	PB1	PB2	Difference (PB2-PB1)	PB1	PB2	Difference (PB2-PB1)	
		M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	
S	Being respectful	4.51 (0.75)	4.75 (0.47)	0.24 (0.52)	4.46 (0.70)	4.69 (0.53)	0.23 (0.56)	4.49 (0.74)	4.73 (0.49)	0.24 (0.53)	
dill	Being cooperative	4.26 (0.86)	4.64 (0.57)	0.37 (0.70)	4.38 (0.71)	4.64 (0.52)	0.26 (0.50)	4.30 (0.81)	4.64 (0.55)	0.34 (0.64)	
s	Being nonjudgmental	3.92 (1.01)	4.43 (0.71)	0.51 (0.84)	3.91 (0.89)	4.37 (0.62)	0.46 (0.71)	3.91 (0.97)	4.41 (0.68)	0.49 (0.80)	
ial	Putting others' needs above my own	3.88 (0.91)	4.43 (0.68)	0.55 (0.70)	3.75 (0.84)	4.23 (0.69)	0.48 (0.64)	3.84 (0.90)	4.36 (0.69)	0.53 (0.68)	
00	Maintaining confidentiality	4.12 (0.94)	4.70 (0.53)	0.58 (0.80)	4.14 (0.98)	4.67 (0.56)	0.53 (0.71)	4.12 (0.96)	4.69 (0.54)	0.56 (0.77)	
/s	Being diplomatic	3.83 (1.05)	4.44 (0.69)	0.61 (0.84)	3.84 (0.95)	4.31 (0.64)	0.47 (0.69)	3.84 (1.02)	4.40 (0.67)	0.56 (0.80)	
a	Being empathic	3.80 (0.93)	4.55 (0.62)	0.75 (0.84)	3.95 (0.91)	4.50 (0.57)	0.56 (0.74)	3.85 (0.93)	4.53 (0.60)	0.68 (0.81)	
20	Behaving in an ethical manner	3.83 (0.97)	4.64 (0.52)	0.81 (0.84)	3.91 (0.86)	4.52 (0.58)	0.61 (0.64)	3.86 (0.93)	4.60 (0.54)	0.74 (0.79)	
ers	Demonstrating accountability	3.76 (0.96)	4.60 (0.53)	0.85 (0.83)	3.60 (0.96)	4.49 (0.58)	0.89 (0.85)	3.70 (0.96)	4.56 (0.55)	0.86 (0.84)	
ğ	Accepting and applying constructive	3.31 (0.96)	4.28 (0.74)	0.96 (0.85)	3.33 (0.84)	4.12 (0.63)	0.79 (0.77)	3.32 (0.94)	4.22 (0.71)	0.91 (0.83)	
Ite	criticism										
-	aggregate	3.92 (0.62)	4.54 (0.41)	0.62 (0.44)	3.92 (0.55)	4.45 (0.40)	0.52 (0.36)	3.92 (0.60)	4.51 (0.41)	.59 (0.42)	
	Being punctual	4.23 (0.96)	4.59 (0.64)	0.36 (0.74)	4.32 (0.97)	4.49 (0.70)	0.17 (0.62)	4.26 (0.98)	4.55 (0.66)	0.30 (0.71)	
	Demonstrating a desire to exceed expectations	3.59 (1.04)	4.35 (0.73)	0.76 (0.92)	3.63 (0.94)	4.32 (0.76)	0.68 (0.79)	3.60 (1.00)	4.34 (0.74)	0.74 (0.88)`	
lţ	Being an active learner	3.73 (1.06)	4.52 (0.61)	0.79 (0.94)	3.63 (0.98)	4.45 (0.64)	0.82 (0.82)	3.69 (1.03)	4.50 (0.62)	0.80 (0.90)	
lid	"Following through" with responsibilities	3.61 (1.11)	4.54 (0.59)	0.93 (0.93)	3.71 (1.00)	4.44 (0.65)	0.74 (0.80)	3.65 (1.07)	4.51 (0.61)	0.86 (0.89)	
nsi	Producing quality work	3.43 (0.94)	4.55 (0.62)	1.11 (0.85)	3.61 (0.94)	4.37 (0.60)	0.76 (0.90)	3.49 (0.94)	4.49 (0.62)	0.99 (0.88)	
ō	Using time efficiently	3.21 (1.01)	4.34 (0.64)	1.12 (0.91)	3.21 (0.80)	4.28 (0.64)	1.06 (0.76)	3.21 (0.94)	4.32 (0.64)	1.11 (0.86)	
est	Being reliable and dependable	3.39 (1.00)	4.62 (0.53)	1.23 (0.89)	3.66 (1.13)	4.55 (0.53)	0.89 (0.99)	3.48 (1.05)	4.59 (0.53)	1.12 (0.94)	
Ř	Being self-directed in undertaking tasks	3.34 (1.05)	4.50 (0.63)	1.16 (1.02)	3.20 (0.92)	4.38 (0.60)	1.19 (0.89)	3.29 (1.01)	4.46 (0.62)	1.17 (0.98)	
	Prioritising responsibilities effectively	3.22 (1.06)	4.44 (0.61)	1.23 (0.86)	3.17 (0.92)	4.34 (0.60)	1.17 (0.79)	3.20 (1.01)	4.41 (.608)	1.21 (0.84)	
_	aggregate	3.53 (0.70)	4.50 (0.41)	0.97 (0.56)	3.60 (0.64)	4.40 (0.44)	0.82 (0.48)	3.55 (0.68)	4.46 (0.42)	0.92 (0.54)	

### Table 4.4: PB scale ratings at the beginning of training (PB1) and near the end of training (PB2) for hospital, community and all

<sup>a</sup> some items have missing data. <sup>b</sup> the mean ratings across all 25 items.

Table	Table 4.4 CONTD.: PB scale ratings at the beginning of training (PB1) and near the end of training (PB2) for hospital, community and all									
		C	ommunity (I	N=230) <sup>a</sup>	Ho	ospital (N=1	17) <sup>a</sup>		All (N=347)	а
	Item	PB1	PB2	Difference (PB2-PB1)	PB1	PB2	Difference (PB2-PB1)	PB1	PB2	Difference (PB2-PB1)
		M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
kills	Communicating using appropriate body language	3.69 (0.98)	4.49 (0.62)	0.80 (0.76)	3.78 (0.96)	4.48 (0.58)	0.69 (0.71)	3.72 (0.97)	4.49 (0.61)	0.76 (0.74)
<u>s</u>	Communicating articulately	3.29 (0.99)	4.45 (0.64)	1.16 (0.84)	3.31 (0.91)	4.41 (0.59)	1.1 (0.78)	3.29 (0.97)	4.44 (0.63)	1.12 (0.822)
Ē	Demonstrating confidence	3.19 (1.14)	4.37 (0.65)	1.18 (1.09)	3.18 (1.06)	4.26 (0.66)	1.09 (0.84)	3.19 (1.11)	4.34 (0.66)	1.15 (1.01)
οu	Communicating assertively	3.03 (1.08)	4.25 (0.74)	1.21 (0.99)	3.03 (1.03)	4.17 (0.69)	1.13 (0.83)	3.03 (1.06)	4.22 (0.72)	1.19 (0.94)
Ŭ	aggregate	3.30 (0.80)	4.40 (0.52)	1.09 (0.66)	3.33 (0.78)	4.33 (0.48)	0.99 (0.55)	3.31 (0.79)	4.37 (0.51)	1.06 (0.62)
σ	Wearing appropriate attire	4.55 (0.70)	4.73 (0.52)	0.18 (0.53)	4.54 (0.73)	4.74 (0.50)	0.20 (0.53)	4.54 (0.71)	4.73 (0.51)	0.19 (0.53)
ġ.	Practising personal hygiene	4.59 (0.66)	4.80 (0.46)	0.21 (0.52)	4.56 (0.64)	4.74 (0.52)	0.17 (0.50)	4.58 (0.65)	4.78 (0.48)	0.20 (0.51)
Ā	aggregate	4.60 (0.58)	4.76 (0.42)	0.20 (0.41)	4.55 (0.54)	4.74 (0.39)	0.18 (0.40)	4.56 (0.56)	4.75 (0.41)	0.19 (0.41)
	TOTAL AGGREGATE	3.72 (0.58)	4.51 (0.38)	1.92 (0.79)	3.76 (0.52)	4.43 (0.38)	0.65 (0.33)	3.73 (0.56)	4.50 (0.38)	0.74 (0.40)
<sup>c</sup> Comm	uniontion akilla									

<sup>c</sup> Communication skills. <sup>d</sup> Appearance.

#### 4.3.3.3 Statistical analyses

It was of interest to compare the differences in the four subscales of the PB scale across time and to consider whether any changes were a function of other variables that were measured and accounted for (e.g. sector; gender). This analysis was examined using multivariate analysis of variance (MANOVA). Due to the correlations between the subscales within the PB scale, which acted as separate dependent variables, a repeated measures MANOVA was employed rather than running separate ANOVA models.<sup>245</sup> It was hypothesised that sector of work, gender, ethnicity and religiosity may have an impact on PB scores based on previous work<sup>23</sup> and findings from work stream 1.

The independent variables were sector (community and hospital) gender (male and female), ethnicity (White British and other) and religiosity (important and not important). Time (beginning of training (PB1) and towards the end of training (PB2)) was a within subjects variable. The four subscales of the PB (interpersonal/social skills, responsibility, communication skills and appearance) acted as separate dependent variables in the model.

The assumption of equality of covariance matrices was not satisfied:

Box's *M*=608.908, *F*=1.32, *p*<.001. Although this assumption was violated, it will not cause major problems if the sample size and cells are large,<sup>203</sup> which in this case they were due to the way variables were dichotomised. Pillai's trace can be used as a more conservative estimate in such cases.<sup>237</sup>

#### Effects

No significant main effects were found for sector, ethnicity or religiosity (ps > .05). There were no differences in professional behaviours for respondents working in community versus hospital; White British respondents versus respondents from other ethnicities or respondents that could be classified as religious versus those classified as non-religious. A significant effect for time was found (Pillai's trace = .617,  $F_{(1,291)} = 469.17$ , p < .001). This was due to respondents scoring higher overall for now ratings (PB2; 4.51 (.30), CI [4.45,4.57]) than retrospective ratings for the beginning of the pre-registration year (PB1; 3.88 (.04), CI [3.79,3.96]).

A significant effect across the dependent variables (subscales of PB scale) was found (Pillai's trace = .517,  $F_{(1,289)}$  = 103.30, p <.001). A closer look at the contrasts between the different subscales revealed significant differences between each comparison (all *p*s<.001). Ratings for appearance were highest (4.657(.03), CI [4.61, 4.71]) followed by interpersonal/social skills (4.22 (.026), CI [4.17, 4.27]), responsibility (4.00 (.03), CI [3.94, 4.05]) and communication skills (3.83 (.03), CI [3.77, 3.9]). Figure 4.3 illustrated the differences across the subscales.



Figure 4.3: Differences between four subscales of professional behaviour scale

#### Interaction effects

Two significant interactions were present: *time x sector* and *time x subscale*. These are examined in closer detail below.

#### Time x sector

A significant two-way interaction was found between time and sector (Pillai's trace = .014,  $F_{(1,291)}$ = 4.23, p=.041)suggesting that the direction of differences in ratings of professional behaviours was reversed from PB1 to PB2 in respondents from community and hospital. This interaction is displayed in Figure 4.4.



In order to examine this interaction more closely, simple effects tests were conducted to compare community vs. hospital at time point 1 (PB1) and time point 2 (PB2), and also to compare PB1 vs PB2 for community and hospital. In total, four t-tests were conducted and a bonferroni correction was used to adjust the alpha level for finding a significant effect to .0125 (.05/4). Significant differences were found between PB1 and PB2 for community ( $t_{(221)} = -27.32$ , p<.001) and hospital ( $t_{(107)} = -20.68$ , p<.001). Respondents from community rated themselves higher at PB2 (M= 4.51 (.38), CI [4.40, 4.67]) than PB1 (M= 3.72 (.0.58), CI [3.65, 3.79]). Similarly, respondents from hospital rated themselves higher at PB2 (M= 4.43 (.38), CI [4.30, 4.56]) than PB1 (M= 3.75 (.52), CI [3.66, 3.84]). There were no significant differences between community and hospital for time point 1 or time point 2 (ps>.05).

#### Time x subscale

Another two-way interaction was found between time and subscale (Pillai's trace = .482,  $F_{(1,289)}$ =89.73, p <.001) suggesting that the way all respondents rated each of the subscales was affected by the time they were rating themselves on (i.e. PB1 vs PB2). This interaction is displayed in Figure 4.5 below.





In order to examine this interaction more closely, simple effects tests were conducted to compare the four subscales with each other for PB1 and again for PB2. A bonferroni correction was used to adjust the alpha level for finding a significant effect to p=.003 (.05/16). All of these comparisons showed a significant difference at the p<.001 level. At PB 1, appearance was rated highest (M= 4.56 (.56), CI [4.50, 4.62]) followed by interpersonal / social skills (M= 3.92 (.60), CI [3.86,3.98]), responsibility (M=3.55 (.68), CI [3.48, 3.62]) and communication skills (M=3.31 (.79), CI [3.24, 3.39]).. Again, at PB2 appearance was rated highest (M= 4.75 (.41), CI [4.71, 4.79]) followed by interpersonal / social skills (M= 4.46 (.42), CI [4.42, 4.50]) and communication skills (M= 4.37 (.51), CI [4.32, 4.42])

# 4.3.4 Supervision scale

### 4.3.4.1 Descriptive statistics

### Selections for person 1 and 2

The first set of results considered in relation to the Supervision scale were simply to explore respondents' selections for person 1, who had the largest impact, and person 2, who had the second largest impact on trainees' development of professionalism (when thinking about professional behaviours in the previous section: the PB scale).

Table 4.5 shows the frequencies and percentages relating to the selections that respondents made for person 1 and person 2. In this table the respondents' selections for person 1 and 2 are combined to display selections made for both persons together. For example, considering the top row of results, there were 117 respondents (64 in community and 53 in hospital) that selected their pre-registration tutor as person 1 and selected other pharmacist as person 2.

Dereen 1	Deneen 2	Community	Heenitel	A 11
Person 1	Person 2	Community	Hospital	All
	_	n (%)	n (%)	n (%)
	Other pharmacist <sup>a</sup>	64 (27.8)	53 (45.3)	117 (33.7)
	Pharmacy technician <sup>b</sup>	40 (17.4)	12 (10.3)	52 (15.0)
Dra registration tutor	Pharmacy dispenser	43 (18.7)	2 (1.7)	45 (13.0)
Fie-registration tutor	Not selected	28 (12.2)	1 (0.9)	29 (8.4)
	Pre-registration tutor <sup>C</sup>	5 (2.2)	0 (0.0)	5 (1.4)
	Store manager	5 (2.2)	0 (0.0)	5 (1.4)
	Pre-registration tutor	12 (5.2)	12 (10.3)	24 (6.9)
	Other pharmacist <sup>a</sup>	3 (1.3)	18 (15.4)	21 (6.1)
	Pharmacy dispenser	8 (3.5)	2 (1.7)	10 (2.9)
Other pharmacist	Not selected	2 (0.9)	7 (6.0)	9 (2.6)
	Pharmacy technician <sup>b</sup>	3 (1.3)	4 (3.4)	7 (2.0)
	Assistant technical officer	0 (0.0)	1 (0.9)	1 (0.3)
	Pre-registration tutor	6 (2.6)	1 (0.9)	7 (2.0)
	Other pharmacist <sup>a</sup>	3 (1.3)	0 (0.0)	3 (0.9)
Pharmacy dispenser	Pharmacy dispenser	2 (0.9)	0 (0.0)	2 (0.6)
	Pharmacy technician <sup>b</sup>	1 (0.4)	0 (0.0)	1 (0.3)
	Other pharmacist <sup>a</sup>	2 (0.9)	3 (2.6)	5 (1.4)
Dhamma ay ta abriaian	Pre-registration tutor	2 (0.9)	1 (0.9)	3 (0.9)
Pharmacy technician	Pharmacy dispenser	1 (0.4)	0 (0.0)	1 (0.3)

Table 4.5: Community, hospital and all respondents' selections for person 1 a	nd 2
together	

<sup>a</sup> Included second pharmacist, relief pharmacist, band six pharmacist, ward specialist pharmacist.

<sup>b</sup> Includes accuracy checking technicians.

<sup>c</sup>Some respondents noted that they had two tutors without explanation.

Although the results in the following table are derived from the results of Table 4.5, they provide, more simply, the positions held by person 1 and person 2 and the frequency with which respondents selected them.

Table 4.6: Selections for person 1 and 2, separately				
		Community	Hospital	All
Person 1		n = 230	n = 117	n = 347
		n (%)	n (%)	n (%)
	Pre-registration tutor	185 (80.4)	68 (58.1)	253 (73)
	Other pharmacist	28 (12.2)	44 (37.6)	72 (20.7)
	Pharmacy dispenser	12 (5.2)	1 (0.9)	13 (3.7)
	Pharmacy technician	5 (2.2)	4 (3.4)	9 (2.6)
Person 2				
Person	2	n = 200	n = 109	n = 309
Person	2	n = 200 n (%)	n = 109 n (%)	n = 309 n (%)
Person	2 Other pharmacist	n = 200 n (%) 72 (36)	n = 109 n (%) 74 (67.9)	n = 309 n (%) 146 (47.2)
Person	2 Other pharmacist Pharmacy technician	n = 200 n (%) 72 (36) 44 (22.0)	n = 109 n (%) 74 (67.9) 16 (14.7)	n = 309 n (%) 146 (47.2) 60 (19.4)
Person	2 Other pharmacist Pharmacy technician Pharmacy dispenser	n = 200 n (%) 72 (36) 44 (22.0) 54 (27.0)	n = 109 n (%) 74 (67.9) 16 (14.7) 4 (3.6)	n = 309 n (%) 146 (47.2) 60 (19.4) 58 (18.8)
Person	2 Other pharmacist Pharmacy technician Pharmacy dispenser Pre-registration tutor	n = 200 n (%) 72 (36) 44 (22.0) 54 (27.0) 25 (12.5)	n = 109 n (%) 74 (67.9) 16 (14.7) 4 (3.6) 14 (12.8)	n = 309 n (%) 146 (47.2) 60 (19.4) 58 (18.8) 39 (12.6)
Person	2 Other pharmacist Pharmacy technician Pharmacy dispenser Pre-registration tutor Store manager	n = 200 n (%) 72 (36) 44 (22.0) 54 (27.0) 25 (12.5) 5 (2.5)	n = 109 n (%) 74 (67.9) 16 (14.7) 4 (3.6) 14 (12.8) 0 (0.0)	n = 309 n (%) 146 (47.2) 60 (19.4) 58 (18.8) 39 (12.6) 5 (1.6)

### Ratings for person 1 and 2

The next part of the analysis of the Supervision scale focused on the ratings given for person 1 and person 2 across the five subscales (analysed for internal consistency in section 4.3.4.2) and overall. As a reminder, the Supervision scale employed a five-point Likert scale which ranged from 1 ('strongly disagree') to 5 ('strongly agree'). The mean and standard deviations of scores provided by respondents for person 1 and 2 are displayed in Table 4.8 for all 14 items in the Supervision scale for community, hospital and all respondents.

Given that selecting and providing ratings for person 2 was optional, there were less responses from which to compute statistics. As can be seen from Table 4.5, there were 38 respondents that did not select person 2 (30 from community and 8 from hospital). Therefore the number of respondents' ratings used to compute means and standard deviations for person 2 was reduced.

### 4.3.4.2 Internal consistency of Supervision scale

Overall, the Supervision scale showed good reliability (Crobach's  $\alpha$  = .95 and .93 when computed for person 1 and person 2, respectively). The internal consistency of the subscales are shown in Table 4.7, below.

Table 4.7: Internal consistency of subscales of Supervision scale: Person 1 and person 2					
		Cronbach's α			
Subscale	Items in subscale <sup>a</sup>	Person 1	Person 2		
Modelling	1,2,3	.82	.78		
Coaching	4,5,6	.79	.79		
Articulation	7,8,9	.86	.84		
Exploration	10,11	.95	.91		
Safe learning environment	12,13,14	.90	.86		

<sup>a</sup> see Table 4.8 for item details.

		Comr (N=	nunity 230) <sup>a</sup>	Hos (N=	pital 117) <sup>a</sup>	A (N=:	\   347) <sup>a</sup>
Subscale	Items	Person 1 M (SD)	Person 2 M (SD)	Person 1 M (SD)	Person 2 M (SD)	Person 1 M (SD)	Person 2 M (SD)
	Created sufficient opportunities for me to observe him/her.	4.28 (0.94)	4.16 (0.95)	4.00 (1.11)	4.01 (1.06)	4.19 (1.01)	4.10 (0.99)
Modelling	Served as a role model as to the kind of healthcare professional I would like to become.	4.28 (1.01)	3.99 (1.07)	4.38 (0.94)	4.21 (1.01)	4.31 (0.99)	4.06 (1.05)
	Consistently demonstrated how to perform clinical skills.	4.25 (1.02)	3.82 (1.11)	4.31 (1.09	4.15 (1.11)	4.27 (1.05)	3.94 (1.12)
	aggregate	4.27 (0.86)	3.99 (0.87)	4.23 (0.89)	4.12 (0.90)	4.26 (0.87)	4.04 (0.88)
	Offered me sufficient opportunities to perform activities independently.	4.47 (0.88)	4.26 (0.96)	4.45 (0.91)	4.27 (1.03)	4.47 (0.89)	4.26 (0.99)
Coaching	Gave useful feedback during or immediately after direct observation of my patient encounters.	4.14 (0.99)	3.96 (1.02)	4.30 (1.01)	3.91 (1.21)	4.20 (1.00)	3.94(1.09)
	Adjusted his/her teaching activities to my level of experience.	4.01 (1.04)	3.81 (1.05)	4.36 (0.92)	4.13 (1.05)	4.09 (1.01)	3.92 (1.06)
	aggregate	4.22 (0.80)	4.01 (0.84)	4.34 (0.82)	4.10 (0.94)	4.26 (0.81)	4.04 (0.88)
	Asked me questions aimed at increasing my understanding.	4.01 (1.12)	3.80 (1.14)	4.49 (0.84)	4.23 (1.07)	4.19 (1.06	3.95 (1.13)
Articulation	Stimulated me to explore my strengths and weaknesses.	4.04 (1.08)	3.81 (1.07)	4.27 (1.05)	4.01 (1.08)	4.12 (1.08)	3.88 (1.07)
Anticulation	Asked me to provide a rationale for my actions.	4.03 (1.02)	3.69 (1.11)	4.30 (0.95)	4.11 (1.09)	4.12 (1.01)	3.83 (1.12)
	aggregate	4.04 (0.94)	3.77 (0.95)	4.36 (0.86)	4.12 (0.97)	4.15 (0.93)	3.90 (0.96)
	Encouraged me to pursue my learning goals.	4.04 (1.01)	3.66 (1.10)	4.17 (1.08)	3.83 (1.10)	4.08 (1.04)	3.72 (1.10)
Exploration	Encouraged me to formulate learning goals.	3.93 (1.09)	3.60 (1.12)	4.17 (1.04)	3.72 (1.10)	4.01 (1.08)	3.64 (1.11)
	aggregate	3.98 (1.03)	3.63 (1.07)	4.17 (1.03)	3.78 (1.03)	4.05 (1.03)	3.68 (1.06)
	Showed that he/she respected me.	4.43 (1.03)	4.34 (1.03)	4.58 (0.86)	4.28 (1.16)	4.48 (0.98)	4.32 (1.08)
Safe learning	Created a safe learning environment.	4.36 (0.96)	4.21 (1.01)	4.40 (0.89)	4.19 (0.96)	4.38 (0.93)	4.20 (0.99)
environment	Was genuinely interested in me as a trainee.	4.32 (1.12)	4.21 (1.04)	4.44 (0.95)	4.13 (1.18)	4.36 (1.07)	4.18 (1.09)
	aggregate	4.37 (0.95)	4.25 (0.90)	4.48 (0.82)	4.20 (0.99)	4.41 (0.91)	4.24 (0.93)
	TOTAL AGGREGATE	4.22 (0.83)	3.96 (0.76)	4.36 (0.87)	4.11 (0.87)	4.27 (0.85)	4.01 (0.80)

#### Table 4.8: Supervision ratings for person 1 and person 2

<sup>a</sup> Some items have missing data.

#### 4.3.4.3 Statistical analyses

#### Selections made for person 1 and 2

Based on findings from work stream 1, where there appeared to be a close working relationship between trainees and tutors in community pharmacy, it was of interest to examine whether there were differences between respondents from community and hospital pharmacy on their choices for person 1 and 2. It was hypothesised, based on the findings from work stream 1, that community trainees would be more likely to select their tutor than another member of staff.

Descriptive statistics showed that a higher percentage of trainees in community selected their tutor for person 1 (80.4%) compared with 58.1% of respondents in hospital. In order to examine this in more detail, person 1 was split into a dichotomous variable: pre-registration tutor and other. A chi-squared test showed that there was a significant relationship between person 1 and sector  $(X^2 (1, N = 347) = 18.21, p < .001)$ . The selection of pre-registration tutors were overrepresented in community compared to hospital.

As selections for person 2 were more variable than for person 1 (in which pre-registration tutor and other pharmacist were often selected), a chi-squared test was performed between sector and the four roles that were consistent across both community and hospital: pre-registration tutor, other pharmacist, pharmacy technician, pharmacy dispenser. Selections of 'store manager' and 'assistant technical officer' were removed. There was a significant relationship between sector and the role of person 2:  $\chi^2$  (1, N = 304) = 42.382, p < .001. A closer examination of the significant result showed that trainees in hospital were more likely than expected to select 'other pharmacist' and less likely than expected to select 'pharmacy dispenser' whereas the opposite was true for community trainees.

However, one issue with trying to interpret results relating to person 2 in too much detail is that the selection of person 2 was based on remaining roles after the selection of person 1. Moreover, the number of individuals in the work environment could have influenced a respondent's choice. For example, a trainee working in a small independent may only work with one pharmacist (the pre-registration tutor) and a member of pharmacy support staff and may therefore be restricted to selecting these two individuals.

### Comparing aggregate ratings for person 1 and person 2

A paired sample *t*-test was used to compare the aggregate scores computed for respondents' ratings of person 1 and person 2. A significant difference in the aggregate scores between person 1 and person 2 was found ( $t_{(302)} = 6.354$ , *p*<.001). Person 1 was rated higher overall (M = 4.29 (.86), CI [4.19,4.39]) than person 2 (M = 4.00 (.80), CI [3.92, 4.10]).

#### Comparing ratings for person 1: pre-registration tutor versus others

The position of Person 1 was dichotomised into 'pre-registration tutor' and 'other', representing the other positions held by individuals selected as person 1.

A one-way MANOVA was conducted to consider the differences between pre-registration tutors and 'other' across the five subscales of the Supervision scale. There was a significant main effect of position (Pillai's trace = .050,  $F_{(5,336)}$ = 2.51, p=.004).

A closer examination of this effect using univariate analysis showed that there were significant differences between pre-registration tutor and other for the subscale 'exploration' ( $F_{(1,340)}$ = 8.37, p=.004). Pre-registration tutors were rated higher (4.16 (0.98), CI [4.04, 4.28]) than others (3.80 (1.08), CI [3.58, 4.02]). This subscale relates to encouraging to formulate / pursue learning goals (see Table 4.8 for details). No other differences were found (all ps > .05). Figure 4.6 displays the ratings given to pre-registration tutors and others for the five subscales of the Supervision scale to illustrate where differences lay.



Figure 4.6: Ratings for person 1 on the Supervision scale: pre-registration tutor and other

#### Comparing community and hospital pre-registration tutor scores

The differences between the ratings of person 1, selected as pre-registration tutor, were compared between community and hospital. A one-way MANOVA was conducted to consider the differences between community and hospital trainee ratings across the five subscales of the Supervision scale. There was a significant main effect of sector (Pillai's trace = .147,  $F_{(5,245)}$ = 8.46, *p*<.001).

Post-hoc *F*-tests showed there were significant differences between community and hospital for the subscale 'articulation' ( $F_{(1,249)}$ = 9.14, *p*=.003) and 'exploration' ( $F_{(1,249)}$ =6.890, *p*=.009). Pre-registration tutors selected as person 1 were rated higher for 'articulation' in hospital (4.44 (0.11),

CI [4.23, 4.65]) compared to community (4.06 (0.07), CI [3.93, 4.19]). Again, for 'exploration', hospital trainees rated person 1 as pre-registration tutor higher (4.42 (0.12), CI [4.19, 4.65]) than community trainees (4.06 (0.07), CI [3.92, 4.20]).

# 4.3.5 Patient Mattering scale

### 4.3.5.1 Descriptive statistics

Table 4.9 shows the descriptive statistics (ranked highest to lowest for 'All') for community, hospital and all trainees relating to ratings from the Patient Mattering (PM) scale. As a reminder, the rating scale ranged from 1 ('not at all') to 5 ('a great deal').

Item	Community	Hospital	All
	M (SD)	M (SD)	M (SD)
How helpful were you to patients?	4.63 (0.54)	4.28 (0.68)	4.51 (0.62)
To what extent did you "make a difference" to patients?	4.19 (0.62)	3.91 (0.68)	4.09 (0.66)
How interested were patients generally in what you had to say?	4.17 (0.72)	3.91 (0.83)	4.08 (0.77)
How much do you feel patients paid attention to you?	4.09 (0.75)	3.83 (0.84)	4.00 (0.79)
How important do you feel you were to patients?	4.06 (0.76)	3.54 (0.90)	3.88 (0.84)
How much did patients depend on you?	3.83 (0.86)	3.15 (0.95)	3.60 (0.95)
How much would patients miss you if you went away?	3.62 (0.98)	2.86 (1.12)	3.36 (1.09)
TOTAL AGGREGATE	4.05 (0.54)	3.64 (0.64)	3.93 (0.61)

Table 4.9: Community, hospital and all respondents' PM ratings

## 4.3.5.2 Internal consistency of PM scale

The PM scale, composed of the seven items in Table 4.9, showed good reliability: Cronbach's  $\alpha$  = .86.

## 4.3.5.3 Statistical analyses

A four-way between groups ANOVA was conducted to explore the differences in the PM scale according to four variables previously considered when examining the PB scale: sector (community and hospital) gender (male and female), ethnicity (White British and other) and religiosity (religious and non-religious). The dependent variable was the total aggregate rating in the PM scale.

A main effect of sector was found ( $F_{(1,308)}$ = 11.63, p=.001) with community respondents scoring higher (4.04 (0.06), CI [3.93, 4.15]) than hospital respondents (3.74 (0.07), CI [3.60, 3.88]). No other main effects or interactions were present (all ps>.05).

Further ANOVA tests compared ratings of the PM scale in different community pharmacies (e.g. independents; large multiples) and in different hospital (teaching; district general and other) settings. No significant differences in PM ratings were found between the different community or hospital settings (all *p*s>.05).

# 4.3.6 Comments

This section focuses on the results from the open-ended comments provided by trainees. A total of 87 (25.1%) of respondents provided comments. Fifty-eight (66.7%) were from community, representing 25% of community respondents, and 29 (33.3%) were from hospital, again representing 25% of hospital respondents.

The section is broken down into two parts. Firstly, valenced responses - comments that were positive or negative - were examined that reflected particularly strong views. The next subsection considers trainees' recommendations of changes to pre-registration training which are derived from comments that explicitly stated a suggestion for change. In addition, some of the positive and negative valenced responses used in the preceding section which incorporate a recommendation for change were included.

### 4.3.6.1 Valenced responses: positive and negative

There were 30 comments that were composed of positive remarks about the pre-registration training year: 20 from community and 10 from hospital. Table 4.10 displays the themes derived from these comments, the number of times they were present across positive comments for community and hospital trainees and an example relating to each theme.

Table 4.10: Positive comments							
Theme	n		Example				
meme	Community Hospital						
Good (generic)	10	2	'Couldn't have asked for a better year.'				
Helped to develop into pharmacist	6	4	'I learnt a lot about managing the pharmacy in addition to developing skills in order to become a pharmacist.'				
Good support	4	2	'Was very well supported within my training base and enjoyed the year.'				
Useful to have mix of role models	1	1	'Was good to have locums and other pharmacists to work in the store - show a difference in ways of working, my pre-registration tutor was outstanding compared to most.'				

There were 19 comments that were composed of negative remarks about the pre-registration training year: 10 from community and nine from hospital. Table 4.11 displays the themes derived from these comments, the number of times they were present across negative comments and an example relating to each theme.

#### Table 4.11: Negative comments

Theme		n	Example		
Theme	Com. <sup>a</sup>	Hosp. <sup>∞</sup>	Example		
Lacked support	4	2	I worked in a very busy store, so felt my tutor was not able to give me enough attention.		
Lacked responsibility	2	3	'I feel that the lack of responsibility given to us has prevented further professional growth as the year neared its end.'		
Training lacked structure	0	3	'The pre-reg year is very self-directed, received little or no help from hospital towards the exam, lacked structure and was not well organised.'		
Bad (generic)	1	1	'I would change everything - the box isn't large enough to comment, sorry.'		
Rotations too long	0	1	'Some rotations were too long such as production and stores '		
Lacked guidance from GPhC on exam	1	0	'Exam was harder than I thought, not enough guidance from GPhC.'		
Lacked financial support for travel	1	0	'I wish my company offered financial support for traveling to travel days etc.'		

<sup>a</sup> Community.

<sup>b</sup> Hospital.

### 4.3.6.2 Recommendations of changes to pre-registration training

There were 64 comments that suggested one or more possible recommendations for changes to the pre-registration training year with 16 of these being derived from the valenced comments described in the previous subsection. Of the 64 comments, 42 were from community trainees and 22 were from hospital trainees. Table 4.12 displays the themes derived from these comments, the number of times they were present across the comments and an example relating to each theme. The majority of recommendations were focused on improving the experience (e.g. support trainees receive), the structure of the year (e.g. changing its length) and the assessment undertaken (e.g. removing the registration exam).

## 4.4 Summary of work stream 2

This chapter focused on work stream 2 where a cross-sectional survey was administered to a sample of 1706 trainees towards the end of the 2011/12 pre-registration training year. The survey examined trainees' perceptions of changes in behavioural professionalism during pre-registration training as well as their views on supervision received and how they believed they mattered to patients. This section summarises the key findings; a wider discussion relating to this work stream and work stream 1 is provided in Chapter 5.

A total of 413 pre-registration trainees responded to the survey giving a response rate of 24.2%. The majority of respondents were female and ethnically diverse, and worked in community pharmacy. Respondents had studied their MPharm degree at one of 23, of the total of 26, schools of pharmacy at the time the survey was conducted. Respondents did not differ significantly in terms of gender, age, or religiosity. White British trainees were underrepresented in community pharmacy whereas other ethnic groups were overrepresented; this was the opposite in hospital pharmacy, reflective of new registrants.

### Table 4.12: Recommendations of changes to pre-registration training

Thoma / Decommondation		า	Example
Theme / Recommendation	Com. <sup>a</sup>	Hosp. <sup>b</sup>	Example
Experience			
Ensure trainees are well supported in their training site	10	5	'Pharmacists should spend more time with pre-reg's and teach them more.'
Give trainees more responsibility	4	6	'More time on wards/clinical focus; spend less time doing assistant's role and more pharmacist shadowing.'
Educate staff / patients on pre-registration trainee's role	5	1	'The role of a pre-reg trainee needs to be explained better to other colleagues before a pre-reg starts so that it can be better understood.'
Ensure training sites provide breadth of learning opportunities and			'In my opinion the training premises are not well designed for the purpose. Generally the place is small, untidy,
experiences	7	1	disorganised and most of all too busy to allow trainee pharmacists to gain skills and experience necessary to become a future pharmacist.'
Structure			
Have compulsory cross sector experience	4	3	'Cross sector placements should be compulsory.'
Encourage completion of work experience before pre-registration training	2	2	'I think it would have been useful to have a more substantial work experience during my degree to help with starting work as a pre-reg.'
Pre-registration training structure needs to be improved	0	3	'The pre-reg year is very self-directed, received little or no help from hospital towards the exam, lacked structure and was not well organised. Could be improved.'
Ensure trainees are allocated regular study time	3	0	'As I did my placement in a community pharmacy, I found it very difficult to have any study time at all and so felt under more pressure to do the work at home. More time to revise at work would be beneficial.'
Embed pre-registration training into the MPharm	2	0	Would prefer if the year was divided into two blocks of six months to allow time to reflect and restructure learning points.
Reconsider length of pre-registration training	3	0	'No need to be a whole year. Maybe 6 months max.' 'A year is not long enough.'
Assessment			
Trainees should sit the registration assessment earlier	2	0	'Have the pre-registration assessment earlier on in the year to allow more time for trainees to use/practise their clinical knowledge further.'
Remove registration assessment	2	0	'Not examinable
More support from GPhC for registration assessment	3	0	'Exam was harder than I thought, not enough guidance from GPhC.'
Have practical exam on site	1	0	'No pre-registration exam, assessment should be carried out in a pharmacy environment by an external assessor or by tutor/superintendent pharmacist'
Reduce the paperwork associated with pre-registration training	0	1	'I think that there is too much paper work in the pre-registration year, which can sometimes lead to the focus being taken away from the actual learning and instead directed onto ticking all the boxes and filling out log sheets.'
Improve consistency for requirements of signing off performance standards	0	1	'[There are] variations in tutor requirements for signing of standards.'

<sup>a</sup> Community. <sup>b</sup> Hospital.

The professional behaviour (PB) scale captured self-rated scores of the ability to demonstrate 25 different types of professional behaviours. Trainees, as a whole, rated themselves significantly higher towards the end of the training year compared to the beginning. Inspection of ratings of individual items showed that there was an increase in each, from the beginning of training to towards the end of training. According to trainees' ratings, the items that increased the most related to, 'responsibility' and 'communication skills'. For example, 'self-directed in undertaking tasks' and 'prioritising responsibilities effectively' changed the most within the responsibility subscale. Items that showed the biggest change in the communication skills subscale were related to confidence and assertiveness. As a whole, 'appearance' and 'interpersonal / social skills' were not as prone to development, and were already rated quite highly at the beginning, showing only a slight increase. When comparing ratings for each subscale, overall ratings for the appearance subscale were scored significantly higher than other dimensions of professionalism at the beginning and towards the end of training. After appearance, ratings of interpersonal / social skills were rated highest followed by responsibility and communications skills, which were rated the lowest.

The findings from the Supervision scale showed the two individuals that trainees believed had the largest impact on their development of professionalism: person1, having the largest impact, and person 2, having the second largest impact. The most common selection for person 1 across both community and hospital was pre-registration tutor. The selection of pre-registration tutors as person 1 were significantly higher in community compared to hospital, where other staff, including other pharmacy staff, namely pharmacists, were selected more often. The most common selection for person 2 across both community and hospital was other pharmacist. When comparing selections for person 2, trainees in hospital were more likely than expected to select 'other pharmacist' and less likely than expected to select 'pharmacy dispenser' whereas the opposite was true for community trainees. When comparing all trainees' aggregate ratings for person 1 and 2 on the Supervision scale (related to clinical teaching: modelling, coaching, articulation, exploration and safe learning environment), person 1 was rated significantly higher than person 2. Nevertheless, when considering the ratings given to person 1 and 2 for the 14 items on the Supervision scale the results were quite positive. The majority of trainees agreed with the statements relating to person 1 and 2, suggesting they had favourable views of these individuals.

When selections for person 1 were divided into pre-registration tutors and others (other pharmacist; pharmacy dispenser; pharmacy technician) and compared, pre-registration tutors were rated significantly higher in 'exploration' which relates to formulating and pursuing learning goals. When ratings for pre-registration tutors selected as person 1 were compared across sectors, it was found that hospital trainees rated pre-registration tutors higher for 'articulation' compared to community trainees. (Articulation relates to asking the trainee questions to increase understanding, stimulating the trainee to explore their strengths and weaknesses and asking the trainee to provide a rationale for their actions.) Hospital trainees also rated their pre-registration tutor higher than community trainees in 'exploration' which relates to encouraging the trainee to

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formulate and pursue their learning goals. No other differences between ratings across sector were found.

Results from the Patient Mattering scale showed that, as a whole, trainees rated themselves quite highly. Most trainees, when providing ratings of how much they believed they mattered to patients overall during the pre-registration training year, rated themselves in the range of 3 (a little) to 5 (a great deal) for the seven items. The item that was rated highest was 'how helpful were you to patients?'. In contrast, the item that was rated the lowest was 'how much would patients miss you if you went away?'. When comparing ratings between sectors, community trainees rated themselves significantly higher than those in hospital, suggesting they believed they mattered more to patients (e.g. felt patients paid more attention to them and were dependent on them) than those in hospital. Other variables such as gender, ethnicity and religiosity did not influence these differences.

A total of 25% of respondents from community and hospital provided comments about their experiences of pre-registration and / or recommendations for changes to it in the questionnaire. Comments were coded according to positive or negative valence and core themes. There were more positive than negative comments about pre-registration training. The most common positive comments were generic whilst others related to how pre-registration helped trainees develop into pharmacists, the receipt of good support, and how useful it was to have a mix of role models to work with. The most common negative comments related to lacking support during training. Other negative comments related to trainees lacking responsibility, the training year lacking structure, and generic negative comments.

The majority of comments related to suggestions or recommendations for changes to preregistration training. The most common recommendations included those that related to the experiences of trainees during training (e.g. ensuring trainees are well supported in their training site). Other comments related to making changes to the structure of the training (e.g. reconsidering its length) or the assessment related to training (e.g. removing the registration assessment). A small number of comments (cited by  $\leq$  3 trainees) were unique to each sector. Examples included: training lacked structure (hospital only); ensuring trainees are allocated regular study time (community only).

The scales used in the survey showed good internal consistency, with items measuring constructs validated in other research. Making comparisons with the findings derived from this scale with other findings in pharmacy are difficult because the use of this scale in pharmacy was novel. Ratings given for individuals in the present study are comparable to ratings given to clinical teachers where the MCTQ instrument by Stalmeijer et al.<sup>220</sup> was used in medicine<sup>220, 246</sup> For example, in a study by Kelly and Bennett in Ireland,<sup>246</sup> year 2 undergraduate medical students rated their GP teachers highly, with a mean item score of 4.5. As with any research using scales in a novel way, more work would be needed to replicate findings and consider validity<sup>209</sup> and reliability.<sup>210</sup>

# **5 DISCUSSION**

# 5.1 Introduction

This chapter focuses on the programme of work undertaken and its contribution to pharmacy practice. The strengths and limitations of the research undertaken and a discussion of the key findings and their implications will be discussed. Suggestions for future research and conclusions and recommendations for pharmacy education and training are also discussed.

The findings of this research come at a time when pharmacy education and training in the UK is facing considerable reform.<sup>247</sup> Decisions about the way in which pre-registration training can sit alongside the MPharm degree have been proposed,<sup>247</sup> and recommendations for managing the quality of pre-registration training have been made.<sup>248</sup> The programme of work undertaken lends itself to informing debates around the delivery of pharmacy education and training. The findings from this programme of work have ultimately provided insights into how pre-registration training supports the professional socialisation and development of professionalism in trainees. The research has shed light on the so-called 'black box'<sup>143</sup> engendered by training sites, in which learners pass through, hoping to acquire a range of skills along the way, and uncovered the way in which trainees develop into pharmacists in different settings.

The programme of work was composed of two work streams to investigate the process of professional socialisation and development of professionalism during pre-registration training in pharmacy. In work stream 1, the researcher conducted a longitudinal study to explore the process of professional socialisation and development of professionalism during pre-registration training in a group of 20 trainees. The use of periodic semi-structured interviews and questionnaires with trainees and their tutors teased apart the different factors which were associated with trainees' socialisation into the pharmacy profession and their development of professionalism during pre-registration training and into early practice as NQPs. Findings from work stream 1 contributed to the development of a survey which was used in work stream 2. The survey was able to examine important issues identified in work stream 1 in a representative sample of trainees. Areas considered in the survey included professional behaviours, individuals that had a significant impact on trainees' development of professionalism and their supervision abilities, and how trainees believed they mattered to patients.

# 5.2 Reflexivity and reflection on the research journey

Reflexivity has been described by King (p.20)<sup>249</sup> as *"the recognition that the involvement of the researcher as an active participant in the research process shapes the nature of the process and the knowledge produced through it."* The researcher, with the help of a supervisory team, was tasked with designing the programme of research; collecting, analysing and interpreting data and producing a written account of this within the thesis. The integral role of the researcher in all that is presented in this thesis is considered in this short section along with a description of the researcher's journey throughout the programme of work.

From the outset, the researcher had a keen interest in researching a topic related to learning and development through experiences in undertaking learning and memory research during an undergraduate and master's degree in psychology. This aligned well with the interests of the supervisory team who were interested in learning and development related to professionalism in pharmacy. The first steps in the programme of research involved generating ideas about a research topic and this involved reading considerable amounts of literature relating to professionalism from healthcare professions such as medicine and nursing whilst touching upon literature relating to learning and development. Indeed, in the early stages of the research there were times the researcher was overwhelmed by the breadth of the area of research being considered. The researcher's prior experience in conducting critical appraisals of research literature, and with guidance from an experienced supervisory team, the pre-registration training year in pharmacy became the research focus, given its importance in the inculcation of professionalism.

With the broad area of research settled, the researcher focused on the research aims and methodological approaches to address them. An applied approach was adopted that involved undertaking considerable amounts of fieldwork in pharmacy settings. The applied nature of the research can be attributed to the background and past research experience of the researcher, in both psychology and pharmacy practice, and the supervisory team, who had extensive experience in pharmacy practice research (see section 2.4 for further information on philosophical stance). A researcher with a different academic background (e.g. pharmacy) may have approached the study of this topic area very differently. The researcher spearheaded the research direction and developed and executed two complementary work streams.

In work stream 1, the researcher faced many challenges in handling vast amounts of data and transcribing, analysing and interpreting it, all whilst following a strict timetable of data collection (see Figure 2.1, section 2.2.). It was an ambitious piece of work that pushed the researcher physically and mentally; the research itself was, however, rewarding. Seeing, first-hand, the changes that take place with trainees' confidence and ability was gratifying. The researcher had a longstanding relationship with research participants through conducting a longitudinal study. Naturally, this may have affected the way in which discussions were held and the way in which he could broach different subjects. On reflection, it would appear that the continuously strengthened relationship facilitated more open discussions with participants as participants would have familiarised themselves with the researcher as time passed. Furthermore, as the researcher is a non-pharmacist, participants may have been more willing to speak openly without fearing judgements that a pharmacist researcher may hold. This arguably bolsters the validity of the findings, with socially desirable responses less of an issue.

Work stream 2 brought a different set of challenges and opportunities to the researcher. Whilst the workload for this research was significantly less than work stream 1, difficulties in collecting data without adequate participant contact information was something that had to be overcome as

did completing this research alongside workstream 1. The opportunities to manage a large-scale survey research from end to end was beneficial for developing the researcher's competence (e.g. administration techniques; data cleaning and analysis) in this important area of practice research. The researcher clearly had a more distant role with participants in this work and the analysis and interpretation of data was less subjective given the more empiricist vantage point of this work, contrasting with a more constructivist stance in work stream 1. The researcher handled both work streams well given his past experiences in conducting research with human participants using different methods.

The programme of work improved the researcher's skills in every aspect of research, from designing research and recruiting participants through to analysing and interpreting data and disseminating it to a range of audiences. It was an arduous journey, though a worthwhile one. Whilst the trainees participating in this research underwent considerable development professionally and personally during their pharmacy training, the researcher, too, developed throughout the PhD.

## 5.3 Research strengths and limitations

The programme of work undertaken was the first of its kind to be conducted in pharmacy. In an underesearched area, the work adds considerably to the knowledge base of how pre-registration training facilitates and shapes trainees into pharmacists as they further undergo professional socialisation and develop the professionalism expected of pharmacists.

The methodology adopted for the programme of work was a key strength. The prospective longitudinal design utilised in work stream 1 enabled the researcher to track the development of 20 trainees in depth as they progressed in the pre-registration and early practice experience as newly qualified pharmacists (NQPs). This approach was superior to examining professional socialisation and the development of professionalism with a cross-sectional design (e.g. collecting data once during a period of interest). It was an ambitious piece of work that required the researcher to adhere to strict timescales for multiple rounds of data collection that took place at different stages of pre-registration and shortly following it, as trainees moved on to become NQPs in early stages of practice. A total of 119 semi-structured interviews were completed alongside the administration of questionnaires at the end of interviews, demonstrating the considerable breadth and richness of data from which the findings are based.

The use of mixed methods in work stream 1 allowed the researcher to explore, with detailed insights, the process of professional socialisation and development of professionalism. As this was an under-researched area in pharmacy, the qualitative approach, using semi-structured interviews was able to tease apart processes relating to the developmental process of trainees into pharmacists. The use of critical incidents highlighted some examples of professional / unprofessional behaviour which illustrated more explicitly the types of activities trainees / NQPs were engaged with at different stages of training / practice. Questionnaires were used to obtain a more standardised measure of the development of behavioural professionalism in trainees.

Collectively, the data gathered in work stream 1 served to reveal the key factors relating to how the process of professional socialisation occurs during pre-registration training as well as showing how abilities to demonstrate professional behaviours were perceived to change.

Past longitudinal research has often been done from the perspective of one group when exploring professional socialisation and the development of professionalism.<sup>89, 90, 250</sup> By adopting a paired (trainees and their tutors) approach, data could be triangulated. The use of triangulation was advantageous as it allowed the researcher to consider the progress of trainees from two perspectives as opposed to just one, strengthening the validity and reliability of the findings.<sup>158</sup> Whilst it is recognised that additional perspectives (e.g. of other colleagues or patients) may have increased validity and reliability of findings,<sup>158</sup> this would have posed logistical challenges for having continuity of participation from, for example, patients, during training. In addition, this would have created considerable demand on the data collection process which was already challenging to uphold.

Apart from the loss of one tutor, who was replaced by another tutor, and the loss of one NQP, who had not registered in time for the final interview, no participant attrition was experienced in work stream 1. This success may have been attributed to the researcher maintaining contact with participants during the study through, for example, sending interim emails reminding participants of future interviews, and building rapport during interviews. The use of incentives (for trainees only) may have also played a role. Maintaining a strong level of commitment from research participants was a further strength of this research.

The findings of work stream 1 supported the development of work stream 2. Thus, the development of work stream 2 was grounded in emerging findings from work stream 1. The findings from work stream 2 served to confirm and strengthen some of the findings of work stream 1 (e.g. showing increases in behavioural professionalism) as well as consider important factors deemed important in trainees' development during pre-registration training (supervision; patient mattering) in a larger, more generalisable, sample of trainees. Capturing the views of a large number of pre-registration trainees about training, which has only been considered by a few studies some years ago,<sup>115, 122, 251</sup> was a further strength of this research. Surveys of trainees in the past covered limited issues and the use of validated scales appeared to be lacking. The use of scales identified in the literature that had undergone validity and reliability checks adds credence to the concepts which were examined.

Although there were a number of strengths with the way in which this programme of work was designed and executed, there are some limitations which are acknowledged. One important limitation that must be noted is that there may have been a self-selection bias<sup>252</sup> in the sample of participants that took part in work stream 1 and 2. This can affect the interpretation of findings. For example, it may be the case that participants that volunteered to take part in work stream 1 did not accurately reflect the process of professional socialisation and development of professionalism witnessed in other training sites. Those who agreed to take part in work stream 1 could have been a zealous group of trainees, with particularly motivated and supportive tutors. It

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was sometimes difficult to elicit examples of trainees' unprofessional behaviours and it is possible that those recruited had a number of positive attributes other trainees would not possess.

Another limitation of this work was the relatively low response rate in the large-scale survey conducted. This was likely, at least in part, due to not being provided with a list of personal contact details of pre-registration trainees. The questionnaire had to be sent to training premises with current trainees addressed to the 'pre-registration trainee'. This, together with the possibility of trainees taking leave following the registration assessment, that took place shortly before the questionnaire was administered, could have affected the response rate. However, even though the response rate was relatively low, the profile of respondents was ethnically diverse, consistent with the growing trend of minority ethnic groups entering the pharmacy profession<sup>253</sup> and respondents reflected what would be expected of registrants (e.g. more females).<sup>254</sup> Moreover, the sample size calculation performed before sampling suggested a minimum sample of 335 participants would be needed to reflect the population of trainees (N= 2608), and an excess of this number of questionnaires were available for analyses (n= 347).

## 5.4 Trainee development

This section considers the development of trainees in terms of their clinical knowledge, attitudes and values and behaviours. The next main section (5.4) considers the influences on trainees' development. The findings relating to NQPs (former trainees) are discussed in relation to the developmental process.

# 5.4.1 Clinical knowledge

The process of professional socialisation and development of professionalism was considered from different angles including exploring the development of clinical knowledge. An exploration of the development of clinical knowledge was considered important as specialised professional knowledge is a core component of professionalism in a pharmacy,<sup>41</sup> and is associated with the ability to communicate information effectively to patients. The possession of appropriate knowledge forms a structural attribute of the professionalism of a pharmacist,<sup>6</sup> and pharmacists are medicines experts with specialist knowledge in the action and use of medicines.<sup>61</sup>

The importance of the MPharm degree in developing a strong foundation of clinical knowledge was recognised by trainees and tutors in work stream 1. However, it was the pre-registration year that served as a setting to actively apply this knowledge. Knowledge of drugs and their uses, through being involved in dispensing drugs, actively using the BNF and speaking with patients added a practical, real life dimension to deepen trainees' understanding of medicines which was developed during the MPharm. A better appreciation of the subjects taught, and their applicability to practice, took place. Although there were initial difficulties in applying the clinical knowledge learned throughout the MPharm in the practice setting and communicating this information adaptively and suitably to different patients, abilities improved with practice as well as changing roles and increased responsibility. Trainees were putting into practice what was formally learned during their degree and continually building confidence.

Study time was available to trainees but it was variable across training sites and it appeared that hospital trainees had more flexibility with how much time they could spend on studying. Throughout training study time served as a means to assimilate new clinical knowledge, allowing trainees to reflect on some of the new information they encountered while working and to synthesise new knowledge in a practical setting. Interactions with patients were central to this process. Indeed, patients have been shown be central in the learning process and developing clinical knowledge in medical students.<sup>112, 114</sup> Towards the end of the training year trainees were focused on preparation for the registration assessment which was attributed to improvements in clinical knowledge as well as working with patients more regularly.

As NQPs, many reported that their clinical knowledge was still developing through further experience in pharmacy practice, particularly because they were now the pharmacist, and as such had to deal with more patient queries directed at the pharmacist. In community, some trainees were exposed to services they had not experienced during their pre-registration training (e.g. smoking cessation; supervised methadone administration) which brought about new learning opportunities for developing and applying clinical knowledge in new areas. In hospital, NQPs were working on wards for longer periods of time which allowed them to witness a wider range of patients and clinical cases and medicines which facilitated their continuing development and application of clinical knowledge. It was evident that the learning and development of clinical knowledge continued beyond the pre-registration year.

### 5.4.2 Attitudes, values

Although attitudes and values were not explored as in depth as the professional behaviours being developed, some insights were gleaned, particularly from the interviews in work stream 1. Past research by Willis et al. found three distinct developmental stages as key themes to understanding how professionalism is learned by early career pharmacists: early life, undergraduate education and experience in practice.<sup>65, 83</sup> In this research attitudes and values relating to professionalism were found to have been nurtured during one's upbringing supporting findings from past research.<sup>81, 82</sup> Religion was also found to be a factor in fostering values and professional attitudes during childhood for some, such as the importance of showing respect and compassion to others. After this early socialisation in childhood, individuals from different backgrounds and cultures come together and begin to undergo professional socialisation.<sup>24</sup>

Upon entering undergraduate education, entering early stages of professional socialisation, the MPharm programme stipulated the appropriate attitudes and values expected of pharmacy professionals,<sup>43, 69, 70</sup> building on the foundations built during one's upbringing. The MPharm formalised the concept of professionalism relating to pharmacy practice and laid out the expectations for professional conduct in practice for trainees. This resonates with other research conducted with three schools of pharmacy that showed pharmacy students often learn about appropriate conduct during the MPharm<sup>10</sup> and there are codes / standards of conduct documents that underpin this.<sup>43, 69</sup> Indeed, the organisational philosophy, or culture, of an institution can play a role in shaping the learning of professionalism in pharmacy education.<sup>10, 11</sup> Pharmacy education

can serve to shape students' understanding of professionalism and how it applies to the profession. This is recognised as attempts have been made by some schools to form a culture that emanates professional values through, for example, the use of white coat ceremonies,<sup>134</sup> though these are not in place in all schools, especially in the UK.

All trainees believed the appropriate positive and professional attitudes and behaviours associated with professionalism were important from the beginning of pre-registration training to towards the end of training; it was seen to be increasingly important as NQPs. However, a growing sense of realism that professionalism may not always be upheld in practice given the demands of the job was found to exist in a few trainees as they progressed in the training year. Similar findings have been found in other studies in medicine and nursing, where a discord between students' professional ideals and practice reality can exist.<sup>255, 256</sup> Changes in attitudes, such as growing cynicism<sup>257, 258</sup> towards the profession<sup>256,257</sup> were not found in this research, though this may have been due to selection bias<sup>252</sup> noted as a limitation; participants that volunteered to take part in this research may have been particularly positive and not a reflection of the majority of trainees. Also, there was not an attenuation of trainees' perceptions of the importance of demonstrating professionalism to all patient groups. Previous studies, too, have demonstrated, for example, that pharmacy students hold favourable views towards different patient groups, including the elderly,<sup>259</sup> mentally ill,<sup>260</sup> and 'underdeserved'<sup>261</sup> (e.g. low socioeconomic status).

### 5.4.3 Behaviours

The present research focused particularly on the development of trainees' professional behaviours longitudinally during reregistration training and into early practice. This was explored in depth in a group of 20 trainees and their tutors. Perceived changes in the ability of trainees' to demonstrate a range of professional behaviours were considered in a survey of a representative group of trainees. The professional behaviour of trainees / NQPs developed during the course of the pre-registration training year and into early practice. This was evident from the qualitative data (interviews and critical incidents) that highlighted changes in the way trainees functioned in the work setting, their role development and how they conducted themselves with patients and colleagues. Findings supported the interpretation and understanding of the results from the behavioural professionalism questionnaires, administered after the interviews. Longitudinal quantitative findings showed increases at each interview round. Both trainees and tutors recognised increases in behavioural professionalism from early on in the training year to towards the end of training, in line with previous work conducted with trainees and tutors in hospital only that looked at competence related to professionalism.<sup>127</sup> There were no significant differences between the ratings of trainees and tutors, nor were there differences between participants from community and hospital. There were, however, significant differences in trainees' ratings in round 1 compared to their ratings at the point of round 4 (as NQPs) when reflecting on round 1. This may be linked to overestimations in behavioural professionalism early on in the training year whereby trainees may not fully appreciate their abilities.

Although exposure to patients was limited in the early stages of pre-registration training, trainees felt they were able to communicate well, however, more professional communication skills in counselling and providing advice to patients was lacking. As trainees' clinical knowledge and contact with patients increased, confidence in communicating with patients improved. This was evident from findings from work stream 1 and supported by findings from work stream 2, with significant improvements in communication taking place from the perspectives of trainees. Communication is an important part of professionalism in pharmacy.<sup>6, 62</sup> Developing communication skills has received more attention from educational providers over the years,<sup>262</sup> with weaknesses in this area often being recognised,<sup>263</sup> and pharmacy curricula have increasingly focused on these skills in recent years.<sup>262, 264</sup> Past research has shown that the MPharm degree may serve to build some communication skills according to the views of pre-registration trainees<sup>115</sup> and 4<sup>th</sup> year MPharm students,<sup>116</sup> but there can be much room for improvement / development from other pharmacists during pre-registration training. However, some pharmacists may also struggle with communication skills<sup>265</sup> potentially affecting trainees ability to learn from a pre-registration tutor or supervising pharmacists with poor communication skills.

Findings from this research support other research<sup>65</sup> – though in a more generalisable sample – that pre-registration trainees develop their communication skills further during training, though they may not be fully developed as they move into practice after registration.<sup>65</sup> The present research showed that self-perceptions of communication skills increased significantly from the start of training to near the end of training, though there was still room for improvement according to self-assessed ratings (i.e. towards demonstrating 'excellent' skills in this area), which improved slightly as NQPs.

Trainees' abilities to work with colleagues were considered to be strong early on. These relationships and ways of communicating were qualitatively different from those with patients; trainees drew comparisons of working with pharmacy staff with other work experiences outside of pharmacy. Findings from work stream 2 supported this with less change reported in professional behaviours that related closely to dealings with colleagues (e.g. being cooperative and diplomatic). These findings extend – across both sectors and in a larger sample – those from a study by Christou and Wright that examined hospital pre-registration tutors perceptions of MPharm graduates.<sup>125</sup> In their study, the majority of tutors surveyed believed graduates did not know how to communicate effectively with patients or other healthcare professionals. In contrast most tutors believed graduates knew how to communicate with tutors and the immediate pharmacy team effectively and show respect for others.<sup>125</sup>

Appearance is considered an important part of professionalism, which is readily witnessed and measurable. It is incorporated into many descriptions of professionalism, both in pharmacy<sup>10, 62, 266</sup> and other healthcare professions such as nursing<sup>267</sup> and medicine<sup>268</sup> and can help build trust in patients, as has been shown in both medicine<sup>269</sup> and pharmacy.<sup>65</sup> The present research showed that trainee appearance was good at the beginning of pre-registration training, leaving little room for improvement. Perhaps this is because students appear to have a clear understanding that

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appearance plays an important part of professionalism<sup>10</sup> which may address this area of professionalism in the degree. The importance of appearance may also be emphasised in pharmacy curricula,<sup>10, 14</sup> with dress codes in place in pharmacy schools.

Overall, the findings from the survey of trainees in work stream 2 showed that trainees rated themselves quite highly in all items relating to behavioural professionalism towards the end of preregistration training. One could then infer that pre-registration training provides the means through which trainees are able to demonstrate professional behaviour to a high standard. However, the results from work stream 2 reflected self-rated abilities to demonstrate professional behaviours in a questionnaire and quantitative instruments may not be able to capture the breadth of issues around abilities as, for example, qualitative methods. A global rating of behavioural professionalism may not capture the day-to-day execution of tasks performed, which can vary depending on context,<sup>270</sup> shown in the longitudinal findings in work stream 1. Furthermore, the findings of the survey were confined to self-assessment and longitudinal findings suggested that trainees appeared to believe they were performing adequately unless they received feedback or comments from individuals saying they were not performing to an appropriate level. Findings from work stream 1 provided some more insights into this issue by showing the different challenges faced by NQPs, and how the pre-registration year did not necessarily provide a NQP with the full range of experiences and skills necessary to perform successfully in their role. For example, in community pharmacy, new ways of communicating with different patient groups and skills in delivering different services had to be learned.

Findings from a survey of pre-registration trainees at the end of the 2001/02 training year found that 90% agreed they had made the transition to a person who 'can practise effectively as a member of the pharmacy'.<sup>122</sup> However, whether these views were consistent once trainees moved into practising as pharmacists was not considered. Insights into issues with preparedness for practising as a NQP and support and guidance available to NQPs came from work stream 1 which followed trainees into early practice allowing the research to consider the role of preregistration in preparing NQPs with a range of skills to practise effectively. In general, NQPs believed that the pre-registration year had been a valuable experience in preparing them for early practice as it had exposed them to the work environment for an extended period of time. However, there were some criticisms of the training year. Weaknesses of pre-registration training included working in a pharmacy that was too busy or too quiet, working with a homogeneous patient group and holding a position with limited responsibility. Holding the newly found responsibility and accountability, often in a new pharmacy setting, was challenging for NQPs. For example, NQPs in community found it challenging to deal with management and delegation which they had not experienced much in pre-registration training. There were some cases as well where services they had to deliver were not provided at the training site and thus had to be learnt with the help of technicians and support staff. NQPs, too, found it challenging to adjust to holding more responsibility and accountability as a pharmacist and in taking charge of wards, though they were often supported more through working with other, more senior, pharmacists in the hospital. These findings resonate with results from a survey of hospital pre-registration tutors where only a

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minority (34%) agreed that at the time of registration trainees would be competent in demonstrating leadership behaviours.<sup>125</sup>

### 5.5 Influences on trainee development

This section considers the influential factors that supported the professional socialisation and development of professionalism of trainees. This includes staff professionalism and role modelling, guidance and support, feedback and assessment and differences across training sites. The findings relating to NQPs (former trainees) are discussed in relation to these factors influencing the developmental process.

# 5.5.1 Staff professionalism and role modelling

In healthcare professions, role models are an important source of learning in practice.<sup>13, 96, 271-273</sup> The conduct of staff and social norms within the workplace form part of an organisational culture that can affect the way in which an individual is socialised.<sup>21</sup> The existence of role models was explored in the present research through trainees' and tutors' perceptions of the professional conduct exhibited by their colleagues and through exploring how trainees learned from others. Individuals that had a large impact on the development of professionalism in trainees were also examined in a large scale survey.

According to trainees, role models were considered those who were experienced in their role and had a good way of working with patients and staff, displayed through their general demeanour and manner. This is similar to findings found in research in other healthcare professions. For example, Jacobson et al.<sup>274</sup> found that physical therapy students felt that personal characteristics (e.g. responsive to the needs of others) were better at describing role models than technical abilities (e.g. applies her knowledge and skills of the latest techniques in patient treatment planning). All trainees and their tutors had positive perceptions of the staff they worked with in terms of their demonstration of professionalism. Trainees did not generally consider any staff members to be unprofessional, though some recognised there may be some minor slips in professionalism, not typically around patients, but amongst other colleagues. Tutors shared the same views, acknowledging that the context and situation an individual may diminish the exhibition of professional behaviours. Indeed context has been known to be a major factor in affecting the professionalism exhibited by individuals.<sup>270</sup> Tutors in community appeared to have more control in governing the behaviour of staff because they worked in close proximity and managed them. Thus, tutors in community could govern the type of behaviour trainees were exposed to more readily than hospital tutors. Some trainees and tutors, particularly in the hospital environment, recognised that the presence of unprofessional behaviour would be encountered but that trainees would have to use their judgement in distinguishing between appropriate and inappropriate behaviour.

In the early stages of training, the pre-registration tutor was often cited as the most important role model for trainees in community and hospital pharmacy. Many also cited other staff as being influential role models, such as pharmacy technicians, who played a major role in supporting

trainees during the beginning of training, particularly in hospital pharmacy. As trainees progressed in the training year they talked about the acquisition of new skills through the observation of other staff members. In community pharmacy it was evident that the pre-registration tutor, generally considered the most important role model, served as the principal role model in later stages. This appeared to be due to the aspiration of trainees to become pharmacists, thus tutors encapsulated traits of their future role. In hospital, trainees acquired skills in how to communicate with patients and other healthcare professionals through observing a range of different pharmacists. They were also able to witness the conduct of doctors and nurses which they saw as useful in order to witness how a range of individuals approached and communicated with patients. The view of a few trainees and tutors in both sectors was that it was useful to have a range of different pharmacists to work with to witness different behaviours and methods of working. The trainee could thus adopt different styles of, for example, communicating with patients. This was considered more beneficial than simply observing the behaviour of one pharmacist such as the pre-registration tutor.

There was evidence of a 'hidden / informal curriculum'<sup>47, 95</sup> at work during pre-registration training which contributed to the process of professional socialisation and development of professionalism. This describes how learners assimilate information and skills from individuals and the overall culture of their work environment. It was apparent that all trainees were learning a lot through observing and / or shadowing other members of staff, and thus role modelling would take place because explicit tuition around, for example, how to communicate and convey elements of professionalism (e.g. empathy), was not generally taking place. Given this process of learning, one cannot discount a learner's own agency in participating in the socialisation process; they are not simply moulded into the profession by being passive and following rules.<sup>85</sup> There were some expectations that the trainee would have to use their own judgement of right and wrong / good and bad, and adopt approaches to practice displayed by positive role models whilst ignoring poor ones. In fact, in a perceptive trainee, bad role models can serve to show them how not to behave.<sup>275</sup> There was evidence in the present research for the influence of less 'modelworthy' staff (e.g. those that appeared lazy) on trainees' practices, but it was unlikely trainees would adopt any serious unprofessional behaviours when trainees' attitudes towards professionalism were strong and consistent. However, other trainees may be more impressionable, particularly if their understanding and appreciation of professionalism is lacking at the beginning of pre-registration training, perhaps due to no prior practical work experience in pharmacy, which all trainees participating in work stream 1 possessed.

Findings from the survey of trainees in work stream 2 showed that the person who had the largest impact on trainees' development of professionalism across both community and hospital were pre-registration tutors. The finding of the pre-registration tutor being a salient member of staff in supporting the trainee and modelling behaviour was also found in an exploration of the development of professionalism in early career pharmacists, as they reflected on their pre-registration training in focus groups.<sup>65</sup> The present programme of work considered the role the tutor played in much more detail. The selection of pre-registration tutor as person 1 was

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significantly higher than expected in community compared to hospital, where trainees were more likely to select other staff, namely other pharmacists. This supports findings from work stream 1 where trainees in community worked closely with their pre-registration tutor who was regularly cited as the main role model and resource. In some cases, albeit a minority, the pre-registration tutor was not perceived favourably and thus not selected as person 1. Relationships with tutors may not be ideal and poor tutor-trainee relations where shown to a degree with one pair in work stream 1. Although there is a paucity of research findings looking at perceptions of pre-registration tutor supervision, one study that surveyed 807 trainees in June 2002 found that the majority of trainees believed their tutor guided their learning, though 27% said their tutor 'seldom', 'almost never' or 'never' did.<sup>251</sup> The most common selections for person 2 across both community and hospital were other pharmacists. This resonates with findings from previous research with early career pharmacists showing that they recognised pharmacists and / or their pre-registration tutor as the more influential role models rather than, for example, pharmacy technicians or other pharmacy support staff.<sup>65, 83</sup>

Pre-registration trainees did not identify other healthcare professionals as salient role models that had a large impact on their development of professionalism. Although other healthcare professionals (e.g. nurses and doctors) may not have had a large impact on trainees' development of professionalism, apparent from findings from work stream 2, they may still have some impact (just not enough to be selected as person 1 or 2 in the survey). Work stream 1 highlighted the potential of, for example, nurses and doctors in hospital to have an impact and trainees could observe the way they spoke to patients. Indeed, research in medicine has found evidence for the role of interprofessional (nurses) support on development of foundation year 1 doctors in terms of shaping doctors' identities and helping with practical skills in the workplace.<sup>162</sup> Opportunities for trainees to observe other staff was considered beneficial according a number of trainees and tutors, and they believed most staff were able to demonstrate good levels of professionalism and could be considered role models. Role models in the work environment are an important learning resource<sup>96</sup> and numerous studies have shown that role models can help individuals learn about professionalism<sup>276</sup> and soft skills such as interpersonal abilities and communication.<sup>275</sup> Given that trainees were not typically explicitly taught, or received regular feedback about their professionalism, the environment becomes even more important for trainees to adopt ways of working. Trainees' colleagues feed into the overall culture of the work environment that determine the informal and hidden curriculum<sup>95</sup> in which trainees are socialised.

Many trainees that participated in work stream 1 moved on to work in a new pharmacy site or hospital and were able to reflect on the professional conduct of a new set of colleagues and the potential role models in existence in this new setting. As with the opinions during pre-registration training, NQPs were not concerned about the levels of professionalism demonstrated by fellow staff members; only occasional minor slips in professionalism occurred. In community pharmacy there did not typically appear to be a strong role model in place for NQPs as they often worked as the only pharmacist and instead could be seen as the role model for other staff as they were the

most qualified pharmacy professional and managed the pharmacy. NQPs working in hospital, on the other hand, maintained a host of role models, such as more experienced pharmacists.

### 5.5.2 Guidance and support

Pre-registration tutors were the main source of support for trainees during the course of the preregistration year in both sectors, as shown in work stream 1 and 2. This may have been anticipated as they are expected to be a role model and coach for trainees.<sup>277</sup> The role of preregistration tutors in community pharmacy was more central in supporting trainees throughout the training year than in hospital. They worked closely alongside the trainee and guided their learning. Tutors would often consider learning opportunities for their trainee when they arose and would often 'quiz' their trainee to help them improve their clinical knowledge. In community pharmacy, it appeared that there were different ways tutors supported trainees in settling into the workplace and into their role by, for example, having trainees gain competency in dispensing at first. As the training year progressed community pharmacy tutors would typically encourage trainees to take more responsibility and get involved in working with patients. Near the end of the training year community pharmacy trainees would often be conducting a role akin to a pharmacist; some tutors encouraged colleagues to approach the trainee with issues to cultivate this sense of responsibility.

In hospital, the working relationship between trainees and tutors was more distant and tutors acted as the key point of contact for trainees. They only seldom worked closely with trainees and instead a range of other pharmacists would be responsible for supporting trainees during ward rotations. Trainees did, however, have a support network of fellow trainees which was considered valuable in reflecting on each other's experiences. The contact time trainees in hospital had with their tutor was very infrequent, and research dating back to the mid-nineties<sup>278</sup> shows that little has changed: based on a survey of 74 tutors, 98% of those in community supervised their trainees on a daily basis whereas in hospital less than 20% were in daily contact with their trainee.<sup>278</sup>

Findings from the survey in the present research provided insights into the kind of supervision trainees were receiving from one or two individuals. When considering the ratings given to person 1 and 2 for the 14 items on the Supervision scale, which considered an individual's ability to model behaviour, coach, encourage the pursuit of learning goals, and create a safe learning environment, the results were positive. There were, however, differences in the way that trainees from community and hospital rated the individuals they selected for person 1 and 2. For example, when ratings for pre-registration tutors selected as person 1 were compared across sectors, it was found that hospital trainees rated pre-registration tutors higher in 'articulation' compared to community trainees. Articulation relates to asking the trainee questions to increase understanding, stimulating the trainee to explore their strengths and weaknesses and asking the trainee to provide a rationale for their actions. Hospital trainees also rated pre-registration tutor higher than community trainees in 'exploration' which relates to encouraging the trainee to formulate and pursue their learning goals. Such differences between community and hospital may be explained by the fact that hospital tutors did more in terms of articulation when they had their time with

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trainees, for example, during 13-weekly review meetings. Community tutors may have worked more often and more closely with their trainees, but did less in terms of 'articulation', or were perceived to do less in the eyes of trainees.

Whilst findings from the survey in the present research did not represent the standard of supervision received overall (instead, reflecting supervision from those that had a large impact on the development of professionalism), there is evidence that trainees are supported well by at least one or two individuals, particularly the pre-registration tutor. Members of staff apart from the tutor, including other pharmacists, pharmacy technicians, pharmacy support staff (e.g. counter assistants; ATOs) and other healthcare professionals, also have an important role to play in the pre-registration year though, as demonstrated in work stream 1. For example, early on in the training year, pharmacy technicians and other pharmacy staff (e.g. dispensers; counter assistants) had a big role to play in supporting trainees adjust to the setting. Findings from work stream 1 showed that trainees recognised pharmacy technicians and other support staff (e.g. counter assistants) as playing an important role in supporting them and acting as role models. Pharmacy staff, such as pharmacy technicians, clearly have a role in the training process and may make an impact on shaping the attitudes and behaviours of trainees, especially early on when they are adjusting to a new environment and identifying with a new role. The utility of pharmacy technicians as instructors has been examined previously in a survey of pharmacy students.<sup>279</sup> Findings showed that the skills pharmacy technicians felt most comfortable teaching related to dispensing and communicating with patients effectively though most students only felt comfortable learning about how to dispense from technicians and learn about communicating with patients. The present research showed that pharmacy technicians were also a source of developing communication skills, particularly in community pharmacy where trainees worked closely with pharmacy technicians throughout the year in the confines of a small community pharmacy.

As NQPs, hospital tutors could receive help and support from a range of other more senior pharmacists and other healthcare professionals. NQPs in community worked in more isolated conditions and would rely on pharmacy staff, such as pharmacy technicians, for support. More clinically-related support could be received from area management, or even the NQPs tutor from the pre-registration year.

### 5.5.3 Feedback and assessment

According to many trainees, the provision of feedback, both informal (i.e. verbal, on the spot) and formal (i.e. structured discussions) was lacking and this could have a negative impact on the development of professional skills. The pre-registration tutor was the main provider of feedback for trainees, however, in hospital pharmacy, tutors also relied on other pharmacists, who were supervised trainees, to provide feedback as well. It was apparent from findings of the present research that many trainees believed they were not receiving much feedback during training, particularly in relation to conveying professional behaviours (e.g. conveying empathy). Although trainees in community worked closely with their tutor, they did not necessarily receive more
comprehensive feedback than trainees in hospital as noted in the previous section when considering ratings for articulation and exploration. Feedback was often given during meetings with trainees and some trainees had meetings with their tutors on a regular basis, such as every one or two weeks though most had sporadic meetings. The more formal and comprehensive feedback sessions were centred around the 13-weekly progress reviews.<sup>280</sup>

Findings from the present research suggest that unless a trainee was witnessed doing something particularly poorly, such as being rude or abusive - a situation that was likely to be addressed they would generally not be able to deepen their understanding of their performance through feedback. Feedback usually related to correcting what a trainee was saying / doing rather than how they were doing it. For example, they may have been told to include some missing information during future contact with patients. Feedback did not tend to incorporate a review of elements of professionalism demonstrated in practice. Some tutors commented that there was some expectations for trainees to know about the importance of professionalism already (e.g. learned during the MPharm). As NQPs, there was an absence of feedback, except for a couple who worked with another pharmacist early on as a NQPs. More may need to be done to ensure adequate feedback is provided during training, especially considering the receipt of support and feedback post-registration is rare, especially for NQPs working in community pharmacy where pharmacists work more isolated. Feedback is crucial to the learning process, encouraging learners and teachers to work together in improving the learners' understanding of a subject.<sup>281</sup> Feedback is essential during experiential learning and, as Hammer (p.4)<sup>21</sup> notes, there is an important role for tutors to play:

"Preceptors [i.e. tutors / supervisors] should provide frequent, specific, and real-time feedback to students, both positive and constructive. If the student does something very well, the preceptor should let the student know immediately and specifically indicate why it was good. Similarly, if the student performs in a manner that is below stated expectations, the student should be taken aside as soon as possible and asked about his/her impression of the situation."

Apart from the registration assessment<sup>282</sup> and reviews of progress,<sup>280</sup> a portfolio of evidence for documenting and achieving performance standards that underpin competence was the main approach towards assessing trainees. Trainees would often provide multiple pieces of evidence to support achievement of competence; one piece of evidence is generally considered insufficient.<sup>283</sup> There is flexibility in documenting evidence and trainees would compile evidence in a way which suited them, often having a folder with hard copies of evidence written up. Though the GPhC recommends using the CPD format for recording evidence<sup>283</sup> this is not mandatory. The portfolio was compiled by trainees with the help of their tutors and was used to document competence in 76 performance standards<sup>131</sup> which a trainee must complete before being able to register as a pharmacist. In the present research, the performance standards were seen to provide a useful guide for learning, though they could be seen to lack some explicit standards, particularly in relation to the demonstration of key elements of professionalism. Findings from work by Eggleton et al.,<sup>284</sup> who interviewed a small group of pharmacy tutors and trainees from hospital, showed

that the portfolio helped to demonstrate competence prior to registration, although it was not the sole method considered when signing trainees off. Some tutors in the Eggleton<sup>284</sup> study commented that they would not trust an individual was competent solely on their portfolio. Considering these findings with those of the present research, the utility of a pre-registration portfolio as a main source of assessment in the pre-registration year can have its limitations.

### 5.5.4 Differences in training experiences

Differences between the way pre-registration training was delivered across training sites, particularly between community and hospital pharmacy, was evident early on in the training year. For example, hospital trainees received longer and more comprehensive inductions than those in community. Whilst those trainees working in the larger multiples / supermarket pharmacies received short company-wide inductions, trainees in smaller multiples and independents typically had an informal induction in the pharmacy where they were introduced to working processes in the pharmacy by colleagues. This may reflect the relative complexity of the roles of trainees and pharmacists in the two sectors, or differences between the approach to inducting healthcare professionals in hospital pharmacy compared with community pharmacy.

Differences between medicines dispensed and patient mix witnessed in community and hospital sectors influenced the development of clinical knowledge and this underpins the specialist knowledge of medicines possessed by pharmacists.<sup>61</sup> Hospital trainees gained more specialised knowledge than community trainees through rotations on wards in specialist areas. Community trainees developed knowledge in medicines, e.g. OTC medicines, for the treatment of minor ailments and long-term conditions commonly treated in primary care. There were also notable differences between the range of services, patient mix and medicines that trainees encountered during training. For example, within community pharmacy, some trainees witnessed services such as supervised methadone administration whereas others did not. It is known from medical training, for example, that patient mix can impact upon learning outcomes in medical students<sup>285</sup> and junior doctors.<sup>286-288</sup> Such differences across training settings shown in the present research may pose issues for NQPs upon the completion of the pre-registration year, particularly for those working in more isolated conditions in community pharmacy, with less support available.

The community pharmacy environment offered trainees closer support from colleagues, particularly from their tutor, who was a central figure and role model for trainees during preregistration training. Trainees in community were more closely guided and directed in their training and had less flexibility taking control of aspects of their training as they were more closely monitored, for example, with regards to their timekeeping. In contrast, those in hospital were more self-directed in finding learning opportunities when working alongside different pharmacists. Differences between the level of interprofessional working was also witnessed. Trainees in (the much larger, interdisciplinary) hospital environment worked alongside nurses and doctors, whereas community trainees worked mostly with their immediate pharmacy team. Some community trainees, worked closely with GP practices, but contact with doctors was limited and

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most communication was with receptionists. Hospital trainees thus had more opportunities to develop interprofessional working skills.

Study time was important for trainees to synthesis what they were learning. The study time that trainees were allocated was inconsistent across training sites. Some training sites were busy and the trainee did not appear to have enough study time as a result, and this was the case particularly in community pharmacy.

Differences in the nature of patient encounters and interactions were evident from work stream 1. Some trainees had more patient contact than others at earlier stages of training though towards the end all trainees had reasonable levels of patient contact as they moved more towards the role of a pharmacist. Hospital trainees were less likely to get to know patients on wards whereas those in community pharmacy developed stronger relationships. This was also reflected in work stream 2 where community trainees felt they mattered more to patients. Trainees who feel they matter to patients, may be likely to interact with patients more.<sup>227</sup> Pharmacists that score higher in 'patient mattering' spent more time in patient consultations.<sup>226</sup> The nature of patient involvement and experience in working with patients appears to differ between community and hospital sectors and this is critical to developing patient-centred professionalism<sup>65</sup> which is often considered at the heart of professionalism.<sup>289</sup>

There is also an issue with consistency in the way trainees are assessed during training particularly with regards to their portfolios of evidence which demonstrate competence in performance standards. Unlike the registration assessment, which is taken by all trainees under the same conditions, the variation in the way performance standards are evidenced and signed off by tutors can vary given their apparent ambiguity. Portfolios can be useful to provide formative feedback, though their application in summative assessment may not be reliable.<sup>290</sup> There are difficulties with the lack of standardisation in the content of portfolios,<sup>291</sup> and the way in which trainees demonstrate competence can vary.

### 5.6 Future research

This research explored a very large under-researched topic area. Whilst providing insight into the black box<sup>143</sup> of pharmacy training in GB and how trainees are developing into pharmacists, many potential research avenues have subsequently been opened up.

The exploration of professional socialisation and development of professionalism posed many challenges as it is a broad, complex topic. The researcher was selective in tackling different elements of these areas (e.g. behaviours), though other areas (e.g. attitudes) were less of a focus. Though they were not researched in detail in the present programme of work they are still pertinent to the exploration of this area. As such, these areas could be given more attention in future research studies.

Research into the important role of pre-registration tutors and their approaches in mentoring trainees during the training year is an important area to explore, particularly as tutors play a critical role in the training year both in terms of support and in having an impact on the

development of professionalism. Results from the survey in the present research showed that hospital tutors were rated higher in many areas such as encouraging the trainee to pursue learning goals though were rated lower in terms of creating opportunities for trainees to observe them. More research can consider the tutor-trainee relationship in more detail. Given the weight of importance placed on tutors, it would be useful to explore motivations for becoming a tutor, their learning needs and how they can be supported in community and hospital pharmacy.

The transition into practice as a NQP appears to be as much of a learning curve as it is to enter practice as a pre-registration trainee. In many ways, it may be even more stressful considering trainees in the present research generally believed it was even more important to demonstrate professionalism as they became the pharmacist with full accountability. However, there may be challenges with supporting NQPs. If they work as locums, for example, mentorship schemes may be hard to implement as locums do not have the same continuity of employment in a pharmacy as employee pharmacists. Learning needs and support networks for NQPs could be explored with a possible intervention planned to support the development needs of NQPs who face challenges with adjusting to their roles following pre-registration training. This may be especially challenging for community pharmacists who work in relative isolation compared to pharmacists in hospital.

Further applied research into the effectiveness of an intercalated five-year pharmacy degree, such as that existing in the Bradford programme, would be useful given that a future five-year MPharm degree may be structured in a similar manner. Research could explore whether this, more integrated, model of education and training serves to synergistically develop trainees knowledge, attitudes and behaviour whilst remedying any issues, such as negative socialisation experienced in the practice setting.

## 5.7 Conclusions and recommendations

The final section of this chapter draws conclusions based on the previous discussions of the findings of this programme of work, pulling them together to form evidence-based recommendations for pharmacy education and training (see Table 5.1). These recommendations are discussed in more detail in the following sections.

Whilst the recommendations here have been driven by this present programme of work, it should be noted that some recommendations relate to others made recently following the work on quality management systems in pre-registration training by Mills et al.<sup>248, 292, 293</sup> Applicable here are their recommendations for defined standards for all aspects of the training programme: an assessment system that uses a variety of standardised workplace assessment tools to allow for triangulation of assessments, a system in place for assessing the competence of tutors against defined standards, and the need for tutor training and support networks to be put in place.<sup>249</sup>

#### Table 5.1: Recommendations for pharmacy education and training

- 1) Integrate university-based and work-based learning more closely
- 2) Ensure consistency in training experiences
- 3) Improve training and support for staff involved in trainee support
- Set explicit standards relating to elements of professionalism and improve assessment strategies

# 5.7.1 Integrate university-based and work-based learning more closely

A number of conclusions can be drawn from the findings from this programme of work, together with insights from other studies. Firstly, integration between the predominantly university-based setting of the MPharm and the practice-based setting of the pre-registration year would have benefits in facilitating the application of knowledge, and particularly in terms of inculcating appropriate attitudes and behaviours. Hammer et al.<sup>22</sup> noted that students can be both negatively and positively socialised. If a student enters a pharmacy programme that has oppositional values with that of the profession and encounters poor role models and an unprofessional environment, this can lead to negative socialisation. It is unlikely that students experiencing this will demonstrate high levels of professionalism until these issues are modified.<sup>22</sup> The learning of professional behaviour through exposure to the practice environment and patients can be modified or reinforced during modules woven into an integrated degree which can reflect on students' practice experiences. As it stands, much of the onus on ensuring these behaviours are developed during pre-registration training is on the trainee and their tutor. Whilst professionalism clearly develops during pre-registration training, as evidenced by the present research, professionalism must be taught<sup>100, 101</sup> explicitly and actively nurtured and monitored if it is to be truly engendered to a high standard. The university-based setting can serve to teach / reinforce what happens in practice.

With students in schools of pharmacy arguably benefitting from a more sophisticated structure of support than in many pharmacies, this could serve to ameliorate any dilemmas faced by students in the workplace, remedying issues with negative socialisation. With this in mind, it is important to ensure schools of pharmacy are providing the right environment for this to take place as the culture within schools of pharmacy feed into an informal / hidden curriculum that students are socialised into.<sup>10, 11, 95</sup> This task may be made easier for schools by attracting and admitting appropriate candidates for the pharmacy degree.

Professions such as medicine and nursing are more integrated in their approach to education and training whereby students undertake placements in practice settings in early stages of the programme. The integration of practice-based learning in the clinical environment early on in the curriculum is an important part of the medical degree.<sup>294</sup> A number of factors feed into this advantageous form of learning and development including supervision, feedback, work environment / culture, and, perhaps most importantly, exposure to patients. Patient contact early

on in education can serve to develop, for example, communication skills and empathy,<sup>113</sup> clinical knowledge,<sup>112</sup> and clinical reasoning.<sup>114</sup> The current pharmacy pre-registration manual, available online, notes that the pre-registration year is about "*progressing from* 'shows how' to 'does' – from *the classroom to the real world*.<sup>295</sup> Based on Miller's triangle,<sup>296</sup> trainees are required to demonstrate competence and achieve performance standards during pre-registration training through 'showing' or 'doing'. The integration between what is learnt in the university setting and what is involved in practising in the practice setting are disassociated which can be problematic. As noted by Wright et al. (p.4),<sup>297</sup> 'too sharp a distinction between theory and practice in training often results in problems of application and a lack of understanding of the contexts of the professional action. It is one thing to know and another to do.' The integration of pre-registration training into the curriculum, as proposed in a five year integrated degree,<sup>247</sup> should facilitate the integration of theory and practice to work harmoniously in socialising trainees into the profession whilst allowing them to apply what they learn in the university setting in practice.

An integrated approach to the MPharm degree is not a new concept to pharmacy in the UK, as a five-year 'sandwich' programme has been in place at Bradford University for approximately 40 years.<sup>298</sup> Whilst the five-year sandwich programme offered by Bradford University is not fully integrated, because the two six month work-based training placements are distinct from the university-based education,<sup>247</sup> this 'intercalated' approach to delivering the MPharm can serve to bridge university- and work-based learning more closely. Anecdotal evidence suggests this system has many strengths in producing highly competent pharmacists with an appreciation of both theory and practice during the five years as university education and practical experience are interlaced.

# 5.7.2 Ensure consistency in training experiences

Ensuring there is consistency in the pre-registration experiences is important given that NQPs can go on to practise in a different sector from where pre-registration training is completed. It is recognised that the individual experiences of trainees will differ during pre-registration training as there are many factors that feed into this. The individualistic nature of the development and socialisation process exudes from descriptions surrounding this, such as that of Merton when describing the process in relation to medical students (p.287)<sup>84</sup>:

"Socialization takes place primarily through social interaction with people who are significant for the individual – in the medical school, probably with faculty members above most others, but importantly also with fellow-students, with the complement of associate personnel (nurses, technicians, caseworkers etc.), and with patients. Since the patterns of social interaction of medical students with these others are only similar and not identical, the variations result in different kinds of medical men emerging from what may at first seem to be the 'same' social environment."

Such characterisations of the socialisation process accept that experiences will differ as patterns of interactions differ. Though this may be true, the environments in which trainees undertake pre-registration training in pharmacy are quite different, particularly between community and hospital pharmacy, and considerable differences in training experiences were highlighted. The day-to-day

tasks incumbent on trainees and NQPs differed between community and hospital pharmacy, as did the work environment in general. The process of professional socialisation into the pharmacy profession, and associated development of professional knowledge and skills, seemed to differ because of the distinct differences between the two sectors. With issues of consistency and standardisation in pre-registration training, it is worth considering how it could be more standardised. Perhaps more could be done to ensure pre-registration training premises are more closely aligned to offer trainees a similar experience. The current application and approval process for pre-registration training premises managed by the GPhC<sup>299</sup> may need to be more robust to ensure training sites are fit for purpose.

In Scotland there are standardised elements of pre-registration training in pharmacy as noted on their website<sup>300</sup>:

"The [pre-registration pharmacist scheme] does not seek to train hospital prereg trainees to work in hospital pharmacy, nor community based trainees to become community pharmacists - but rather, prepare pharmacists for registration, with the knowledge and skills defined in the Performance Standards, and able to deliver pharmaceutical services in either sector in NHS Scotland."

As part of the scheme, trainees participate in distance learning and local support events which feature the following<sup>300</sup>:

- a statement on the organisation and delivery of workplace training, and the assessment of this, to ensure that the needs of the GPhC and NES are met
- a programme of core direct learning events and a number of specified distance learning packs all of which must be attended / completed by all pre-registration trainee pharmacists in the pre-registration pharmacist scheme (PRPS)
- a practice registration examination to be undertaken by all pre-registration trainee pharmacists in the PRPS
- a First Aid training course organised by NES to be undertaken by all pre-registration trainee pharmacists in the PRPS
- a period of cross sector experience to be undertaken by all pre-registration trainee pharmacists in the PRPS
- a project on personal development to be undertaken by all pre-registration trainee pharmacists in the PRPS which may include a specialist placement with specific learning outcomes

A more centralised system in place such as this could mitigate some of the differences that may be experienced by trainees, however, it is not yet known how successful this programme is compared to programmes in the rest of the UK. Additionally, whilst there is some standardisation with some elements of pre-registration training in Scotland the in-house training delivered cannot be said to be standardised and may differ across various settings.

# 5.7.3 Improve training and support for staff involved in trainee support

Given their central role in pre-registration training, the training and support available to preregistration tutors should be reconsidered as should the requirements of becoming a tutor. Currently, to become a pre-registration tutor one must be a registered pharmacist who has been practising in the sector of pharmacy in which they wish to tutor for three years or more and must not be under investigation by the GPhC.<sup>301</sup> There is little stopping anyone who fulfils these requirements becoming a pre-registration tutor. The importance of having strong pre-registration tutors appears particularly true within the community environment: generally being a smaller work site, the tutor often has more control in monitoring staff behaviour and directing trainees' learning. Thus, community settings can be influenced largely by an individual pharmacist (e.g. a preregistration tutor). Although perceptions of tutors from this research were positive in general, hospital tutors were rated higher by trainees in a couple areas compared with ratings of community tutors. Given the particular importance of community tutors, one would hope such differences would not exist or, if they did, would favour community tutors.

Other research has shown that pre-registration tutors may not be considered good role models by some pharmacy pre-registration trainees.<sup>251</sup> Considering this together with the findings of the present research, it would be advisable to provide more training and support to tutors (touching upon recommendations from Mills et al.<sup>248</sup>), particularly in understanding the importance of instilling professionalism in trainees through regular feedback and / or explicit instruction. The finding that tutors may not be involved with the selection of their trainees<sup>124</sup> is a potential concern. as motivation to tutor may be a defining factor in their ability to be an effective role model. Support may be lacking in a number of cases as no formal training is provided to tutors by the GPhC, although a development resource booklet is available.<sup>302</sup> Recent developments taking place have seen guidance for tutoring being developed which were released in January, 2014.<sup>303</sup> The guidance serves as a supplement to standards of conduct, ethics and performance. It discusses initial education and training for pharmacists and pharmacy technicians and tutoring roles; core requirements of the standards of conduct, ethics and performance; and general guidance to help tutors in their role.<sup>303</sup> However, the content within the guidance goes little beyond what is stipulated in the trainee pre-registration manual or tutor development resource (currently being revised),<sup>277</sup> simply stressing the importance of, for example, being a professional role model and supporting the trainee.

Besides tutors, other members of staff such as pharmacy technicians and pharmacy support staff had important roles as well, particularly early on in the training year. All staff feed into the work environment and social milieu, or 'hidden curriculum' and their impact on the trainees' development into a pharmacist cannot be underestimated. However, the awareness or recognition of their important role in supporting trainees appears limited given that they may not be assigned any specific role (e.g. mentor; assessor) or be given specific responsibilities in supporting trainees. It is important for staff to be aware of their effect on neophyte learners such as pre-

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registration trainees and provide support to them if they take on tutoring-related responsibilities – which appeared commonplace, particularly in hospital pharmacy.

Ensuring that staff are aware of their important role and are trained and supported for this is challenging, particularly when some environments – namely, hospitals – have numerous staff from different disciplines whose behaviour may be hard to govern. The flipside of this is that there are more potential role models present within the larger hospital environment. However, this is not to say more is better, because it would seem the issue is more about quality than quantity. Nevertheless, the opportunities to selectively acquire the knowledge attitudes behaviours<sup>84</sup> from a variety of role models appears greater in hospital where there was much involvement from other pharmacists in supervising and supporting trainees. However, it is not clear how prepared these various pharmacists were for their role in engaging with trainees who will benefit from active role modelling, encouragement and feedback to support their learning.

### 5.7.4 Set explicit standards relating to elements of professionalism and improve assessment strategies

An emphasis on professionalism, explicitly and comprehensively, appears to be lacking during pre-registration training. For example performance standard A1.1.<sup>304</sup> 'Behave in a manner consistent with membership of the profession', is open to interpretation. If professional behaviours are to be assessed as part of a portfolio of evidence to achieve performance standards, there may need to be more explicit standards in place. These can be given with clear examples, perhaps utilising vignettes, which can describe practice scenarios clearly and can stimulate reflection on professionalism.<sup>305</sup> A portfolio is useful compared to one-off assessments which may only provide a snapshot of a trainee's ability.<sup>297</sup> However, the main summative assessment in the preregistration year rests with the pre-registration assessment. This assessment tests knowledge and understanding and not performance (i.e. the 'does' element of Miller's triangle<sup>296</sup> is absent) or professional behaviour. Thus, the ability of an individual to demonstrate professionalism is judged primarily by the colleagues surrounding them and high standards may not be stressed; 'sufficient', rather than 'exemplary' professionalism, may be the goal. The subjective judgement of appropriate levels and demonstration of professionalism, without clearly defined standards and appropriate assessment, rests on opinions of staff. This may be problematic. For example, in community pharmacy a trainees performance and behaviours may only be witnessed and judged by few, primarily by the pre-registration tutor who is responsible for signing off the trainee as performing as 'satisfactory<sup>306</sup>, and demonstrating competence in different areas.<sup>131</sup> Preregistration tutors in both sectors may be unconsciously incompentent and thus not be aware of issues with their own professionalism, let alone their trainee's professionalism.

Assessing professionalism is important when striving for high standards which is becoming increasingly important for the profession.<sup>9</sup> In order to instil professionalism and monitor the progress of professional behaviours during pre-registration training, more robust assessment and feedback mechanisms may need be put in place. At present the pre-registration tutor makes acts as the main assessor, making judgements on a trainee's competence and professionalism, as

well as taking on a supportive mentorship role that involves providing feedback. The tension between being an assessor and mentor that pre-registration tutors face was touched upon in the present study and has been noted as a challenge for tutors in a previous survey which included trainees and tutors.<sup>307</sup> Consideration should be given to easing the conflict in roles facing tutors in order to develop a more robust system of assessment and feedback; this problem is arguably most challenging in community where pre-registration tutors have a more central role tutoring trainees; in hospital other pharmacists have opportunities to either assess or provide formative feedback.

Assessing professionalism can be challenging, however, a number of methods are available to do this.<sup>179</sup> It is worth considering a range of methods to assess behavioural professionalism and overall performance, and this could take the form of observational assessments such as OSCEs, or similar. In a 2002 survey, John et al.<sup>122</sup> found that more than two-thirds of pharmacy pre-registration trainees agreed that an OSCE would be a very useful part of the assessment during the pre-registration year and that it would help assess whether trainees were ready to practise as pharmacists. Whilst the questions did not focus specifically on the assessment of professionalism,<sup>122</sup> the use of OSCEs as an assessment tool appears to be well received, and OSCEs can be used as a means to assess professionalism.<sup>179</sup>

Whilst the assessment of professionalism during pre-registration is clearly important in order to raise standards, it is also important to consider assessing potential candidates wishing to pursue pharmacy as a profession on dimensions of professionalism prior to admission onto an MPharm programme. Ensuring that those who enter pharmacy training programmes have the right values and attitudes at the heart of professionalism, which lead to the demonstration of professional behaviours, seems of critical importance. Considering that the inculcation of values and attitudes that can occur during early (primary) socialisation during one's upbringing, it would appear important that schools of pharmacy are attracting candidates with the values and attitudes in line with the profession. The importance of values based recruitment has been recognised following a mandate to Health Education England from the Department of Health,<sup>308</sup> which stresses the importance of recruiting and training staff with the right values and behaviours to deliver high quality patient care. Health professions such as pharmacy will have to respond accordingly.

## 5.7.5 Concluding comments

The professionalism of a future pharmacist is contingent upon many factors, stemming from upbringing, education and practice. As such it is imperative to select pharmacy students that possess the right attitudes and behaviours, foster these during education and training, and recognise and promote their importance so pharmacists can strive for exemplary professionalism in their practice.

# 6 **REFERENCES**

- 1. *The Shipman Inquiry*. 2002-2005 [cited 06/03/2014]; Available from: <u>http://webarchive.nationalarchives.gov.uk/20090808154959/http://www.the-shipman-inquiry.org.uk/home.asp</u>.
- 2. Department of Health. Learning from Bristol: The Department of Health's response to the report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-1995. 2002. London: The Stationary Office.
- 3. Francis, R. *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. 2013. London: The Stationary Office.
- 4. Department of Health. *Liberating the NHS: Developing the healthcare workforce from design to delivery*. 2010 [cited 10/03/2014]; Available from: https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/216421/dh \_132087.pdf.
- 5. Health Education England. *Health Education England: Homepage*. 2014 [cited 19/01/2014]; Available from: <u>http://hee.nhs.uk/</u>.
- 6. Hammer, D.P. Professional attitudes and behaviors: The "A's and B's" of professionalism. *American Journal of Pharmaceutical Education.* 2000, **64**(4): 455-464.
- 7. Irvine, D. The performance of doctors: The new professionalism. *Lancet.* 1999, **353**: 1174-1177.
- 8. Irvine, D. Time for hard decisions on patient-centred professionalism. *Medical Journal of Australia*. 2004, **181**(5): 271-274.
- Department of Health. Pharmacy in England: Building on strengths delivering the future. 2008 [cited 10/03/2014]; Available from: https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/228858/73 41.pdf.
- 10. Schafheutle, E., Hassell, K., Ashcroft, D., Hall, J., and Harrison, S. *Professionalism in pharmacy education* 2010. London: Pharmacy Practice Research Trust.
- 11. Schafheutle, E., Hassell, K., Ashcroft, D., Hall, J., and Harrison, S. Learning professionalism in the MPharm What role does 'organisational philosophy' play? *International Journal of Pharmacy Practice*. 2010, **18**(Supp 1): 19-20.
- Schafheutle, E., Hassell, K., Ashcroft, D.M., Hall, J., and Harrison, S. How do pharmacy students learn professionalism, and how is it assessed? *Pharmacy Practice*. 2010, 8(suppl 1): 92-93.
- 13. Schafheutle, E., Hassell, K., Ashcroft, D., Hall, J., and Harrison, S. Learning professionalism through practice exposure and role models. *Pharmaceutical Journal*. 2010, **285**: 164-165.
- 14. Schafheutle, E., Hassell, K., Ashcroft, D., and Harrison, S. Organizational Philosophy as a new perspective on understanding the learning of professionalism. *American Journal of Pharmaceutical Education.* 2013, **77**(10): Article 214.
- 15. Schafheutle, E., Hassell, K., Ashcroft, D., Hall, J., and Harrison, S. How do pharmacy students learn professionalism? *International Journal of Pharmacy Practice*. 2012, **20**(2): 118-128.
- Black, P.E. and Plowright, D. How postgraduate pharmacy students develop professional understanding: Re-conceptualising deep, reflective learning. *Pharmacy Education.* 2008, **8**(1): 29-35.
- 17. Bumgarner, G.W., Spies, A.R., Asbill, C.S., and Prince, V.T. Using the humanities to strengthen the concept of professionalism among first-professional year pharmacy students. *American Journal of Pharmaceutical Education.* 2007, **71**(2): Article 28.

- 18. Cain, J., Scott, D.R., and Akers, P. Pharmacy students' facebook activity and opinions regarding accountability and e-professionalism. *American Journal of Pharmaceutical Education.* 2009, **73**: Article 104.
- 19. Cameron, G. Learning professionalism by celebrating students' work. *Journal of Nursing Education.* 2002, **41**(9): 425-428.
- 20. Duke, L.J., Francisco, G.E., Herist, K.N., McDuffie, C.H., and White, C.A. Student professionalism: Development and implementation of a curricular competency statement and professionalism policy at the University of Georgia College of Pharmacy. *Journal of Pharmacy Teaching.* 2006, **12**(2): 5-24.
- 21. Hammer, D.P. Improving student professionalism during experiential learning. *American Journal of Pharmaceutical Education.* 2006, **70**(3): Article 59.
- 22. Hammer, D.P., Berger, B.A., Beardsley, R.S., and Easton, M.R. Student professionalism. *American Journal of Pharmaceutical Education.* 2003, **67**(3): Article 96.
- Hammer, D.P., Mason, H.L., Chalmers, R.K., Popovich, N.G., and Rupp, M.T. Development and testing of an instrument to assess behavioral professionalism of pharmacy students. *American Journal of Pharmaceutical Education*. 2000, 64: 141-151.
- 24. Higby, G.J. *Professional socialization of pharmacists*, In: Social and behavioral aspects of *pharmaceutical care*, Rickles, N.M., Wertheimer, A.I., and Smith, M.C., Editors. 2010. Sudbury, MA: Jones and Bartlett Publishers. p. 109-119.
- 25. Di Vito-Thomas, P.A. Barmentoring: Mentoring and critical nursing behaviors among novice nurses in clinical nursing practice. *Medsurg Nursing: Official Journal of the Academy of Medical-Surgical Nurses*. 1998, **7**(2): 110-113.
- 26. Aveyard, H. *Doing a literature review in health and social care: A practical guide* 2nd ed. 2010. Maidenhead, England: Open University Press.
- 27. Booth, A., Papaioannou, D., and Sutton, A. Systematic approaches to a successful literature review. 2012. London: SAGE.
- Library Services The University of Manchester. How to undertake a literature search.
  2013 [cited 15/01/2013]; Available from: <u>http://www.library.manchester.ac.uk/academicsupport/howtostructurealiteraturesearch/\_files/How-to-undertake-a-literature-search.pdf</u>.
- The University of Manchester. The University of Manchester Library Library Search.
  2013 [cited 07/01/2014]; Available from: http://www.library.manchester.ac.uk/searchresources/librarysearch/.
- 30. Jesson, J., Matheson, L., and Lacey, F.M. *Doing your literature review: Traditional and systematic techniques.* 2011. London: SAGE.
- Barbour, R.S. and Barbour, M. Evaluating and synthesizing qualitative research: The need to develop a distinctive approach. *Journal of Evaluation in Clinical Practice*. 2003, 9(2): 179-186.
- 32. Mays, N. and Pope, C. Qualitative research: Rigour and qualitative research. *BMJ.* 1995, **311**: 109-112.
- 33. Oxford English Dictionary. Oxford English Dictionary profession. [cited 20/10/2013]; Available from: <u>http://oxforddictionaries.com/</u>.
- 34. Carr-Saunders, A.M. and Wilson, P. *The Professions*. 1933. Oxford, England: The Clarendon Press.
- 35. Vollmer, H.M. and Mills, D.L. *Professionalization*. 1966. Englewood Cliffs, NJ: Prentice-Hall
- 36. Goode, W.J. Community within a community: The professions. *American Sociological Review.* **22**(2): 194-200.
- 37. Denzin, N.K. and Mettlin, C.J. Incomplete professionalization: The case of pharmacy. *Social Forces.* 1968, **46**(3): 375-381.

- 38. Zellmer, W.A. Searching for the soul of pharmacy. *American Journal of Health-System Pharmacy.* 1996, **53**(16): 1911-1916.
- 39. McCormack, T.H. The druggists' dilemma: Problems of a marginal occupation. *American Journal of Sociology*. 1956, **61**(4): 308-315.
- 40. Dingwall, R. and Wilson, E. Is pharmacy really an incomplete profession? *Perspectives* on Social Problems. 1995, **7**: 111-128.
- 41. Roth, M.T. and Zlatic, T.D. ACCP white paper: Development of student professionalism. *Pharmacotherapy.* 2009, **29**(6): 749-756.
- 42. American Pharmaceutical Association Academy of Students of Pharmacy American Association of Colleges of Pharmacy Council of Deans Task Force on Professionalism. White paper on pharmacy student professionalism. *Journal of the American Pharmaceutical Association*. 2000, **40**: 96-102.
- 43. General Pharmaceutical Council. *Standards of conduct, ethics and performance*. 2010 [cited 14/03/2014]; Available from: <u>http://www.pharmacyregulation.org/sites/default/files/Standards%20of%20conduct%20eth</u> <u>ics%20and%20performance%20July%202012.pdf</u>.
- 44. Harding, G. and Taylor, K. Why pharmacists are needed to help shape students' professional identity. *Pharmaceutical Journal.* 2006, **277**: 766.
- 45. Arnold, L. and Stern, D.T. *What is medical professionalism?*, In: *Measuring medical professionalism*, Stern, D.T., Editor. 2006. Oxford: Oxford University Press.
- 46. Duff, P. Teaching and assessing professionalism in medicine. *Obstetrics and Gynecology.* 2004, **104**(6): 1362-1366.
- 47. Hafferty, F.W. and Franks, R. The hidden curriculum, ethics teaching, and the structure of medical education. *Academic Medicine*. 1994, **69**(11): 861-871.
- 48. Misch, D.A. Evaluating physicians' professionalism and humanism: The case for humanism "connoisseurs". *Academic Medicine*. 2002, **77**(6): 489-495.
- 49. Joyce, M. What does professionalism really mean. *Journal of the American Pharmacists* Association. 2002, **42**(5): 677-678.
- 50. Cairns, C. Equipping pharmacy undergraduates to deal with life on the jubilee line! *Pharmaceutical Journal.* 2008, **281**: 641.
- 51. Royal College of Physicians. *Doctors in society: Medical professionalism in a changing world.* 2005. London: Royal College of Physicians.
- 52. Irvine, D. Doctors in the UK: their new professionalism and its regulatory framework. *Lancet.* 2001, **358**(9295): 1807-1810.
- 53. Irvine, D. Patients, professionalism, and revalidation. *BMJ*. 2005, **330**: 1265-1268.
- 54. Irvine, D. New ideas about medical professionalism. *Medical Journal of Australia*. 2006, **184**(5): 204-205.
- 55. Swick, H.M. Toward a normative definition of medical professionalism. *Academic Medicine*. 2000, **75**(6): 612.
- 56. Cohen, J.J. Viewpoint: Linking professionalism to humanism: What it means, why it matters. *Academic Medicine*. 2007, **82**(11): 1029-1032.
- 57. Green, M., Zick, A., and Makoul, G. Defining professionalism from the perspective of patients, physicians, and nurses. *Academic Medicine*. 2009, **84**(5): 566-573.
- Birden, H., Glass, N., Wilson, I., Harrison, M., Usherwood, T., and Nass, D. Defining professionalism in medical education: A systematic review. *Medical Teacher.* 2014, 36(1): 47-61.
- Van De Camp, K., Vernooij-Dassen, M., Grol, R., and Bottema, B. Professionalism in general practice: Development of an instrument to assess professional behaviour in general practitioner trainees. *Medical Education.* 2006, **40**: 43-50.

- 60. Smith, J., Picton, C., and Dayan, M. *Now or never: Shaping pharmacy for the future*. 2013 [cited 18/01/2014]; Available from: <u>http://www.rpharms.com/promoting-pharmacy-pdfs/moc-report-full.pdf</u>.
- 61. Bond, C.M. *The role of pharmacy in health care*, In: *Pharmaceutical practice (4th ed.)*, Winfield, A.J., Rees, J.A., and Smith, I., Editors. 2009. Edinburgh: Churchill Livingstone Elsevier. p. 3-16.
- 62. Hall, J. and Ashcroft, D. Exploring the domains of professionalism in pharmacy education: A nominal group study. *International Journal of Pharmacy Practice*. 2007, **15**(supp 2): B10-B11.
- 63. Wilson, S., Tordoff, A., and Beckett, G. Pharmacy professionalism: A systematic analysis of contemporary literature (1998-2009). *Pharmacy Education.* 2010, **10**: 27-31.
- 64. Elvey, R., Lewis, P., Schafheutle, E., Willis, S., Harrison, S., and Hassell, K. Defining professionalism (and its elements) in early career pharmacists. *International Journal of Pharmacy Practice*. 2011, **19**(supp 2): 8-9.
- 65. Elvey, R., Lewis, P., Schafheutle, E.I., Willis, S., Harrison, S., and Hassell, K. *Patient-centred professionalism among newly registered pharmacists*. 2011. London: Pharmacy Practice Research Trust.
- 66. General Pharmaceutical Council. *Standards of conduct, ethics and performance* 2012 [cited 12/03/2014]; Available from: <u>http://www.pharmacyregulation.org/sites/default/files/Standards%20of%20conduct%20eth</u> <u>ics%20and%20performance%20July%202012.pdf</u>.
- 67. Royal Pharmaceutical Society of Great Britain. *Code of Ethics for Pharmacists and Pharmacy Technicians*. 2007. London: Royal Pharmaceutical Society of Great Britain.
- 68. General Pharmaceutical Council. *Pre-registration Manual: 2. Standards of conduct, ethics and performance.* 2013 [cited 14/01/2013]; Available from: http://www.pharmacyregulation.org/standards-of-conduct.
- 69. General Pharmaceutical Council. *Code of conduct for pharmacy students*. 2010 [cited 10/03/2014]; Available from: <u>http://www.pharmacyregulation.org/sites/default/files/Code%20of%20conduct%20for%20</u> <u>phamacy%20students%20s.pdf</u>.
- 70. Royal Pharmaceutical Society. *Medicines, ethics and practice*. 37 ed. 2013. London: Royal Pharmaceutical Society.
- 71. Royal Pharmaceutical Society *Medicines, Ethics and Practice (MEP).* 2013 [cited 02/01/2014]; Available from: <u>http://www.rpharms.com/support/mep.asp</u>.
- 72. General Medical Council. *Good Medical Practice*. 2013 [cited 11/03/2014]; Available from: <u>http://www.gmc-uk.org/static/documents/content/GMP\_2013.pdf\_51447599.pdf</u>.
- 73. Chalmers, R.K. Contemporary issues: Professionalism in pharmacy. *Tomorrow's Pharmacist.* 1997: 10-12.
- 74. Goslin, D. *Handbook of socialization: Theory and research*. 1969. Chicago, USA: Rand McNally College Publishing Company.
- 75. Kolb, D.A. *Experiential learning: Experience as the source of learning and development.* 1984. Englewood Cliffs, NJ: Prentice-Hall
- 76. Wenger, E. *Communities of practice: Learning, meaning, and identity*. 1998. Cambridge: Cambridge University Press.
- 77. Dornan, T. Workplace learning. *Perspectives on Medical Education.* 2012, **1**(1): 15-23.
- 78. Dornan, T., Boshuizen, H., King, N., and Scherpbier, A. Experience-based learning: A model linking the processes and outcomes of medical students' workplace learning. *Medical Education*. 2007, **41**(1): 84-91.
- 79. Andresen, L., Boud, D., and Cohen, R. *Experience-based learning*, In: *Understanding adult education and training*, Foley, G., Editor. 1999. Sydney: Allen & Unwin. p. 225-239.

- 80. Dornan, T., Scherpbier, A., and Boshuizen, H. Supporting medical students' workplace learning: experience-based learning (ExBL). *The Clinical Teacher.* 2009, **6**(3): 167-171.
- 81. Park, J., Woodrow, S., Reznick, R., Beales, J., and MacRae, H. Observation, reflection, and reinforcement: Surgery faculty members' and residents' perceptions of how they learned professionalism. *Academic Medicine*. 2010, **85**(1): 134-139.
- 82. Baernstein, A., Oelschlager, A.M., Chang, T., and Wenrich, M. Learning professionalism: Perspectives of preclinical medical students. *Academic Medicine*. 2009, **84**(5): 574-581.
- 83. Willis, S.C., Schafheutle, E.I., Elvey, R.E., Lewis, P.J., Harrison, S., and Hassell, K. Learning the professional role: How pharmacists develop during pre-registration training and their early careers. *International Journal of Pharmacy Practice*. 2012, **20**(Suppl 1): 16-17.
- 84. Merton, R.K., Reader, G.G., and Kendall, P.L. *The student-physician: Introductory studies in the sociology of medical education* 1ed. 1957. Cambridge, MA: Harvard University Press.
- Clouder, L. Becoming professional: exploring the complexities of professional socialization in health and social care. *Learning in Health and Social Care*. 2003, 2(4): 213-222.
- 86. Eraut, M. *Developing professional knowledge and competence*. 1994. London: The Falmer Press.
- 87. Shuval, J. Entering medicine the dynamics of transition: A seven year study of medical education in Israel. 1980. Oxford: Pergamon Press.
- 88. Shuval, J.T. From" boy" to" colleague": Processes of role transformation in professional socialization. *Social Science & Medicine*. 1975, **9**(8): 413-420.
- Mackintosh, C. Caring: The socialisation of pre-registration student nurses: A longitudinal qualitative descriptive study. *International Journal of Nursing Studies*. 2006, **43**(8): 953-962.
- 90. Gray, M. and Smith, L.N. The professional socialization of diploma of higher education in nursing students (Project 2000): A longitudinal qualitative study. *Journal of Advanced Nursing.* 1999, **29**(3): 639-647.
- 91. Ferguson, K. and Hope, K. From novice to competent practitioner: Tracking the progress of undergraduate mental health nursing students. *Journal of Advanced Nursing.* 1999, **29**(3): 630-638.
- 92. Maclellan, D., Lordlyy, D., and Gingras, J. Professional socialization in dietetics: A review of the literature. *Canadian Journal of Dietetic Practice and Research*. 2011, **72**(1): 37-42.
- 93. MacLellan, D.L. and Lordly, D. The socialization of dietetic students: Influence of the preceptor role. *Journal of Allied Health.* 2008, **37**(2): e81-e92.
- 94. Tryssenaar, J. and Perkins, J. From Student to Therapist: Exploring the First Year of Practice. *The American Journal of Occupational Therapy.* 2001, **55**(1): 19-27.
- 95. Hafferty, F.W. Beyond curriculum reform: Confronting medicine's hidden curriculum. *Academic Medicine.* 1998, **73**: 403-407.
- 96. Kenny, N.P., Mann, K.V., and MacLeod, H. Role modeling in physicians' professional formation: Reconsidering an essential but untapped educational strategy. *Academic Medicine*. 2003, **78**(12): 1203-1210.
- 97. Brown, D.L., Ferrill, M.J., and Pankaskie, M.C. White coat ceremonies in US schools of pharmacy. *The Annals of Pharmacotherapy*. 2003, **37**(10): 1414-1419.
- 98. UCSF School of Pharmacy. *White coat ceremony*. 2013 [cited 13/03/2013]; Available from: <u>http://pharmacy.ucsf.edu/pharmd/events/whitecoat/</u>.
- 99. The University of Huddersfield. *Pharmacy students take oath*. 2010 [cited 10/03/2014]; Available from:

http://www.hud.ac.uk/courses/supporting/sci/newsevents/00000890/pharmacystudentstak etheoath.php.

- 100. Cruess, R.L. and Cruess, S.R. Teaching professionalism: General principles. *Medical Teacher.* 2006, **28**(3): 205-208.
- 101. Cruess, S.R. and Cruess, R.L. Professionalism must be taught. *BMJ.* 1997, **315**: 1674-1677.
- 102. Irvine, D. The performance of doctors. I: Professionalism and self regulation in a changing world. *British Medical Journal.* 1997, **314**(7093): 1540-1542.
- 103. Irvine, D. The performance of doctors. II: Maintaining good practice, protecting patients from poor performance. *BMJ.* 1997, **314**(7094): 1613-1615.
- 104. Jackson, P.W. Life in classrooms. 1990. New York: Teachers College Press
- 105. Hafferty, F.W.P. and Castellani, B.P. The increasing complexities of professionalism. *Academic Medicine*. 2010, **85**(2): 288-301.
- 106. Hafferty, F.W. Definitions of professionalism: A search for meaning and identity. *Clinical Orthopaedics and Related Research.* 2006, **449**: 193-204.
- 107. Chuang, A.W., Nuthalapaty, F.S., Casey, P.M., Kaczmarczyk, J.M., Cullimore, A.J., Dalrymple, J.L., Dugoff, L., Espey, E.L., Hammoud, M.M., and Hueppchen, N.A. To the point: reviews in medical education - taking control of the hidden curriculum. *American Journal of Obstetrics and Gynecology*. 2010, **203**(4): 316e1-316e6.
- 108. Spencer, J., Blackmore, D., Heard, S., McCrorie, P., McHaffie, D., Scherpbier, A., Gupta, T.S., Singh, K., and Southgate, L. Patient-oriented learning: A review of the role of the patient in the education of medical students. *Medical Education*. 2000, **34**(10): 851-857.
- 109. Grant, J. *Principles of curriculum design*, In: *Understanding medical education: Evidence, theory and practice*, Swanwick, T., Editor. 2010. Chichester: Wiley Blackwell. p. 1-15.
- 110. Wilson, K.A., Jesson, J.K., Langley, C.A., and Hatfield, K. Mapping teaching, learning and assessment in the MPharm in UK schools of pharmacy. *Pharmaceutical Journal.* 2006, **277**(7419): 369-372.
- 111. Taylor, K. and Harding, G. The pharmacy degree: The student experience of professional training. *Pharmacy Education*. 2007, **7**(1): 83-88.
- 112. Diemers, A.D., van de Wiel, M.W., Scherpbier, A.J., Heineman, E., and Dolmans, D.H. Pre-clinical patient contacts and the application of biomedical and clinical knowledge. *Medical Education.* 2011, **45**(3): 280-288.
- 113. Helmich, E., Bolhuis, S., Laan, R., and Koopmans, R. Early clinical experience: do students learn what we expect? *Medical Education*. 2011, **45**(7): 731-740.
- 114. Diemers, A.D., Dolmans, D.H., Verwijnen, M.G., Heineman, E., and Scherpbier, A.J. Students' opinions about the effects of preclinical patient contacts on their learning. *Advances in Health Sciences Education.* 2008, **13**(5): 633-647.
- 115. McAteer, S., John, D., and Luscombe, D.K. Views of pre-registration graduates on the UK pharmacy undergraduate course as preparation for pre-registration training. *International Journal of Pharmacy Practice*. 2004, **12**(Supp 61).
- Willis, S., Hassell, K., Seston, E.M., and Hann, M. Using learning outcomes for undergraduate pharmacy education to assess final-year students' perceptions of their preparedness for pharmacy practice. *International Journal of Pharmacy Practice*. 2009, 17(6): 351-358.
- 117. Illing, J., Morrow, G., Kergon, C., Burford, B., Spencer, J., Peile, E., Davies, C., Baldauf, B., Allen, M., Johnson, N., Morrison, J., Donaldson, M., Whitelaw, M., and Field, M. *How prepared are medical graduates to begin practice? A comparison of three diverse UK medical schools.* 2008 [cited 12/03/2014]; Available from: <u>http://www.gmc-uk.org/FINAL How prepared are medical graduates to begin practice September 08 .pdf\_29697834.pdf</u>.

- 118. Langley, C.A. and Aheer, S. Do pharmacy graduates possess the necessary professional skills? *Pharmacy Education.* 2010, **10**(2): 114-118.
- 119. Kelley, K.A., DeBisschop, M., Donaldson, A.R., Hogue, V.W., Joyner, P.U., Schwinghammer, T.L., and Riffee, W.H. Professional socialization of pharmacy students: Do we have the right ingredients AND the right formula for success? *Currents in Pharmacy Teaching and Learning*. 2009, **1**(2): 103-109.
- 120. Pharmaceutical Society of Northern Ireland. *About pre-registration*. 2013 [cited 10/03/2014]; Available from: <u>http://www.psni.org.uk/pre-registration/information/</u>.
- 121. General Pharmaceutical Council. *Pre-registration manual 2012-2013*. 2012 [cited 10/04/2013]; Available from: <u>http://www.pharmacyregulation.org/preregmanual</u>.
- 122. John, D.N., McAteer, S., and Luscombe, D.K. Views of pre-registration graduates on the transition 'from student to professional' and on the role of OSCEs for assessment during the pre-registration year. *Journal of Pharmacy and Pharmacology*. 2005, **57**(Supp 44).
- 123. Mudhar, M.S., Wilson, K.A., and Irwin, W.J. Perceptions of preregistration graduates about the UK pharmacy undergraduate course. *International Journal of Pharmacy Practice*. 1996, **4**(1): 59-64.
- 124. John, D.N. and Brownsdon, Z. MPharm graduates what are the views of pre-registration tutors? *Journal of Pharmacy and Pharmacology*. 2004, **56**(Supp 65).
- 125. Christou, M. and Wright, D. Engendering and appraising professionalism within the UK pharmacy pre-registration year: Identifying the current barriers. *Pharmacy Education*. 2011, **11**(1): 107-114.
- 126. Stern, D. A framework for measuring professionalism, In: Measuring Medical Professionalism, Stern, D., Editor. 2006. New York: Oxford University Press. p. 3-13.
- 127. Christou, M., Moore, L., and Wright, D. Development of professionalism in pharmacy education leading to registration trainees' self-assessments versus tutors' perceptions. *International Journal of Pharmacy Practice*. 2011, **19**(supp 2): 55-56.
- 128. Lewis, P., Schafheutle, E., Willis, S., Elvey, R., and Hassell, K. Use of critical incident technique in focus groups: A novel method for exploring pharmacy professionalism. *International Journal of Pharmacy Practice*. 2012, **20**(supp 1): 10.
- 129. Willis, S. Can patient-centred professionalism be engendered in young pharmacists? *Pharmaceutical Journal.* 2011, **287**: 203.
- 130. Stern, D.T. *Measuring medical professionalism*. 2006. New York: Oxford University Press.
- 131. General Pharmaceutical Council. *Pre-registration manual:* 7. *The performance standards*. 2014 [cited 06/03/2014]; Available from: http://www.pharmacyregulation.org/performance-standards.
- 132. Du Preez, R.R., Pickworth, G.E., and Van, R.M. Teaching professionalism: A South African perspective. *Medical Teacher*. 2007, **29**(9): e284-e291.
- 133. Sivalingam, N. Teaching and learning of professionalism in medical schools. *Annals of the Academy of Medicine Singapore*. 2004, **33**(6): 706-710.
- 134. Berger, B.A., Butler, S.L., Duncan-Hewitt, W., Felkey, B.G., Jungnickel, P.W., Krueger, J.L., Perry, C.R., and Taylor, C. Changing the culture: An institution-wide approach to instilling professional values. *American Journal of Pharmaceutical Education.* 2004, **68**(1): 1-9.
- 135. Boyle, C.J., Beardsley, R.S., Morgan, J.A., and Rodriguez de Bittner, M. Professionalism: A determining factor in experiential learning. *American Journal of Pharmaceutical Education.* 2007, **71**: Article 31.
- 136. Patel, K., Ali, M., and Kostrzewski, A. Fostering professionalism in students on undergraduate pharmacy courses. *Pharmaceutical Journal.* 2009, **282**: 15.

- 137. Asch, S., Connor, S.E., Hamilton, E.G., and Fox, S.A. Problems in recruiting communitybased physicians for health services research. *Journal of General Internal Medicine*. 2000, **15**(8): 591-599.
- 138. VanGeest, J.B., Johnson, T.P., and Welch, V.L. Methodologies for improving response rates in surveys of physicians. *Evaluation & the Health Professions*. 2007, **30**(4): 303-321.
- 139. American Board of Internal Medicine. *Project Professionalism*. 2001 [cited 11/03/2014]; Available from: <u>http://www.abimfoundation.org/Resource-</u> <u>Center/Bibliography/~/media/Files/Resource%20Center/Project%20professionalism.ashx</u>.
- 140. Chisholm, M.A., Cobb, H., Duke, L., McDuffie, C., and Kennedy, W.K. Development of an instrument to measure professionalism. *American Journal of Pharmaceutical Education*. 2006, **70**: Article 85.
- 141. Cruess, S.R., Cruess, R.L., and Steinert, Y. Role modelling making the most of a powerful teaching strategy. *BMJ.* 2008, **336**: 718-721.
- 142. Brownell, A.K. and Côté, L. Senior residents' views on the meaning of professionalism and how they learn about it. *Academic Medicine*. 2001, **76**(7): 734-737.
- 143. Swanson, J. and Chapman, L. *Inside the black box: Theoretical and methodological issues in conducting evaluation research using a qualitative approach.*, In: *Critical issues in qualitative research methods.*, Morse, J.M., Editor. 1994. Thousand Oaks, CA: SAGE. p. 66-93.
- 144. Paice, E., Heard, S., and Moss, F. How important are role models in making good doctors? *BMJ.* 2002, **325**(7366): 707-710.
- 145. Creswell, J.W. *Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.).* 2009. London: SAGE.
- 146. Tuli, F. The basis of distinction between qualitative and quantitative research in social science: Reflection on ontological, epistemological and methodological perspectives. *Ethiopian Journal of Education and Sciences.* 2011, **6**(1): 97-108.
- 147. Wenger, G.C. Advantages gained by combining qualitative and quantitative data in a longitudinal study. *Journal of Aging Studies.* 1999, **13**(4): 369-376.
- 148. Miller, T. and Bell, L. Consenting to what? Issues of access, gate-keeping and 'informed' consent, In: Ethics in qualitative research, Mauthner, M., Birch, M., Jessop, J., and Miller, T., Editors. 2002. London: SAGE. p. 53-69.
- 149. Schuh, K.L. and Barab, S.A. *Philosophical perspectives*, In: *Handbook of research on educational communications and technology*, Spector, J.M., Merrill, M.D., van Merrinboer, J., and Driscoll, M.P., Editors. 2007. London: Taylor & Francis. p. 67-82.
- 150. Berg, B.L. *Qualitative research methods for the social sciences (4th ed.)*. 2001. Boston: Allyn & Bacon
- 151. Creswell, J.W. and Plano Clark, V.L. *Designing and conducting mixed methods research*. 2007. London: SAGE.
- 152. Crotty, M. *The foundations of social research: Meaning and perspective in the research process.* 1998. London: SAGE.
- 153. Howe, K.R. Against the quantitative-qualitative incompatibility thesis (or dogmas die hard). *Educational Researcher*. 1988, **17**(8): 10-16.
- 154. Tashakkori, A. and Teddlie, C. *Mixed methodology: Combining qualitative and quantitative approaches*. Applied social research methods Vol. 46. 1998. Thousand Oaks, CA: SAGE.
- 155. Burman, E. Interviewing, In: Qualitative methods in psychology: A research guide, Banister, P., Burman, E., Parker, I., Taylor, M., and Tindall, C., Editors. 2005. Maidenhead: Open University Press. p. 49-71.
- 156. Krueger, R. and Casey, M. *Focus groups: A practical guide for applied research (4th ed.).* 2009. London: SAGE.

- 157. Brown, J., Stevens, J., and Kermode, S. Supporting student nurse professionalisation: The role of the clinical teacher. *Nurse Education Today*. 2012, **32**(5): 606-610.
- 158. Berg, B. Qualitative research methods for the social sciences (6th ed.). 2007. Boston: Allyn & Bacon.
- 159. Symon, G. Qualitative research diaries, In: Qualitative methods and analysis in organizational research: A practical guide., Cassell, C. and Symon, G., Editors. 2004. London: SAGE. p. 98-113.
- 160. Yin, R.K. Case study research: Design and methods (3rd ed.). 2003. Thousand Oaks, CA: SAGE.
- 161. Miller, S.E. Professional socialization: A bridge between the explicit and implicit curricula. *Journal of Social Work Education.* 2013, **49**(3): 368-386.
- 162. Burford, B., Morrow, G., Morrison, J., Baldauf, B., Spencer, J., Johnson, N., Rothwell, C., Peile, E., Davies, C., and Allen, M. Newly qualified doctors' perceptions of informal learning from nurses: Implications for interprofessional education and practice. *Journal of Interprofessional Care.* 2013, **27**(5): 394-400.
- 163. Flanagan, J.C. The critical incident technique. *Psychological Bulletin.* 1954, **51**(4): 327-357.
- 164. Chell, E. Critical incident technique, In: Qualitative methods and analysis in organizational research: A practical guide, Symon, G.E. and Cassell, C.E., Editors. 2004. London: SAGE. p. 45-60.
- 165. Anderson, L. and Wilson, S. *Critical incident technique*, In: *Applied measurement methods in industrial psychology*, Whetzel, D.L. and Wheaton, G.R., Editors. 1997. Palo Alto, CA: Davies-Black Publishing p. 89-112.
- 166. Kemppainen, J.K. The critical incident technique and nursing care quality research. *Journal of Advanced Nursing.* 2000, **32**(5): 1264-1271.
- 167. Kent, G., Wills, G., Faulkner, A., Parry, G., Whipp, M., and Coleman, R. Patient reactions to met and unmet psychological need: A critical incident analysis. *Patient Education and Counseling.* 1996, **28**(2): 187-190.
- 168. Minghella, E. and Benson, A. Developing reflective practice in mental health nursing through critical incident analysis. *Journal of Advanced Nursing.* 1995, **21**(2): 205-213.
- 169. Ousey, K. Socialization of student nurses-the role of the mentor. *Learning in Health and Social Care.* 2009, **8**(3): 175-184.
- 170. Batenburg, V. Do professional attitudes change during medical education? *Advances in Health Sciences Education.* 1996, **1**(2): 153-164.
- 171. Bouldin, A.S. and Bentley, J.P. Using the critical incident technique to investigate the concept of pharmacy student professionalism. *American Journal of Pharmaceutical Education*. 2002, **66**(supp1): 96.
- 172. Gremler, D.D. The critical incident technique in service research. *Journal of Service Research.* 2004, **7**: 65-89.
- 173. Grove, S.J. and Fisk, R.P. The impact of other customers on service experiences: A critical incident examination of "getting along". *Journal of Retailing*. 1997, **73**(1): 63-85.
- 174. Van De Camp, K., Vernooij-Dassen, M.J., Grol, R.P., and Bottema, B.J. How to conceptualize professionalism: A qualitative study. *Medical Teacher*. 2004, **26**: 696-702.
- 175. Arnold, E.L., Blank, L.L., Race, K.E., and Cipparrone, N. Can professionalism be measured? The development of a scale for use in the medical environment. *Academic Medicine*. 1998, **73**(10): 1119-1121.
- 176. DeLisa, J.A., Foye, P.M., Jain, S.S., Kirshblum, S., and Christodoulou, C. Measuring professionalism in a physiatry residency training program. *American Journal of Physical Medicine & Rehabilitation*. 2001, **80**(3): 225-229.

- 177. Karnieli-Miller, O., Vu, T.R., Holtman, M.C., Clyman, S.G., and Inui, T.S. Medical students' professionalism narratives: A window on the informal and hidden curriculum. *Academic Medicine*. 2010, **85**(1): 124.
- 178. Bradley, F., Steven, A., and Ashcroft, D.M. The role of hidden curriculum in teaching pharmacy students about patient safety. *American Journal of Pharmaceutical Education*. 2011, **75**(7): Article 143.
- 179. Wilkinson, T.J., Wade, W.B., and Knock, L.D. A blueprint to assess professionalism: Results of a systematic review. *Academic Medicine*. 2009, **84**(5): 551-558.
- 180. Norcini, J. *Faculty observations of student professional behaviour*, In: *Measuring medical professionalism*, Stern, D., Editor. 2006. New York: Oxford University Press. p. 147-173.
- 181. O'Sullivan, A.J. and Toohey, S.M. Assessment of professionalism in undergraduate medical students. *Medical Teacher*. 2008, **30**(3): 280-286.
- 182. Veloski, J.J., Fields, S.K., Boex, J.R., and Blank, L.L. Measuring professionalism: A review of studies with instruments reported in the literature between 1982 and 2002. *Academic Medicine.* 2005, **80**(4): 366-370.
- Schwartz, A.C., Kotwicki, R.J., and McDonald, W.M. Developing a modern standard to define and assess professionalism in trainees. *Academic Psychiatry*. 2009, **33**(6): 442-450.
- 184. Lynch, D.C., Surdyk, P.M., and Eiser, A.R. Assessing professionalism: A review of the literature. *Medical Teacher.* 2004, **26**(4): 366-373.
- 185. Arnold, L. Assessing professional behavior: Yesterday, today, and tomorrow. *Academic Medicine*. 2002, **77**(6): 502-515.
- 186. Lerkiatbundit, S. Professionalism in Thai pharmacy students. *Journal of Social & Administrative Pharmacy*. 2000, **17**(1): 51-58.
- 187. Lerkiatbundit, S. Factor structure and cross-validation of a professionalism scale in pharmacy students. *Journal of Pharmacy Teaching*. 2005, **12**(2): 25-49.
- 188. Schack, D.W. and Hepler, C.D. Modification of Hall's professionalism scale for use with pharmacists. *American Journal of Pharmaceutical Education.* 1979, **43**: 98-104.
- 189. Kelley, K.A., Stanke, L.D., Rabi, S.M., Kuba, S.E., and Janke, K.K. Cross-validation of an instrument for measuring professionalism behaviors. *American Journal of Pharmaceutical Education*. 2011, **75**(9): Article 179.
- 190. Teddlie, C. and Tashakkori, A. *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences.* 2009. London: SAGE.
- 191. Kuzel, A.J. Sampling in qualitative inquiry, In: Doing qualitative research, Crabtree, B.F. and Miller, W.L., Editors. 1992. London: SAGE. p. 31-44.
- 192. Ritchie, J., Spencer, L., and O'Connor, W. *Carrying out qualitative analysis*, In: *Qualitative research practice: A guide for social science students and researchers*, Ritchie, J. and Lewis, J., Editors. 2003. London: SAGE. p. 219-262.
- 193. Onwuegbuzie, A.J. and Leech, N.L. A call for qualitative power analyses. *Quality* & *Quantity*. 2007, **41**(1): 105-121.
- 194. Guest, G., Bunce, A., and Johnson, L. How many interviews are enough? *Field Methods.* 2006, **18**(1): 59-82.
- 195. Morse, J.M. *Designing funded qualitative research*, In: *Handbook of qualitative research*, Denzin, N.K. and Lincoln, Y.S., Editors. 1994. Thousand Oaks, CA: SAGE. p. 220-235.
- 196. Pharmacy Workforce North West. *LPF: Greater Manchester practice forum*. 2014 [cited 20/01/2014]; Available from: <u>http://www.pharmacyworkforcenw.nhs.uk/?page=192</u>.
- 197. General Pharmaceutical Council. *Looking for training premises*. 2014 [cited 20/01/2014]; Available from: <u>http://www.pharmacyregulation.org/registers/trainingpremises/location/M13/sector/C</u>.

- 198. Boyatzis, R.E. Transforming qualitative information. 1998. London: SAGE.
- 199. King, N. Using templates in the thematic analysis of texts, In: Qualitative methods and analysis in organizational research: A practical guide., Symon, G.E. and Cassell, C.E., Editors. 2004. London SAGE. p. 256-270.
- 200. Seale, C. Quality in qualitative research. *Qualitative Inquiry*. 1999, **5**(4): 465-478.
- Ritchie, J. and Spencer, E. Qualitative data analysis for applied policy research, In: Analysing qualitative data, Bryman, A. and Burgess, R.G., Editors. 1994. London: Routledge. p. 173-194.
- 202. Srivastava, A. and Thomson, S.B. Framework analysis: A qualitative methodology for applied policy research. *Journal of Administration & Governance*. 2009, **4**(2): 72-9.
- 203. Field, A.P. Discovering statistics using SPSS. 2009. London: SAGE.
- 204. Brick, J. and Kalton, G. Handling missing data in survey research. *Statistical Methods in Medical Research.* 1996, **5**(3): 215-238.
- 205. Norman, G. Likert scales, levels of measurement and the "laws" of statistics. Advances in Health Sciences Education. 2010, **15**(5): 625-632.
- Riley, S. and Kumar, N. Teaching medical professionalism. *Clinical Medicine*. 2012, 12(1): 9-12.
- 207. Oppenheim, A.N. *Questionnaire design, interviewing and attitude measurement.* 2000. London: Continuum International
- 208. Fowler, F.J. *Improving survey questions: Design and evaluation*. Applied social research methods Vol. 38. 1995. London: Sage.
- 209. Anastasi, A. *Psychological testing*. 1988. New York: Macmillan.
- 210. Coaley, K. An introduction to psychological assessment and psychometrics. 2009. London: SAGE.
- 211. De Vaus, D.A. Surveys in social research (5th ed.). 2002. London: Psychology Press.
- 212. Kaplan, R.M., Bush, J.W., and Berry, C.C. Health status: Types of validity and the index of well-being. *Health Services Research.* 1976, **11**(4): 478-507.
- 213. Rogelberg, S. Handbook of research methods in industrial and organizational psychology. 2008. NJ, USA: John Wiley & Sons.
- 214. Bland, J.M. and Altman, D.G. Statistics notes: Cronbach's alpha. *BMJ.* 1997, **314**(7080): 572.
- 215. Cronbach, L.J. Coefficient alpha and the internal structure of tests. *Psychometrika*. 1951, **16**(3): 297-334.
- 216. Cortina, J.M. What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology.* 1993, **78**(1): 98.
- 217. Streiner, D.L. and Norman, G.R. *Health measurement scales: A practical guide to their development and use.* 2008: Oxford University Press.
- Pharmacy Education. *Pharmacy Education: Homepage*. 2014 [cited 13/03/2014]; Available from: <u>http://pharmacyeducation.fip.org/</u>.
- 219. Calder, B.J., Phillips, L.W., and Tybout, A.M. The concept of external validity. *Journal of Consumer Research*. 1982, **9**(3): 240-244.
- 220. Stalmeijer, R.E., Dolmans, D.H., Wolfhagen, I.H., Muijtjens, A.M., and Scherpbier, A.J. The Maastricht Clinical Teaching Questionnaire (MCTQ) as a valid and reliable instrument for the evaluation of clinical teachers. *Academic Medicine*. 2010, **85**(11): 1732-1738.
- 221. Brown, J., Collins, A., and Newman, S. Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics, In: Knowing, learning, and instruction: Essays in honor

*of Robert Glaser.*, Resnick, L., Editor. 1989. Hillsdale, NJ: Lawrence Erlbaum Associates. p. 453-494.

- 222. Stalmeijer, R.E., Dolmans, D.H., Wolfhagen, I.H., and Scherpbier, A.J. Cognitive apprenticeship in clinical practice: Can it stimulate learning in the opinion of students? *Advances in Health Sciences Education.* 2009, **14**(4): 535-546.
- 223. Stalmeijer, R.E., Dolmans, D.H., Wolfhagen, I.H., Muijtjens, A.M., and Scherpbier, A.J. The development of an instrument for evaluating clinical teachers: Involving stakeholders to determine content validity. *Medical Teacher*. 2008, **30**(8): e272-e277.
- 224. Boerboom, T., Dolmans, D., Jaarsma, A., Muijtjens, A., Van Beukelen, P., and Scherpbier, A. Exploring the validity and reliability of a questionnaire for evaluating veterinary clinical teachers' supervisory skills during clinical rotations. *Medical Teacher*. 2011, **33**(2): e84-e91.
- 225. Boerboom, T.B., Mainhard, T., Dolmans, D.H., Scherpbier, A.J., Van Beukelen, P., and Jaarsma, A.C. Evaluating clinical teachers with the Maastricht clinical teaching questionnaire: How much 'teacher' is in student ratings? *Medical Teacher.* 2012, **34**(4): 320-326.
- 226. Guirguis, L. and Kreling, D. Do wisconsin pharmacists believe they matter to their patients? *Journal of the Pharmacy Society of Wisconsin.* 2007(March/April): 44-48.
- 227. Guirguis, L.M. and Chewning, B.A. A pilot study on students' perceptions of patient interactions in community pharmacy and the importance of mattering, in International Conference on Communication in Healthcare. 2005: Chicago, USA.
- 228. Guirguis, L.M. and Chewning, B.A. Development of a measure to assess pharmacy students' beliefs about monitoring chronic diseases. *Research in Social and Administrative Pharmacy*. 2008, **4**(4): 402-416.
- 229. Marcus, F. and Rosenberg, M. *Mattering: Its measurement and significance in everyday life, in Eastern Sociological Society Meeting.* 1987: Boston, USA.
- 230. Guirguis, L.M., Chewning, B.A., Kieser, M.A., and Kanous, N.L. Evaluation of structured patient interactions: the Diabetes Check. *American Journal of Pharmaceutical Education*. 2006, **70**(3).
- Gebauer, J.E., Sedikides, C., and Neberich, W. Religiosity, social self-esteem, and psychological adjustment on the cross-cultural specificity of the psychological benefits of religiosity. *Psychological Science*. 2012, 23(2): 158-160.
- 232. Willis, S., Seston, L., and Hassell, K. A longitudinal cohort study of pharmacy careers -Report 8: Analysis of pharmacy practice questionnaire: Work, employment and the early careers of cohort pharmacists. 2009. London: Pharmacy Practice Research Trust.
- 233. Raosoft. Sample size calculator. 2004 [cited 15/01/2014]; Available from: http://www.raosoft.com/samplesize.html.
- Osborne, J.W. and Costello, A.B. Sample size and subject to item ratio in principal components analysis. *Practical Assessment, Research & Evaluation.* 2004, 9(11): 8.
- 235. Kaplan, D. Structural equation modeling: Foundations and extensions (2nd Ed.). 2009. London: SAGE.
- 236. Hair, J., Anderson, R., Tatham, R., and Black, W. *Multivariate data analysis*. 1995. Englewood Cliffs, NJ: Prentice Hall.
- 237. Tabachnick, B.G. and Fidell, L.S. *Using multivariate statistics*. 2007. Boston, USA: Pearson Education.
- 238. Gaskin, J. *Ten steps for formulating a decent quantitative model.* 2013 [cited 2nd August, 2013]; Available from: <u>http://statwiki.kolobkreations.com/wiki/Guidelines</u>.
- 239. SPSS. IBM SPSS Missing Values 20. 2011. Chicago: SPSS.

- 240. Joffe, H. and Yardley, L. *Content and thematic analysis*, In: *Research methods for clinical and health psychology*, Marks, D. and Yardley, L., Editors. 2004. London: SAGE. p. 56-68.
- 241. Hsieh, H.-F. and Shannon, S.E. Three approaches to qualitative content analysis. *Qualitative Health Research*. 2005, **15**(9): 1277-1288.
- 242. Poncheri, R.M., Lindberg, J.T., Thompson, L.F., and Surface, E.A. A comment on employee surveys negativity bias in open-ended responses. *Organizational Research Methods.* 2008, **11**(3): 614-630.
- 243. Borg, I. and Zuell, C. Write-in comments in employee surveys. *International Journal of Manpower.* 2012, **33**(2): 206-220.
- 244. Eisinga, R., Grotenhuis, M.t., and Pelzer, B. The reliability of a two-item scale: Pearson, Cronbach, or Spearman-Brown? *International Journal of Public Health.* 2012: 1-6.
- 245. Pallant, J. SPSS survival manual: A step by step guide to data analysis using SPSS. 2010. Maidenhead: Open University Press.
- 246. Kelly, M., Bennett, D., and McDonald, P. Evaluation of clinical teaching in general practice using the Maastricht Clinical Teaching Questionnaire. *Medical Teacher.* 2012, **34**(12): 1089-1089.
- 247. Smith, A. and Darracott, R. *Modernising Pharmacy Careers Programme*. 2011 [cited 10/03/2014]; Available from: <a href="http://www.mee.nhs.uk/pdf/MPC\_Discussion\_Paper.pdf">http://www.mee.nhs.uk/pdf/MPC\_Discussion\_Paper.pdf</a>.
- 248. Mills, E., Blenkinsopp, A., and Black, P. Quality management in pharmacy pre-registration training: Recommendations for the future. *Pharmacy Education.* 2013, **13**(1): 87-92.
- 249. King, N. Using interviews in qualitative research, In: Qualitative methods and analysis in organizational research: A practical guide., Symon, G. and Cassell, C., Editors. 2004. London: SAGE. p. 11-22.
- 250. Poirier, T.I. and Gupchup, G.V. Assessment of pharmacy student professionalism across a curriculum. *American Journal of Pharmaceutical Education.* 2010, **74**: Article 62.
- 251. John, D., McAteer, S., and Luscombe, D. Pharmacy graduates' opinions on their preregistration tutors: a GB survey. *Journal of Pharmacy and Pharmacology*. 2005, **57**(Supp 44).
- 252. Collier, D. and Mahoney, J. Insights and pitfalls: Selection bias in qualitative research. *World Politics.* 1996, **49**(1): 56-91.
- 253. Willis SC, Shann P, and K, H. Who will be tomorrow's pharmacists and why did they study pharmacy? *Pharmaceutical Journal.* 2006, **277**: 107-108.
- 254. Seston, L. and Hassell, K. *Pharmacy workforce census 2008: Main findings.* 2009. London: Royal Pharmaceutical Society of Great Britain.
- Jaye, C., Egan, T., and Parker, S. 'Do as I say, not as I do': Medical education and Foucault's normalizing technologies of self. *Anthropology and Medicine*. 2006, **13**(2): 141-155.
- 256. Curtis, K., Horton, K., and Smith, P. Student nurse socialisation in compassionate practice: A grounded theory study. *Nurse Education Today*. 2012, **32**(7): 790-5.
- 257. Wolf, T.M., Balson, P.M., Faucett, J.M., and Randall, H.M. A retrospective study of attitude change during medical education. *Medical Education.* 1989, **23**(1): 19-23.
- 258. Wolf, T.M., Randall, H.M., Von Almen, K., and Tynes, L.L. Perceived mistreatment and attitude change by graduating medical students: A retrospective study. *Medical Education.* 1991, **25**(3): 182-190.
- 259. Shepherd, M.D. and Erwin, G. An examination of students' attitudes toward the elderly. *American Journal of Pharmaceutical Education.* 1983, **47**(1): 35-38.
- 260. Crismon, M., Jermain, D., and Torian, S. Attitudes of pharmacy students toward mental illness. *American Journal of Health-System Pharmacy.* 1990, **47**(6): 1369-1373.

- 261. Crandall, S.J., Davis, S.W., Broeseker, A.E., and Hildebrandt, C. A longitudinal comparison of pharmacy and medical students' attitudes toward the medically underserved. *American Journal of Pharmaceutical Education.* 2008, **72**(6): Article 148.
- 262. Wallman, A., Vaudan, C., and Sporrong, S.K. Communications training in pharmacy education, 1995-2010. *American Journal of Pharmaceutical Education.* 2013, **77**(2): 36.
- 263. Parkhurst, C. Assessing and improving students' verbal communication abilities in pharmacy courses. *American Journal of Pharmaceutical Education.* 1994, **58**(1): 50-54.
- 264. Agomo, C.O. Why UK pharmacy must adapt to the increasing demands of professionalism in practice. *International Journal of Pharmacy Practice*. 2012, **20**(5): 320-323.
- 265. Salter, C., Holland, R., Harvey, I., and Henwood, K. "I haven't even phoned my doctor yet." The advice giving role of the pharmacist during consultations for medication review with patients aged 80 or more: qualitative discourse analysis. *BMJ.* 2007, **334**(7603): 1101.
- 266. Duke, L.J., Kennedy, K., McDuffie, C.H., Miller, M.S., and Chisholm, M.A. Student attitudes, values, and beliefs regarding professionalism. *American Journal of Pharmaceutical Education.* 2005, **69**(5): Article 104.
- 267. LaSala, K.B. and Nelson, J. What contributes to professionalism? *Medsurg Nursing: Official Journal of the Academy of Medical-Surgical Nurses.* 2005, **14**(1): 63-67.
- 268. Hills, L.S. Polishing your professional image: Eight rules for medical practice employees. *Journal of Medical Practice Management.* 2008, **23**(6): 358-362.
- 269. Rehman, S.U., Nietert, P.J., Cope, D.W., and Kilpatrick, A.O. What to wear today? Effect of doctor's attire on the trust and confidence of patients. *The American Journal of Medicine*. 2005, **118**(11): 1279-1286.
- Ginsburg, S., Regehr, G., Hatala, R., McNaughton, N., Frohna, A., Hodges, B., Lingard, L., and Stern, D. Context, conflict, and resolution: A new conceptual framework for evaluating professionalism. *Academic Medicine*. 2000, **75**(Supp S6-S10).
- 271. Shuval, J.T. and Adler, I. The role of models in professional socialization. *Social Science* & *Medicine*. 1980, **14**(1): 5-14.
- 272. Davies, E. Clinical role modelling: Uncovering hidden knowledge. *Journal of Advanced Nursing.* 1993, **18**(4): 627-636.
- 273. Kraemer, L.G. Impact of faculty and work role models on the professional socialization of dental hygienists. *Journal of Dental Hygiene*. 1990, **64**(6): 278-285.
- 274. Jacobson, B.F. Role-model concepts before and after the formal professional socialization period. *Physical Therapy*. 1980, **60**(2): 188-93.
- 275. Joubert, P.M., Kruger, C., Bergh, A.-M., Pickworth, G., Van Staden, C., Roos, J.L., Schurink, W., Du Preez, R., Grey, S.V., and Lindeque, B. Medical students on the value of role models for developing 'soft skills'-"That's the way you do it". South African Psychiatry Review. 2006, **9**: 28-32.
- Byszewski, A., Hendelman, W., McGuinty, C., and Moineau, G. Wanted: role modelsmedical students' perceptions of professionalism. *BMC Medical Education*. 2012, **12**(1): 115.
- 277. General Pharmaceutical Council. *Pre-registration manual: Guidance on tutoring and tutor development resource*. 2014; Available from: <u>http://www.pharmacyregulation.org/tutor-development-resource</u>.
- 278. Groundland, F., Johnson, B., and Murray, J. Preregistration tutor: Role model for lifelong learning. *Pharmaceutical Journal.* 1994, **253**: E3-E5.
- Hudgens, J. and Park, T. Perceptions of pharmacy technicians and students regarding technicians as pharmacy instructors. *American Journal of Pharmaceutical Education*. 2011, **75**(8): Article 151.

- 280. General Pharmaceutical Council. *Pre-registration manual providing feedback and reviewing progress*. 2014 [cited 09/03/2014]; Available from: <u>http://www.pharmacyregulation.org/providing-feedback-and-reviewing-progress</u>.
- 281. Wood, D. Formative assessment, In: Understanding medical education: Evidence, theory and practice, Swanwick, T., Editor. 2010. Chichester: Wiley-Blackwell. p. 259-270.
- 282. General Pharmaceutical Council. *Pre-registration Manual: 8. The registration assessment* (*the exam*). 2014 [cited 05/03/2014]; Available from: http://www.pharmacyregulation.org/registration-assessment-exam.
- General Pharmaceutical Council. Pre-registration manual: 7.9. Recording progress. 2014 [cited 13/05/2014]; Available from: <u>http://www.pharmacyregulation.org/recording-progress</u>.
- 284. Eggelton, A., Wright, D., Parr, N., Norris, N., and Christou, M. Portfolio-based learning and assessment within UK pharmacy pre-registration training: An exploratory study of tutor and student perceptions. *Pharmacy Education*. 2011, **11**(1): 115-120.
- 285. Dolmans, D.H.J.M., Wolfhagen, I.H.A.P., Essed, G.G.M., Scherpbier, A.J.J.A., and van der Vleuten, C.P.M. The impacts of supervision, patient mix, and numbers of students on the effectiveness of clinical rotations. *Academic Medicine*. 2002, **77**(4): 332-335.
- 286. de Jong, J., Visser, M., Van Dijk, N., van der Vleuten, C., and Wieringa-de Waard, M. A systematic review of the relationship between patient mix and learning in work-based clinical settings. A BEME systematic review: BEME Guide No. 24. *Medical teacher.* 2013, **35**(6): e1181-e1196.
- 287. de Jong, J., Visser, M.R., Mohrs, J., and Wieringa-de Waard, M. Opening the black box: The patient mix of GP trainees. *The British Journal of General Practice*. 2011, **61**(591): 650-657.
- 288. Van der Zwet, J., Hanssen, V., Zwietering, P., Muijtjens, A., Van der vleuten, C., Metsemakers, J., and Scherpbier, A. Workplace learning in general practice: Supervision, patient mix and independence emerge from the black box once again. *Medical Teacher*. 2010, **32**(7): 294-299.
- 289. Cole, A. Patients are at the heart of new medical professionalism. *BMJ.* 2005, **331**(7529): 1355.
- Pitts, J. Portfolios, personal development and reflective practice, In: Understanding medical education: Evidence, theory and practice, Swanwick, T., Editor. 2010. Chichester: Wiley-Blackwell. p. 99-108.
- 291. Snadden, D. and Thomas, M. The use of portfolio learning in medical education. *Medical Teacher*. 1998, **20**(3): 192-199.
- 292. Mills, E., Blenkinsopp, A., and Black, P. Quality management in medicial foundation training: Lessons for pharmacy. *Pharmacy Education.* 2013, **13**(1): 75-81.
- 293. Mills, E., Blenkinsopp, A., and Black, P. Quality management in pharmacy pre-registration training: Current practice. *Pharmacy Education.* 2013, **13**(1): 82-86.
- 294. General Medical Council. *Tomorrow's Doctors*. 2009. London: General Medical Council.
- 295. General Pharmaceutical Council. *Pre-registration manual: 6.6. Demonstrating your knowledge*. 2013 [cited 08/03/2014]; Available from: http://www.pharmacyregulation.org/demonstrating-your-knowledge.
- 296. Miller, G.E. The assessment of clinical skills/competence/performance. Academic Medicine. 1990, **65**(9): 63-7.
- 297. Wright, D., Loftus, M., Christou, M., Eggleton, A., and Norris, N. *Healthcare professional education & training: How does pharmacy in Great Britain compare?* 2006. London: Royal Pharmaceutical Society of Great Britain.
- 298. The University of Bradford. *Pharmacy (MPharm) 5 years*. 2014 [cited 27/02/2014]; Available from: <u>http://www.bradford.ac.uk/courses/view/?c=pharmacy-mpharm-5-years</u>.

- 299. General Pharmaceutical Council. *Application for Approval for the Provision of Preregistration Training 2013.* 2014 [cited 01/03/2014]; Available from: <u>http://www.pharmacyregulation.org/sites/default/files/Application%20for%20Provision%20</u> <u>of%20Pre-Reg%20Training%202013.pdf</u>.
- 300. NHS Education for Scotland. *Pharmacy: Training programme: A standardised training programme.* 2013 [cited 03/12/2013]; Available from: <u>http://www.nes.scot.nhs.uk/education-and-training/by-discipline/pharmacy/pre-registration-pharmacist-scheme/training-programme.aspx.</u>
- 301. General Pharmaceutical Council. *Pre-registration training tutors*. 2014 [cited 01/03/2014]; Available from: <u>http://www.pharmacyregulation.org/education/pharmacist-pre-registration-training/tutors</u>.
- 302. General Pharmaceutical Council. *Tutor Development Resource*. 2013; Available from: http://www.pharmacyregulation.org/tutor-development-resource.
- 303. General Pharmaceutical Council. Guidance on tutoring for pharmacists and pharmacy technicians. 2014 [cited 12/03/2014]; Available from: <a href="http://www.pharmacyregulation.org/sites/default/files/Guidance%20on%20tutoring%20for%20pharmacists%20and%20pharmacy%20technicians%2028.01.14.pdf">http://www.pharmaceutical Council. Guidance on tutoring for pharmacists and pharmacy technicians. 2014 [cited 12/03/2014]; Available from: <a href="http://www.pharmacyregulation.org/sites/default/files/Guidance%20on%20tutoring%20for%20pharmacists%20and%20pharmacy%20technicians%2028.01.14.pdf">http://www.pharmacyregulation.org/sites/default/files/Guidance%20on%20tutoring%20for%20pharmacists%20and%20pharmacy%20technicians%2028.01.14.pdf</a>.
- 304. General Pharmaceutical Council. *Pre-registration manual 2013-2014*. 2013 [cited 02/01/2014]; Available from: <u>http://www.pharmacyregulation.org/preregmanual</u>.
- 305. Bernabeo, E., Holmboe, E., Ross, K., Chesluk, B., and Ginsburg, S. The utility of vignettes to stimulate reflection on professionalism: Theory and practice. *Advances in Health Sciences Education.* 2013, **18**(3): 463-484.
- 306. General Pharmaceutical Council. *Pre-registration Manual:* 7.10 Observed evidence. 2014 [cited 04/03/2014]; Available from: <u>http://www.pharmacyregulation.org/observed-evidence</u>.
- 307. Wright, D. and Morgan, L. *An independent evaluation of frameworks for professional development in pharmacy*. 2012 [cited 10/05/14]; Available from: <u>http://hee.nhs.uk/wp-content/uploads/sites/321/2012/10/Independent-evaluation-of-professional-development-frameworks.pdf</u>.
- 308. Department of Health. Delivering high quality, effective, compassionate care: Developing the right people with the right skills and the right values. 2013 [cited 09/03/2014]; Available from: <u>http://hee.nhs.uk/wp-</u> content/uploads/sites/321/2013/05/29257 2900971 Delivering Accessible.pdf.



# Appendix 1: Hammer et al.(2000) questionnaire: Items used to define and measure behavioural professionalism

#### **INSTRUCTIONS:**

Rate your student on the following items using the rating system described below. A rating of 3 should serve as the starting point. If you feel your student performed satisfactorily, "average," or met minimum requirements for a particular item, rate that student a "3" for that item. If a student demonstrated above average or excellent performance for a particular item, rate that student a "4" or "5," respectively. Conversely, if a student performed below average or unsatisfactorily on a particular item, that student should rate a "2" or "1," respectively. If you have no basis for judgment on a particular item, use the "N" rating. Base your ratings on your overall impressions of your student's behavior during this rotation.

#### **Rating descriptor guides:**

**5** = Student demonstrated <u>excellent</u> skills in this area; was <u>extremely effective</u> and/or <u>very</u> <u>consistent</u> (could serve as a model).

**4** = Student demonstrated <u>very good</u> skills in this area; was <u>above average in effectiveness</u> and/or <u>consistency</u>.

**3** = Student demonstrated <u>satisfactory</u> skills in this area; was <u>generally effective</u> and/or <u>consistent</u> but <u>needs some improvement</u> (appropriate for this level).

2 = Student *needs improvement* in this area; was *somewhat ineffective* and/or *inconsistent*.

**1** = Student <u>**needs significant improvement**</u> in this area; was <u>**ineffective**</u> and/or <u>**inconsistent**</u> (performance was unsatisfactory).

N = Not enough evidence to evaluate.

1.	<b>Student is reliable and dependable</b> , <i>i.e.,</i> can be counted on to fulfill responsibilities and meet expectations.	5	4	3	2	1	Ν
2.	<b>Student practices personal hygiene</b> , <i>i.e.</i> , maintains personal health and grooming habits acceptable to practice setting.	5	4	3	2	1	Ν
3.	Student produces quality work, <i>i.e.</i> , tasks and assignments are complete, accurate, and meet their respective objectives.	5	4	3	2	1	Ν
4.	<b>Student is empathic</b> , <i>i.e.</i> , demonstrates appreciation of others' positions; attempts to identify with others' perspectives; demonstrates consideration towards others.	5	4	3	2	1	Ν
5.	<b>Student behaves in an ethical manner</b> , <i>i.e.</i> , acts in patients' best interests; acts in accord with the profession's and/or practice site's code of ethics.	5	4	3	2	1	Ν
6.	<b>Student communicates articulately</b> , <i>i.e.</i> , clearly communicates thoughts; uses appropriate terminology and vocabulary for intended audience.	5	4	3	2	1	Ν
7.	<b>Student is punctual</b> , <i>i.e.</i> , arrives at practice site and meetings early or on time; meets deadlines for completion of tasks and responsibilities.	5	4	3	2	1	Ν
8.	<b>Student uses time efficiently</b> , <i>i.e.</i> , allocates and utilizes appropriate amounts of time to fulfill responsibilities; utilizes others' time wisely.	5	4	3	2	1	Ν
9.	<b>Student is self-directed in undertaking tasks</b> , <i>i.e.</i> , after initial instruction of tasks/assignments/responsibilities, initiates activities to complete them; self-motivated; functions independently; seeks additional tasks after completing originals.	5	4	3	2	1	N

10.	<b>Student maintains confidentiality</b> , <i>i.e.</i> , engages in discussions or other activities involving patient- and/or site-specific information for purposes of fulfilling professional responsibilities <u>only</u> ; maintains confidential nature of patient- and/or site-specific documents.	5	4	3	2	1	Ν
11.	<b>Student is respectful</b> , <i>i.e.</i> , demonstrates regard for patients, superiors, colleagues, other personnel, and property; acts in a manner that shows recognition that he/she is a guest at the practice site as a professional student.	5	4	3	2	1	Ν
12.	<b>Student communicates using appropriate body language</b> , <i>i.e.,</i> utilizes gestures and mannerisms that enhance formal and informal communication.	5	4	3	2	1	Ν
13.	<b>Student demonstrates accountability</b> , <i>i.e.</i> , holds oneself liable for tasks/duties/responsibilities that he/she is responsible; does not blame others for mistakes or mishaps. nor avoids responsibilities.	5	4	3	2	1	N
14.	<b>Student prioritizes responsibilities effectively</b> , <i>i.e.</i> , organizes and approaches multiple tasks and assignments in a manner to produce desired outcomes.	5	4	3	2	1	Ν
15.	Student accepts and applies constructive criticism, <i>i.e.</i> , responds openly and positively to feedback; modifies behavior if necessary.	5	4	3	2	1	Ν
16.	<b>Student puts others' needs above his/her own</b> , <i>i.e.</i> , demonstrates an attitude of service by taking the necessary time and actions to help others; gives of oneself to benefit others.	5	4	3	2	1	N
17.	<b>Student is nonjudgmental</b> , <i>i.e.</i> , demonstrates an attitude of open- mindedness towards others and situations; does not "stereotype" others or preiudge situations.	5	4	3	2	1	N
18.	<b>Student communicates assertively</b> , <i>i.e.</i> , actively and appropriately engages in dialogue or discussion; not afraid to provide his/her viewpoint.	5	4	3	2	1	Ν
19.	<b>Student is an active learner</b> , <i>i.e.</i> , seeks knowledge; asks questions; searches for information; takes responsibility for own learning.	5	4	3	2	1	Ν
20.	Student is cooperative, <i>i.e.</i> , non-argumentative; willing and helpful.	5	4	3	2	1	Ν
21.	<b>Student is diplomatic</b> , <i>i.e.,</i> is fair and tactful in all dealings with patients, superiors, colleagues, and other personnel.	5	4	3	2	1	Ν
22.	<b>Student "follows through" with responsibilities</b> , <i>i.e.,</i> if task is left incomplete or problem is not resolved, student seeks aid or explains situation to parties who can follow-up on task or problem.	5	4	3	2	1	Ν
23.	<b>Student wears appropriate attire</b> , <i>i.e.</i> , adheres to dress code (written or unwritten); attire is acceptable to practice setting.	5	4	3	2	1	Ν
24.	<b>Student demonstrates confidence</b> , <i>i.e.</i> , acts and communicates in a self-assured manner, yet with modesty and humility.	5	4	3	2	1	Ν
25.	Student demonstrates a desire to exceed expectations, <i>i.e.</i> , goes "above and beyond the call of duty;" attempts to exceed minimal standards and requirements for tasks/assignments/responsibilities.	5	4	3	2	1	N

# Appendix 2: Current arrangements for pre-registration training

This appendix provides an overview of how pre-registration training is delivered, the requirements of training for registration as a pharmacist and requirements for training sites and tutors. The application process for pharmacy students seeking training places, funding available for pre-registration training and future arrangements for training are also discussed. Whilst the information presented here was obtained through current documentation (i.e. applicable for 2013/14), there have not been any significant changes since the time the data were collected for the programme of work conducted (2011/12).

It is possible to undertake pre-registration training as part of a five-year degree. Two schools of pharmacy currently offer a five-year MPharm degree which incorporate pre-registration training: The University of Bradford<sup>1</sup>, which has been established for around 40 years, and The University of Nottingham,<sup>2</sup> which has only recently begun offering an integrated degree. It is also possible to undertake pre-registration training following an overseas pharmacists' assessment programme (OSPAP)<sup>3</sup> degree or a 2 + 2 degree,<sup>4</sup> the majority of pharmacy students will undertake a four year (full time) programme and graduate with an MPharm degree before they enter their pre-registration training year. The main focus here will be on this form of pre-registration delivery as it has been the focus of the programme of work conducted.

### Delivery of pre-registration training following the MPharm degree

At present, there are 26 schools of pharmacy in the UK that are accredited to offer MPharm degrees. A further three universities are provisionally accredited.<sup>5</sup> Although the GPhC is the regulatory body for pharmacy professional in Great Britain it accredits MPharm degrees in Great Britain *and* Northern Ireland (i.e. UK).

Following completion of the MPharm degree, pharmacy graduates need to complete a year of pre-registration training if they wish to go on to register as pharmacists. Whilst the vast majority of trainees will undertake their training in a single sector (community or hospital) there are options for trainees to undertake a 'split' post with six months in hospital and six months in community.<sup>6</sup> There is also the possibility to undertake a 'joint' post: six months of training in a non-patient facing sector (e.g. industry; academia) and six months in community or hospital.<sup>6</sup> However, only very few trainees enrol in such split or joint posts. Community pharmacy is the most common place for pre-registration trainees to undertake their pre-registration training; roughly two-thirds of training in hospital for the 2013-14 training year (GPhC, data from personal communication, March, 2014).

### Applying for training

Pharmacy students generally make applications for a pre-registration place during the end of their third year of the MPharm degree. Students wishing to undertake their training in community pharmacy will make applications to employers directly and will often receive help in making applications from their school of pharmacy when doing this.<sup>7</sup> For those wishing to undertake pre-registration training in hospital pharmacy in England and Wales there is a central website which trainees apply to run by Pharmalife recruitment service.<sup>8</sup> In Scotland, recruitment for positions in community and hospital is done through NHS Education for Scotland (NES).<sup>9</sup> For trainees wishing to undertake pre-registration training as a joint or split programme the terms of employment will generally be negotiated between the two employers.

Trainees are by no means guaranteed a place at their chosen organisation or sector. In fact, gaining a pre-registration place will likely become more competitive with the rise of student numbers – which are not capped – and graduates may not train in their desired organisation, or even sector. Concerns over rising student numbers and associated implications have been raised in recent publications by Higher Education Funding Council for England (HEFCE) and Health Education England (HEE),<sup>10</sup> Centre for Workforce Intelligence<sup>11</sup> and the British Pharmaceutical Students' Association (BPSA)<sup>12</sup> This may be a particular concern given that places for pre-registration are not secure, particularly in community pharmacy where employers are under no obligation to recruit a set number of trainees each year.

# Requirements of pre-registration training prior to registration as a pharmacist

If done full-time (i.e. 35-45 hours per week), pre-registration training takes a minimum of 52 weeks.<sup>13</sup> A 'pre-registration tutor' will need to act as a supervisor for the pre-registration trainee during the year.<sup>13</sup> Throughout the year, trainees need to compile evidence that demonstrate competence across 76 performance standards relating to personal effectiveness, interpersonal skills and medicines and health.<sup>14</sup> Performance standards are signed off by pre-registration tutors throughout the year. In addition, the completion of 13-weekly progress reviews<sup>15</sup> at weeks 13,26 and 39, where trainees are signed off as satisfactory or unsatisfactory by their tutor, must be completed. A final declaration, at the end of the training year (week 49) must also be signed off by the tutor.

Trainees must also complete a registration assessment which they are eligible to sit following a 'satisfactory' sign off at 39 weeks.<sup>16</sup> The registration assessment consists of a closed book and an open book multiple choice exam. Trainees must score 70% across both papers; a minimum of 70% in calculation questions is required. Trainees are allowed three attempts to pass the assessment.<sup>16</sup>

Following successful completion of training through receiving satisfactory sign offs, achieving all performance standards and passing the registration assessment, trainees can register as pharmacists and practise in any sector.

#### Pre-registration training site and tutor requirements

Organisations wishing to provide pre-registration training must complete an application form and submit it to the GPhC for review<sup>17</sup> in order for their training site(s) to be approved. The application form includes a declaration list where the applicant must confirm, for example, that trainees will *"be exposed to a sufficient range of clinical services that are patient focussed in order to attain competence."*<sup>17</sup> A training plan must accompany the application which should be outcome based and in keeping with modern practice.<sup>17</sup> Though there is no training plan template, there are stipulations for producing one: for example, the plan must be *"written in a type written format"* and the applicant needs to *"states the objectives within each area of practice and map the activities to the Performance Standards to identify how all 76 standards will be met."*<sup>17</sup>

To become a pre-registration tutor one must be a registered pharmacist who has been practising in the sector of pharmacy in which they wish to tutor for three years or more and must not be under investigation by the GPhC.<sup>18</sup> If tutors cannot work at least 28 hours over four days per week with their trainee(s) the GPhC may approve more than one tutor (i.e. joint tutoring arrangement).<sup>19</sup>

### Funding of pre-registration training

Community pharmacy employers can apply for a training grant which is currently set at £18,440 per year for a trainee and is paid to employers by NHS England in arrears.<sup>20</sup> The grant is not paid directly to the trainee and therefore the employer agrees terms with the trainee for their salary which may vary across training sites. In hospital, the Department of Health provides Multi Professional Education and Training (MPET) funding which is allocated to the Local Education and Training Boards by HEE.<sup>21</sup> Hospital trainees are salaried on Band 5 of the nationally agreed NHS salary scale. <sup>22</sup> The basic salary of a pre-registration trainee was £21,388 per year in April 2013. Additional salary allowance may be provided to trainees in certain regions (London and South East England).<sup>22</sup> If a trainee undertakes training as a joint or split programme the funding for the trainee is usually negotiated between the two employers.

### **Future arrangements**

A recent discussion paper from the Modernising Pharmacy Careers Programme argued for pharmacy education and training to be completed in a five-year integrated degree programme.<sup>23</sup> Under these proposals, schools of pharmacy would work closely with employers and be jointly responsible for signing off of students' academic and professional assessments.<sup>23</sup> The currently preferred option for the main practice placements (i.e. integrated pre-registration training) is for

one six month placement at the beginning of year 4 and another at the end of year 5, transitioning directly into registered practice.<sup>23</sup> These placements could be managed centrally through a system similar to that which is in existence in hospital already.<sup>8, 23</sup> Quality of placements could be managed by a regional pharmacy deanery accountable to the GPhC.<sup>23</sup>

Changes to funding arrangements for pharmacy education and training will be affected as a result of any changes to the current system. HEFCE currently funds pharmacy within the higher education institution as a science / laboratory-based subject (band B).<sup>23</sup> The Modernising Pharmacy Careers Programme discussion paper (p.12)<sup>23</sup> proposed that the five year MPharm programme "should be eligible for at least 12 months' funding as a clinical subject in addition to the existing funding as a science-based subject." Decisions on the future of pharmacy education and training are still being discussed.

#### References

- 1. The University of Bradford. *Pharmacy (MPharm) 5 years*. 2014 [cited 27/02/2014]; Available from: <u>http://www.bradford.ac.uk/courses/view/?c=pharmacy-mpharm-5-years</u>.
- 2. The University of Nottingham. *Pharmacy (with Integrated Pre-registration Scheme) MPharm*. 2014 [cited 27/02/2014]; Available from: <u>http://www.nottingham.ac.uk/ugstudy/courses/pharmacy/mpharm-pharmacy-(with-integrated-pre-registration-scheme).aspx</u>.
- 3. General Pharmaceutical Council. Overseas pharmacists' assessment programme. 2014 [cited 08/03/14]; Available from: <u>http://www.pharmacyregulation.org/education/pharmacist/overseas-pharmacists-assessment-programme</u>.
- 4. General Pharmaceutical Council. *MPharm* 2+2. 2014 [cited 25/02/2014]; Available from: <u>http://www.pharmacyregulation.org/education/pharmacist/mpharm-22</u>.
- 5. General Pharmaceutical Council. *Accredited MPharm degrees*. 2014 [cited 18/02/2014]; Available from: <u>http://www.pharmacyregulation.org/education/pharmacist/accredited-mpharm-degrees</u>.
- 6. General Pharmaceutical Council. *Pre-registration Manual: 4.4 Deciding where and how to train.* 2014 [cited 26/02/2014]; Available from: http://www.pharmacyregulation.org/deciding-where-and-how-train.
- 7. Bukhari, N. *The Pre-registration Interview*. 2007. London: Pharmaceutical Press.
- 8. Service, N.-P.R. *NHS Pre-registration Trainee Pharmacist Training*. 2014 [cited 28/02/2014]; Available from: <u>http://www.pharmalife.co.uk/</u>.
- 9. NHS Education for Scotland. *Pre-Registration Pharmacist Scheme*. 2013; Available from: <u>http://www.nes.scot.nhs.uk/education-and-training/by-discipline/pharmacy/pre-</u> <u>registration-pharmacist-scheme.aspx</u>.
- 10. Higher Education Funding Council for England and Health Education England. *Ensuring a sustainable supply of pharmacy graduates proposals for consultation (first stage).* 2013 [cited 12/03/2014]; Available from: http://www.hefce.ac.uk/media/hefce/content/pubs/2013/201319/HEFCE 2013 19.pdf.
- 11. Centre for Workforce Intelligence. A strategic review of the future pharmacist workforce: Informing pharmacist student intakes. 2013 [cited 12/03/2014]; Available from: <u>http://www.cfwi.org.uk/publications/a-strategic-review-of-the-future-pharmacist-workforce/@@publication-detail</u>.

- 12. British Pharmaceutical Students' Association. *The imbalance between pre-registration training and undergraduate pharmacy student numbers*. 2012 [cited 28/02/2014]; Available from: <u>http://www.bpsa.co.uk/Press\_Releases/BPSA\_Student\_Numbers\_Discussion\_Paper\_-17th\_July\_2012.pdf</u>.
- 13. General Pharmaceutical Council. *Pre-registration Manual: 3. Becoming a pharmacist in Great Britain.* 2014 [cited 03/03/2014]; Available from: http://www.pharmacyregulation.org/becoming-a-pharmacist.
- 14. General Pharmaceutical Council. *Pre-registration manual:* 7. *The performance standards*. 2014 [cited 06/03/2014]; Available from: http://www.pharmacyregulation.org/performance-standards.
- 15. General Pharmaceutical Council. *Pre-registration Manual:* 7.10 Observed evidence. 2014 [cited 04/03/2014]; Available from: <u>http://www.pharmacyregulation.org/observed-evidence</u>.
- 16. General Pharmaceutical Council. *Pre-registration Manual: 8. The registration assessment (the exam).* 2014 [cited 05/03/2014]; Available from: http://www.pharmacyregulation.org/registration-assessment-exam.
- 17. General Pharmaceutical Council. *Application for Approval for the Provision of Pre*registration Training 2013. 2014 [cited 01/03/2014]; Available from: <u>http://www.pharmacyregulation.org/sites/default/files/Application%20for%20Provision%20</u> of%20Pre-Reg%20Training%202013.pdf.
- 18. General Pharmaceutical Council. *Pre-registration training tutors*. 2014 [cited 01/03/2014]; Available from: <u>http://www.pharmacyregulation.org/education/pharmacist-pre-registration-training/tutors</u>.
- 19. General Pharmaceutical Council. *Pre-registration manual: 5. Pre-registration tutors.* 2014 [cited 01/03/2014]; Available from: <u>http://www.pharmacyregulation.org/pre-reg-tutors</u>.
- 20. Pharmaceutical Services Negotiating Committee. *Pre-Registration Training Grant.* 2014 [cited 01/03/2014]; Available from: <u>http://psnc.org.uk/funding-and-statistics/pre-registration-training-grant/</u>.
- 21. Health Education England. *Financial Planning*. 2014 [cited 02/03/2014]; Available from: http://hee.nhs.uk/work-programmes/resources/.
- 22. Service, N.-P.R. *Hospital Pharmacy Pre-registration Salary*. 2014 [cited 02/03/2014]; Available from: <u>http://www.pharmalife.co.uk/browsehospitals/menu/id/Mzg3/menutitle/SG9zcGI0YWwgU</u> <u>Ghhcm1hY3kgUHJILXJIZ2IzdHJhdGlvbg==</u>.
- 23. Smith, A. and Darracott, R. *Modernising Pharmacy Careers Programme Review of Pharmacist Undergraduate Education and Pre-registration Training and Proposals for Reform: Discussion Paper.* 2011. London: Medical Education England.

## Appendix 3: NHS ethics approval letter to conduct research for work stream 1

NHS National Research Ethics Service NRES Con th East - Newcastle & North Tyneside TEDCO Business Cen Lusiness Centr Room 00 Rolling Mill Roa g Mill Road Jarrow NE32 3DT

Telephone: 0191 428 3566 Facsimile: 0191 428 3432

Mr Sam Jee School of Pharmacy and Pharmaceutical Sciences Room 1.136, Stopford Building The University of Manchester Oxford Road M13 9PT

Dear Mr Jee Study title:

25 July 2011

#### Exploring the process of professionalisation during the pre-registration training year in pharmacy 11/NE/0222 **REC reference:**

The Proportionate Review Sub-committee of the NRES Committee North East - Newcastle & North Tyneside 1 Research Ethics Committee reviewed the above application on 22 July 2011.

Ethical opinion

1. A22 Length of interviews - Members suggested that a realistic length of 1.5 - 2 hours would be more appropriate. Members were advised that the interview schedules had been piloted with a group of trainees and also with a pharmacist who has been a tutor for many years. The interviews lasted between 30 and 60 minutes in each case, and this was with added discussion of the comprehension and wording of the guestions. It is expected that interviews with participants will take less time because they will just be answering the questions. A time frame of 30-60 minutes has been judged to be suitable and all interviews should fall within this allocated time. You appreciated the consideration for additional time to be added in order for interviews to be completed.

2. A30 - Clarification was sought on whether trainees/tutors (respondents) have access to each other's interview data, as if so, explicit consent should be sought. It was recommended, however, that this should not happen. Members were informed that the interview data collected from trainees will not be made available to their tutors. Likewise, the interview data collected from tutors will not be made available to trainees.

3. A33-1/A17-1 - Members queried whether the principal inclusion criteria matched up? The inclusion criteria (17-1) describes all of the individuals who will be recruited to the study. It is expected that these individuals will be able to communicate in English in order to carry out their job in pharmacy. Speaking English is a requirement for pharmacy professionals (pharmacists and pharmacy technicians) as outlined by the regulator. Other support staff (e.g. dispensers) are the group of participants that may have issues with

This Research Ethics Committee is an advisory committee to the North East Strategic Health Authority The National Research Ethics Service (NRES) represents the NRES Directorate within the National Patient Safety Agency and Research Ethics Committees in England

speaking English. It is a necessary requirement for participants to speak English in order for them to be able to take part in an interview. Special arrangements will not be made (A33-1) for language difficulties; participants will have to be excluded if they cannot communicate well in an interview. Perhaps the inclusion criteria could have had a statement regarding this, for example, 'participants that are able to communicate well in English so they are capable of taking part in an interview.'

The invitation and follow up letter mentions interviews but not questionnaires - please 

5. Please clarify when the respondent will qualify for the £40 voucher - is it when full quota of interviews/questionnaires has been completed? It was noted that the £40 voucher will be given to participants who complete the full quota of interviews and questionnaires. The voucher would be given to these participants after they complete their last interview and questionnaire.

6. Members were concerned that the warning in the PIS about the possibility of discovery of malpractice is rather stern for junior pharmacists at the start of their careers, possibly feeling insecure and worried about the possibility of undue influence that any discovery may have upon them. It was recommended that an alternative form of words be used, stating that any concerns about unsafe practice will be raised with the individual directly in the first instance, and with the tutor only if necessary. This has been taken into account. The participant information sheet for trainees has been amended (under the section 'Will information about me remain confidential?'

7. Members requested clarification on whether the interviews with the tutors will be specific and personalised or whether data will be based upon reports for each individual trainee rather than seeking the tutors views on "Professionalism". The interviews with tutors will ask questions about the trainee they work with so in this sense the interviews are specific and personalised and relate to the professionalism of the trainee they supervise. The interviews will touch upon the progress of trainees and therefore discussion based upon the progress reports is also likely to occur.

8. Members advised that the right of the participant to refuse or withdraw at any time without personal or professional detriment should be more emphatic. This has been taken into account. The participant information sheet for trainees, tutors, and pharmacists/support staff have been amended (under the section 'Do I have to take part?').

9. Clarification was sought on what will happen if a trainee refuses to allow their tutor to disclose data when tutor's are recruited singly (protocol page 9). If a trainee refuses to allow their tutor to disclose data when the tutor is recruit singly than the tutor will not be able to make explicit comments about their current trainee and will not be able to make explicit comments about their current trainee and will not be able to make explicit comments about their current trainee and will not be able to make explicit comments about their current trainee and will not be able to make explicit comments about their current trainee and will not be able to provide any data about progress (e.g. the performance standards the trainee has been achieving). The tutor can still participate in this study, however, they will only be able to provide more general comments about the process of professionalisation trainees undergo in training based on past experiences with trainees. Essentially, in this case the interview held with tutor may be more in line with the interviews being held with others pharmacists/support staff in that discussions about trainees and their professional development are more general.

It was confirmed that satisfactorily amended participant documents had been submitted into the REC Office on 22 July.

On behalf of the Committee, the sub-committee gave a favourable ethical opinion of the

above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

#### Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <u>http://www.rdforum.nhs.uk</u>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. Confirmation should also be provided to host organisations together with relevant documentation.

#### Approved documents

The documents reviewed and approved were:

Document	Version	Date
Covering Letter	1	11 July 2011
Interview Schedules/Topic Guides	1 - Trainees	11 July 2011
Interview Schedules/Topic Guides	1 - Tutors	11 July 2011
Interview Schedules/Topic Guides	1 - Pharmacists/ Support Staff	11 July 2011
Investigator CV	Sam Jee	08 July 2011
Investigator CV	Ellen Schafheutle	
Investigator CV	Peter Noyce	

Letter from Sponsor	1	06 July 2011
Letter of invitation to participant	2	21 July 2011
Other: Interview confirmation letter	1	11 July 2011
Other: Follow-up invitation letter	2	21 July 2011
Participant Consent Form: Trainees	1	11 July 2011
Participant Consent Form: Tutors/Pharmacists/Support Staff	1	11 July 2011
Participant Information Sheet: Trainees	2	21 July 2011
Participant Information Sheet: Tutors	2	21 July 2011
Participant Information Sheet: Pharmacists/Support Staff	2	21 July 2011
Protocol	1	11 July 2011
Questionnaire: Trainees	1	11 July 2011
Questionnaire: Tutors	1	11 July 2011
REC application	IRAS 3.1	06 July 2011
Summary/Synopsis	1	11 July 2011

Membership of the Proportionate Review Sub-Committee

The members of the Sub-Committee who took part in the review are listed on the attached sheet.

#### Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

#### After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
  Adding new sites and investigators
  Notification of serious breaches of the protocol
  Progress and safety reports
  Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

#### Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review 11/NE/0222 Please quote this number on all correspondence
With the Committee's best wishes for the success of this project

Yours sincerely

H Dr Simon Woods Vice Chair

Email: leigh.pollard@nhs.net

Enclosures: List of names and professions of members who took part in the review "After ethical review – guidance for researchers" Ms Lynne Macrae Mrs Rachel Georgiou, Salford Royal NHS foundation trust Copy to:

NRES Committee North East - Newcastle & North Tyneside 1 Attendance at PRS Sub-Committee of the REC meeting on 22 July 2011 hed via email correspondence

#### Present:

Name	Profession	Capacity
Dr Mike Bone (Alt Vice Chair)	Consultant Physician	Expert
Dr Pamela Davies	Principal Lecturer	Lay Plus
Dr Simon Woods (Vice Chair)	Senior Lecturer	Lay

## **Appendix 4: Participant information sheet (trainees)**



#### **PARTICIPANT INFORMATION SHEET**

Exploring the process of professionalisation during the pre-registration training year in pharmacy

#### Introduction

You are being invited to take part in a research study. Before you decide whether to take part, it is important for you to understand why the research is being carried out and what it involves for you. Please take time to read the following information carefully. Discuss it with others if you wish. If there is anything that is not clear or if you would like to receive more information, please feel free to contact the chief investigator (Sam Jee) on 0161 275 1807 or at <a href="mailto:sam.jee@postgrad.manchester.ac.uk">sam.jee@postgrad.manchester.ac.uk</a>. Take time to decide whether or not you wish to take part. Thank you for reading this information sheet.

#### What is this study about?

In order for pharmacists to provide good quality, patient-centred care to patients they require a set of skills, attitudes and behaviours that are associated with professionalism and acting 'professionally'. Many of the skills, attitudes and behaviours related to professionalism that pharmacists possess can be acquired through practice-based experience during the pre-registration training year. At present, not enough is understood about professionalisation (the process whereby trainees develop the competencies, attitudes and behaviours of a professional pharmacist) during pre-registration training. Therefore, research is needed to address this gap in research and explore the different factors that are associated with this process of professionalisation throughout the pre-registration year. Exploring elements of professionalism and their development in trainees during the pre-registration year will improve our understanding of how professionalism is developed and changes through time and how it can be instilled within pre-registration trainees.

#### What is the purpose of this study?

This study aims to explore the process of professionalisation in trainees during the preregistration year in pharmacy. This study is being undertaken for educational purposes, as part of my PhD degree.

#### Why have I been chosen?

You have been chosen to take part in this study as you are a pre-registration trainee who has completed the MPharm degree and are currently undertaking pre-registration training in community or hospital pharmacy. We therefore feel you have the necessary knowledge and expertise to contribute to this research.

#### What will I have to do if I take part?

If you decide to take part in this study, you will take part in four interviews and complete four brief questionnaires during the course of the pre-registration training year.

The first interview will take place at the beginning of the training year with the subsequent three interviews taking place every four months after this. You will be provided with an outline of the topics that will be discussed so that you can think about them before you take part in the interview. The interview questions will touch upon your progress and professionalism during the pre-registration year. The interviews will be held at a convenient location or may be conducted over the telephone if necessary. Interviews will last for approximately 30-60 minutes. With your permission, the interviews will be sound recorded, transcribed and analysed. On transcription, the information will be anonymised. If you do not wish to be sound recorded, please indicate this to the chief investigator; you can still participate and he will simply take notes during the interviews.

You will also be asked to complete four brief questionnaires around the same time as the interviews and each questionnaire should take approximately 10 minutes to complete. The questions on the questionnaire ask you to rate yourself between 1 (needs significant improvement) and 5 (excellent) on a number of professional behaviours.

You will receive a £40 voucher and will be reimbursed for any travel expenses you incur for taking part in this study.

Information about you and your progress and professionalism during the pre-registration may also be discussed in two interviews and in two questionnaires with your pre-registration tutor. The interviews/questionnaires your tutor undertakes would be very similar to the interviews and questionnaires you complete, except the tutor will be asked to give answers in relation to your progress and professionalism during the training year from their perspective. Though you would not need to directly take part in these interviews/questionnaires, it is important that you would be happy for your tutor to discuss your progress and professionalism and that you give you consent for your tutor to take part in these interviews and complete the questionnaires.

#### Are there any risks or benefits to taking part?

It is hoped that participants will benefit from the process of reflection involved in the study and its relevance to lifelong learning. There are no anticipated risks to taking part in this study.

#### Will information about me remain confidential?

All information obtained from you or your pre-registration tutor will be kept strictly confidential. The exception to this is if there is discussion of seriously unsafe practices which have the potential to cause harm to patients and/or staff. Should this situation arise, these issues will be raised with the interviewee in the first instance. The interviewer, after discussing the case with his supervisory team, may have to break confidentiality and inform the pre-registration tutor and relevant authority if necessary. Should this occur, we will discuss the matter with you, making it clear what is being done to address the situation.

To ensure data about you is confidential, data will be anonymised and securely stored. Your personal details will not be used in any analysis of data. Any personal identifiable information will be destroyed when it is no longer needed for correspondence and other anonymised research data will be destroyed approximately five years after the last publication of the anonymised research findings take place. The study will respect confidentiality of others and you will be asked not to mention patients or colleagues by name. If any of these details are mentioned they will be promptly removed from the transcripts of the interview data.

#### Do I have to take part?

No. It is up to you to decide whether or not to take part. If you decide to take part you are still free to withdraw from the study at any time, and without giving a reason. It is perfectly acceptable to refuse to take part in this study or withdraw at any time without any personal or professional detriment. Your participation or non-participation will not be disclosed to anyone.

#### What if there is a problem?

If you have any concerns about any aspect of this study, you should speak with the chief investigator who will do his best to answer your questions (see contact details at the end of this form).

You may also wish to contact a member of the supervisory team:

Dr Ellen Schafheutle	Professor Peter Noyce
School of Pharmacy and Pharmaceutical Sciences	School of Pharmacy and Pharmaceutical Sciences
First floor, Stopford Building	First floor, Stopford Building
The University of Manchester	The University of Manchester
M13 9PT	M13 9PT
Telephone: 0161 275 7493	Telephone: 0161 275 2342
Email: ellen.schafheutle@manchester.ac.uk	Email: peter.noyce@manchester.ac.uk

If you remain unhappy and wish to complain formally, you can contact the University Research Office on 0161 275 2743. This contact is independent of the chief investigator and his supervisors.

#### Who has organised the study?

The study has been organised and funded by the School of Pharmacy & Pharmaceutical Sciences and the Centre for Pharmacy Workforce Studies at The University of Manchester.

#### Who has reviewed the study?

This study has been approved by the Newcastle and North Tyneside Research Ethics Proportionate Review Sub-Committee and The University of Manchester.

#### What do I do next?

Contact the chief investigator (Sam Jee) to demonstrate your interest in taking part in this research and to arrange an interview. It would be appreciated if you could also return a completed consent form.

#### **Contact details for further information**

If you wish to ask any questions about this study before deciding to take part, please do not hesitate to contact me:

Sam Jee Centre for Pharmacy Workforce Studies 1<sup>st</sup> Floor, Stopford Building University of Manchester Oxford Road, Manchester M13 9PT

Telephone: 0161 275 1807 Email: sam.jee@postgrad.manchester.ac.uk

## Thank you once again for taking the time to read through this information and considering taking part in this study.

## **Appendix 5: Participant information sheet (tutors)**



#### **PARTICIPANT INFORMATION SHEET**

Exploring the process of professionalisation during the pre-registration training year in pharmacy

#### Introduction

You are being invited to take part in a research study. Before you decide whether to take part, it is important for you to understand why the research is being carried out and what it involves for you. Please take time to read the following information carefully. Discuss it with others if you wish. If there is anything that is not clear or if you would like to receive more information, please feel free to contact the chief investigator (Sam Jee) on 0161 275 1807 or at <a href="mailto:sam.jee@postgrad.manchester.ac.uk">sam.jee@postgrad.manchester.ac.uk</a>. Take time to decide whether or not you wish to take part. Thank you for reading this information sheet.

#### What is this study about?

In order for pharmacists to provide good quality, patient-centred care to patients they require a set of skills, attitudes and behaviours that are associated with professionalism and acting 'professionally'. Many of the skills, attitudes and behaviours related to professionalism that pharmacists possess can be acquired through practice-based experience during the pre-registration training year. At present, not enough is understood about professionalisation (the process whereby trainees develop the competencies, attitudes and behaviours of a professional pharmacist) during pre-registration training. Therefore, research is needed to address this gap in research and explore the different factors that are associated with this process of professionalisation throughout the pre-registration year. Exploring elements of professionalism and their development in trainees during the pre-registration year will improve our understanding of how professionalism is developed and changes through time and how it can be instilled within pre-registration trainees. This study is being undertaken for educational purposes, as part of my PhD degree.

#### What is the purpose of this study?

This study aims to explore the process of professionalisation in trainees during the preregistration year in pharmacy. This study is being undertaken for educational purposes, as part of my PhD degree.

#### Why have I been chosen?

You have been chosen to take part in this study as you are a pre-registration tutor, currently acting as a tutor for a pre-registration trainee, and are working in a community or hospital pharmacy. We therefore feel you have the necessary knowledge and expertise to contribute to this research.

#### What will I have to do if I take part?

If you decide to take part in this study, you will take part in two interviews and complete two brief questionnaires during the course of the pre-registration training year.

The first interview will take place at the beginning of the training year with the second interview taking place either six months or twelve months later (i.e. half way through or at the end of the training year). You will be provided with an outline of the topics that will be discussed so that you can think about them before you take part in the interview. Interview questions will touch upon the trainee's progress in the training year and their professionalism.

The interviews will be held at a convenient location or may be conducted over the telephone if necessary. Interviews will last for approximately 30-60 minutes. With your permission, the interviews will be sound recorded, transcribed and analysed. On transcription, the information will be anonymised. If you do not wish to be sound recorded, please indicate this to the chief investigator; you can still participate and he will take notes during the interviews.

You will also be asked to complete two brief questionnaires around the same time as the interviews and each questionnaire should take approximately 10 minutes to complete. The questions on the questionnaire ask you to rate your trainee between 1 (needs significant improvement) and 5 (excellent) on a number of professional behaviours.

You will be reimbursed for reimbursed for any travel expenses you incur for taking part in this study.

#### Are there any risks or benefits to taking part?

It is hoped that participants will benefit from the process of reflection involved in the study and its relevance to lifelong learning. There are no anticipated risks to taking part in this study.

#### Will information about me remain confidential?

All information obtained from you or your pre-registration tutor will be kept strictly confidential. The exception to this is if there is discussion of seriously unsafe practices which have the potential to cause harm to patients and/or staff. Should this situation arise, the interviewer, after discussing the case with his supervisory team, may have to break confidentiality and inform the relevant authority. Should this occur, we will discuss the matter with you, making it clear what is being done to address the situation.

To ensure data about you is confidential, data will be anonymised and securely stored. Your personal details will not be used in any analysis of data. Any personal identifiable information will be destroyed when it is no longer needed for correspondence and other anonymised research data will be destroyed approximately five years after the last publication of the anonymised research findings take place. The study will respect confidentiality of others and you will be asked not to mention patients or colleagues by name. If any of these details are mentioned they will be promptly removed from the transcripts of the interview data.

#### Do I have to take part?

No. It is up to you to decide whether or not to take part. If you decide to take part you are still free to withdraw from the study at any time, and without giving a reason. It is perfectly acceptable to refuse to take part in this study or withdraw at any time without any personal or professional detriment. Your participation or non-participation will not be disclosed to anyone.

#### What if there is a problem?

If you have any concerns about any aspect of this study, you should speak with the researcher who will do his best to answer your questions (see contact details at the end of this form).

You may also wish to contact a member of the supervisory team:

Dr Ellen Schafheutle	Professor Peter Noyce
School of Pharmacy and Pharmaceutical Sciences	School of Pharmacy and Pharmaceutical Sciences
First floor, Stopford Building	First floor, Stopford Building
The University of Manchester	The University of Manchester
M13 9PT	M13 9PT
Telephone: 0161 275 7493	Telephone: 0161 275 2342

Email: ellen.schafheutle@manchester.ac.uk Email: peter.noyce@manchester.ac.uk

If you remain unhappy and wish to complain formally, you can contact the University Research Office on 0161 275 2743. This contact is independent of the chief investigator and his supervisors.

#### Who has organised the study?

The study has been organised and funded by the School of Pharmacy & Pharmaceutical Sciences and the Centre for Pharmacy Workforce Studies at The University of Manchester.

#### Who has reviewed the study?

This study has been approved by the Newcastle and North Tyneside Research Ethics Proportionate Review Sub-Committee and The University of Manchester.

#### What do I do next?

Contact the chief investigator (Sam Jee) to demonstrate your interest in taking part in this research and to arrange an interview. It would be appreciated if you could also return a completed consent form.

#### **Contact details for further information**

If you wish to ask any questions about this study before deciding to take part, please do not hesitate to contact me:

Sam Jee Centre for Pharmacy Workforce Studies 1<sup>st</sup> Floor, Stopford Building University of Manchester Oxford Road, Manchester M13 9PT

Telephone: 0161 275 1807 Email: sam.jee@postgrad.manchester.ac.uk

Thank you once again for taking the time to read through this information and considering taking part in this study.

## **Appendix 6: Consent form**



### CONSENT FORM

## Exploring the process of professionalisation during the pre-registration training year in pharmacy

If you agree with the statements below please place your initials in the box provided

I have read and understood the information sheet	
I have had an opportunity to ask questions and discuss this study	
I have received satisfactory answers to all my questions	
I have received enough information about the study	
I am happy for details about my training progress and professionalism to be discussed anonymously by my pre-registration tutor	
I understand that relevant sections of data collected during this study may be looked at by individuals from The University of Manchester,	
regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to	
have access to my records	

I understand that I am free to withdraw from the study at any time and	
without giving a reason for withdrawing without my legal rights	
being affected	
I agree to take part in the above study	
Participant giving consent:	
Name (Please Print)	
O'sea d	
Signed Date	
Percenter taking concents	
Researcher taking consent.	
Name (Please Print)	
Signed Date	

Please indicate how you would prefer to be contacted to arrange your participation in an interview. Please provide your telephone number / email address:

Telephone:	Email:

# Appendix 7: University ethics approval letter to conduct research for work stream 2

12073

Compliance and Risk Office University of Manchester

Oxford Road Manchester, M13 9PL

#### Secretary to Research Ethics Committees Room 2.004 John Owens Building

Tel: 0161 275 2206/2046 Fax: 0161 275 5697 Email: <u>timothy.stibbs@manchester.ac.uk</u>

ref: ethics/12073

Sam Jee, c/o Dr Ellen Schafheutlle, School of Pharmacy and Pharmaceutical Sciences, Stopford Building

20<sup>th</sup> June 2012

Dear Sam,

#### **Research Ethics Committee 4**

*Exploring the development of professionalism during the pre-registration training year in pharmacy* (ref 12073)

I write to thank you and Ellen for attending the meeting on 13<sup>th</sup> June and to confirm that, after the submission of the amended information sheet in your email of 18<sup>th</sup> June, the project has been given a favourable ethical opinion.

This approval is effective for a period of five years and if the project continues beyond that period it must be submitted for review. It is the Committee's practice to warn investigators that they should not depart from the agreed protocol without seeking the approval of the Committee, as any significant deviation could invalidate the insurance arrangements and constitute research misconduct. We also ask that any information sheet should carry a University logo or other indication of where it came from, and that, in accordance with University policy, any data carrying personal identifiers must be encrypted when not held on a university computer or kept as a hard copy in a location which is accessible only to those involved with the research.

Finally, I would be grateful if you could complete and return the attached form at the end of the project or by June 2013.

Yours sincerely

Dr T P C Stibbs Secretary to the University Research Ethics Committee

Enclosed: Report form

## **Appendix 8: Survey invitation letter**



School of Pharmacy and Pharmaceutical Sciences

The University of Manchester

1<sup>st</sup> Floor, Stopford Building

Oxford Road, Manchester

M13 9PT

#### Development of professionalism during the pre-registration training year

Dear Pre-registration trainee,

I am a PhD student and would like to invite you to take part in a study I am conducting. You have been selected, from a database of current training premises provided by the General Pharmaceutical Council, as you are currently doing your pre-registration training in Great Britain.

This study aims to examine how professionalism develops during the pre-registration year, and how elements of professionalism change as a result of factors such as supervision and involvement with patient care. I have undertaken a number of interviews with some of your fellow pre-registration trainees on several occasions during the training year which have informed the enclosed questionnaire. The findings from those interviews suggest that many skills related to professionalism are developed during the pre-registration training year when trainee pharmacists experience (some for the first time) working in practice, and dealing with patients and other healthcare professionals. I am now trying to examine this with a much larger number of pre-registration trainees.

I would really appreciate you spending **15-20 minutes** of your time to complete and return the enclosed questionnaire which contains sections about yourself, professional behaviours, individuals impacting on your development of professionalism and how much you believe you have mattered to patients. Please note that by completing and returning the questionnaire you are consenting to your responses being included in our study.

All returned questionnaires will be stored securely, and responses will be transferred and stored securely and anonymously on an encrypted computer. **Confidentiality will be maintained at all times**. Your contact details have only been used to contact you now, and for one reminder mailing. Each questionnaire has a unique ID number so that we know who to send a reminder to. Findings from this study will be published in a PhD thesis, journal articles and/or conference presentations, but your identity will never be disclosed. This study has been approved by The University of Manchester Ethics Committee.

Please contact me (or my supervisors) if you have any further questions about the study. If you agree to take part, we would ask that you complete the questionnaire booklet and send it back to us in the FREEPOST envelope provided. Many thanks.

Yours sincerely,

Some

Mr Samuel Jee, T: 0161 275 1807; E: <u>sam.jee@postgrad.manchester.ac.uk</u>

**Supervisors:** Dr. Ellen Schafheutle (**T**: 0161 275 7493; **E**: <u>ellen.schafheutle@manchester.ac.uk</u>) & Professor Peter Noyce (**T**: 0161 275 2342; **E**: <u>peter.noyce@manchester.ac.uk</u>)

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: Research-Governance@manchester.ac.uk, or by telephoning 0161 275 7583 or 275 8093.

### **Appendix 9: Survey reminder letter**



School of Pharmacy and Pharmaceutical Sciences The University of Manchester 1<sup>st</sup> Floor, Stopford Building Oxford Road, Manchester M13 9PT

#### RE: Development of professionalism during the pre-registration training year in pharmacy

Dear Pre-registration trainee,

I wrote to you recently to invite you to take part in a national survey of pre-registration trainees to examine the development of professionalism during the pharmacy pre-registration training year and possible factors associated with this. If you have recently completed and sent back the questionnaire, my sincerest apologies for sending you this reminder which you can ignore.

You have been selected, from a database of current training premises provided by the General Pharmaceutical Council, as you are currently doing your pre-registration training in Great Britain. **This study aims to examine how professionalism develops during the pre-registration year** and how elements of professionalism change as a result of factors such as supervision and involvement with patient care. I have undertaken a number of interviews with some of your fellow pre-registration trainees on several occasions during the training year which have informed the enclosed questionnaire. The findings from those interviews suggest that many skills related to professionalism are developed during the pre-registration training year when trainee pharmacists experience (some for the first time) working in practice, and dealing with patients and other healthcare professionals. I am now trying to examine this with a much larger number of pre-registration trainees.

I would really appreciate you spending **15-20 minutes** of your time to complete and return the enclosed questionnaire which contains sections about yourself, professional behaviours, individuals impacting on your development of professionalism and how much you believe you have mattered to patients. Please note that by completing and returning the questionnaire you are consenting to your responses being included in our study.

All returned questionnaires will be stored securely, and responses will be transferred and stored securely and anonymously on an encrypted computer. **Confidentiality will be maintained at all times**. Each questionnaire has a unique ID number so we can keep track of responses from the different training sites. Findings from this study will be published in a PhD thesis, journal articles and/or conference presentations, but your identity will never be disclosed. This study has been approved by The University of Manchester Ethics Committee.

Please contact me (or my supervisors) if you have any further questions about the study. If you agree to take part, we would ask that you complete the questionnaire booklet and send it back to us in the FREEPOST envelope provided. Many thanks.

Yours sincerely,

Sanfee

Mr Samuel Jee, T: 0161 275 1807; E: <u>sam.jee@postgrad.manchester.ac.uk</u>

**Supervisors:** Dr. Ellen Schafheutle (**T**: 0161 275 7493; **E**: <u>ellen.schafheutle@manchester.ac.uk</u>) & Professor Peter Noyce (**T**: 0161 275 2342; **E**: <u>peter.noyce@manchester.ac.uk</u>)

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Practice and Governance Co-ordinator by either writing to 'The Research Practice and Governance Co-ordinator, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL', by emailing: <u>Research-Governance@manchester.ac.uk</u>, or by telephoning 0161 275 7583 or 275 8093.

## Appendix 10: Trainee interview schedule (round 1)

Start with brief informal discussion about how pre-registration has been going to break the ice and open up conversation.

First interview will collect basic demographic details & place of MPharm study, details of preregistration post, past work experience in pharmacy.

#### Trainees' learning / development that has taken place

What skills do you think you have learnt and developed since *starting your training/ the last time we spoke*?

Probe: Anything else?

(follow with relevant prompts that explore four areas of professionalism: *patients, other professionals, self, public*):

#### prompt about patients

What about dealing effectively with patients/customers (*i.e. in terms of how patients would expect to be treated*), have you improved in this area since *starting pre-registration training/the last time we spoke*?

How so? Can you give an example of a time you believe you dealt effectively with a patient?

Can you give an example of a time you believe you didn't deal effectively with a patient?

What do you believe has contributed most in your ability to deal with patients? (e.g. upbringing, education (MPharm), practice experience)

#### prompt about other professionals

What about dealing effectively with work colleagues/other healthcare professionals (*i.e. in terms of how patients would expect to be treated*), have you improved in this area since starting pre-registration training/the last time we spoke?

How so? Can you give an example of a time you believe you dealt effectively with another colleague/healthcare professional?

Can you give an example of a time you believe you didn't deal effectively with another work colleague/other professional?

What do you believe has contributed most in your ability to deal with work colleagues/other professionals? (e.g. upbringing, education (MPharm), practice experience) Which people?

Have you improved in your ability to work with others as part of a team?

How so? Can you give an example?

prompt about self/public

Have you actively tried to improve your knowledge base and practical skills since starting preregistration training/the last time we spoke?

How so? Can you give an example this?

Do you believe you try to exceed expectations in working practices?

How so? Can you give an example?

Do you believe you dress appropriately for your role as a pharmacy professional? Is this important?

So, no one has made any comments about your how you are dressed?

Are you punctual - do you show up to work and engagements on time? Is this important?

So, no one has made any comments about your punctuality?

Where do you believe you learnt about these (previous 3 questions) aspects of pharmacy practice? (e.g. upbringing, education (MPharm), practice) Which people?

Professionalism is associated with ethical practice and attributes such as building trust and respecting confidentiality. Professionalism is also associated with demonstrating values such as honesty, empathy, altruism, compassion, and respect in your practice.

Do you exhibit these values in your day-to-day practice?

Where do you believe these aspects of professionalism were learnt or developed and how? (e.g. upbringing, education (MPharm), practice) Which people?

Do you think these are important values to have for your job role?

What is important?

Do you think anything has prevented or hindered you in developing competencies in these various areas of being a pharmacist (i.e. dealing with patients, colleagues/other professionals and self improvement and values)? For example, lack of help and support, busy environment, lack of motivation

#### Work colleagues and learning support during training

Who do you work with regularly?

Do you believe your work colleagues possess the attributes values of professionalism we discussed and exhibit them in their day-to-day practice?

Do you believe your work colleagues are able to deal effectively with patients, and work colleagues/ other professionals?

Do you believe your work colleagues possess good knowledge base and practical skills for

their job role?

Have you ever had a reason to doubt that your work colleagues possess all of these elements of professionalism? Can you give an example?

Do you believe your work colleagues are good role models (i.e. a person looked to by others as an example to be imitated)?

Who would you say have been your role models at work?

Do you believe that the way your work colleagues conduct themselves at work influences how you conduct yourself (i.e. do you try to align your behaviours to those of your colleagues)?

Who do you think has supported your learning since *starting/ the last time we spoke?* (e.g. tutor, trainer, mentor, other pharmacist, pharmacy technicians, others; probe where necessary) *Are different members of staff providing support at different times during the training year?* 

How have they helped you?

Do you receive feedback on the work you do?

If Yes > from who? What kind of feedback? In what form is it given (verbal / written)? Can you give an example of an event and feedback given?

Is this very beneficial for your development? What else do you think is beneficial?

Do you use any other documents or portfolios besides the pre-registration workbook?

If Yes > can you describe this/these?

Do you benefit from having/using any of these?

What skills have you developed by having this resource?

#### Preparedness to practise as a professional pharmacist

How prepared do you feel to practise as a *professional pharmacist* at this stage? (By professional pharmacist we mean a pharmacist who possesses the attitudes and behaviours expected by the profession and can carry out the role professionally – consider the aspects of professionalism we have talked about as well)

What competencies do you believe you are lacking in order to practise as a professional pharmacist?

What competencies do you believe you possess at this stage to practise as a professional pharmacist?

What performance standards have you met and had signed off?

Are there any that are simple to meet? Which ones? Why? (consider the different units: a) personal effectiveness; b) interpersonal skills; c) medicines and health)

Are there any that are hard to meet? Which ones? Why?

How are you achieving your performance standards (e.g. through evidence from various people, or mostly observations from tutor)?

Do you believe the performance standards guide your learning during training?

Do you think about what you need to know for the registration exam during your training and seek out ways to prepare for it during training?

Do you believe that the registration exam/syllabus guides your learning during training?

Do you believe the MPharm has helped prepare you to be a professional pharmacist?

How, in what areas? Give examples

Do you think prior practice experience has helped prepare you to be a professional pharmacist?

How, in what areas? Give examples

Has your concept of what professionalism is changed since *starting/ the last time we spoke?* (e.g. in comparison to what you learned about professionalism in the MPharm)

## Appendix 11: Trainee interview schedule (round 2)

#### Trainees' learning / development that has taken place

Start out with asking about how the pre-reg year has been going since the last interview

What kind of things they have been doing at work since the last interview

What skills do you think you have learnt and developed since the last time we spoke?

Probe: Anything else?

(follow with relevant prompts that explore four areas of professionalism: *patients, other professionals, self, public*):

#### prompt about patients

What about dealing effectively with patients/customers (*i.e. in terms of how patients would expect to be treated*), have you improved in this area since the last time we spoke?

How so? Can you give an example of a time you believe you dealt effectively with a patient?

Can you give an example of a time you believe you didn't deal effectively with a patient?

What did you learn about from this experience?

#### prompt about other professionals

What about dealing effectively with work colleagues/other healthcare professionals (*i.e. in terms of how patients would expect to be treated*), have you improved in this area since starting pre-registration training/the last time we spoke?

How so? Can you give an example of a time you believe you dealt effectively with another colleague/healthcare professional?

Can you give an example of a time you believe you didn't deal effectively with another work colleague/other professional?

What did you learn about from this experience?

Have you improved in your ability to work with others as part of a team?

Do you find yourself delegating tasks?

prompt about self/public

Have you improved your knowledge base and practical skills since the last time we spoke?

We discussed things such as clinical knowledge

How so? Can you give an example this? (go into a bit more detail about the 'clinical' stuff they are referring to)

Still get study time?

Have your responsibilities changed? How would you describe your role now?

As we've discussed before, professionalism is associated with ethical practice and attributes such as building trust and respecting confidentiality. Professionalism is also associated with demonstrating values such as honesty, empathy, altruism, compassion, and respect in your practice.

Can you think of time/an incident where you think you were able to effectively demonstrate these elements of professionalism

What about the other elements? (list ones not covered in the example)

Can you think of any incidents that have happened since we last spoke where you witnessed these elements of professionalism in practice? – you may not have been directly involved yourself

What did you learn about from this experience?

Did this have any impact on how you think about these elements of professionalism?

Have you improved in your ability to exhibit these values in your day to day practice?

What do you believe has allowed this to happen?

Is it important to you to strive to exhibit these elements of professionalism?

If there were no rules/standards in place for your professional behaviour do you think you would act differently?

Has your concept of what professionalism is changed since the last time we spoke? (e.g. in comparison to what you learned about professionalism in the MPharm)

Do you have a stronger appreciation for what professionalism is and why it is important?

What made this happen?

Have you faced any conflicts of interest in acting a way you would consider unprofessional due to the working environment? (e.g. feeling pressured to do something that may not be in the best interest of someone else)

Do you think anything has prevented or hindered you in developing competencies in these various areas of becoming a professional pharmacist (i.e. dealing with patients, colleagues/other professionals and self improvement and values)? *For example, lack of help and support, busy environment, lack of motivation* 

#### Work colleagues and learning support during training

Who have you been working with regularly since the last time we spoke? Have the people you work with changed? *Give reference to the people they mentioned in the first interview* 

Do you believe these people you have been working with possess the attributes values of professionalism we discussed and exhibit them in their day-to-day practice?

They are able to deal effectively with patients, and work colleagues/ other professionals?

They possess good knowledge base and practical skills for their job role?

Have you ever had a reason to doubt that your work colleagues possess all of these elements of professionalism?

If so, can you give an example? What did you learn from this experience?

You think these work colleagues are good role models (i.e. a person looked to by others as an example to be imitated)?

Who would you say have been your role models at work?

Do you believe that the way your work colleagues conduct themselves at work influences how you conduct yourself (i.e. do you try to align your behaviours to those of your colleagues)?

Who do you think has supported your learning since *the last time we spoke?* (e.g. tutor, trainer, mentor, other pharmacist, pharmacy technicians, others; probe where necessary) *Reference the members of staff mentioned previously (often dispensing staff & tutor)* 

How have they helped you?

Have you been receiving feedback on the work you do?

If Yes > from who? What kind of feedback (soft vs. hard skills)?

In what form is it given (verbal / written)? Can you give an example of an event and feedback given?

#### Preparedness to practise as a professional pharmacist

How prepared do you feel to practise as a professional pharmacist<sup>\*</sup> at this stage? (By professional pharmacist we mean a pharmacist who possesses the attitudes and behaviours expected by the profession and can carry out the role professionally – consider the aspects of professionalism we have talked about as well)

What competencies do you believe you are lacking in order to practise as a professional pharmacist?

What competencies do you believe you possess at this stage to practise as a professional pharmacist?

Do you have a better sense of the importance of the MPharm now that you have been working

for a bit longer?

Are you applying some of the things you learnt in the course more now?

Which aspects?

What performance standards have you met and had signed off now?

Are there any that are simple to meet? Which ones? Why? (consider the different units: a) personal effectiveness; b) interpersonal skills; c) medicines and health)

Are there any that are hard to meet? Which ones? Why?

How have you been achieving your performance standards (e.g. through evidence from various people, or mostly observations from tutor)?

Have the performance standards still been guiding your learning during training?

Have you been thinking about the registration exam since the last time we spoke and do you seek out ways to prepare for it during training?

Do you believe that the registration exam/syllabus guides your learning during training?

## Appendix 12: Trainee interview schedule (round 3)

#### Trainees' learning / development that has taken place

Start out with asking about how the pre-reg year has been going since the last interview

What kind of things they have been doing at work since the last interview

As we've discussed before, professionalism is associated with ethical practice and attributes such as building trust and respecting confidentiality. Professionalism is also associated with demonstrating values such as honesty, empathy, altruism, compassion, and respect in your practice.

You mentioned previously these are important for practice - how so?

How has pre-registration training made you realise the importance of them?

How so? Can you give an example of a time that made you realise the importance of these elements of professionalism?

Have you improved in your ability to exhibit these values in your day to day practice?

What do you believe has allowed this to happen? (e.g. opportunities with patients, help from colleagues, etc.)

Does the way you behave with patients and colleagues reflect how you think you should behave or want to behave? (i.e. Has your attitude/internal state changed in relation to these elements of professionalism as a result of being in practice during training?)

How have you learned about these aspects of professionalism during training? (e.g. observing and following; explicit instruction; feedback)

Probe specific elements (ethical practice, building trust and respecting confidentiality, honesty, empathy, altruism, compassion, and respect in your practice)

Is having the opportunity to engage with patients important in learning about these elements of professionalism? Do you think you have been provided with sufficient opportunities to do this?

How important is encountering and dealing with patients in learning and developing these elements of professionalism?

Would you say you have dealt with a variety of patients and scenarios?

Do people ever state the importance of these aspects?

Do you get feedback on how you portray these elements of professionalism with people? How and in what situations?

Can you think of time/an incident where you think you were able to effectively demonstrate these elements of professionalism

What about the other elements? (list ones not covered in the example)

Can you think of any incidents that have happened since we last spoke where you witnessed these elements of professionalism in practice? – you may not have been directly involved yourself

What did you learn about from this experience?

Did this have any impact on how you think about these elements of professionalism?

Have you faced any conflicts of interest in acting a way you would consider unprofessional due to the working environment? (e.g. feeling pressured to do something that may not be in the best interest of someone else)

What skills do you think you have learnt and developed since the last time we spoke?

Probe: Anything else?

#### prompt about patients

What about dealing effectively with patients/customers (*i.e. in terms of how patients would expect to be treated*), have you improved in this area since the last time we spoke?

How so? Can you give an example of a time you believe you dealt effectively with a patient?

Can you give an example of a time you believe you didn't deal effectively with a patient?

What did you learn about from this experience?

prompt about other professionals

Are you working more with anyone in particular now?

What about dealing effectively with work colleagues/other healthcare, have you improved in this area since the last time we spoke?

How so? Can you give an example of a time you believe you dealt effectively with another colleague/healthcare professional?

Can you give an example of a time you believe you didn't deal effectively with another work colleague/other professional?

What did you learn about from this experience?

Have you improved in your ability to work with others as part of a team?

Do you find yourself delegating tasks now?

prompt about self/public

Have you improved your knowledge base and practical skills since the last time we spoke?

(We discussed things such as clinical knowledge)

How so? Can you give an example this? (go into a bit more detail about the 'clinical' stuff they are referring to)

Study time? Same amount?

Have your responsibilities changed? How would you describe your role now?

Do you think anything has prevented or hindered you in developing competencies in these various areas of becoming a professional pharmacist (i.e. dealing with patients, colleagues/other professionals and self improvement and values)? *For example, lack of help and support, busy environment, lack of motivation.* 

#### Work colleagues and learning support during training

Are your work colleagues still exhibiting professional behaviours?

Any cases where they have / have not?

Who do you think has supported your learning since *the last time we spoke*? (e.g. tutor, trainer, mentor, other pharmacist, pharmacy technicians, others; probe where necessary) *Reference the members of staff mentioned previously (often dispensing staff & tutor)* 

How have they helped you?

You talked about your work colleagues being good role models – what makes them good role models?

What have you learnt from them? (probe elements of professionalism)

Have you been receiving feedback on the work you do?

If Yes > from who? What kind of feedback (soft vs. hard skills)?

In what form is it given (verbal / written)? Can you give an example of an event and feedback given?

What role has your pre-registration tutor played in helping you throughout this year?

#### Preparedness to practise as a professional pharmacist

How prepared do you feel to practise as a professional pharmacist at this stage? (By professional pharmacist we mean a pharmacist who possesses the attitudes and behaviours expected by the profession and can carry out the role professionally – consider the aspects of professionalism we have talked about as well)

What competencies do you believe you are lacking in order to practise as a professional pharmacist?

What competencies do you believe you possess at this stage to practise as a professional pharmacist?

What about all the professional attitudes and behaviours talked about, do you have these and do you think you are able to exhibit them?

Do you see them as important in being prepared to practice?

(Most did not mention they were lacking these professional behaviours at the initial stages – so how have they changed and why are they important?)

Do you have a better sense of the importance of the MPharm now that you have been working for a bit longer?

Are you applying some of the things you learnt in the course more now?

Which aspects?

Have you been thinking about the registration exam since the last time we spoke and do you seek out ways to prepare for it during training?

Do you believe that the registration exam/syllabus guides your learning during training?

# Appendix 13: NQP (former trainee) interview schedule (round 4)

#### Start of interview

- Cover information about where they are currently working
- Date when they finished pre-registration training/working at their pre-registration site
- Date when they started in their current role
- Get a basic overview/description of current job role

#### Transition into practising as a pharmacist

How has the transition from pre-registration training into practising as a pharmacist been?

What challenges have you faced?

Did the pre-registration year prepare you well for your current role?

How so? (or how did it not?)

Now that you are working as a pharmacist, is there anything you think should be changed about the pre-registration training year to better prepare you for practice?

#### Learning / development that has taken place

We spoke previously about professionalism which is associated with ethical practice and attributes such as building trust and respecting confidentiality. Professionalism is also associated with demonstrating values such as honesty, empathy, altruism, compassion, and respect in your practice...

Did pre-registration change your views of professionalism at all (e.g whether it is truly important for practice; if people you worked with met your expectations of how professionals should conduct themselves)?

Are possessing and demonstrating these elements of professionalism more important in your current role?

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How so? (or why not?)
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More so than during pre-registration training?

What role did the pre-registration training year have in developing these elements of professionalism?

What/who was involved in allowing you to develop in these areas?

#### Abilities with patients

What about dealing effectively with patients/customers (*i.e. in terms of how patients would expect to be treated*), have you improved in this area since starting in your new role?

How so?

Can you give an example of a time you believe you dealt effectively with a patient since starting your new role?

Can you give an example of a time you believe you didn't deal effectively with a patient since starting your new role?

Does your current role provide you with more or less opportunities than in pre-registration training to improve in this area?

How so? (or how does it not?)

How has pre-registration training aided your abilities in this area?

How so?

#### Abilities with colleagues / health care professionals

What about dealing effectively with work colleagues/other healthcare professionals - have you improved in this area since starting your new role?

How so?

Can you give an example of a time you believe you dealt effectively with another colleague/healthcare professional since starting your new role?

Can you give an example of a time you believe you didn't deal effectively with another work colleague/other professional since starting your new role?

Have you improved in your ability to work with others as part of a team?

How so? Can you give an example?

Does your current role provide you with more or less opportunities than in pre-registration training to improve in this area?

How so?

How has pre-registration training aided your abilities in this area?

How so?

#### <u>Self / public</u>

Have you actively tried to improve your knowledge base and any other practical skills since starting your new role?

How so? How has new role allowed this to happen?

Can you give an example this since starting your new role?

Have you had any issues with dress or punctuality?

#### Work environment / colleagues

Who have you been working with?

Do you believe these people you have been working with possess the attributes values of professionalism we discussed and exhibit them in their day-to-day practice?

Who would you consider to be good role models (*i.e. a person looked to by others as an example to be imitated*)?

Why? What have you learned from them?

Who can you turn to for help?

Who do you turn to for help?

Do you feel isolated?

How does this working environment compare to your working environment during preregistration training?

How is it similar? How is it different?

Does this working environment have an impact on your working practices (e.g. in dealing with patients and carrying out tasks in a different way than in your training site)?

Do you think anything has prevented or hindered you in developing as a more well-rounded professional pharmacist (i.e. dealing with patients, colleagues/other professionals and self improvement and values)? For example, lack of help and support, busy environment, lack of motivation.

## Appendix 14: Tutor interview schedule (round 1)

Start with brief informal discussion about how pre-registration has been going to break the ice and open up conversation.

First interview will collect basic demographic details & details of post, past work experience in pharmacy and years of experience; years of being a pre-registration tutor (if applicable)

#### Trainees' learning /development that has taken place

What skills do you think the pre-registration trainee in your workplace has developed and improved in since they *started training/ the last time we spoke*?

Probe: Anything else?

(follow with relevant prompts that explore four areas of professionalism: *patients, other professionals, self, public*):

#### prompt about patients

What about dealing effectively with patients/customers (*i.e. in terms of how patients would expect to be treated*), have they improved in this area since *starting pre-registration training/the last time we spoke?* 

How so? Can you give an example of a time you believe they dealt effectively with a patient?

Can you give an example of a time you believe they didn't deal effectively with a patient?

#### prompt about other professionals

What about dealing effectively with work colleagues/other healthcare professionals (*i.e. in terms of how patients would expect to be treated*), have they improved in this area since *starting pre-registration training/the last time we spoke?* 

How so? Can you give an example of a time you believe they dealt effectively with another colleague/healthcare professional?

Have they improved in their ability to work with others as part of a team?

How so? Can you give an example?

Can you give an example of a time you believe they didn't deal effectively with another work colleague/other professional?

#### prompt about self/public

Do you think they have actively tried to improve their knowledge base and technical skills since starting pre-registration training/the last time we spoke?

How so? Can you give an example this?

Do you believe they have tried to exceed expectations in working practices?

How so? Can you give an example?

Do you believe they dress appropriately for their role as a pharmacy professional?

Are they punctual - do they show up to work and engagements on time?

Professionalism is associated with ethical practice and attributes such as building trust and respecting confidentiality. Professionalism is also associated with demonstrating honesty, empathy, altruism, compassion, and respect in your practice<sup>3</sup>.

Do you believe the trainee exhibits these attributes and values in their day-to-day practice?

Have you ever had a reason to doubt that the trainee possesses these elements of professionalism? Can you give an example?

Have you witnessed the trainee's improvement in these areas, or has it been somewhat consistent since the trainee started?

Do you think it is hard to measure and see improvement such aspects of professionalism?

Do you think these are important values to have for your job role? What is important?

#### Work colleagues and learning support during training

Do you work with the trainee regularly? How often?

Do you believe that your work colleagues possess the core values of professionalism we discussed and exhibit them in their day-to-day practice?

Do you believe your work colleagues are able to deal effectively with patients, and work colleagues/ other professionals?

Do you believe your work colleagues possess a good knowledge base and practical skills for their job role?

Have you ever had a reason to doubt that your work colleagues possess these elements of professionalism? Can you give an example?

Do you believe *you* and your work colleagues are good role models (i.e. a person looked to by others as an example to be imitated)?

What help and support have you been providing to the trainee since they started/ the last time we spoke?

How do you help/support them?

Do you provide much feedback on the work they do?

If Yes > When do you give feedback?

In what form is it given (verbal / written)?

Can you give an example of an event and feedback given?

Does your trainee use any other documents or portfolios besides the pre-registration workbook?

If Yes > can you describe this/these?

In what way do you think this/these resource(s) benefit the trainee?

#### Preparedness to practise as a professional pharmacist

How ready do you believe the trainee is to practise as a *professional pharmacist* at this stage? (\*By professional pharmacist we mean a pharmacist who possesses the attitudes and behaviours expected by the profession and can carry out the role professionally – consider the aspects of professionalism we have talked about as well)

What competencies do you believe the trainee is lacking in order to practise as a professional pharmacist?

What competencies do you believe the trainee possesses at this stage to practise as a professional pharmacist?

Do you have any doubts or worries about the way the trainee has been conducting themselves at work?

If yes > do you express these issues to the trainee and make note of this in assessments and reviews?

What performance standards have you signed off for your trainee?

Which performance standards do you believe have easiest for the trainee to meet and get signed off? (consider the different units: a) personal effectiveness; b) interpersonal skills; c) medicines and health)

Are there any that have been hard to meet, or you think will take more time for the trainee to achieve? Which ones? Why?

Do you sign performance standards off based mostly on observations or does the trainee bring a lot of evidence?

Do you think meeting all the performance standards is a good benchmark for being ready to practise as a professional pharmacist?

Do you believe the performance standards are a useful guide to have during training?

Do you consider the registration exam/syllabus when helping your trainee during training?

Do you consider the registration exam/syllabus when guiding the trainee during training (i.e.

directing your teaching to help the trainee to be prepared for the exam)?

## Appendix 15: Tutor interview schedule (round 3)

#### Trainees' learning /development that has taken place

Start out with asking about how the pre-reg year has been going since the last interview

What skills do you think the pre-registration trainee in your workplace has developed and improved in since they *started training/ the last time we spoke*?

Probe: Anything else?

(follow with relevant prompts that explore four areas of professionalism: *patients, other professionals, self, public*):

#### prompt about patients

What about dealing effectively with patients/customers (*i.e. in terms of how patients would expect to be treated*), have you witnessed improvement in this area since *starting pre-registration training/the last time we spoke*?

How so? Can you give an example of a time you believe they dealt effectively with a patient? How would this differ from they way they may have handled the situation earlier or at the beginning of training?

Can you give an example of a time you believe they didn't deal effectively with a patient?

Any evidence that they learned from this? What?

#### prompt about other professionals

What about dealing effectively with work colleagues/other healthcare professionals (*i.e. in terms of how patients would expect to be treated*), have they improved in this area since *starting pre-registration training/the last time we spoke?* 

How so? Can you give an example of a time you believe they dealt effectively with another colleague/healthcare professional? How would this differ from they way they may have handled the situation earlier or at the beginning of training?

Have they improved in their ability to work with others as part of a team?

How so? Can you give an example?

Can you give an example of a time you believe they didn't deal effectively with another work colleague/other professional?

Any evidence that they learned from this? What?

#### prompt about self/public

Do you think they have actively tried to improve their knowledge base and technical skills since starting pre-registration training/the last time we spoke?
In what way have their responsibilities changed over the year?

We previously talked about professionalism which is associated with ethical practice and attributes such as building trust and respecting confidentiality. Professionalism is also associated with demonstrating honesty, empathy, altruism, compassion, and respect in your practice.

At the beginning of the year you seemed confident that the trainee possessed these attributes of professionalisms. Is this still the case – were your initial judgements right?

How do you know this is the case?

Do you believe the trainee exhibits these elements of professionalism in their day-to-day practice? Can you give an example?

Have you ever had a reason to doubt that the trainee possesses these elements of professionalism? Can you give an example?

Have you witnessed the trainee's improvement in these areas, or has it been somewhat consistent since the trainee started?

Do you express the importance of these values/attributes to the trainee? If so, how?

Do you give feedback on these elements of professionalism and how the trainee is demonstrating them?

Can you give an example of a time you did this?

Would you say you try to model the appropriate behaviours for the trainee to follow when dealing with patients?

Do you provide them with sufficient opportunities to deal with patients? Is this important for the trainee to develop these elements of professionalism?

# Work colleagues and learning support during training

Previously you mentioned you were confident in the professionalism of your colleagues who may work alongside the trainee. Is this still the case? Has there been any incidents which have made you doubt this?

Do you believe your work colleagues are still good role models (i.e. a person looked to by others as an example to be imitated)?

What help and support have you been providing to the trainee since they started/ the last time we spoke?

How do you help/support them?

Have you been providing much feedback on the work they do?

If Yes > When do you give feedback?

In what form is it given (verbal / written)?

Can you give an example of an event and feedback given?

## Preparedness to practise as a professional pharmacist

How ready do you believe the trainee is to practise as a *professional pharmacist*\* at this stage? (\*By professional pharmacist we mean a pharmacist who possesses the attitudes and behaviours expected by the profession and can carry out the role professionally – consider the aspects of professionalism we have talked about as well)

What competencies do you believe the trainee is lacking in order to practise as a professional pharmacist?

What competencies do you believe the trainee possesses at this stage to practise as a professional pharmacist?

Do you have any doubts or worries about the way the trainee has been conducting themselves at work?

If yes > do you express these issues to the trainee and make note of this in assessments and reviews?

Did you sign performance standards off based mostly on observations or does the trainee bring a lot of evidence?

Do you consider the registration exam/syllabus when helping your trainee during training?

Do you consider the registration exam/syllabus when guiding the trainee during training (i.e. directing your teaching to help the trainee to be prepared for the exam)?

# Appendix 16: Trainee behavioural professionalism questionnaire (rounds 1-3)

#### INSTRUCTIONS:

Rate yourself by circling the appropriate number on the following items using the rating system described below. A rating of 3 should serve as the starting point. If you feel you are satisfactory, "average," or met minimum requirements for a particular item, rate yourself a "3" for that item. If you have demonstrated above average or excellent performance for a particular item, rate yourself a "4" or "5," respectively. Conversely, if you think you performed below average or unsatisfactorily on a particular item, rate yourself a "2" or "1," respectively.

Base your ratings on your overall impressions of your behaviour at this stage in your training.

Rating descriptor guides:

5 = I demonstrate excellent skills in this area; I am extremely effective and/or very consistent (could serve as a model).

4 = I demonstrate very good skills in this area; I am above average in effectiveness and/or consistency.

3 = I demonstrate satisfactory skills in this area; I am generally effective and/or consistent (appropriate for this level).

2 = I need some improvement in this area; I am somewhat ineffective and/or inconsistent.

1.	I am reliable and dependable, <i>i.e.</i> , can be counted on to fulfil responsibilities and meet expectations.	5	4	3	2	1
2.	I practise personal hygiene, <i>i.e.</i> , maintain personal health and grooming habits acceptable to practice setting.	5	4	3	2	1
3.	I produce quality work, <i>i.e.</i> , tasks and assignments are complete, accurate, and meet their respective objectives.	5	4	3	2	1
4.	I am empathetic, <i>i.e.</i> , demonstrate appreciation of others' positions; attempt to identify with others' perspectives; demonstrates consideration towards others.	5	4	3	2	1
5.	I behave in an ethical manner, <i>i.e.</i> , act in patients' best interests; act in accordance with the profession's and/or practice site's code of ethics.	5	4	3	2	1
6.	I communicate articulately, <i>i.e.</i> , clearly communicate thoughts; use appropriate terminology and vocabulary for intended audience.	5	4	3	2	1
7.	I am punctual, <i>i.e.</i> , arrive at practice site and meetings early or on time; meet deadlines for completion of tasks and responsibilities.	5	4	3	2	1
8.	I use time efficiently, <i>i.e.</i> , allocate and utilise appropriate amounts of time to fulfill responsibilities; utilise others' time wisely.	5	4	3	2	1
9.	I am self-directed in undertaking tasks, <i>i.e.</i> , after initial instruction of tasks/assignments/responsibilities, initiate activities to complete them; self-motivated; function independently; seek additional tasks after completing originals.	5	4	3	2	1
10.	I maintain confidentiality, <i>i.e.</i> , engage in discussions or other activities involving patient- and/or site-specific information for purposes of fulfilling professional responsibilities <u>only</u> ; maintain confidential nature of patient- and/or site-specific documents.	5	4	3	2	1

SEE OTHER SIDE

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<sup>1 =</sup> I need significant improvement in this area; I am ineffective and/or inconsistent (performance was unsatisfactory).

#### Rating descriptor guides:

5 = I demonstrate excellent skills in this area; I am extremely effective and/or very consistent (could serve as a model).

4 = I demonstrate very good skills in this area; I am above average in effectiveness and/or consistency.
 3 = I demonstrate satisfactory skills in this area; I am generally effective and/or consistent (appropriate for this level).

2 = I need some improvement in this area; I am somewhat ineffective and/or inconsistent. 1 = I need significant improvement in this area; I am ineffective and/or inconsistent (performance was unsatisfactory).

11.	I am respectful, <i>i.e.</i> , demonstrate regard for patients, superiors, colleagues, other personnel, and property.	5	4	3	2	1
12.	I communicate using appropriate body language, <i>i.e.</i> , utilise gestures and mannerisms that enhance formal and informal communication.	5	4	3	2	1
13.	I demonstrate accountability, <i>i.e.</i> , hold myself liable for tasks/ duties/responsibilities that I am responsible for; do not blame others for mistakes or mishaps, nor avoid responsibilities.	5	4	3	2	1
14.	I prioritise responsibilities effectively, <i>i.e.</i> , organise and approach multiple tasks and assignments in a manner to produce desired outcomes.	5	4	3	2	1
15.	I accept and apply constructive criticism, <i>i.e.</i> , respond openly and positively to feedback; modify behaviour if necessary.	5	4	3	2	1
16.	I put others' needs above my own, <i>i.e.</i> , demonstrate an attitude of service by taking the necessary time and actions to help others; give of oneself to benefit others.	5	4	3	2	1
17.	I am nonjudgmental, <i>i.e.</i> , demonstrate an attitude of open-mindedness towards others and situations; do not "stereotype" others or prejudge situations.	5	4	3	2	1
18.	I communicate assertively, <i>i.e.</i> , actively and appropriately engage in dialogue or discussion; not afraid to provide my viewpoint.	5	4	3	2	1
19.	I am an active learner, <i>i.e.</i> , seek knowledge; ask questions; search for information; take responsibility for own learning.	5	4	3	2	1
20.	I am cooperative, <i>i.e.</i> , non-argumentative; willing and helpful.	5	4	3	2	1
21.	I am diplomatic, <i>i.e.</i> , fair and tactful in all dealings with patients, superiors, colleagues, and other personnel.	5	4	3	2	1
22.	I "follow through" with responsibilities, <i>i.e.</i> , if task is left incomplete or problem is not resolved, seek aid or explain situation to parties who can follow-up on task or problem.	5	4	3	2	1
23.	I wear appropriate attire, <i>i.e.</i> , adhere to dress code (written or unwritten); attire is acceptable to practice setting.	5	4	3	2	1
24.	I demonstrate confidence, <i>i.e.</i> , act and communicate in a self-assured manner, yet with modesty and humility.	5	4	3	2	1
25.	I demonstrate a desire to exceed expectations, <i>i.e.</i> , go "above and beyond the call of duty;" attempt to exceed minimal standards and requirements for tasks/assignments/responsibilities.	5	4	3	2	1

Thank you for completing this questionnaire

Exploring professionalisation in pharmacy pre-registration training - Trainee questionnaire v.1 - 08/07/11

# Appendix 17: Tutor behavioural professionalism questionnaire (round 1 and 3)

#### INSTRUCTIONS:

Rate your trainee by circling the appropriate number on the following items using the rating system described below. A rating of 3 should serve as the starting point. If you feel your trainee is satisfactory, "average," or met minimum requirements for a particular item, rate them with a "3" for that item. If they have demonstrated above average or excellent performance for a particular item, rate them with a "4" or "5," respectively. Conversely, if you think they performed below average or unsatisfactorily on a particular item, rate them with a "2" or "1," respectively.

Base your ratings on your overall impressions of the trainee's behaviour at this stage in the training year.

#### Rating descriptor guides:

5 = Trainee demonstrates excellent skills in this area; trainee is extremely effective and/or very consistent (could serve as a model).

4 = Trainee demonstrates very good skills in this area; trainee is <u>above average in effectiveness</u> and/or consistency.

3 = Trainee demonstrates satisfactory skills in this area; trainee is generally effective and/or consistent (appropriate for this level).

2 = Trainee <u>needs some improvement</u> in this area; trainee is <u>somewhat ineffective</u> and/or <u>inconsistent</u>.

1 = Trainee needs significant improvement in this area; trainee is ineffective and/or inconsistent (performance was unsatisfactory).

1.	Trainee is reliable and dependable, <i>i.e.</i> , can be counted on to fulfil responsibilities and meet expectations.	5	4	3	2	1
2.	Trainee practises personal hygiene, <i>i.e.</i> , maintains personal health and grooming habits acceptable to practice setting.	5	4	3	2	1
3.	Trainee produces quality work, <i>i.e.</i> , tasks and assignments are complete, accurate, and meet their respective objectives.	5	4	3	2	1
4.	<b>Trainee is empathetic</b> , <i>i.e.</i> , demonstrates appreciation of others' positions; attempts to identify with others' perspectives; demonstrates consideration towards others.	5	4	3	2	1
5.	Trainee behaves in an ethical manner, <i>i.e.</i> , acts in patients' best interests; acts in accordance with the profession's and/or practice site's code of ethics.	5	4	3	2	1
6.	Trainee communicates articulately, <i>i.e.</i> , clearly communicates thoughts; uses appropriate terminology and vocabulary for intended audience.	5	4	3	2	1
7.	Trainee is punctual, <i>i.e.</i> , arrives at practice site and meetings early or on time; meets deadlines for completion of tasks and responsibilities.	5	4	3	2	1
8.	Trainee uses time efficiently, <i>i.e.</i> , allocates and utilises appropriate amounts of time to fulfil responsibilities; utilises others' time wisely.	5	4	3	2	1
9.	Trainee is self-directed in undertaking tasks, <i>i.e.</i> , after initial instruction of tasks/assignments/responsibilities, initiates activities to complete them; self-motivated; functions independently; seeks additional tasks after completing originals.	5	4	3	2	1
10.	Trainee maintains confidentiality, <i>i.e.</i> , engages in discussions or other activities involving patient- and/or site-specific information for purposes of fulfilling professional responsibilities <u>only</u> ; maintains confidential nature of patient- and/or site-specific documents	5	4	3	2	1
	WOLDERARD.	(si	EE O	THE	R SI	DE

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Rating descriptor guides:

5 = Trainee demonstrates <u>excellent</u> skills in this area; trainee is <u>extremely effective</u> and/or <u>very consistent</u> (could serve as a model).
 4 = Trainee demonstrates <u>very good</u> skills in this area; trainee is <u>above average in effectiveness</u> and/or <u>consistency</u>.
 3 = Trainee demonstrates <u>satisfactory</u> skills in this area; trainee is <u>generally effective</u> and/or <u>consistent</u> (appropriate for this level).

2 = Trainee needs some improvement in this area; trainee is somewhat ineffective and/or inconsistent. 1 = Trainee needs significant improvement in this area; trainee is ineffective and/or inconsistent (performance was unsatisfactory).

11.	Trainee is respectful, <i>i.e.</i> , demonstrates regard for patients, superiors, colleagues, other personnel, and property; acts in a manner that shows recognition that he/she is a guest at the practice site as a professional student.	5	4	3	2	1
12.	Trainee communicates using appropriate body language, <i>i.e.</i> , utilises gestures and mannerisms that enhance formal and informal communication.	5	4	3	2	1
13.	Trainee demonstrates accountability, <i>i.e.</i> , holds oneself liable for tasks/ duties/responsibilities that he/she is responsible; does not blame others for mistakes or mishaps, nor avoids responsibilities.	5	4	3	2	1
14.	Trainee prioritises responsibilities effectively, <i>i.e.</i> , organises and approaches multiple tasks and assignments in a manner to produce desired outcomes.	5	4	3	2	1
15.	Trainee accepts and applies constructive criticism, <i>i.e.</i> , responds openly and positively to feedback; modifies behaviour if necessary.	5	4	3	2	1
16.	Trainee puts others' needs above his/her own, <i>i.e.</i> , demonstrates an attitude of service by taking the necessary time and actions to help others; gives of oneself to benefit others.	5	4	3	2	1
17.	Trainee is nonjudgmental, <i>i.e.</i> , demonstrates an attitude of open-mindedness towards others and situations; does not "stereotype" others or prejudge situations.	5	4	3	2	1
18.	Trainee communicates assertively, <i>i.e.</i> , actively and appropriately engages in dialogue or discussion; not afraid to provide his/her viewpoint.	5	4	3	2	1
19.	Trainee is an active learner, <i>i.e.</i> , seeks knowledge; asks questions; searches for information; takes responsibility for own learning.	5	4	3	2	1
20.	Trainee is cooperative, <i>i.e.</i> , non-argumentative; willing and helpful.	5	4	3	2	1
21.	Trainee is diplomatic, <i>i.e.</i> , is fair and tactful in all dealings with patients, superiors, colleagues, and other personnel.	5	4	3	2	1
22.	Trainee "follows through" with responsibilities, <i>i.e.</i> , if task is left incomplete or problem is not resolved, student seeks aid or explains situation to parties who can follow-up on task or problem.	5	4	3	2	1
23.	Trainee wears appropriate attire, <i>i.e.</i> , adheres to dress code (written or unwritten); attire is acceptable to practice setting.	5	4	3	2	1
24.	Trainee demonstrates confidence, <i>i.e.</i> , acts and communicates in a self-assured manner, yet with modesty and humility.	5	4	3	2	1
25.	Trainee demonstrates a desire to exceed expectations, <i>i.e.</i> , goes "above and beyond the call of duty;" attempts to exceed minimal standards and requirements for tasks / assignments/responsibilities.	5	4	3	2	1

Thank you for completing this questionnaire

Exploring professionalisation in pharmacy pre-registration training - Tutor questionnaire v.1 - 08/07/11

# Appendix 18: NQP (former trainee) behavioural professionalism questionnaire (round 4)

#### INSTRUCTIONS:

We are interested in how you believe your ability to demonstrate professionalism, according to a range of professional behaviours, has changed as a result of training during the pre-registration year.

On the 25 statements in the following table, rate yourself at two different time points: **now** – during the early stages of working as a registered pharmacist, and at the **beginning** of the pre-registration training year in 2011.

Do this by circling the appropriate number using the rating descriptor guides described below. A rating of 3 should serve as the starting point. If you feel you are satisfactory, "average," or met minimum requirements for a particular item, rate yourself a "3" for that item. If you have demonstrated above average or excellent performance for a particular item, rate yourself a "4" or "5," respectively. Conversely, if you think you performed below average or unsatisfactorily on a particular item, rate yourself a "2" or "1," respectively.

#### Rating descriptor guides:

5 = I demonstrate excellent skills in this area; I am extremely effective and/or very consistent (could serve as a model).

4 = I demonstrate very good skills in this area; I am above average in effectiveness and/or consistency.

3 = I demonstrate satisfactory skills in this area; I am generally effective and/or consistent but need some improvement (appropriate for this level).

2 = I need some improvement in this area; I am somewhat ineffective and/or inconsistent.

**1** = I need significant improvement in this area; I am ineffective and/or inconsistent (performance was unsatisfactory).

		RATINGS (please cir				
STATEMENTS		NOW	At the beginning of training			
1	Being reliable and dependable, <i>i.e.</i> , can be counted on to fulfil responsibilities and meet expectations.	54321	54321			
2	Practising personal hygiene, i.e., maintaining personal health and grooming habits acceptable to practice setting.	54321	54321			
3	Producing quality work, <i>i.e.</i> , tasks and assignments are complete, accurate, and meet their respective objectives.	54321	54321			
4	Being empathic, <i>i.e.</i> , demonstrating appreciation of others' positions; attempting to identify with others' perspectives; demonstrating consideration towards others.	54321	54321			
5	Behaving in an ethical manner, <i>i.e.</i> , acting in patients' best interests; acting in accordance with the profession's and/or practice site's code of ethics.	54321	54321			
6	Communicating articulately, <i>i.e.</i> , clearly communicating thoughts; using appropriate terminology and vocabulary for intended audience.	54321	54321			
7	Being punctual, <i>i.e.</i> , arriving at practice site and meetings early or on time; meeting deadlines for completion of tasks and responsibilities.	54321	54321			

		RATINGS	(please circle)
STA	TEMENTS	NOW	At the beginning of training
8	Using time efficiently, <i>i.e.</i> , allocating and utilising appropriate amounts of time to fulfil responsibilities; utilising others' time wisely.	54321	54321
9	Being self-directed in undertaking tasks, <i>i.e.</i> , after initial instruction of tasks/assignments/responsibilities, initiating activities to complete them; being self-motivated; functioning independently; seeking additional tasks after completing originals.	54321	54321
10	Maintaining confidentiality, <i>i.e.</i> , engaging in discussions or other activities involving patient- and/or site-specific information for purposes of fulfilling professional responsibilities <u>only</u> ; maintaining confidential nature of patient-and/or site-specific documents.	54321	54321
11	Being respectful, <i>i.e.</i> , demonstrating regard for patients, superiors, colleagues, other personnel, and property.	5 4 3 2 1	54321
12	Communicating using appropriate body language, <i>i.e.</i> , utilising gestures and mannerisms that enhance formal and informal communication.	54321	54321
13	Demonstrating accountability, <i>i.e.</i> , holding myself liable for tasks/ duties/responsibilities that I am responsible for; not blaming others for mistakes or mishaps, nor avoid responsibilities.	54321	54321
14	<b>Prioritising</b> responsibilities effectively, <i>i.e.</i> , organising and approaching multiple tasks and assignments in a manner to produce desired outcomes.	54321	54321
15	Accepting and applying constructive criticism, <i>i.e.</i> , responding openly and positively to feedback; modifying behaviour if necessary.	54321	54321
16	<b>Putting</b> others' needs above my own, <i>i.e.</i> , demonstrating an attitude of service by taking the necessary time and actions to help others; giving of oneself to benefit others.	54321	54321
17	Being nonjudgmental, <i>i.e.</i> , demonstrating an attitude of open-mindedness towards others and situations; not "stereotyping" others or prejudging situations.	54321	54321
18	<b>Communicating</b> assertively, <i>i.e.</i> , actively and appropriately engaging in dialogue or discussion; not afraid to provide my viewpoint.	54321	54321
19	Being an active learner, <i>i.e.</i> , seeking knowledge; asking questions; searching for information; taking responsibility for own learning.	54321	54321
20	Being cooperative, i.e., non-argumentative; willing and helpful.	54321	54321
21	Being diplomatic, <i>i.e.</i> , fair and tactful in all dealings with patients, superiors, colleagues, and other personnel.	54321	54321
22	<b>"Following through" with responsibilities</b> , <i>i.e.</i> , if task is left incomplete or problem is not resolved, will seek aid or explain situation to parties who can follow-up on task or problem.	54321	54321
23	Wearing appropriate attire, <i>i.e.</i> , adhering to dress code (written or unwritten); attire is acceptable to practice setting.	54321	54321
24	<b>Demonstrating confidence</b> , <i>i.e.</i> , acting and communicating in a self-assured manner, yet with modesty and humility.	54321	54321
25	<b>Demonstrating a desire to exceed expectations</b> , <i>i.e.</i> , going "above and beyond the call of duty;" attempting to exceed minimal standards and requirements for tasks/assignments/responsibilities.	54321	54321

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# Appendix 19: Questionnaire used in work stream 2

#### MANCHESTER 1824

The University of Manchester ID No:

# Exploring the development of professionalism during the pre-registration training year in pharmacy

#### Section 1: Professional Behaviours

We are interested in how you believe your ability to demonstrate professionalism, according to a range of professional behaviours, has changed as a result of training during the pre-registration year.

On the 25 statements in the following table, rate yourself at two different time points: at the beginning of the pre-registration training year, and now – near the end of the pre-registration training year.

Do this by circling the appropriate number using the rating descriptor guides described below. A rating of 3 should serve as the starting point. If you feel you are satisfactory, "average," or met minimum requirements for a particular item, rate yourself a "3" for that item. If you have demonstrated above average or excellent performance for a particular item, rate yourself a "4" or "5," respectively. Conversely, if you think you performed below average or unsatisfactorily on a particular item, rate yourself a "2" or "1," respectively.

#### Rating descriptor guides:

5 = I demonstrate excellent skills in this area; I am extremely effective and/or very consistent (could serve as a model).

4 = I demonstrate very good skills in this area; I am above average in effectiveness and/or consistency.

3 = I demonstrate satisfactory skills in this area; I am generally effective and/or consistent but need some improvement (appropriate for this level).

2 = I need some improvement in this area; I am somewhat ineffective and/or inconsistent.

1 = I need significant improvement in this area; I am ineffective and/or inconsistent (performance was unsatisfactory).

KAII	NGS (	please circle)
STATEMENTS At ti begins of train	ie iing iing	NOW – near the end of training
<b>1</b> Being reliable and dependable, <i>i.e.</i> , can be counted on to fulfil responsibilities 5 4 3 and meet expectations.	2 1	54321
2 Practising personal hygiene, <i>i.e.</i> , maintaining personal health and grooming 5 4 3 habits acceptable to practice setting.	2 1	54321
<b>3 Producing quality work</b> , <i>i.e.</i> , tasks and assignments are complete, accurate, and 5 4 3 meet their respective objectives.	2 1	54321
4 Being empathic, <i>i.e.</i> , demonstrating appreciation of others' positions; attempting 5 4 3 to identify with others' perspectives; demonstrating consideration towards others.	2 1	54321
5 Behaving in an ethical manner, <i>i.e.</i> , acting in patients' best interests; acting in 5 4 3 accordance with the profession's and/or practice site's code of ethics.	2 1	54321
6 Communicating articulately, <i>i.e.</i> , clearly communicating thoughts; using appropriate terminology and vocabulary for intended audience. 5 4 3	2 1	54321
7 Being punctual, <i>i.e.</i> , arriving at practice site and meetings early or on time; 5 4 3 meeting deadlines for completion of tasks and responsibilities.	2 1	54321

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		RATINGS	(please circle)			
		At the	NOW - near			
STATEMENTS			the end of			
	•	of training	training			
8	Using time efficiently, <i>i.e.</i> , allocating and utilising appropriate amounts of time to fulfil responsibilities; utilising others' time wisely.	54321	54321			
9	Being self-directed in undertaking tasks, <i>i.e.</i> , after initial instruction of tasks/assignments/responsibilities, initiating activities to complete them; being self-motivated; functioning independently; seeking additional tasks after completing originals.	54321	54321			
10	Maintaining confidentiality, <i>i.e.</i> , engaging in discussions or other activities involving patient- and/or site-specific information for purposes of fulfilling professional responsibilities <u>only</u> ; maintaining confidential nature of patient-and/or site-specific documents.	54321	54321			
11	Being respectful, <i>i.e.</i> , demonstrating regard for patients, superiors, colleagues, other personnel, and property.	54321	54321			
12	Communicating using appropriate body language, <i>i.e.</i> , utilising gestures and mannerisms that enhance formal and informal communication.	54321	54321			
13	Demonstrating accountability, <i>i.e.</i> , holding myself liable for tasks/ duties/responsibilities that I am responsible for; not blaming others for mistakes or mishaps, nor avoid responsibilities.	54321	54321			
14	<b>Prioritising responsibilities effectively</b> , <i>i.e.</i> , organising and approaching multiple tasks and assignments in a manner to produce desired outcomes.	54321	54321			
15	Accepting and applying constructive criticism, <i>i.e.</i> , responding openly and positively to feedback; modifying behaviour if necessary.	54321	54321			
16	<b>Putting others' needs above my own</b> , <i>i.e.</i> , demonstrating an attitude of service by taking the necessary time and actions to help others; giving of oneself to benefit others.	54321	54321			
17	Being nonjudgmental, <i>i.e.</i> , demonstrating an attitude of open-mindedness towards others and situations; not "stereotyping" others or prejudging situations.	54321	54321			
18	<b>Communicating</b> assertively, <i>i.e.</i> , actively and appropriately engaging in dialogue or discussion; not afraid to provide my viewpoint.	54321	54321			
19	Being an active learner, <i>i.e.</i> , seeking knowledge; asking questions; searching for information; taking responsibility for own learning.	54321	5 4 3 2 1			
20	Being cooperative, i.e., non-argumentative; willing and helpful.	54321	54321			
21	Being diplomatic, <i>i.e.</i> , fair and tactful in all dealings with patients, superiors, colleagues, and other personnel.	54321	54321			
22	"Following through" with responsibilities, <i>i.e.</i> , if task is left incomplete or problem is not resolved, will seek aid or explain situation to parties who can follow-up on task or problem.	54321	54321			
23	Wearing appropriate attire, <i>i.e.</i> , adhering to dress code (written or unwritten); attire is acceptable to practice setting.	54321	54321			
24	<b>Demonstrating confidence</b> , <i>i.e.</i> , acting and communicating in a self-assured manner, yet with modesty and humility.	5 4 3 2 1	5 4 3 2 1			
25	Demonstrating a desire to exceed expectations, <i>i.e.</i> , going "above and beyond the call of duty;" attempting to exceed minimal standards and requirements for tasks/assignments/responsibilities.	54321	54321			

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### Section 2: Individuals involved in your development of professionalism

We are interested in the role that other people play in facilitating your development of professionalism during the pre-registration training year.

Think about two people you have worked with during the pre-registration training year that you believe have had a large impact on your development of professionalism (when thinking about professionalism consider the 25 professional behaviours in the previous section).

In the first row of the table below, specify the job title of **Person 1**: the person you believe had the *largest* impact on your development of professionalism during the pre-registration training year. Next to this, specify the job title of **Person 2**: the person who you believe had the *second largest* impact on your development of professionalism during the pre-registration training year. If you think there was only one person who had a large impact on your development of professionalism provide ratings for Person 1 only.

In the subsequent rows, please rate your level of agreement with statements listed in the first column for BOTH persons by circling the appropriate number. The rating scale is as follows:

1 =strongly disagree 2 =disagree 3 =neither agree nor disagree 4 =agree 5 =strongly agree

The person in question:	Person 1 job title (please tick): Pre-registration tutor Other pharmacist Pharmacy technician Pharmacy dispenser Other (specify):					Per () □ Pre- □ Oth □ Pha □ Pha □ Oth	rsor plea reg er p rma rma er (:	istra istra han icy t icy c	ob t ick) tior nac ech lisp ify)	itle ): ist nician enser
Consistently demonstrated how to perform clinical skills.	1	2	3	4	5	1	2	3	4	5
Created sufficient opportunities for me to observe him/her.	1	2	3	4	5	1	2	3	4	5
Served as a role model as to the kind of healthcare professional I would like to become.	1	2	3	4	5	1	2	3	4	5
Gave useful feedback during or immediately after direct observation of my patient encounters.	1	2	3	4	5	1	2	3	4	5
Adjusted his/her teaching activities to my level of experience.	1	2	3	4	5	1	2	3	4	5
Offered me sufficient opportunities to perform activities independently.	1	2	3	4	5	1	2	3	4	5
Asked me to provide a rationale for my actions.	1	2	3	4	5	1	2	3	4	5
Asked me questions aimed at increasing my understanding.	1	2	3	4	5	1	2	3	4	5
Stimulated me to explore my strengths and weaknesses.	1	2	3	4	5	1	2	3	4	5
Encouraged me to formulate learning goals.	1	2	3	4	5	1	2	3	4	5
Encouraged me to pursue my learning goals.	1	2	3	4	5	1	2	3	4	5
Created a safe learning environment.	1	2	3	4	5	1	2	3	4	5
Was genuinely interested in me as a trainee.	1	2	3	4	5	1	2	3	4	5
Showed that he/she respected me.	1	2	3	4	5	1	2	3	4	5

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#### Section 3: Mattering to patients

We are interested in your views on your involvement with patients during the pre-registration training year and how much you believe you have mattered to them.

Read the statements listed in the left column below and provide your ratings of how much you believe you mattered to patients overall during the pre-registration training year for each statement using the following rating scale:

1 = Not at all

2 = Almost not at all 3 = A little

S = A intue

4 = Somewhat 5 = A great deal

5 – A great dear

Statements		R	atin	gs	
To what extent did you "make a difference" to patients?	1	2	3	4	5
How helpful were you to patients?	1	2	3	4	5
How important do you feel you were to patients?	1	2	3	4	5
How much do you feel patients paid attention to you?	1	2	3	4	5
How much would patients miss you if you went away?	1	2	3	4	5
How interested were patients generally in what you had to say?	1	2	3	4	5
How much did patients depend on you?	1	2	3	4	5

#### Section 4: Comments

If you would like to make any comments about your pre-registration training year or recommend changing anything about the training year please do so in the box below.

Write comments here

#### Section 5: About you

1	) Gender	(0)	lease	tick	-
-		1000			

🗆 Male

Female

Age (please specify):

3) Please circle a response from the scale below in relation to this statement: "My personal religious beliefs are important to me"

1 2 3 4 5 6 7 (1 = not at all, 7 = very much).

□ Please tick here if you do not have any religious beliefs □ Please tick here if you prefer not to say

Please see next page

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4) My ethnicity is: (please tick):

a) W	Thite	b) B	lack or Black British	c) M	ixed
	British Irish Other (please specify):		Caribbean African Other <i>(please specify):</i>		White & Black Caribbean White & Black African White & Asian Other (please specify):
d) A	sian or Asian British	e) Cl	inese	f) Ot	her ethnic group
	Indian Pakistani Bangladeshi Other <i>(please specify):</i>		Chinese		Other (please specify):
□ M □ OS 6) At 7) In 1	Pharm SPAP which university did you complet which setting are you carrying ou	e your M  t your pre	Pharm / OSPAP? <i>(please :</i> -registration training from	specify): the options below	ı (please tick):
a) ]	Hospital in (please tick); b)	) Commu	nity in (please tick):		c) 🗆 Split post
     	<ul> <li>A teaching hospital</li> <li>A district general hospital</li> <li>Other (specify):</li> </ul>	□ An ii □ A sn □ A m □ A m □ A m □ A lan □ A su	ndependent pharmacy nall chain (2-4 stores) edium sized multiple (5-2: edium-to-large sized multi ge multiple (more than 10 permarket	5 stores) ple (26-100 stores 0 stores)	between hospital and community
d) (	Joint post between <i>(please tick 2 t</i> ☐ hospital	hat apply	): e) Sandwich placen (please tick 2 tha	ments as part of 5 y it apply):	vear integrated degree in
			i placeme	em. 2	placement:

- hospital
   community
   industry
   PCT
- 🗆 academia

1<sup>st</sup> placement: ☐ hospital ☐ community ☐ industry

PCT

academia

- hospital
- □ community
- industry
  - □ PCT □ academia

Thank you for completing this questionnaire, your contribution to this research is valued.

### PLEASE RETURN IN THE FREEPOST ENVELOPE: MI' Samuel Jee freepost MR9661, school of pharmacy and pharmaceutical sciences, the university of manchester, stopford building, 1<sup>st</sup> floor, oxford road, manchester M13 9pt

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# Appendix 20: MCTQ scale items

## Questionnaire item—The clinical teacher ...

## Modeling

Consistently demonstrated how to perform clinical skills.

Created sufficient opportunities for me to observe him/her.

Served as a role model as to the kind of doctor I would like to become.

## Coaching

Gave useful feedback during or immediately after direct observation of my patient encounters. Adjusted his/her teaching activities to my level of experience.

Offered me sufficient opportunities to perform activities independently.

## Articulation

Asked me to provide a rationale for my actions.

Asked me questions aimed at increasing my understanding.

Stimulated me to explore my strengths and weaknesses.

## Exploration

Encouraged me to formulate learning goals.

Encouraged me to pursue my learning goals.

## Safe learning environment

Created a safe learning environment.

Was genuinely interested in me as a student.

Showed that he/she respected me.

# **Appendix 21: Patient mattering scale items**

- 1. To what extent do you "make a difference" to patients?
- 2. How helpful are you to patients?
- 3. How important do you feel you are to patients?
- 4. How much do you feel patients pay attention to you?
- 5. How much would patients miss you if you went away?
- 6. How interested are patients generally in what you have to say?
- 7. How much do patients depend on you?

# Appendix 22: Survey cover letter (more than one trainee)



School of Pharmacy and Pharmaceutical Sciences The University of Manchester 1<sup>st</sup> Floor, Stopford Building Oxford Road, Manchester

Development of professionalism during the pre-registration training year

To whom it may concern,

The University of Manchester

I would like to invite the pharmacy pre-registration trainees at this site who are completing their training during 2011/12 to take part in a study about the development of professionalism during the pre-registration training year.

Appended is a copy of the invitation letter which outlines the study. Taking part involves completing a questionnaire which should take 15-20 minutes.

I would very much appreciate it if you would pass on a copy of the invitation letter, questionnaire and a FREEPOST envelope enclosed to all trainees based at your training site.

If you have any questions about this study please do not hesitate to contact me.

Many thanks for your help.

Yours sincerely,

Mr Samuel Jee, T: 0161 275 1807; E: <u>sam.jee@postgrad.manchester.ac.uk</u>

# Appendix 23: Survey reminder letter (more than one trainee)



School of Pharmacy and Pharmaceutical Sciences The University of Manchester 1<sup>st</sup> Floor, Stopford Building Oxford Road, Manchester M13 9PT

Development of professionalism during the pre-registration training year

To whom it may concern,

ne Universit Mancheste

I recently sent an invitation letter, and associated documentation, to this training site inviting the pharmacy pre-registration trainees who are completing their 2011/12 pre-registration training to take part in a study about the development of professionalism during the pre-registration training year. I would now like to provide this reminder letter, along with all the necessary materials, to allow those trainees who have not responded another opportunity to do so.

Appended is a copy of the invitation letter which outlines the study. Taking part involves completing a questionnaire which should take 15-20 minutes.

I would very much appreciate it if you would pass on a copy of the invitation letter, questionnaire and a FREEPOST envelope enclosed to all trainees based at your training site who have not yet responded. I have included enough copies of these for all the trainees who did not respond after the first invitation.

If you have any questions about this study please do not hesitate to contact me.

Many thanks for your help.

Yours sincerely,

Soules

Mr Samuel Jee, T: 0161 275 1807; E: <u>sam.jee@postgrad.manchester.ac.uk</u>