The quality of pharmacy technician education and training

A report to the General Pharmaceutical Council

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List of abbreviations

BTEC	Business and Technology Council (qualification)
EV	External verifi/cation/er
FE college	Further Education College
GB	Great Britain
GPhC	General Pharmaceutical Council
IQA	Internal quality assur/ance/er
IV	Internal verifi/cation/er
MCQ	Multiple choice question
NHS	National Health Service
NPA	National Pharmacy Association
NVQ	National vocational qualification
QCF	Qualifications and Credit Framework
SQA	Scottish Qualifications Authority
SVQ	Scottish vocational qualification
TAQA	Training Assessment and Quality Assurance (qualification)
UCAS	Universities and Colleges Admissions Service
UK	United Kingdom

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Dissemination of research findings to date

Jee S, Willis S, Pritchard A & Schafheutle E. (2014). *Insights into the provision of Pharmacy Technician qualifications in Great Britain*. Presented at APTUK Annual Professional Conference & Exhibition 2014 Patients First. Aston University, Birmingham.

Jee S, Willis S, Schafheutle E . (2014). *Delivery of work-based pre-registration training for pharmacy technicians in community and hospital settings in Great Britain*. Presented at Royal Pharmaceutical Society Annual Conference. ICC Birmingham UK: International Journal of Pharmacy Practice; Volume 22: Suppl 2.

Section 1: Background

1.1 The pharmacy technician profession

Whilst pharmacists are a long established group of pharmacy professionals, pharmacy technicians have only very recently become registered pharmacy professionals. Voluntary registration of pharmacy technicians was introduced in 2005, and first legal underpinnings for pharmacy technician regulation came in under the Pharmacists and Pharmacy Technicians Order 2007.[1] However, pharmacy technicians only became a fully regulated profession under the Pharmacy Order 2010.[2] Since then, 'pharmacy technician' has become a protected title, requiring registration with the General Pharmaceutical Council (GPhC), the independent regulator of pharmacists, pharmacy technicians and pharmacy premises in Great Britain (GB). This registration became mandatory on 1st July, 2011.

Pharmacy technicians are thus a relatively new profession, to which many of the same standards apply as they do to pharmacists. As pharmacists' roles become increasingly clinical and new services are being developed, pharmacy technicians play an increasingly important part in the provision of pharmacy services throughout Great Britain. The public, patients, colleagues (particularly pharmacists) and employers thus need to be assured that pharmacy technicians are qualified to the required standards,[3] and meet these standards of conduct, ethics and performance,[4] throughout their careers.

1.2 Pharmacy technician education and training

Pharmacy technicians generally undergo training under an apprenticeship-type model, where the majority of learning occurs in employment, on the job, usually in one of the two main sectors of the pharmacy labour market: community or hospital pharmacy. In order to qualify for registration pharmacy technicians need to have completed two years' work experience, under the supervision, direction or guidance of a pharmacist.[5] Furthermore, they need to have two approved qualifications,[5] a knowledge based and a competency-based one, to be completed alongside work experience.

The knowledge qualification provides the underpinning knowledge required for pharmacy practice and covers topics such as human physiology and pharmacy law. Trainees are typically assessed using assignments or exams. In contrast, the competence qualification requires trainees to demonstrate competence through documenting their ability to undertake different tasks in practice (e.g. ordering pharmaceutical stock; issue prescribed items). When trainees demonstrate a sufficient level of competence they can be signed off by an assessor who has either observed them directly or has received testimonials from expert witnesses in the workplace.

Trainees can opt to undertake the knowledge and competence qualifications with face-to-face providers, mainly Further Education (FE) colleges and approved NHS trusts, or at a distance, through private distance providers such as National Pharmacy Association (NPA), Buttercups and Chemist and Druggist. All lead to recognised accredited qualifications, most of which are awarded by Edexcel, City and Guilds, or Scottish Qualifications Authority (SQA).

Under powers given to it by the Pharmacy Order 2010, the GPhC has set standards for the initial education and training of pharmacy technicians,[3] published in September, 2010. These standards need to be met by both awarding bodies and training providers, so that the GPhC can approve the competency and/or knowledge-based qualifications. These standards set out the curriculum requirements for both competency- and knowledge-based qualifications, containing detail on learning hours and outcomes. Most qualifications are approved through recognition, as they are mapped to the quality credit framework and agreed national occupational standards[6]; two knowledge qualifications provided by distance providers are directly accredited by the GPhC.

1.3 The need for this research

Under the Pharmacy Order 2010[2], the GPhC has implemented standards for the education and training of pharmacy technicians.[3] Within the Order, it also states that the regulator must "take appropriate steps to satisfy itself that those standards and requirements are met." The GPhC needs to ensure it is in the best position to approve courses appropriately and robustly. By doing so, the GPhC must not only ensure a high quality training experience, but also that the qualifications awarded ensure comparable/ equivalent levels of both knowledge and competence. Furthermore, these awarded qualifications, whilst usually gained through work experience in just one sector, i.e. community or hospital pharmacy, need to be transferrable between sectors, as registered pharmacy technicians can practise in any sector.

All GPhC standards and rules provide a practicable, workable framework for pharmacy professionals to deliver services safely, which the GPhC intend to be proportionate and useful. It is therefore important to identify strengths and weaknesses of the current system of education and training of pharmacy technicians, and the approval mechanisms which underpin this. With this insight, the GPhC will be in a position to focus its efforts on areas which may require additional direction and support, whilst other existing processes can remain as they are.

1.4 Research aims and objectives

The programme of work aimed to better understand the quality of pharmacy technician initial education and training delivered by providers (FE colleges, distance providers and employing organisations) and the role of awarding bodies and GPhC in this process. Five objectives were set to address this aim:

- to describe the quality and delivery of courses;
- to describe the infrastructure supporting delivery; and
- to describe the GPhC's approach to recognising and accrediting courses.
- to profile the trainee population; and
- to elicit trainee views on course delivery, especially perceived strengths and weaknesses.

1.5 Research overview

Given the broad set of objectives, the research team set out to achieve them through developing four related work streams outlined in Table 1.

Table 1: Overview of four work streams
Work stream 1 involved conducting semi-structured telephone interviews with representatives of **education providers**: FE colleges and distance providers.
Work stream 2 captured views of **employing organisations**: community pharmacies and NHS organisations. It involved semi-structured telephone interviews with representatives from pre-registration pharmacy technician employers that worked closely with trainees or were in more senior positions.
Work stream 3 captured the views of members of staff from **awarding bodies** and the **GPhC** and focused on the approval / accreditation process of pharmacy technician qualifications. Semi-structured telephone interviews were conducted with members of staff from pharmacy technician qualification awarding bodies (Edexcel, City and Guilds, or Scottish Qualifications Authority (SQA)) and representatives from the GPhC.
Work stream 4 investigated the views of **recently registered pharmacy technicians** on their education and training experiences and used a postal and electronic survey to recently registered (Feb. 2013 – Feb. 2014) pharmacy technicians.

1.6 Research team

This project was undertaken by researchers at Manchester Pharmacy School with support from an external collaborator. The project was led by Dr Ellen Schafheutle, a pharmacist with many years' experience in undertaking commissioned health services research to inform pharmacy policy and regulation. Dr Sarah Willis was co-investigator and is a social scientist with many years' experiences of research, with a particular focus on medical and pharmacy education. Dr Sam Jee, a psychologist by background, with research experience in pharmacy education and practice, was the research associate responsible for the day-to-day conduct of this.

Alison Pritchard acted as an external collaborator for this research. Alison Pritchard is a pharmacy technician and North West Lead for Pharmacy Support Staff Training & Development.

1.7 Ethics

Ethics approval was granted in November, 2013 by The University of Manchester's research ethics committee.

Section 2: Methods

2.1 Work streams 1-3

The same qualitative methods were used for work streams 1-3 where different stakeholder groups were interviewed to discuss pharmacy technician education and training. The methods employed for these work streams are discussed in this section.

2.1.1 Sampling

The sampling procedure carried out in this study was based on qualitative sampling techniques. The aim of sampling in qualitative research is to recruit a sample who can provide detailed insights from relevant participants into the research questions being explored, as opposed to attempting to generalise findings to a wider population, as in quantitative research.[7] 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.

The sampling frame included all FE colleges and distance providers offering level 3 pharmacy technician qualifications across the UK, community pharmacy and NHS hospital organisations that had experience in supporting trainee pharmacy technicians in Great Britain, awarding bodies that approved level 3 pharmacy technician qualifications across the UK and the education department of the GPhC.

The 'snowballing' method, which involved asking those recruited to the study to identify others they knew,[8] was also employed to recruit further participants. 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.[8]

2.1.2 Sample size

Qualitative researchers have not attached the same level of importance to sample size as their quantitative counterparts.[9] However, in general, there should be an adequate sample of participants to reach data saturation, whereby no new themes emerge from the data.[10] 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,[10] though more may be needed if one wishes to explore how two or more groups differ on a given dimension.[10]

In work stream 1, the research team aimed to survey most FE colleges and distance providers offering level 3 pharmacy technician qualifications and therefore were not aiming specifically to find recurring themes to the point of saturation. Instead the purpose was to

explore how education was being delivered across the range of education providers in the UK.

In work stream 2, the aim was to consider how trainees were supported during their work based learning in community and hospital environments. Given the wide range of working environments across community settings (e.g. independents; supermarkets; large multiples) and hospital settings (e.g. small hospital trusts vs. large hospital trusts with multiple hospitals) the number of participants that the research team aimed to recruit was higher than if the working environments were more homogenous.

Finally, in work stream 3, the aim was to collect views on the accreditation and approval process of pharmacy technician across awarding bodies and course centres. As such, one member of staff was purposively sampled from each of the three awarding bodies and two members of staff were recruited from the GPhC.

2.1.3   Recruitment

Potential participants were identified via a database, which had been compiled by the GPhC and was shared with the research team. Further contacts were found through accessing the websites of education providers' websites and awarding bodies and through professional networks known to the research team. Emails were sent to contacts inviting them to participate in the study. These emails included a participant information sheet and consent form. 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 might have. If there was no response then a second email was sent as a reminder.

2.1.4   Data collection: Semi-structured telephone interviews

The interview approach was selected in order to collect a breadth of detailed information and views on pharmacy technician education and training, an under researched area. 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.[11] 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.[12] 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.

2.1.5   Interview schedules

The formulation of the interview schedules used in this research was based on the research objectives of the research (see section 1.4). A total of 3 interview schedules were used for

conducting semi-structured interviews: one for each work stream. In cases where the employing organisation was approved to offer pharmacy technician education, some of the questions from the interview schedule for work stream 1 were used in work stream 2 to consider how the employing organisation delivered training.

The questions included in the interview schedule for work stream 1 considered trainee numbers using the education providers and their demographics, the qualification(s) offered, the mode of delivery and staff involved in the delivery of the qualification(s), support and facilities/resources available to trainees, methods of assessment used and feedback mechanisms, the education providers' relationships with employing organisations, and quality assurance processes. Furthermore, interviewees' views on pharmacy technician education and training, including their views on the current qualifications, were also discussed in the interview.

The interview schedule for work stream 2 focused on the number of trainees within the employing organisation and basic demographic information of these trainees. Information about the education provider(s) the employing organisation used for knowledge and competence qualifications, the support available to trainees, resources and facilities available, study time was also considered. Relationships with education providers and any additional assessment and feedback that took place in the workplace beyond that undertaken by the education provider(s) were discussed. Additionally, Interviewees' views on pharmacy technician education and training more generally, including their opinions on the current qualifications, were also discussed in the interview.

For work stream 3, where interviews were shorter with fewer topics to cover, questions that evoked discussion around the quality assurance processes in place across awarding bodies and the GPhC were posed. This included what quality assurance process were undertaken by awarding bodies and the GPhC, which individuals were involved in these processes, and interviewees' perceptions on the robustness of these processes.

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 the need to avoid leading questions, phrased in a manner that tends to suggest a desired answer.[11]

2.1.6 Data preparation

Telephone interviews were audio recorded with a digital recorder. Transcription of interviews was outsourced to a company verified by The University of Manchester, where anonymity and confidentiality agreements were in place. All interviews were transcribed verbatim; murmurs were removed at the time of transcription.

At the point of transcription the interviewer was denoted as 'I' and the interviewee was denoted as 'R' for respondent. Although most illustrative quotes present only the interviewees' comments in this report, sometimes the interviewer's questions and comments are included to provide context to the interviewee's comments.

2.1.7 Data analysis

Data were analysed thematically. A thematic analysis aims to establish themes in the data which has been defined by Boyatzis (p.4)[13] 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 described by Boyatzis (p.4)[13] 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 approach to the thematic analysis of interview data was used through template analysis. King (p.21),[14] 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.[14] 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.[199] King[14] 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,[14] 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[14]; 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,[15] those individuals whose views / experiences contrasted with other individuals, to improve the quality and trust in the qualitative investigations[16]; this was done throughout the analysis process. The coded data should be interpreted to suit the specific aims and content of a particular study.[14] 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.

2.2 Work stream 4

Work stream 4 involved developing and administering a questionnaire survey to recently registered (February, 2013 – February, 2014) pharmacy technicians. The methods used to carry out this research are discussed in this section.

2.2.1 Survey design

The survey was designed by the research team following the completion of many interviews in work streams 1 and 2, and thus the content of the questionnaire was informed by preliminary findings from interviews with education providers and employers.

The questionnaire was structured into five sections: A to E. Section A focused on the knowledge-based components of education and training (i.e. the knowledge qualification). Respondents were asked which types of education provider they used (e.g. FE college or distance provider) and to share their views on the content of the knowledge qualification, the way in which it was delivered by the education provider, and the support the education provider gave. Respondents were also asked to share their views about the assessments they had as part of the knowledge qualification and feedback they received. Respondents'

views were captured using a 5-point Likert-type agreement scale (*strongly disagree* through to *strongly agree*). The final three questions asked respondents how satisfied they were, overall, with the knowledge qualification on 7-point Likert-type scale (*completely dissatisfied* through to *completely satisfied)*, the time it took to complete it, and who funded it.

In Section B respondents were asked about the competence qualification they completed. Again, the section asked for details of the education provider used for completing this qualification. It then moved on to ask participants for their views on the content of the competence qualification followed by a question that asked respondents how satisfied they were, overall, with the competence qualification; these questions used the same scales used in Section A. Following this, respondents were asked whether they had a named assessor, the job title(s) of their assessor(s) and the type of contact (e.g. face-to-face; at a distance) to see if differences existed between sectors and education providers. Respondents were then asked to state their level of agreement, again using the same 5-point agreement scale as used in Section A, to a series of statements about their assessor(s) which included how they felt their relationship was, and the level of feedback they received.

Section C focused on respondents' experience in the workplace during training. Respondents were asked about the sector in which they undertook their work experience, the number of hours they worked, their salary as a trainee, and the study time they received. Respondents were also asked to rate their level of agreement, using the same 5-point scale used in previous sections, to a number of statements evaluating their experience, including the support they received from their employing organisation and colleagues, the clarity of their role and work-life balance. Respondents were also asked to rate their overall satisfaction with their experience in the workplace as a trainee, consistent with the question posed in the previous sections.

Section D offered respondents the opportunity to provide open, written comments on the previous three sections, i.e. the knowledge qualification (Section A), competence qualification (Section B) and experience in the workplace during training (Section C), using free text space.

The final section, Section E, asked respondents about their personal details including their age, gender and ethnicity. Respondents were also asked about their current role as a pharmacy technician (if they were working as a pharmacy technicians at the time of completing the survey). These questions included asking about the setting in which they were working, their salary, the number of hours they worked per week, and what they saw themselves doing in five years' time. In addition to this respondents were asked to share their views on being a registered pharmacy technician, again using a series of statements

with 5-point Likert agreement scales. These statement addressed respondents' clarity of their role and their awareness and understanding of their requirements as a registered pharmacy professional.

A paper-based survey and an electronic survey, using Qualtrics© software, were employed.

2.2.2   Pilot work

The questionnaire was piloted with three pharmacy technician trainees from hospital and three from community pharmacy for comprehension, feedback was provided. In addition to this, feedback on the questionnaire was received from the research collaborator (AP) and a lecturer (TH) with significant experience in training pharmacy technicians in community pharmacy, working in the Manchester Pharmacy School at the time this research was conducted. The feedback largely focused on the introductory statements at the beginning of the different sections to ensure respondents were clear as to what they were being asked about.

2.2.3   Sampling strategy

Approaching current trainees was not possible because the GPhC do not hold a list of all current trainees and administration of a survey would need to go through education and training providers rather than to trainees directly, which could have adversely affected response rates. Therefore, the research team aimed to survey recently registered pharmacy technicians who could comment on their experiences of education and training. At the same time, it was important to avoid surveying registrants that registered using the grandparenting clause, as they would not have trained recently, using current arrangements for knowledge and competence qualifications. The research team undertook a census of all pharmacy technician registrants who had registered between February, 2013 and February, 2014 using a register extract provided by the GPhC. The number of registered pharmacy technicians during this time period was 1457.

2.2.4   Survey administration

The survey was administered a total of five times between May and July 2014, three times electronically to those where e-mail addresses were available (97.6%) and twice by post (see Table 2), though not all participants would have received it a total of five times as the contact database did not always have email addresses or usable addresses. Once a response was received by post or electronically, the individual was removed from the database and received no further reminders.

Furthermore, prior to administering the survey on 07 May, 2014, all potential respondents were sent an email from the GPhC encouraging them to take part in the survey they would be receiving shortly. A news release describing the research study was also issued on the

GPhC website[1] on 08 May 2014, and a further encouraging e-mail was sent from the GPhC on 07 July, 2014.

Table 2: Survey administration dates	
Date	**Format**
07.05.14	Electronic
21.05.14	Paper
10.06.14	Electronic
17.06.14	Paper
08.07.14	Electronic

2.2.5 Inclusion / exclusion criteria

The database of 1457 potential participants held by the research team contained all registrants registering between February, 2013 and February, 2014 including those that trained outside of the UK. The few registrants who trained outside of the UK were excluded after their responses were received; the database did not contain information of whether registrants trained in, or outside, the UK. Additionally, responses received after the cut-off date (06 August, 2014) were not included in data analysis. All pharmacy technician registrants that were educated and trained in the UK were included in data analysis.

2.2.6 Quantitative data analysis

Paper-based data were entered into an IBM SPSS Statistics v20 database and this was combined with electronic data, checked for accuracy and then analysed. A range of descriptive and multivariate analyses were used to examine the data.

Data were analysed with descriptive statistics first, using valid frequencies (n) and percentages, i.e. missing data were excluded from frequency and percentage count. In this report percentages have been rounded to one decimal place and are given as 'valid' percentages. When the mean is used, the standard deviation is also provided following the plus-minus sign ($\pm$).

The descriptive data of the different questions are followed by a presentation of findings from statistical analyses of the data in grey boxes. Statistical tests performance included Chi-square, Mann-Whittney U, and Kruskal Wallis.[17] The significance level set for the statistical analyses was $p=.05$.

The presentation of findings (in text and particularly tables) is used to highlight differences between respondents depending on the education providers they used, and depending on the sector in which they undertook their work experience.

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[1] http://www.pharmacyregulation.org/gphc-launches-pharmacy-technician-education-and-training-survey

2.2.7 Qualitative data analysis

After data entry of all questionnaires was complete the comments provided in response to the open questions in Section D were typed, verbatim, into a Word document for coding, along with ID numbers, an identifying code for sector and the corresponding comments. Content analysis[18] 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. Each comment, or parts of it (if different issues were raised within an individual comment), were coded under emerging themes.

Section 3: Workstream 1 findings

The first set of findings presented in this report is from work stream 1. This work involved capturing the views of education providers (FE colleges and distance providers) that delivered pharmacy technician qualifications to trainees.

Most subsections of the findings have been divided between the two types of education provider: FE colleges and distance providers. The results section first considers the participants interviewed for this research and details of the interviews conducted. Following this are the results stemming from the interview data including a discussion of the trainee profile, the mode of study, assessment strategies and support provided to trainees by the education providers to trainees studying for level 3 pharmacy technician qualifications. Though many interviews used the term student, to describe learners, the term 'trainee' will be used in the narratives hereafter.

3.1 Research participants

A total of 23 semi-structured telephone interviews were conducted with interviewees representing pharmacy technician education providers in the UK. Of these 23 interviews, 17 were conducted with Further Education (FE) colleges. Six semi-structured interviews were conducted with organisations that provide education and training to pre-registration pharmacy technicians through distance learning. These organisations will be referred to as 'distance providers' hereafter.

Participants that took part in semi-structured interviews had extensive knowledge of the level 3 pharmacy technician competence-based and knowledge-based qualifications offered by their organisation. Their job titles included programme leader/manager/coordinator for pharmacy knowledge-based and/or competence-based level 3 pharmacy qualifications; NVQ centre manager; pharmacy assessor; pharmacy lecturer; head of science and technology; and assistant head of science.

3.2 Interviews

Semi-structured telephone interviews with FE colleges and distance providers took place between November, 2013 and February, 2014. As noted in section 2.1.5, the interviewed covered topics including, for example, staff involved in the delivery of the qualification(s), support and facilities/resources available to trainees, methods of assessment used and feedback provided to trainees. The researcher conducted the interviews with research participants predominantly whilst they were in their place of work; several research participants took part in an interview from their home. The time it took to complete interviews ranged from between 27 and 51 minutes.

3.3 Trainee profile

This section considers the number, gender, age and work experience setting of students studying for the level 3 pharmacy technician qualifications. FE colleges and distance providers are discussed together to highlight any similarities and differences between these education providers in relation to the topics considered.

3.3.1 Number of trainees

Table 3 displays the number of trainees studying at the different education providers at the time of interview. Some data were not available as the interviewee was either not able to share this information or was not certain of the exact number of trainees undertaking the level 3 pharmacy technician qualification(s).

In general the distance providers had more students enrolled on their pharmacy technician qualification(s), though three of the distance providers (Distance provider 1, 5, and 6) were smaller organisations and had a similar number of trainees to those in FE colleges. The number of trainees in year one or two within the FE colleges ranged from as few as eight in one FE college, to over 60 in another.

Table 3: Number of trainees		
FE colleges	1st year	2nd year
1	11	10
2	9	9
3	35	30
4	30	26
5	14	11
6	41	60
7	15	18
8	data not available	data not available
9	40	40
10	13	13
11	14	17
12	13	data not available
13	data not available	data not available
14	15	15
15	16	11
16	16	16
17	30	8
Distance providers		
1	30	
2	180	
3	In the 1000s	
4	1050	
5	None at time of interview	
6	72	

The larger distance online providers (2, 3 and 4) had a larger number of trainees, though the numbers they quoted represented total trainee numbers at any point in their education,

whereas the FE colleges had year 1 and year 2 numbers which were based on academic year of study for the knowledge qualification and competence qualification, if offered.

3.3.2 Gender

According to interviewees from FE colleges and distance providers, the majority of trainees undertaking the level 3 pharmacy technician qualifications were female.

3.3.3 Age

The age of trainees studying for level 3 pharmacy technician qualifications at FE colleges varied considerably, with some trainees in colleges aged 16 and some into their 40s or 50s.

> *"At the minute, in the current class, it would be quite representative. We would have a couple of older women, who are coming back into employment, after having kids, maybe in their mid-30s. We had last year, a gentleman who was retraining, who was in his late 40s, and we've have had a couple of older people in the past as well, even who have come from the Trusts."*
>
> ***FE college 2***

The apprenticeship scheme may have encouraged employers to take younger trainees and this was reflected in the age of trainees at the FE colleges.

> *"[N]ow, compared to previous years, because of the apprenticeship framework we have significantly more younger learners - so 16 to 18 year olds."*
>
> ***FE college 9***

Based on the interviews with distance providers, it appeared that they educated trainees who tended to be older than those studying in the FE colleges.

> *"From the three categories that you've put on the survey we have no one in the 16 to 18 group, we have 18 in the 19 to 23 and 162 are 24 and above."*
>
> ***Distance provider 2***

Distance provider 4, who had 1050 pre-registration pharmacy technicians, provided a breakdown of their trainee numbers:

> *"So it's about seven per cent 16 to 18 year olds, that's all, 28 per cent 19 to 23 and then we've got 65 [per cent] for 24 and over … ."*
>
> ***Distance provider 4***

3.3.4 Work experience setting

Across the majority of FE colleges most of their trainees were completing their work experience in hospital.

> *"I mean, in the past we've had one or two community, but it's 90 per cent...sorry, over the last 10 years it's 95 (and that's probably underselling it) per cent hospital. I haven't had anyone in community for a number of years."*
>
> ***FE college 7***

Some colleges were more evenly split between hospital and community trainees. The higher proportion of community trainees may have been due to candidates being apprentices.

> *I: So, the majority of students are based in hospital?*
>
> *R: "Yes, well actually no. Again, that's changed with the apprenticeship scheme. No, they're split 50: 50 now."*
>
> ***FE college 4***

Five of the distance providers catered predominantly to community trainees.

> *"The vast majority are from community, so 173 are community, five are hospital and two are in the Prison Service."*
>
> ***Distance provider 2***

> *"[O]n the whole, 99.9 per cent are from community pharmacy."*
>
> ***Distance provider 3***

One of the reasons for more community trainees using online distance providers cited by interviewees was their difficulty to have leave from their workplace. This was noted by a few interviewees, as illustrated by the quote below:

> *"A lot of the community, they don't like…the way I see it, is because they're private organisations, they don't like the day release, because then they're paying the student for a day and they're not actually working. So what the community normally do, is pay for a distance learning package, that can give them the straight qualifications. It's true that they normally use [distance providers], yeah."*

FE college 1

The difficulty in releasing a member of staff from work for studying a qualification at an FE college (on day release) was also noted by a few distance providers. The following interviewee from distance provider 3, for example, suggested that due to the small number of staff in some community pharmacies, having a member of staff absent could affect the delivery of pharmacy services. They also suggested that if individuals needed day release, the numbers of support staff would reduce.

"They may not be able to free up a member of staff to actually take a day out of the pharmacy to go to college, because the workforce is so small, having one person out of the pharmacy would mean that they can't provide services. So I think if it became that everyone had to take a day release course I think the number of people who were trained technicians would actually go down."

Distance provider 3

In contrast to this, distance provider 6 – who also offered regional study days as part of the delivery of the knowledge-based materials (the same as distance provider 4) – had more trainees in hospital than community. Distance provider 6 worked more with smaller chain and independent pharmacies, but all hospitals in the geographical area.

R: "We don't work with the larger chains, [they] tend to use their own training. So we work more with independents and smaller chains that actually approach us and initially they wanted [trainees] to go to college, so that's where we've picked up the distance learning because our colleges are currently not running the BTEC programmes."

I: "And so you work with a lot of hospitals as well?"

R: "Yeah, work collaboratively with all hospitals in [area removed]."

Distance provider 6

3.4 Qualifications offered by education providers

Before considering different elements of the knowledge- and competence-based parts of the education and training, an overview of the qualifications offered by the education providers that took part in this research is provided in Table 4. Whether the qualification was approved by an awarding body or directly accredited by the GPhC is also provided.

The majority of education providers that took part in this research offered the knowledge-based BTEC National Diploma in Pharmaceutical Science and the competence-based Level 3 Diploma National Vocational Qualification (NVQ) Qualifications and Credit Framework (QCF) awarded by Pearson Edexcel. Four FE colleges did not offer the competence-based qualification.

Table 4: Qualifications offered by education providers

Qualification	Awarding body / Accredited by	Number of education providers offering qualification
BTEC National Diploma Pharmaceutical Science	Pearson Edexcel awarding body	11 FE colleges and two distance providers.
Level 3 Diploma (NVQ)(QCF) Pharmacy service skills	Pearson Edexcel awarding body	7 FE colleges and two distance providers
Level 3 Diploma Pharmaceutical Science	City and Guilds awarding body	3 FE colleges and 2 distance providers.
Level 3 NVQ Diploma Pharmacy Services Skills	City and Guilds awarding body	6 FE colleges and 3 distance providers
National Certificate in Pharmacy Services	SQA awarding body	3 FE colleges
Level 3 SVQ Pharmacy Services	SQA awarding body	1 FE college
Level Three Diploma (NVQ) (QCF) in Pharmacy Service Skills with underpinning knowledge	Accredited by GPhC	1 distance provider
Technical certificate in pharmaceutical science	Accredited by GPhC	1 distance provider

3.5 Mode of delivery

This section considers the way in which the knowledge- and competence-based components of the education and training requirements for registration as a pharmacy technician were undertaken by trainees studying these qualifications.

3.5.1 Knowledge-based components

3.5.1.1 FE colleges

The majority of trainees studying for their level 3 knowledge-based pharmacy technician qualification at FE colleges would attend the course centre one day per week (generally on day release from work) over two years, alongside pharmacy work experience. This type of delivery was consistent across most of the FE colleges that took part in this research. The FE colleges in Scotland, offered the knowledge-based qualification (National Certificate in Pharmacy Services) as a full-time qualification as well. As one interviewee from FE college 17 explained, learners doing the full-time qualification would do voluntary work placements in pharmacy.

> *"[T]here are 12 units within the [national certificate] that they must complete to complete the [national certificate], but as a full-time student here we do 16 units, so there's obviously an additional four units that we put in, one of those would be the work placement unit, so they get credit for that, and then we choose other units that will complement them."*
>
> **FE college 17**

Another interviewee from an FE college in Scotland explained how some learners could study for the knowledge-based qualification full time (three days per week) without undertaking pharmacy work experience alongside the qualification which was unique compared to colleges in the rest of GB where interviewees noted that learners were working while completing the knowledge-based qualification.

> *"Some of them may be going through the [Scottish vocational qualification] element in the workplace. So those that are attending…some of them may attend part time and do it over two years. But we have others who attend full time, so they attend as a full time student. So they are not being in the workplace doing the [Scottish Vocational Qualification] at this point, they're just attending to get the independent knowledge programme.*
>
> **FE college 12**

Undertaking the qualification full time allowed some flexibility for the learner to pursue a different career path once they had completed a national certificate.

> *"To be honest some people don't necessarily want to do pharmacy afterwards, so some of our students use the full time course as a way to access higher education, so they come and do the full time course and then go on normally to do another health related course at a higher education level, and those people do have the option not to take up a placement."*
>
> **FE college 13**

Two FE colleges (FE colleges 5 and 9) that offered a different mode of study that did not involve attending the course centre one day per week over two academic years alongside work experience. For example, FE college 9, delivered the knowledge-based qualification through distance learning in addition to in the college setting. The interviewee from FE college 9 described this distance learning programme

"I've got a certain amount of students who do distance learning, so they don't actually come into the college and they're taught through an internet provider, so we do virtual lessons with them

…

"We use … an internet system which facilitates group learning, so we have virtual classrooms and pretty much similar staffing do the classroom-taught one to the virtual classroom taught, and the students come online for lessons like biology or action and uses of drugs, and they come online at a set time. They have a plan which tells them every week what lessons they need to attend, and they attend but online, so we do the lessons online and it's interactive. The students can contribute and it's through webcams and microphones so you can have a normal kind of lesson but through the internet.

FE college 9

The other FE college that introduced a new course in 2013 involves early college-based teaching followed by the majority of the teaching provided through a distance provider. The FE college worked in conjunction with a distance provider to offer the qualification

"So the new students, they come to college for the first eight weeks, every Wednesday, and I've been delivering the biology, chemistry and micro-biology, at a month, of that … then the idea is after Christmas they will just come into college one day per month to get their anatomy and physiology teaching.

…

"The [distance provider] provide the online resources, so in addition to what I teach them in class, they then have resources online and then when they're ready they then submit the assignments online and then those assignments are sent back to me for marking.
…
"[i]t's a joint, you know, sort of, they're getting the one to one, you know, they're getting the group teaching in college solidly for the first eight weeks and that should get them used to the system. And then when they go to submit their assignments online, they've also got those online resources as well and I work closely with that in my lesson plans."

FE college 5

The majority of course centres had virtual learning environments to support the delivery of their course, often referred to as a 'moodle' (modular object-oriented dynamic learning environment) that trainees could access.

> *"[W]e've got a moodle website where they can look at anything that they've missed … It's for downloading material really … ."*
>
> ***FE college 6***

The moodle generally served as a way for trainees to access material or find information related to course content they were learning.

3.5.1.2 Distance providers

For trainees using distance providers the knowledge-based components were delivered through distance learning packs and online facilities. The paper-based materials and online facilities could complement each other whereby, for example, videos could be used to illustrate areas of pharmacy practice (e.g. aseptic dispensing) that may not be familiar to groups of trainees.

> *"The actual level three, because it's such a large course, it's paper based, because our students tell us that's what they prefer. But going forwards, in the future, elements of that will be online, but because it's such a huge course logistically it's very difficult to have it online. … So going forwards there'll be elements of this which is online, and then the remainder will be paper based. … So I guess an example would be things like where we talk about aseptic dispensing. So in a community pharmacy most technicians won't have seen an aseptic lab or any of that, so we might use a video clip to show them what one looks like. But the learning itself is paper based, but we direct them to online resources."*
>
> ***Distance provider 3***

Undertaking the knowledge qualification with a distance provider would not involve face-to-face tuition, unless a trainee's assessor visited the trainee's workplace, and this would usually be as part of the competence-qualification to observe a trainee. However, distance provider 6, that provided education to trainees across one geographical area, offered supplementary training sessions, in addition to the distance education , to trainees across different regions in the country.

> *"When the colleges were unable to deliver the BTEC it was quite a culture change to go to a distance learning pack, completely independently. So that's*

> *why we actually bought [and now use] the distance learning pack but felt that we*
> *still needed the students coming together, and give added value.*
>
> *…*
>
> *"[The distance learning materials] probably wouldn't give us what we want of our*
> *students as the end product. And the fact that they're able to come together,*
> *there's a lot of value, the students find it very useful in being able to be part of a*
> *group."*
>
> ***Distance provider 6***

One other distance provider offered optional study days to trainees though not all trainees
would attend these.

> *"We run study days, so they're voluntary and they're available to all different*
> *locations around the country. So we hold about four a year and we try and vary*
> *the location so people can get to different ones. And it's a day where the*
> *students are invited to attend … . So we don't have a structured programme to*
> *the day; it is more about bringing along what students are currently working on*
> *and then there are assessors available on the day to have a one-to-one session*
> *with."*
>
> *…*
>
> *"Some people attend all of them and some people attend none of them."*
>
> ***Distance provider 2***

Whilst a general structure for the knowledge-based qualification was in place, there was
flexibility for learners to undertake units in a more customised fashion that was tailored to
their needs when using a distance provider.

> *"It is quite structured, yes. We do give them a timetable for each unit. There is*
> *usually an order in which they complete those units. … I mean for a particular*
> *student if they really wanted to work on a particular unit first or they had a*
> *preference or there was going to be some changes in the workplace perhaps*
> *where it would be more convenient for them to do certain units rather than*
> *others, it might vary.*
>
> ***Distance provider 1***

> *"The majority will work in the order that we've designed them in. … So we were keen to put the law and ethics, and dispensing and supply units earlier on in the programme, but actually, I mean, we work with other sectors. I know I've got some hospital learners where they'll do if they're on rotations they'll start with different units of the knowledge depending on where they're working. That's what I say about being flexible, they can do that.*
>
> ***Distance provider 4***

3.5.2   Competence-based qualification

3.5.2.1   FE colleges

FE colleges 12, 14, 16 and 17 did not offer the competence-based qualification. The work for the competence-based qualification was completed in the trainee's place of work as trainees collected evidence (in the form of a portfolio) of competence in a range of competencies outlined in the qualification specification of the awarding body. As such the education providers overseeing the competence-based qualification (portfolio) would be more involved in assessing or verifying the evidence provided. However, in many cases the employing organisations contributed much to this, commonly with work-based assessors in hospital, or with expert witnesses in the community setting. In this sense this qualification was largely overseen by the trainee and their employing organisation. Some employing organisations (e.g. NHS hospitals) were approved centres and as such managed the delivery of the competence qualification entirely.

The way in which trainees progressed through the competence-based qualification was through achieving competence in a range of units alongside their knowledge based qualification.

> *"So over the two years, while they're in college, we'll cover 19 units for the BTEC. … the other four days a week, they'll be generating evidence to demonstrate their competence."*
>
> ***FE college 1***

Most FE colleges were using an online portfolio system whereby trainees could upload evidence to an e-portfolio.

> *"With the NVQ, so they're in work, they have their portfolio provided by the college, they know what to look for, they then have, sort of, collecting evidence, they can have expert witnesses who can vouch for what they've done."*

Five of the FE colleges were using a paper-based system where trainees collected evidence in a folder, though two of these FE colleges commented that they were planning to move towards an electronic portfolio.

3.5.2.2 Distance providers

All distance providers offered the competence-based qualification in addition to the knowledge-based qualification and many trainees would undertake the competence qualification alongside the knowledge qualification from the same distance provider. Apart from one small distance provider (5), all had online facilities for trainees to document evidence of achieving competence.

3.6 Study time

3.6.1 FE colleges

As noted in the previous section, trainees attending an FE college for the knowledge-based components would attend one full day per week where they would be taught subject materials. Outside of this time there would be requirements to study independently and the amount of time taken to study and work towards assessments (exams or assignments) would vary and could relate to individual factors, for example, motivation for higher grades, as noted by one interviewee.

> *"Yeah, they will have work to do. We try to get as much done in class as possible, with regards to probably the passes, but a lot of students do want to achieve up to merits and distinctions. So they would be very well motivated students and yeah, they would do a lot of work at home. I mean, I'm guessing how many hours. But I would say they're doing three, four, five hours at home."*
>
> *FE college 2*

The availability of protected study time during work time, for completing work relating to the knowledge or competence qualifications, differed across sectors. It appeared that hospital trainees would have protected study time in the workplace whereas those in community may not have the same opportunity/ allowance.

> *"[Students] come into college one day a week and they are encouraged to have study time in the workplace. Now that really depends, and we do find that our hospital students are more likely to get the study time than the retail students."*
>
> *FE college 8*

One interviewee explained how hospital trainees would have study time built into their contract which was commissioned by strategic health authorities.

> *"Communities, generally they're not as supportive as the hospital [who receive funding] through their strategic health authority, it's part of their contract, their commissioning contract that the students have half a day a week."*
>
> ***FE college 6***

3.6.2 Distance providers

For those trainees studying through a distance provider, studying was done independently. Comments about the study time available using distance providers resonated with those from FE colleges, and it appeared that trainees in community did not tend to receive much study time.

> *"Then the next question is, do they get study time in the workplace and to be honest, not much in community pharmacy. One to two [hours] a week, but some don't even get any."*
>
> ***Distance provider 4***

3.7 Staff involved in delivery and assessment

3.7.1 Knowledge-based

3.7.1.1 FE colleges

Staff teaching the knowledge-based qualification were generally a mixture of subject specialists and pharmacy professionals. The use of subject specialists for the delivery of some elements of the course was commonplace. For example, chemistry, biology or physiology teachers employed by the college, who taught on a range of courses, would deliver classes for the level 3 pharmacy technician qualification.

> *"That's right, we've got three college lecturers that are doing the chemistry, biology and the physiology, and we've got myself and…how many others have we got? Two, three…about four other technicians, specialist technicians that come in to do the various actions and uses of drugs and we've got a guy that comes in to do all about the parental nutrition and the aseptic units … ."*
>
> ***FE college 16***

Almost all FE colleges had pharmacy technicians involved in regularly delivering the knowledge-based material either as employed members of staff at the college or invited as guest speakers that visited the college and delivered a class on a specific topic. For example, in one college a pharmacy technician would visit the course centre to deliver a talk on aseptics:

"I have guest speakers as well for some of the bits that I can't do so one of my colleagues, she comes and does all the asepticy [sic] things."

FE college 10

One FE college, that had a small number of trainees, did not have pharmacy professionals involved in the delivery of the knowledge-based qualification. The interviewee recognised the limitation of holding a degree in pharmacology rather than one in pharmacy, as it hindered their ability to relate education to practice and understand the course as a whole.

Well, I think in order to teach the course competently, I need to understand where they're coming from, because the problem with the degree in pharmacology, it's not really clinically based. It's just like a study of the interaction of drugs with the body and even though it's useful for some of the units, I think to understand the course as a whole, you have to be a pharmacist or pharmacy technician.

FE college 1

With regards to assessments, after a member of staff had marked assessments, another would scrutinise this marking. This process was commonly referred to as 'internal verification' or 'internal quality assurance' and would be done across the knowledge units whereby assessor marking would be subject to scrutiny by a member of staff that was often a qualified internal verifier/quality assurer.

"We also have our own process of internal verification. So each year, we pick out…well, ourselves and the college in [location removed], we select particular units and we then all meet up and basically look at each other's assessment decisions, and sample and identify if there's any actions or any kind of good practice, and share that kind of information as well."

FE college 12

Assessors with less experience may have more of their work checked than those with more experience as noted by one interviewee, below:

"New assessors are – somebody who hasn't assessed the unit before – will be sampled in a higher percentage … but all assessors are sampled every year."

FE college 13

3.7.1.2 Distance providers

The distance providers delivered the knowledge-based components through distance learning packs/materials and online facilities. Trainees would study independently at home or in the workplace, if study time was available. Therefore, those supporting the delivery of the knowledge qualification for trainees studying at a distance would often be assessors: pharmacy professionals, employed by the distance provider, who were assigned trainees to assess, and support where necessary, during the course of their study.

"The split is that we have a mixture of pharmacists and pharmacy technicians which you'd expect. We've got a team of 21 pharmacy technicians and the 13 pharmacists that are all involved with the delivery of the knowledge and the competency based programmes."

Distance provider 4

Interviewees described how trainees would normally have one assessor that was responsible for overseeing the marking of that trainees' work.

"Yes, that's the idea. You have one assessor who does both [knowledge and competence]. Obviously we have to change sometimes, but the idea is…the aim is that that assessor sees them through from beginning to end."

Distance provider 2

Trainees' assessors would usually have experience of working in the same sector as the trainees they were supporting.

"They've got different backgrounds, so some have worked in community pharmacy, some have worked in hospital pharmacy, and we would just allocate assessors based on numbers and also experience. So for example, if it was a student in a community pharmacy we'd try and give them an assessor who's also in that area."

Distance provider 1

Assessors employed by distance providers were generally tasked with marking their trainees' summative assessments (exams or assignments). However, it was pointed out by an interviewee from one distance provider that there was some flexibility in who would mark assessments. Some individuals may have had more specialism in aspects of the knowledge or competence qualification and therefore they could focus on assessments linked closely with their expertise. Assessors that were pharmacy technicians could be better placed with assessing the competence side of the qualification as they would have most insight into the practice undertaken by trainees.

> *"Not every assignment is marked by that person and the reason for that is it wouldn't be appropriate necessarily when we've got experts in science areas. So we make the most of the skill mix that we've got. Then we've got some technicians who focus mainly on the competency side and we look as well with our staff at what expertise, what background they come from. So we've got a mixture of staff that are from hospital and community and industry.*
>
> ***Distance provider 4***

As with FE colleges, the marking of assessments by assessors would be subject to internal verification/quality assurance, where samples of graded assessments would be reviewed by another assessor.

> *"We have an IQA, Internal Quality Assurance as well, so they will do a sample of the work we do, so they'll check each of the candidates to see that they're progressing as they should be, that the assessor is marking them fairly, and the evidence provided is sufficient."*
>
> ***Distance provider 5***

Though not commonplace across distance providers, the delivery of supplementary face-to-face sessions provided to trainees by Distance provider 2 and 6 (noted in section 3.5.1.2) were delivered by pharmacy professionals or subject specialists.

> *"Sometimes we will, with the chemistry, for example, we've got some chemistry teachers that will come in and actually do additional work in relation to the assignments."*
>
> ***Distance provider 6***

3.7.2 Competence-based

3.7.2.1 FE colleges

The competence-based qualification was undertaken in the workplace where trainees would collect evidence of work completed to demonstrate competence. The management of the competence qualification was often done 'in-house' in the trainee's workplace as this is where evidence could be demonstrated and recorded in the portfolio. Therefore staff involved in assessing the competence qualification could vary. If trainees worked in settings where there were assessors available there would be less staff required at the FE college to assess trainees. One of the FE colleges with a higher number of trainees compared to other FE colleges – and more trainees in community than hospital – described the staff involved in the management of the competence qualification.

> *"I've got two full time members of staff who classroom teach and assess the NVQ part and … one part time assessor and then I've got a handful of assessors that I just call locum assessors, associate assessors."*
>
> **FE college 6**

As FE college 6 had more community trainees than other FE colleges they had more staff involved in overseeing the competence qualification as many community pharmacies did not have qualified assessors in the workplace. As noted previously, many trainees undertook their work experience within the hospital setting and many hospitals had assessors in the workplace who fed into the delivery and assessment of the competence qualification. These assessors in the workplace would not be FE college staff, but hospital staff, though they would work with the FE college in the delivery and assessment of the competence qualification.

> *"The assessors are all pharmacy technicians or pharmacists, but they're not employed by the college; they would be employed in the workplace beside where the student works.*
>
> **FE college 13**

In order to assess trainees' competence, assessors would have to hold an assessor qualification, often completed through an FE college. This would be a level 3 qualification awarded by the same awarding bodies that offered the knowledge and competence qualification for pharmacy technicians (Pearson Edexcel; City and Guilds; SQA). One such example is the current Training Assessment and Quality Assurance (TAQA) qualification for assessors that is awarded by City and Guilds. which was, however, not specific to

pharmacy, so it could be a qualification held by assessors in a range of disciplines outside of pharmacy.

> *"It's a generic qualification, it's not pharmacy specific, so you can actually go anywhere for that qualification."*
>
> **FE college 3**

Often, the assessor qualification would be completed at an FE college, such as one that worked closely with the hospital to provide the knowledge and/or competence qualification to trainees. This would give the hospital site some independence in managing and overseeing the progress of their trainees throughout completing the competence qualification.

> *"We provide the assessor award and the verifiers' award … staff have come and done them qualifications with us and they actually, within the NHS Trusts, look after their own students."*
>
> **FE college 9**

Many hospitals had the infrastructure to provide assessors and also internal verification of assessments for the competence qualification and the FE college would provide the portfolio materials that were used by the hospital. In some cases, smaller hospitals may not have had the infrastructure, with assessors in place, to assess a trainee's competence. In such cases peripatetic assessment could take place where assessors employed by the FE college would visit the hospital to observe and assess trainees.

> *We've got two hospitals, very small hospitals, where they haven't got any assessors in the workplace … we have got an assessor who works one day a week for the college, she tends to work mainly on the level two, to be honest, but she does actually look after a couple of our students, so she actually goes in as a peripatetic assessor to the workplace, so there is that model and also, you know, we have to obviously provide assessment for the community pharmacy technicians, because they don't have assessors in the workplace.*
>
> **FE college 3**

Peripatetic assessment was, however, more commonly used to observe trainees that were undertaking their work experience in community pharmacy.

> *"For community pharmacy generally we provide the assessors because they don't have their own qualified assessors. We provide qualified assessors from*

> *[our] college and they go out into their workplace and provide that assessment for them and support them through the NVQ."*
>
> **FE college 9**

As with the internal quality assurance of the knowledge qualification, the assessments that were completed by assessors for the competence qualification were subject to the same checks by an internal verifier/quality assurer who would hold an appropriate (level 4) qualification.

> *"We have an internal verifier who will again just sample at random to make sure that the quality of the assessments is robust."*
>
> **FE college 16**

Internal verification of assessments would be completed by the FE college if internal verifiers were not present in the workplace (e.g. in community pharmacies or some hospitals). Several interviewees from FE colleges spoke about how some hospitals may not have had qualified internal verifiers available to check assessment decisions and therefore the FE college would provide internal verification to ensure the assessments being conducted by workplace-based assessors were of a similar standard.

> *"[Trainees] have work based assessors, so they're people that they work alongside in the NHS Trusts, most of them, some of them, not all of them do, but most of them have work based assessors and we manage it from the college, so the quality of the assessment is managed from the college."*
>
> **FE college 3**

3.7.2.2 Distance providers

The distance providers employed assessors that were involved in both knowledge and competence assessment of trainees, and therefore the staff involved in overseeing the progress of trainees' competence qualification were the same as those discussed in the previous section about the knowledge qualification. The process of assessment of competence followed by internal verification was consistent with the knowledge qualification. The actual assessment of trainees was, however, commonly done from a distance (see section 3.8.2), with the assessor not working alongside the trainee nor visiting the trainee's workplace to undertake observations regularly, as appeared to be the case for trainees using FE colleges. Instead, expert witnesses' observations and testimonials of trainees' competence in the workplace were considered. The expert witnesses were not employed by

the distance provider. They were typically a line manager of the trainee (e.g. supervising pharmacist in community) or another pharmacist or pharmacy technician who had witnessed the trainee undertaking a task that mapped onto competencies laid out in the portfolio.

> *"So it'll be usually their supervising pharmacist. If they are working with a registered technician then we will also accept witness testimony from them. And they also act in a supervisor and an expert witness role as well."*
>
> ***Distance provider 2***

In some cases it appeared that assessors would visit a trainee's workplace but this was not common practice, as illustrated in the quote below:

> *For some students who are in the area where the assessors are based, assessors will go out and observe candidates. But I think a lot of our students are actually at a distance, so it is mainly through expert witness testimony and professional discussions.*
>
> ***Distance provider 1***

Support for expert witnesses in community pharmacy often came in the form of reading through some training material which outlined the roles and responsibilities of an expert witness.

> *"It's a short course. We also have…it's called an information module … that would support the pharmacist or technician in the pharmacy as well to support their students."*
>
> ***Distance provider 3***

> *"The expert witness will do an induction through our centre on what's actually involved in being an expert witness. We do an induction with them, so they are clear on what their role is and how the student is gathering evidence."*
>
> ***Distance provider 1***

3.8 Assessment and feedback

This section considers the way in which assessment for the knowledge- and competence-based qualifications was conducted within the FE colleges and distance providers.

3.8.1 Knowledge-based components

This section provides detail on formative assessments (e.g. quizzes; tests) and feedback provided to support trainees to improve their knowledge. It then focuses on summative assessment, which is the type of assessment where formal grades are provided and that see the trainee pass units that lead towards both the knowledge and competence qualification.

3.8.1.1 FE colleges

As part of completing the qualification formative assessments (typically tests / quizzes) would be dispersed throughout. These assessments offered trainees the opportunity to test their knowledge and get feedback prior to summative assessments.

> *"Before the students sit any summative assessment, they always have the opportunity to sit formative assessments, which they get feedback on. And the feedback will always be a combination of verbal feedback and written feedback."*
>
> *..*
>
> *"The formative tests very much just give them an opportunity to, you know, kind of, consolidate their knowledge and get used to exam structures and things ... ."*
>
> **FE college 12**

> *"In the weeks prior or leading up to the summative test the tutors will do mock tests with them, like formative assessments with them."*
>
> **FE college 8**

Three FE colleges offered City and Guilds-accredited qualifications; 11 offered Pearson Edexcel-accredited qualifications and three offered SQA-accredited qualifications. This dictated the way in which summative assessments took place. For example, those colleges offering Pearson Edexcel qualifications would assess trainees' knowledge using written assignments for each unit of the qualification.

> *"They are given assignments which usually centre around a particular topic within a unit. So out of 19 units they get 84 assignments over two years."*
>
> **FE college 11**

Other colleges offering City and Guilds used exams to assess trainees at the end of a unit.

> *"We teach the unit like in a block of teaching and then they'll sit the assessment paper for it once they've completed the teaching."*
>
> **FE college 16**

In contrast, the three FE colleges that were using SQA assessed trainees with a combination of exams and assignments.

> *"It's a mixture. We don't have any single unit where it's only assignment. Most of the units are either a mixture of an exam plus practical or an exam plus an assignment."*
>
> **FE college 12**

> *"There's a variety of methods of assessment that are used. Some of the, and again it's stipulated in the [Scottish Qualification Authority's National Certiciates], so students may have to complete a closed book assessment and they may have to complete an open book assessment and these would be done in college, in the classroom, and it would be invigilated. We would never allow a student to complete an assessment which was closed book or open book without an invigilator, a lecturer present actually, obviously to ensure that there was the authenticity of the assessment process. Perhaps the unit specification will stipulate that the student has to design a report and they would do that in their own time; they would go away and maybe use something like moodle or the internet, or they would go into our own learning reader centre here where they've got access to books and computers and whatever they wanted and then they would develop their report and hand that in. It depends on what's needed in the unit specification."*
>
> **FE college 13**

Issues with assessment methods were noted by a few interviewees when asked to provide comments about the pharmacy technician qualifications. For example, one interviewee noted that it was ideal to have a mixture of exams and assignments to assess trainees. Placing the weight on either exams or assignments alone posed challenges for trainees, which is illustrated in the quote below:

> *"What we need is half and half. We need it half by written assessments and we need it half by exam, you know, the students are now stressing because they've*

got 19 exams and they say why can't we do it in assessments and written assignments, and whereas my old students used to say couldn't we just have an exam to get this all over and done with, I'm permanently writing assignments, so the ideal and especially for this type of student, a technical student, would be a mixture of both, but neither of the qualifications offer that and I am bound with what the awarding body says that I've got to assess."

FE college 14

Assessments would be graded as a pass, merit or distinction by education providers offering Edexcel and City and Guilds qualifications and the final qualification would be certificated in the same way. If minimum (i.e. pass) requirements were not met, the next submission or resit would often be capped at a pass grade.

"So for the first attempt, you can get a pass, merit and distinction, but then if you fail, then you only get one more attempt and only a pass is available."

FE college 3

FE colleges offering SQA qualifications described grading assessments with scores that converted to pass or fail criteria.

"It's a score of…that again it's stipulated in the unit specification from SQA, so it's stipulated there what the pass mark is for [national certificates]. It's generally about 60 per cent for NCs, and the student will know that; it will be on the assessment before they get it."

FE college 13

It was difficult for trainees to fail units of the knowledge qualification because they would be coached to reach at least a pass level and they had opportunities of resubmitting work or resitting exams.

"Not many people do [fail] because if I can say that they're on the right track, then I can give them guidance to pass, and therefore…well, from the student perspective, they are told that they will be able to submit twice, and unless they're almost there that could mean that they could fail on that second submission. The reality is by the second submission, they've looked at the feedback from the first, and most students will then pull it up to the mark, or more or less, and if it just needs a little bit of tweaking, then that's allowable."

R: "They can fail but then, yeah, they're supported to achieve, they can redo, they can retake."

I: "So it is, is it fair to say it is difficult then to fail really because if you slip up and don't achieve the pass marks you'll then be supported to achieve...?"

R: "You'd be supported to...it is difficult to fail, yeah."

FE college 6

After completing assessments, trainees would receive written feedback from the member of staff that delivered the teaching for the unit relating to the assignment; this was consistent across all FE colleges. Additional feedback could be delivered face-to-face during classes as the trainees attended the college on a weekly basis.

I: "You provide written feedback on assignments?"

R: "Yes, yeah".

…

"But also because I see the students I can also talk to them as well so that's the advantage."

FE college 5

3.8.1.2   Distance providers

In preparation for summative assessments, trainees using distance providers could complete different activities in their workbooks that could then be marked by their line manager (e.g. supervising pharmacist) as described below:

"There are exercises and activities for them to work through as they go through the module. They're marked within the workplace by the supervising pharmacist."

Distance provider 2

Other ways of conducting formative assessment would be through online testing where automated feedback could be generated.

R: "Some of the formative assessment's done through the computer, so they can go online and actually do multiple choice questions and actually get some idea of" -

I: - "Okay, so they get feedback on it automatically?"

R: "Yes, absolutely."

Distance provider 4

As with the FE colleges, summative assessments for the knowledge qualification could be in the form of assignments or exams. Most distance providers used written exams to assess trainees rather than assignments. These would be sat in trainees' workplaces under exam conditions.

"They have written [exams] at the end of each unit which they need to do in the workplace. So they do have those which they need to do in the workplace and those are sent in for marking to our assessors who will then give them quite detailed feedback and advice and if they need to re-sit an assignment they'll give them a plan for further study."

Distance provider 1

"Yes. What happens is we send out the modules and the student would get those. But the actual named supervising pharmacist would get the summative questions and the assessment questions which go out in a sealed pack. So they would hold onto them until they're ready to give them out to their student."

…

"[T]hey would sit that in the pharmacy, supervised by their pharmacist under exam conditions."

Distance provider 3

One interviewee did, however, consider the potential issues associated with the arrangements of the trainee completing assessments at a distance with the support of a supervising pharmacist, without a trained assessor working with them or observing them. They described how some trainees, without the help of a trained assessor in the workplace,

may not fully understand the content of what they are producing for their assessments due to, for example, learning 'by rote'.

> *"If you've got an online test to do, then the pharmacist could be there, or somebody else could be there supporting, and maybe helping with the answers, and not realising…and because obviously they're not trained assessors, they're not trained in teaching, but they know the job, so they assume … that their member of staff understands something, and they actually don't. I have seen that before as well, where they're kind of almost given the answers, but their explanation isn't really that great. Also, when somebody's doing an assignment, and they're just writing it up and getting it sent off, again it could be something that they've kind of almost learnt by rote, and they're regurgitating an answer, but the understanding and practice isn't there."*
>
> ***Distance provider 5***

Three distance providers (distance providers 4, 5 and 6), using a Pearson Edexcel-approved qualification, assessed through submitted assignments (distance provider 5 and 6 used the materials developed by distance provider 4 and therefore the assessment method was the same).

> *"They don't do exam conditions tests at all."*
>
> *…*
>
> *"It is all submitting assignments, yes, that we produce."*
>
> ***Distance provider 4***

The grading of assignments was done in the same manner as most FE colleges, with pass, merit and distinction criteria being used for the final outcome at the point of certification.

Feedback for summative assessments was provided by assessors employed by the education providers and the assessors typically assessed trainees' knowledge and competence together throughout their training. Written feedback was often provided that could be shared with trainees online or sent to them through the post. Verbal feedback could take place during telephone conversations and these conversations may also have involved 'professional discussions', considered in the following section.

> *"They have written assignments at the end of each unit which they need to do in the workplace. So they do have those which they need to do in the workplace*

and those are sent in for marking to our assessors who will then give them quite detailed feedback and advice and if they need to re-sit an assignment they'll give them a plan for further study."

Distance provider 1

3.8.2 Competence-based components

3.8.2.1 FE colleges

The competence-based components were more practical and trainees undertaking the competence qualification through an FE college would document evidence of competence in a range of units (e.g. ordering pharmaceutical stock) in their portfolios (outlined in section 3.5.2) as well as collect evidence of being observed in the workplace by assessors or expert witnesses when performing different activities. This process was described by interviewees from FE colleges such as the following one:

"They build their own portfolio, so to speak, but yes, the standards are there for them within the portfolio, and we, all the recording materials proformas are there, and when the assessor goes out to see them, then certain forms are completed, including an action plan so the student knows what they're going to do next, to provide evidence for which unit, and so forth, and whether they need candidate statements or witness testimonies, or that sort of thing, you know; or some underpinning knowledge questions that they need to answer to prove that."

FE college 11

Portfolios would then be checked by an internal verifier to ensure consistency between evidence provided across trainees' portfolios. An interviewee from one college described the process of assessing evidence of competence, common amongst FE colleges, below:

I: "[Trainees are] filling in, collecting evidence and then they get also witnessed doing things by the assessor?"

R: "Yeah. Or a colleague, another pharmacy technician, or pharmacist in the work place can sign off, can sign…they can write a witness testimony, saying they've done something."

I: "Okay. And then the College, you kind of see the portfolios they progress, and…?"

As many trainees completing the competence qualification provided by FE colleges worked in hospital, they generally had assessors in the workplace. Therefore, feedback could be provided on a regular basis about evidence they were providing and on their general performance (see work stream 2 findings for further information). If a trainee was assessed by a peripatetic assessor employed by the FE college then feedback from the assessor would be less frequent; typically this would be monthly.

Though trainees may have contact with their peripatetic assessors less frequently they would still receive verbal feedback on how they were doing and the quality of the evidence being provided as well as more formalised written up feedback documented in the portfolio.

3.8.2.2 Distance providers

Distance providers' assessment of competence, as in FE colleges, was based on documented evidence in a portfolio. Those using distance providers would also be observed by another member of staff. In most cases this would be an expert witness rather than a qualified assessor, mainly because most trainees would be based in a community pharmacy rather than a hospital, where qualified assessors were commonly situated.

The main difference from FE colleges appeared to be in the contact trainees had with their assessors. Trainees undertaking their competence qualification through a distance provider

typically had a distant relationship with their assessor and therefore had observations from expert witnesses as opposed to assessors in the workplace or peripatetic assessors.

Professional discussions could take place over the telephone whereby a trainee could discuss different aspects of practice with an assessor, allowing the assessor to gauge a trainee's understanding of different aspects of the competence qualification as well as elements mapping onto the knowledge qualification. This was most applicable to those in community who were often using a distance provider to undertake the competence qualification; most trainees in hospital would be undertaking the competence qualification through an FE college or through an accredited hospital NVQ centre. Interviewees from distance providers spoke of professional discussions that could take place between assessors and trainees as a means to consider trainees' understanding of different issues, and this could relate equally to elements of competence and knowledge.

> R: "It's a planned discussion so it has to be planned. It's not a question and answer session and they're not put on the spot. It's something that's planned with the learner through their assessment plans to either cover criteria, concern criteria, we holistically assess across units, so it's a really useful assessment method actually covering a subject, if you like, rather than just one unit, if that makes sense?"
>
> I: "So it offers the opportunity to ask questions of the trainee to clarify their understanding about things?"
>
> R: "Yes, they have to talk around subjects, that's right."
>
> **Distance provider 4**

The use of expert witnesses as observers and the use of professional discussions were a means of assessing trainees in the absence of having assessors observe trainees in the workplace as this was not always possible. This is not to say it never occurred, though it appeared to be uncommon for assessors from distance providers to visit trainees in their workplace on a regular basis.

> "Probably we use [professional discussions] more than, just because we've always used professional discussion as a way of assessing. We use the expert witness observations and sometimes assessor observations, because like I said earlier, we do go out, not all the time and not to every learner, but in some sectors we do and also based on need. So then it would be a combination of expert witness too."

In the case of one of the smaller distance providers interviewed, visits did take place in a similar manner to visits by peripatetic assessors from FE colleges, and this may be due to the close proximity of the distance provider to the trainees' workplaces and the relative small number of trainees undertaking the qualification through a small provider.

> *"No, we'll visit the candidates once a month, or at least once a month, and be available through email or telephone, as well, at other times, if needed. We do the NVQ part, they provide evidence that's witnessed by their supervisor, also work products…we'll do questioning and observation as well, with them, while we're there, and they build up a portfolio to meet the standards for the NVQ."*
>
> *Distance provider 5*

3.9 Support

This section considers the way in which trainees were supported by their education provider during their study. This includes both the help they would receive from individuals as well as the services and facilities available for trainees to use. The support available for trainees within the workplace is considered in the findings of work stream 2.

3.9.1 FE colleges

In terms of physical resources available for trainees, the FE colleges were equipped with library and IT facilities that could be used to support trainees' work, particularly on the knowledge qualification. FE colleges were also housed with labs that could be used for practicals. There was some variability in the facilities available to trainees. For example, a few FE colleges appeared to have better lab facilities that were particularly well suited for trainees studying pharmacy.

> *"Yes, there's a lab. We have a pharmacy lab where there's a…we have a labeller. We have practical labs where they make ointments, creams, lotions, so they have balances, electronic balances, spatulas, masks, mixing things; there's a variety of things that we do. So the students, our students get practical work every week so they are in class and are able to make an ointment or a cream or a lotion or whatever in that class every week. They also then label for a patient and they do role play scenarios."*
>
> *FE college 13*

> *"We've got a purpose-built lab that's only used by our pharmacy students."*
>
> *…*
>
> *"And it's got all of the usual pharmacy equipment in, so that we can dispense – well, we can practise, simulate dispensing – but more so to do with pharmaceutics and [extemporaneous].".*
>
> **FE college 11**

The majority of FE colleges had an online learning environment or 'moodle' as it was typically referred to. The moodle served as a facility for trainees to access material that was previously taught or supplementary material relating to different elements of the content, typically the knowledge qualification. The overview of the moodle facility provided by one interviewee illustrates this:

> *"[The moodle]'s not something where we'd say, well, chemistry is taught via Moodle, it's if you're struggling with chemistry, why don't you log onto Moodle, there's five or six pieces of work on there that's at level 2 or something of that nature, it might help you in your study."*
>
> *…*
>
> *"Of course, any of the teaching materials as well will be uploaded there, so if a student was away or sick or poorly or something like that, they'd be able to take it from there."*
>
> **FE college 7**

The moodle generally served as a way for trainees to access material or find information related to course content they were learning to further support their learning of the material being taught. Members of staff were available for trainees allowing them to discuss any questions or concerns. Staff members were accessible for support when trainees visited the FE college for the full day to attend classes for the knowledge qualification. Additionally, trainees were able to contact FE college staff by email or phone outside of these face-to-face sessions.

> *"Yes, yeah. We're available, you know, even on our days off and I know my colleagues, even on their days off they answer their emails, you know, so we all do."*
>
> **FE college 3**

> *"All of the learners can message tutors using that or they've got our email addresses so they can obviously access us whenever we're not in college. So there's support there whenever they need it, basically. We have to respond to emails within 24 hours so that's available."*
>
> **FE college 10**

An added element of support available to trainees attending FE colleges was that of peer support. As they were attending college on a weekly basis with other trainees at the same stage in their education and training, they had peer support available to them which many trainees using distance providers did not have.

> *"I think that our courses are of a really good quality because of the connections that the learners build with each other, the networking that they have with each other and obviously the tutors, and obviously access to other pharmacy technicians from other areas who've come in to teach them. There is a lot of, like I say, practical work that I just don't understand how you get round it distance learning."*
>
> **FE college 10**

3.9.2 Distance providers

The main source of support for trainees using was their assessors working at the distance provider who provided the assessment feedback and conducted professional discussions with trainees regularly throughout the completion of trainees' education and training. As such they were a central source of support for any queries relating to their education.

> *"If [trainees] have any questions as they're working through the activities they can call their assessor and go through any of the activities in detail."*
>
> **Distance provider 1**

Trainees could contact the head office of the distant provider if they were not in close contact with their assessor or wanted to receive support with something not relating to the qualification(s) they were completing through the distance provider. For example, one interviewee described how trainees could also contact the head office for pastoral care issues.

> *"[The assessor is] the main link for anything relating to the assessment and the qualification. Any other holistic support or pastoral care or anything like that is done through the centre."*
>
> **Distance provider 2**

The larger distance providers that may not have had as close a working relationship with every trainee and their site as a smaller distance provider, had telephone helplines which were available for trainees, or their supervisors, to call when they required help.

> *"There's also a 24 hour helpline which is manned by an assessor and that does get used a lot."*
>
> **Distance provider 4**

> *"It's not 24 hour, it's business hours. But they can call as many times as they like, there's no cap. So we won't say you've called us every day for the last 52 weeks. They can call as many times as they like."*
>
> **Distance provider 3**

There was not the same opportunity for trainees to work and discuss different coursework with others as within FE colleges, but sometimes trainees worked with other trainees in the workplace.

> *"Sometimes within the workplace there might be more than one student doing the course, and that can be supportive because they can obviously discuss the units with each other and their colleagues within the workplace and that does seem to work quite well."*
>
> **Distance provider 1**

3.10 Working relationships with employers

This section considers the working relationships between the education providers and the employers of trainee pharmacy technicians.

3.10.1 FE colleges

Interviewees described how there was a close working relationship between FE colleges and the employers where trainees were completing their work experience.

> *"We have a very good relationship with the [employers]…there's usually a training lead in each of the trusts, who may be…usually it's the [internal quality assurer] within the team and that would be the person that would be my point of contact and I send out regular emails."*
>
> **FE college 3**

It was apparent from some interviews that the working relationships were very close, particularly amongst hospitals, and the employers had an influence on the evolution of the delivery of the qualification(s) employers were using. For example, one interviewee talked about the course being developed with what employers wanted.

> *"Well, I went out to them originally, when I set the course up, and as I said to you, I developed the course in line with what they wanted. And so they've been very good and regularly now send all of their trainees to us. And it seems to work quite well."*
>
> **FE college 2**

One interviewee from an FE college described the partnership in place between the college and the hospitals, in particular, where members of staff from the hospitals would contribute to some of the teaching.

> *"I have a contact person at every site of employment, and I actually get those people to come in and do some teaching for the students as well, to give them a bit of variety and expertise. So they come in and do one or two sessions for me, and we have quite a close dialogue. We formalise that once a term, with what we call a partnership meeting, where this representative from the employment area, and college tutors, get together and have a discussion about student progress on the course."*
>
> *…*
>
> *"I mean they are true partners, we kind of work it together. In years gone by, it was a very close partnership with the NHS trusts. It wasn't an advertised course, they just sent me students. That has all changed now, but we keep the same firm relationships with the employers. We don't get as much representation from the community as from the hospitals, just because of the practicalities of that."*
>
> **FE college 4**

The working relationships between FE colleges and hospitals where trainees were undertaking their work experience appeared stronger than those with community pharmacy employers, exemplified by the following quote from an interviewee from one FE college:

> *"We probably...I would say we're more...we work more closely with the hospital employers than we are with the communities."*
>
> *…*
>
> *"With hospital employers we have a, it's approximately a six monthly educational group meetings where...yeah, if anything...if they want to improve something or change something or if we want to send information we can table it at those meetings. The termly reviews that we do with the students get posted out to the employers as well so they have an indication and a review of how the students are doing. Those that are apprentices have a ten weekly review which the employer has to sign as well."*
>
> **FE college 6**

Part of the working relationship between FE colleges and hospital employers would be the receipt of feedback from employers and evolution of the course which was commonplace according to all interviewees.

> *"There's an awful lot of hospitals out there and an awful lot of stakeholders, so we really value their opinion and their input. It's difficult to please everybody all the time, but of course it's, yeah, we do, we have meetings during the year. At the end of the year they'll give us some feedback, we'll give them some feedback. We'll change things that need to be changed … ."*
>
> **FE college 7**

> *"[We receive] annual feedback we get from employers and maybe students as well. So we look at what they've...what's gone well, what lessons they've liked and what strategies we've used in the classroom and then we can take that forward for the next year."*
>
> **FE college 6**

3.10.2 Distance providers

Interviewees from the distance providers also described having a close working relationship with employer organisations. It appeared that the larger distance providers would have more contact with employers – who were commonly larger chains or multiples – dealing with training leads rather than individual training sites where trainees worked. This would be more pragmatic when dealing with a large number of trainees as any information / discussions with head office could be disseminated to pharmacy branches within the employer's organisation.

> *"Not so much with the supervisors. If we have a main employer then we tend to work with them quite closely at a head office level. But not so much individual student level, unless there's a particular issue or reason that we would want to alert the supervising pharmacist to."*
>
> ***Distance provider 2***

Smaller distance providers often provided education and training to smaller chains or independents and therefore they would work more closely with the workplace where trainees were based. An interviewee with one of the smaller distance providers highlighted the regular communication occurring between their organisation and trainees' workplaces through, for example, monthly progress reports to update the trainees' supervisors on how trainees were progressing.

> *"Yes, and we also do a monthly review and progress as well, so there's a form for that, for us to feed back to the supervisor about how they're doing, and for the supervisor to come back to us, and say if there's any problems. And also, feedback from the learner to say what issues they're having or how well they feel that they're doing."*
>
> ***Distance provider 5***

One smaller distance provider spoke of a longstanding relationship with employers having worked with them in providing education and training for level 2 dispensing qualifications. Having a successful history of working together would increase the likelihood of working together again when employers needed employees to train for level 3 qualifications.

> *"Very often students will have done the level two and then the same students will then go onto to do the level three with us, because they've been happy with the support that they've had and they usually choose us for their level three training as well."*

The close working relationships between distance providers and employers was important to facilitate feedback for distance providers. As with FE colleges, receiving feedback about elements of the qualification was used to make adjustments to it to better suit the employers' and/or trainees' needs.

> *"We're all the time evolving our courses and looking at materials and looking at feedback and that's not just learner feedback but is often employer feedback."*
>
> *Distance provider 4*
>
> *"We do ask for feedback from students and also their employers. So it's not too regular but we do usually have some feedback within the middle of the course and then at the end of the course."*
>
> *Distance provider 1*

3.11 Completion rates

This section of the report considers the completion rates of trainees undertaking their knowledge and competence qualifications at FE colleges and distance providers. Not all interviewees were able to share information relating to completion rates, however, more insights into completions rates were offered by interviewees from employers, covered in the work stream 2 findings, and in the survey of recently registered pharmacy technicians: work stream 4 findings.

3.11.1 FE colleges

The majority of FE colleges were able to share information about their completion rates in recent years. A few interviewees were not able to share this information because they had recently started their position, the data was unknown to them or they did not agree to share this information. Overall, interviewees from FE colleges that discussed completion rates stated that there were very few issues with trainees leaving the course and completion rates were considered to be very high, or near perfect in recent years.

> *"We're looking at this year between 90 and 100 per cent. We have had one person who had to withdraw because they've moved location, so really that was a bit unavoidable."*
>
> *FE college 8*

Whilst completion rates could be considered high, it did happen that a very small number (e.g. one or two) of trainees dropped out of the course. For example, one interviewee acknowledged that their FE college may lose a couple of people near the start of the course and that they were attempting to address this with the recruitment/admissions process.

> *"Usually, we usually, yeah. I mean, last year we had…I think we lost two last year, one very young girl that I don't think perhaps fully appreciated what the course was and just sort of started to miss lessons and then sort of just didn't come back, and we're not quite sure where she disappeared to, we couldn't get contact with her again, and the other one actually got a place at university to study pharmacy, so she's still in the system but she decided she'd rather do that than perhaps still take up the place on the college course, but I would say, yeah, it's not that common that we lose people, but I'd say in the last couple of years we've maybe lost one or two each year, but we sort it out with…we're trying to tackle that at the recruitment point now, to make sure that we are actually attracting the right people."*
>
> **FE college 16**

Where there were instances of trainees dropping out of the course this was generally attributed to factors outside of the control of the college. Whilst one cannot know the exact reason without speaking with the individual leaving the FE college, interviewees usually described how some trainees had personal issues that they were dealing with, or that the qualifications and job role was not what they had anticipated. One interviewee described how some trainees may not have anticipated the amount of work required of them to complete the qualifications.

> *"It's generally that the course is very intensive, obviously, and some students don't bear in mind how intensive it is, and also the professional rigor that's expected within the workplace."*
>
> **FE college 7**

> *"I've just looked back over the last couple of years and we've had one each year that, for one reason or another, hasn't succeeded, you know, for perhaps career change, may have decided it's not for them and moved on, but it's, sort of, averaged over the last, I would say, three or four years of one a year."*
>
> **FE college 3**

3.11.2 Distance providers

A few of the distance providers (distance providers 1, 2 and 3) could not provide figures for the number of trainees that had not completed their course: two interviewees did not hold this information and another (distance provider 2) stated that their organisation had not had a complete cycle of trainees finish their courses.

Distance providers 4 and 6 stated that the majority of trainees completed the course and that completion rates were high. One of these interviewees, from a large distance provider, explained that some trainees took longer than the two years it would commonly take for trainees to complete training. Therefore completion rates for the course would rise even higher when considering those completing them beyond the two years. Reasons for the protracted time for completion were considered to be, for example, taking maternity leave or completing functional skills (English and maths) as an apprentice.

> R: *"Within two years we get about an 88 per cent completion rate, but it increases to 92 per cent between two and three years."*
>
> I: *"So some people just take a little bit longer."*
>
> R: *"That's it. I mean, it's for a number of reasons: breaks in learning, maternity leave, varying other extenuating circumstances, really. Some just need that little bit longer, you'll know, it's a big course particularly if they're doing functional skills as well."*
>
> **Distance provider 4**

In contrast, one participant from a smaller distance provider that was interviewed had a particularly poor completion rate when they were offering the level 3 qualifications. They had since stopped enrolling further trainees because of this.

> R: *"We only had a 25 per cent completion rate."*
>
> *…*
>
> I: *"Okay, so over the years it's been quite a low completion rate?"*
>
> R: *"Very, yes, which again is the reason why we're not putting other people on."*
>
> **Distance provider 5**

Explanations for why trainees did not complete their qualification were considered by interviewees, even those that could not provide information about completion rates. In

general, they described how individuals studying for the qualification may have left pharmacy to perform a different role or for personal reasons.

> *"The vast majority have been due to changing employer or just not carrying on that particular line of work. There have been a few who have gone for personal reasons."*
>
> **Distance provider 2**

3.12 Quality of the qualifications

This section considers the way in which interviewees described how the quality of the qualifications they offered was ensured. Much of the focus of discussion turned out to be around quality assurance as can be seen by the findings below. As such, the reader is encouraged to read work stream 3 findings which consider, in more detail, the role of external verifiers and the awarding bodies in pharmacy education and training.

3.12.1 FE colleges

When asking about how the quality of the qualifications being offered was being assured, most interviewees spoke of the quality assurance process in existence. These included the internal verification processes, considered in some detail in section 3.7, and also the external verification/quality approval processes conducted by an external body, the awarding body.

The internal verification of assessments was one of the main ways the quality of the course was upheld according to many interviewees. A qualified internal verifier would ensure that marking conducted by assessors was done well and that there was consistency in the outcomes of their assessments.

> *"Everything that I do or the assessor does, it gets checked by somebody else. So I think that's one of the main quality assurance processes that we have."*
>
> **FE college 1**

External verification or external quality assurance was also commonly raised as part of the quality assurance process of ensuring a qualification of a high standard was being delivered by FE colleges. An external verifier would oversee the process and this individual would be a pharmacy professional with a qualified external verifier qualification. The process of external verification, as it was commonly called, was described mainly as a process that involved an

external verifier from a FE college's awarding body (Pearson Edexcel; City and Guilds; SQA) examining the internal verification/quality assurance process that the education provider had in place.

> *"They come in once a year and check the college's IV process. They don't check the IVing, they check the IVing process. They want to know how the IVing is being performed by the college and our IV strategy. So last year, the pharmacy's IV process work was checked and they found it sound, so there was no need to actually physically check the marking of the work and the IVing of the work, they just checked our process."*
>
> **FE college 1**

Essentially, external verification conducted by a representative of the awarding body would ensure certain standards were being met continuously. Their role may have extended beyond simply examining the internal verification process though, as noted by some interviewees, such as the one below, who described their external verifier as examining timetables and other procedures in place:

> *"So currently once a year an external quality assurer will come and check more on our processes and procedures, you know, check that we are meeting, check we are reviewing, check that the timetable is up to scratch, check that the internal quality assurer knows what she's doing."*
>
> **FE college 14**

A few interviewees also spoke about maintaining trainee numbers and repeat business as an indicator of delivering a high quality course, illustrated by the following quote from one interviewee:

> *"We've got a significant amount of students on that course because it's spread, the word has spread, and you soon find if people are not happy they will…there are other options to go with and so we generally…because I think we communicate so well with the students and the employers, luckily we've got quite a good reputation."*
>
> **FE college 9**

The appraisal of staff, conducted by line managers, was common across all the FE colleges to assess staff performance and consider development needs which could also potentially feed into the quality of the course.

> *"All of the staff are subjected to appraisals where they'll identify anything that they need to develop or change or increase for over the year."*
>
> **FE college 7**

A few interviewees mentioned how their college was subject to inspections from OFSTED though the pharmacy qualifications would not be the focus of the inspection visits but simply part of a much larger examination of the provision of education across the FE college.

> *I: "They're looking specifically at for example the Level 3 Pharmacy Technician qualifications?"*
>
> *R: "No, they look at the whole college."*
>
> **FE college 8**

Though not raised by most interviewees, a few did comment on how they had experts involved in delivering parts of the knowledge based qualification which added to the quality of the qualification they were offering.

> *"Well, we use vocational experts to deliver the course. These are practising pharmacists who are specialising, or have up to date knowledge of all of the topics in which they are delivering, and lots of experience. So in terms of the quality of the content, that's extremely high."*
>
> **FE college 11**

3.12.2 Distance providers

As with FE colleges, distance providers had internal verification/quality assurance processes where grading of assessments conducted by assessors would be checked by internal verifiers.

> *"We have an IQA, Internal Quality Assurance as well, so they will do a sample of the work we do, so they'll check each of the candidates to see that they're progressing as they should be, that the assessor is marking them fairly, and the evidence provided is sufficient."*
>
> **Distance provider 5**

Similarly, distance providers also spoke about external verification taking place to ensure quality was being maintained, and the evolution of the course (e.g. changing course

materials based on feedback; see below) as ways in which the quality of the qualifications being offered was ensured.

> I:"I mean do you find that the course has changed as a result of feedback you're getting?"
>
> R: "Definitely. I mean just one of the things I think we did at the last accreditation, it's something that's very simple, but we changed the colour of the paper that we use because it's a very long course, people found that the contrast of black ink on a white background, if you've got to read that for hours on end it may feel a bit of a strain on the eye."
>
> **Distance provider 3**

Though not subject to external verification from awarding bodies, two large distance providers (Distance providers 3 and 4) were directly accredited by the GPhC for their knowledge qualifications and felt confident they were offering a strong qualification. One interviewee from one of these distance providers noted how they felt confident with the quality of the qualifications being ensured through the external scrutiny of an awarding body and the pharmacy regulatory body directly.

> The other thing externally obviously, I think we probably get the best of both worlds, if you like, from a quality assurance point of view because we are obviously audited by the awarding bodies through their standard verifiers. Obviously they're looking at assessment and then with GPhC accrediting our programmes anyway, they're obviously looking at every bit of material and the processes and the staff.
>
> **Distance provider 4**

Distance provider 4 mentioned OFSTED being involved examining their organisation and another mentioned the equivalent in Wales (Estyn) inspecting their organisation.

> Then we have additionally to that, because we're delivering apprenticeships we have OFSTED and we have to do self-assessment records for the colleges that we work in partnership with. So we audit ourselves against OFSTED criteria.
>
> **Distance provider 4**

Though not raised when discussing quality of the qualification specifically, the appraisal of staff also appeared common amongst distance providers.

> *"We do annual appraisals with all of our staff, so that's just part of our company."*
>
> ***Distance provider 1***

3.13 Summary of key findings

- **Distance providers provide education predominantly to community trainees.**

- **FE colleges provide education predominantly to hospital.**

- **Many FE colleges described how hospital sites they worked with often managed much of the competence qualification in house as they had work-based assessors in place and in some cases also internal verifiers.**

- **Staff involved in the delivery of the qualifications in both education providers were a combination of pharmacy professionals and subject specialists**

- **Assessment methods for knowledge differed between awarding bodies (e.g. assignments vs. written assessments).**

- **Assessments of knowledge undertaken through FE colleges and distance providers varied in terms of how they were undertaken (e.g. written assessments sat at college vs. sat in pharmacy under exam conditions).**

- **To assess competence, distance providers would often use expert witnesses' observations as opposed to have assessor observations of trainees' competence – as with FE colleges – and would also use professional discussions over the telephone to gauge competence levels.**

- **Perceived to be difficult for trainees to fail assessments for knowledge and competence as they were supported when struggling.**

- **Feedback appears strongest when there is face-to-face contact with assessors (e.g. in hospital) or teaching staff (if using an FE college).**

- **Lack of peer support when using distance provider compared to FE colleges where trainees studied alongside other trainees.**

- **Quality assurance procedures in place across both education providers included internal verification by qualified internal verifiers within the organisations and independent external verifications from an awarding body.**

Section 4: Work stream 2 findings

Work stream 2 involved conducting a range of semi-structured telephone interviews with pharmacy technician employing organisations and the findings from this research are considered in this section. Most subsections of the findings have been divided between NHS organisations and community employers. The results section first describes the research participants interviewed for this research and provides details of the interviews conducted. Following this are the results stemming from the interview data including a discussion of the trainee profile, the training arrangements for work based training, the work environment and support available to trainees, working relations with education providers, assessment, study time and completion rates.

4.1 Research participants

A total of 31 semi-structured telephone interviews were conducted with interviewees representing pharmacy technician employers in Great Britain. Sixteen of these interviews were conducted with representatives from community pharmacy organisations and 15 with representatives from NHS organisations (hospitals/ NVQ training centres) across Great Britain.

Participants had a good understanding of how trainee pharmacy technicians were supported in the workplace during their level 3 education and training. Amongst community employers, interviewees included pharmacy managers, education and training managers as well as owners and superintendents. Representatives from NHS organisations included pharmacy technician education and training leads, NVQ centre managers and assessors.

4.2 Interviews

Semi-structured telephone interviews were conducted between January, 2014 and March, 2014. Most interviews were conducted whilst participants were in their place of work; a few took part whilst at home. Interviews lasted between 14 and 52 minutes. As noted in section 2.1.5, the interview schedule for work stream 2 focused on, for example, the number of trainees, and their demographics, within the employing organisation; information about the education provider(s) used; and how trainees were supported in the workplace.

4.3 Education providers

This section focuses on the different types of education provider used by the organisations taking part in this research and these are shown in Table 5. A number of participants representing organisations that participated in this research, particularly amongst NHS organisations, were approved to deliver pharmacy technician qualifications. As such, these

organisations could be considered education providers as well as employing organisations. A more detailed overview of the delivery of pharmacy technician qualifications is discussed in the findings of work stream 1 which includes an overview of the staff involved in the delivery of the qualification(s), assessment strategies and support provided to trainees. It considers how the delivery of the pharmacy technician qualifications would be delivered within employing organisations and therefore the reader is advised to refer to that section of the report for further details.

Table 5: Education providers used

| Organisation identifier | Type of organisation | Education provider used | |
		Knowledge qualification	Competence qualification
Community 1_MLM	Medium to large multiple	Distance provider	Distance provider
Community 2_LM	Large multiple	Distance provider	Distance provider
Community 3_LM	Large multiple	Distance provider	Distance provider
Community 4_MLM	Medium to large multiple	Their own city and guilds-approved centre	Their own city and guilds-approved centre
Community 5_LM	Large multiple	Distance provider	Distance provider
Community 6_LM	Large multiple	Distance provider	Distance provider
Community 7_I	Independent	Distance provider	Distance provider
Community 8_LM	Large multiple	Distance provider	Distance provider
Community 9_I	Independent	Distance provider	Distance provider
Community 10_Sup	Supermarket	Distance provider	Distance provider
Community 11_MLM	Medium to large multiple	Distance provider	Distance provider
Community 12_Sup	Supermarket	Distance provider	Distance provider
Community 13_LM	Large multiple	Distance provider	Distance provider
Community 14_LM	Large multiple	Distance provider	Distance provider
Community 15_Sup	Supermarket	Distance provider	Distance provider
Community 16_I	Independent	Distance provider	Distance provider
NHS 1_RTC*	Regional training centre	FE college / distance provider	Their own city and guilds-accredited NHS centre
NHS 2_DGH	District general	Distance provider	Distance provider
NHS 3_RTC*	Regional training centre	FE college	Their own city and guilds-approved NHS centre
NHS 4_RTC*	Regional training centre	FE college / distance provider	Distance providers / approved NHS centres
NHS 5_RTC*	Regional training centre	FE college / distance provider	Distance providers / FE colleges
NHS 6_DGH	District general hospital	FE college	FE college
NHS 7_TH	Teaching hospital	Distance provider	Their own Pearson Edexcel approved NHS centre
NHS 8_RTC*	Regional training centre	Distance provider	Their own city and guilds-approved NHS centre
NHS 9_DGH	District general	FE college	FE college
NHS 10_TH	Teaching hospital	FE college	Their own city and guilds-approved NHS centre
NHS 11_DGH	District general	Distance provider	Local city and guilds-approved NHS centre
NHS 12_TH	Teaching hospital	FE college	FE college
NHS 13_DGH	District general	FE college	FE college
NHS 14_TH	Teaching hospital	FE college	Their own city and guilds-approved NHS centre
NHS 15_TH	Teaching hospital	FE college	FE college

*Interviewees were representatives from regional NHS organisations and discussed education and training for trainees across multiple hospitals in the region.

4.3.1 NHS organisations

As displayed in Table 5, many NHS organisations used FE colleges to deliver the knowledge qualification, however, almost half (n=7) of those that participated in this research used distance providers in some capacity. Four of these organisations used a distance provider for the delivery of the knowledge qualifications. Three NHS organisations discussed training across multiple hospitals and a combination of FE colleges and distance providers were used by hospitals in these regions.

Across the NHS organisations the competence qualification was often delivered through an approved NHS site, i.e. the hospital/trust where trainees were based or a regional NVQ centre. These NHS organisations were approved to deliver and provide certification of the NVQ awards: five of these were City and Guilds-approved and one was Pearson Edexcel-approved. In a few instances distance providers were used by NHS organisations for the competence qualification. The delivery of the competence qualification within NHS organisations was largely done in-house as discussed in the findings of work stream 1.

4.3.2 Community

As displayed in Table 5, the majority of community pharmacy organisations that took part in this research used distance providers for the delivery of the knowledge and competence qualifications. One was a City and Guilds-approved centre and managed the delivery of both the knowledge and competence qualifications. This education provider offered qualifications that were very similar to distance provider 2 (see work stream 1), as they worked collaboratively to develop materials.

> *"We teamed up three years ago now to work with [distance provider 2] and we actually wrote their knowledge qualification for them, myself and one of the other pharmacists on the centre team. So, yeah, we spent a good nine, ten months actually getting all that written and done."*
>
> ***Community 4_MLM***

The delivery of the qualifications was, therefore, done in a similar fashion to the distance providers. The assessment of the knowledge qualification was done through the use of exams that were sent to the supervising pharmacist from head office and sat by the trainee in the pharmacy under exam conditions. As with most distance providers, the assessment of competence was done mostly through witness testimonies though there would be a minimum of two observations of the trainee that would be undertaken by a qualified assessor employed within the organisation, and the marking carried out by the assessor would be

checked by an internal verifier. Further information about the delivery of pharmacy technician qualifications is discussed in more detail in the findings of work stream 1.

4.4 Trainee profile

This section considers the number, gender, age of trainees in the organisations taking part in this research. Data relating to the characteristics of the trainees across all of the organisations was not always available, however, more representative information about the characteristics of trainees in considered in work stream 4.

4.4.1 NHS organisations

Across the NHS hospitals where trainees were based, there were commonly two trainees in an individual site per year (i.e. four in total). The majority of trainees in hospital were female. Though trainees' ages were not always discussed with every interviewee, in hospital settings it appeared lower than in community settings, as exemplified in the quote below:

> *"Years and years ago we were taking them on at 16 and the majority of them that came to interview would have been...they'd done GCSEs and weren't going to go and do A-levels, so they were 16. I would say in the last probably five or six years we're getting more that are coming through that have done either AS-levels and then feel that they don't want to continue for whatever reason or have actually done A-levels. So they're kind of 17/18/19."*
>
> *NHS 10_TH*

4.4.2 Community employers

In community pharmacies, interviewees described how there was commonly only one trainee in each pharmacy. The majority of trainees were female. Some interviewees discussed the age of trainees that were currently undertaking training, or had done training in the past, and described having trainees of a wide age range. However, it appeared that community trainees were older on average than trainees in hospital settings as highlighted by one interviewee who stated the average age of trainees was 35.

> *"I would say that probably on average, round about thirty-five, because it seems to go from around 20, and we've got students up to sort of fifty."*
>
> *Community 2_LM*

4.5 Arrangements for work-based training

This section considers how trainees were selected to become trainees and the individuals in the workplace and how work-based training was undertaken across the employing organisations taking part in this research.

4.5.1   NHS organisations

Trainees commencing work-based training in hospital pharmacy were recruited to two year training contracts.

> *"Yes, basically it's a two year, fixed-term contract."*
>
> **NHS 6_DGH**

Prior to receiving a training contract, individuals had different backgrounds and experience, including previously working in a hospital or community pharmacy as a dispenser or as a university graduate.

> *"The majority that we've employed, in fact that have even applied, to be honest, have been either post-uni, … we've had some pharmacology graduates, or they've been working in community as dispensers or have done that and they're interested in progressing, so they want to move into hospital or they want more experience in hospital to progress and, hopefully, get a bit more of a career out of it."*
>
> **NHS 11_DGH**

The hospital sites had a range of divisions/services (e.g. dispensary; stores; aspectics) that could allow trainees to demonstrate competence for the competence qualification. In order to cover different areas of competence, hospital trainees would do rotations in different departments across the hospital site(s).

> *"We divide the different departments for the students. So they're on about…I think there's about six different rotations that they go to over the two years."*
>
> **NHS 6_DGH**

> *I: "What are the other rotations then if they do, say dispensary, aseptics?*
>
> *R: "We're a fairly small trust here obviously but they have aseptics and dispensary stores, medicines information."*

NHS 11_DGH

Another interviewee spoke about the training and development schedule they had in place which would allow trainees to cover different units through working in the dispensary, stores, aseptics and medicines information. They would have a plan over the two years of training at the site with details of who they would be working with and the area of practice.

"Yes, each of them have what we call a training and development schedule. It's basically just a plan over two years, which shows on a sort of week by week basis which area of the pharmacy that they're actually working in, who their contact person is, and who the assessor is, and the IQA. And what units of the NVQ they'd be working towards at any particular time. And they would just follow that rota."

…

"Well the major areas, obviously the dispensary, they work in stores, they work in the aseptics, medicines information, erm...trying to think what else. They obviously do, within the different areas, they're doing things like their customer service unit as well."

NHS 3_RTC

There were a few instances where there was more than one hospital within a trust and in such cases trainees could be on rotations which included visiting the different sites. This is illustrated by the following quote from one interviewee, where trainees would not only move across hospital sites but also had time in community.

"All of their training is not going to take place within the hospital sites that they are based within. We've got quite a robust training programme for them, where they go to visit various hospital sites or specialities, and obviously into areas such as the prescribing teams, and into community pharmacy as well."

NHS 12_TH

4.5.2   Community

In community pharmacy, many trainees were previously experienced dispensers, who would progress through to pharmacy technician training in a pharmacy that required a pharmacy technician.

> *"We look at it from the store need. … If a store needs someone to be Level 3, that's what we would look at. If it doesn't need a Level 3, then we don't…it's not an option."*
>
> ***Community 1_MLM***

This pharmacy would often be the same branch they had worked in as a dispenser; there were no designated branches for conducting pre-registration pharmacy technician training.

> *"We've got a lot of longstanding employees and then we have, with the younger ones, obviously, it's people that have come into the business and we're quite impressed with the skills that they're showing and how well they've done with their level 2 courses. And we obviously want them to progress to a technician, and then on to [accuracy checking technician]."*
>
> ***Community 2_LM***

4.6 Work environment

4.6.1 NHS organisations

The majority of interviewees described how trainees in hospital were typically based in one hospital site and often worked alongside one other trainee in their year and another two in the other training year, as noted in section 4.5. Also working alongside trainees would be other pharmacy technicians, pharmacists and other healthcare professionals based within the hospital. (The support role of different members of staff is considered in more detail in section 4.7.)

4.6.2 Community

The number of staff that worked alongside the trainee during their work experience varied and depended on the size of the pharmacy. There would be one regular pharmacist (e.g. pharmacy manager) typically acting as the supervising pharmacist overseeing the trainee's progress and varying numbers of support staff.

> *"So currently I have a pharmacist, the second pharmacist. I have a registered technician, [and] a technician trainee. I have three dispensing assistants and I have a counter member of staff as well."*
>
> ***Community 14_LM***

It was rare for a pharmacy to have more than one trainee, and the number of other pharmacy technicians varied. Therefore, there was less opportunity for trainees to work or

study with other trainees, compared with hospitals, because of the work setting and education provider (i.e. distance provider) used. Having contact with other trainees did not appear facilitated by the employing organisation.

> *"We are a [location removed] region so different technicians in different stores can phone each other up with any queries, if they're working, if need be. Although it's very rare that happens, but they have got a support in other stores, and the same sort of area…let's say they're both in the first year, they can kind of help each other out as well."*
>
> *Community 12_Sup*

> *"In all honesty I wouldn't know where they were located. It's not known who is doing what and what training in each store. So it's difficult in that sense."*
>
> *Community 15_Sup*

Although trainees may not work alongside another trainee, it appeared in many cases that a pharmacy would have another pharmacy technician, or two, working with them. However, depending on the size of the pharmacy, this was not always the case:

> *"[W]ill the trainees always have like another technician, say a qualified pharmacy technician, working with them, or is that not necessarily…?"*
>
> *R: "It depends on the size of the store."*
>
> *Community 1_MLM*

> *"In most of the branches there will not be another technician. That's the whole reason why the person is training to be a technician. Occasionally we do have a few ACTs. So if there's an ACT there, there may be a student technician as well, but most of the branches it is either the rest of the staff will be dispensers or counter assistants."*
>
> *Community 11_MLM*

4.7 Support available for trainees in employing organisations

This section focuses on the support available to trainees in their place of work. It considers both the direct support they would receive from individuals working alongside them as well as any organisational support offered by their employing organisation.

4.7.1 NHS organisations

4.7.1.1 Pharmacy staff working alongside trainees

In NHS organisations, interviewees spoke of having assessors in the workplace that would specialise in different areas and could observe and assess competence in these different areas. The main source of support for trainees came from their assessors and line manager, typically the lead for pharmacy technician education and training. Although there would typically be a number of qualified assessors within a hospital site, interviewees described how trainees would have one main assessor who would be tasked with assessing the bulk of a trainee's demonstration of competence and be a key source of support for queries relating to the qualifications they were studying.

> *"[Trainees] have an allocated assessor which I try to keep the same assessor with them throughout the whole of their two years for most of the units where possible so that they can build up a really good rapport with them and they understand them and they understand their working practices and how they like to operate, how they think."*
>
> **NHS 11_DGH**

Besides the one main assessor, trainees would be observed by different assessors on occasion in more specialist areas, so that trainees' competence could be witnessed by an individual with relevant specialist expertise.

> *"We've got four NVQ assessors and we all assess in our specialist areas. For example, we've got one assessor that specialises in aseptics, another in stores and the rest, then, is basically patient services which is for dispensary, which is myself and another assessor."*
>
> **NHS 2_DGH**

Besides help from assessors or their line manager, trainees could receive informal support from other colleagues as they worked alongside many other pharmacy technicians and often another trainee.

> *"They get quite friendly with the other technicians obviously that they work with, so they build up...they tend to go for their own friends and similar age, so the students are pretty much together and they tend to use each other for pastoral care."*
>
> **NHS 11_DGH**

In a few NHS organisations, the use of buddies or mentors was in place. For example, one interviewee spoke of a more formalised mentoring scheme where pharmacy technicians could volunteer themselves as mentors for trainees

> *"So we offer them a mentor programme and there are other technicians that want to do it, so we don't force people to do it and we've had a real good uptake on that, I think because people want to expand their own experiences as qualified technicians."*
>
> **NHS 10_TH**

> *"They always have a named mentor that's within their area of work that they could go to, somebody that's on more of a level with them. And that might not be a technician. That might be another assistant that's been here a few years."*
>
> **NHS 13_DGH**

Interviewees described how trainees could receive feedback from more senior pharmacy technicians working alongside them. The bulk of formative feedback would, however, come from trainees' assessors who had responsibility for trainees' progression and demonstration of competence.

> *"They would see their assessor probably every other week depending on which unit they're doing, and they would mark their work and give them feedback…with some feedback on their assessment plan."*
>
> **NHS 14_TH**

A number of interviewees also mentioned the use of end of rotation reviews where trainees would receive feedback on their performance during a rotation in an area by a specialist assessor.

> *"Some of them will have end of rotation reviews where just before they're moving onto another rotation whoever's been line managing them during that rotation they will get some feedback from that person."*
>
> ***NHS 1_RTC***

> *"We have a set sort of timetable of their rotations where they rotate through each of the sections, each of those sections then do something called an end of rotation report."*
>
> ***NHS 10_TH***

4.7.1.2 Additional support infrastructure

Though much of the training and support could be handled in a trainee's workplace in hospital where multiple pharmacy technicians and assessors worked, there was also support for trainees from senior management in NHS organisations. Issues with training could be raised with different parts of the organisation (e.g. Human resources; Occupational health) where trainees could receive impartial help and advice.

> *"We've got occupational health and they do have counselling, and they'll offer counselling support if needed. We've also got a business partner within the human resources, so that if we do have any issues, that they're actually assigned to pharmacy. So we can actually just contact her. She's a regular face within the department. So any problems, you know, there's always that support as well. Within the trust, we work very closely with HR and occupational health. So, yeah, very well covered I think."*
>
> ***NHS 13_DGH***

In one region, there appeared to be a robust way of dealing with any issues experienced by trainees or those supporting them during the work-based training. The interviewee discussing the training in this region described how there were local faculty groups that could be used which would feed into the trust board

> *"[E]ach of our pharmacies will belong to a pharmacy local faculty group … that feeds into local academic boards, where there are representatives from all the different [local faculty groups] within the employing organisation … and then that*

feeds into the trust board, so we are able to raise any kind of concerns about trainee placements or, you know, kind of, any issues, things like accommodation or IT support, all that goes through the trust board, so it's a very powerful, kind of, mechanism for supporting trainees."

…

"When we're monitoring the placement, we expect feedback from the trust and from trainees and we use a professional appraisal tool as well, to close that gap about professionalism which isn't covered within the underpinning qualification. So…and I have end of year exit data, exit questionnaires. So if, for example, trainees report something around, like, supervision like, I haven't had a supervisor, or, I haven't met…or whatever, that triggers the Trainee in Difficulty policy, so then we can go in and we can do formal visits, which then prompts the trust to have to have, kind of, action plans that they have to see through. And I guess the stick – for want of a better word – for the trust is that we could say…we could withdraw trainees, which obviously means that they lose funding."

NHS 4_RTC

Some interviewees discussed the use of inductions given to new starters, allowing trainees to familiarise themselves with the pharmacy department and hospital site overall. The induction would often cover information such as health and safety and infection control.

"And then we do a three week, what we call an initial induction, so basically [they receive] lots of detail about the job, the department, what we're expecting from them and we do that for three weeks. And then if they don't really do anything practically, they don't go into a section until after their first week, their first week is really a lot of classroom based, us talking to them about things."

NHS 10_TH

"Yeah, they have a full trust induction, which is all around the health and safety really of the trust, going through fire precautions and infection control, lots and lots of things. That's a full day. And then they'll have an in-house induction as well, a local induction, where we show them round the department and do all the fire exits et cetera, and then they also have an NVQ induction where they get sat down and we go through a PowerPoint all around NVQ."

NHS 14_TH

Supplementary study days were provided in several hospital trusts taking part in this research as a means to support trainees, particularly with the completion of the knowledge qualification.

> *"Yeah, that's right. And then we provide a study day once a month to, sort of, just back up that learning that they've been doing that month."*
>
> *…*
>
> *"We get some of the pharmacists that work on the wards that are relevant with the module that they've done, to come along and talk about patient histories and things like that, sort of, make it a bit more interesting really than them just sitting and reading a screen."*
>
> ***NHS 7_TH***

4.7.2 Community

4.7.2.1 Pharmacy staff working alongside trainees

It was evident from speaking with representatives from community pharmacy employers that the day to day support for trainees came from the main pharmacist based in the community pharmacy. They played a central role in supporting the trainee throughout their education and training through providing help and support with queries as well as reviewing work trainees completed, often relating to the knowledge qualification.

> *"When they do get stuck I help them out, and each module comes with an MCQ which I mark, so then I get a good idea that they're doing okay. They need to get 70 per cent or 80 per cent, to pass otherwise they have to do it again, so I give them half an hour to do that and then mark it myself. They're pretty good."*
>
> ***Community 3_LM***

Furthermore, supervising pharmacists would be involved in observing trainees' competence and acting as an expert witness who had observed the trainee demonstrate competence that could be signed off by an assessor.

> *"Yes, I'm the expert witness mostly. There was one point they were saying that they might come out, but I don't think so to my knowledge, that anyone has come out to see the student in store."*
>
> ***Community 12_Sup***

Though other staff members, such as a senior pharmacy technician could provide feedback to trainees, the supervising pharmacist would also be the main source of feedback, besides that received from the education provider pertaining to the qualifications being undertaken through them. This normally involved impromptu verbal feedback on performance in the workplace.

> *"Well, because I'm the pharmacist in the store, most of the time, on a daily basis, they'd get feedback about what they were doing."*
>
> ***Community 16_I***

Feedback provided by the supervising pharmacist would involve discussions and answering questions about the work trainees were producing to contribute to the completion of their knowledge and competence qualifications. For example, one pharmacy manager spoke about marking formative multiple choice questions (MCQs) that the trainee completed. He could then have a discussion with the trainee about

> *"I like the way they have an MCQ at the end of each section that I can mark in store, because it also gives me the opportunity that I can mark it, so I'll just mark it upstairs, write down the results, but then I can tell her which ones are wrong and why they're wrong and explain it … ."*
>
> ***Community 14_LM***

One interviewee, a pharmacy manager, described the length he went to in order to support his trainee, even visiting the trainee in her home to provided one-to-one support in going through the material.

> *"I've actually had to - and I don't mind if it's a colleague and friend of mine so obviously I want them to do well, but I've spent hours and hours and hours with them at home as well. So marking through work, going through the assessment criteria. Making sure that everything's done."*
>
> ***Community 15_Sup***

The assessors employed by the education provider were often referred to as the other key source of support provided to trainees. In the organisation that was providing its own assessors, as they delivered the pharmacy technician qualifications for their trainees, the assessors played a significant role in the training of trainees.

4.7.2.2 Additional support infrastructure

There were differences between the infrastructures in the community pharmacy organisations taking part in this research. In some instances the regular pharmacist supervising may have had some support from their employer, for example, in the larger multiples where there were members of staff involved in the delivery and management of training within the organisation. They could be contacted for support where the education provider may not be able to help. For example in one large multiple there were three training facilitators available and also qualified assessors working for the employer to assess or witness trainees' competence. An interviewee from this community pharmacy organisation, who had a training role within her organisation, described how she and two of her colleagues – also training facilitators – were qualified to assess the competence of trainees and could therefore conduct observations or, in some cases, even act as a witness.

"So we've done an assessor's qualification, which means that we can assess the competency based side of the NVQ QCF which it is now. So we can also be used in that role, as an assessor, or we're just used sometimes there as a witness, and just as support for them. It's particularly useful in branches, where if they're very, very busy and they may be struggling to find time to sit down and write things up, you can go in and do observations, based on what they're doing, and write accounts down of what you've seen them do, which is quite a useful tool to have as well."

Community 2_LM

In another large multiple, the interviewee – a professional development manager – described how the learning and development department were engaged with education providers and branches where trainees were based to discuss trainees' progress. They would call upon the regional development manager to support a trainee and their supervising pharmacist if reports from the distance provider highlighted issues with a trainee's progress.

"We've also got a team within our learning development department who track their progress. So, we get a regular report from [distance provider] to see how the trainees are progressing and if we see any kind of dip in progress then we'll

> *contact the branch and contact the trainer directly to see if there are any issues*
> *that we should be aware of. If need be we ask to set up as well to the*
> *pharmacist and then if there's still no progression we've got an escalation*
> *process to flag it up to the regional development manager … ."*
>
> ***Community 6_LM***

Community 4_MLM delivered their own education materials and assessed trainees themselves as an approved centre. Therefore, the working relationship between the branches where trainees were based and management were closer. A number of workshops were conducted relating to the knowledge and competence qualification in order to help trainees.

> *"Some of the technician training stuff requires atoms and elements to be taught,*
> *and that's not something that's immediately obvious to your average trainee tech*
> *in branch as to how it's relevant. So we put on a day's workshop to go through*
> *that and the biology bit. … So we do six workshops in total looking at the*
> *knowledge course, spread over two years, and then for the practical side of*
> *things, so the pharmacy service skills, we do another ten. So what we do for*
> *each of those when we've got them we have a workshop where we go through*
> *the standards they need to meet practically, provide them with suggestions on*
> *how they can do it, and we spend some time working with them on their*
> *portfolios to give them time to ask us questions basically."*
>
> ***Community 4_MLM***

4.8 Employer views on the support from, and working relations with, education providers

This section considers the support that was available to trainees and staff from education providers from the perspectives of employing organisations. This section relates closely with section 3.9 in the findings of work stream 1 where the support available to trainees from education providers was discussed with education providers directly.

4.8.1 NHS organisations

The delivery of the knowledge qualifications was done through FE colleges or distance providers and support offered by these providers was considered in section 3.9 of the findings of work stream 1. The competence qualification was largely handled 'in-house' as NHS organisations were either approved centres, able to deliver the competence

qualification and provide certification themselves, or had work-based assessors and internal verifiers that could observe and sign off trainees' demonstration of competence leading to certification from the education provider.

Being separate from the competence qualification, the knowledge qualification was largely overseen by the education provider: either an FE college of distance provider. For example, one interviewee described how the knowledge qualification (BTEC) was managed by the FE college. Though trainees could still receive support from colleagues in the workplace, trainees could get support from staff at the college.

> *"I think the BTEC is quite separate because we don't really have much to do with that side of the qualification here. They might still come and ask questions. I know one girl who had got an issue with her aseptic assignment, so I pointed her in the right direction of the books and the person who could help her, but we don't get much of that. They tend to manage their BTEC qualification very much on their own, very much at college. If they've got issues, they'd probably go to the college tutor rather than to me. I tend to look after the NVQ side of things, their role here and their rotation here."*
>
> **NHS 6_DGH**

The NHS organisations participating in this research used both distance providers and FE colleges and therefore the views on these providers could be compared. Those with experiences of working with FE colleges often described a close working relationship with them through regular contact with programme leads at the college and holding meetings, such as standardisation meetings where assessment decisions could be compared.

> *"We've got a sort of good working relationship with the college as well. And we have, you know, formal meetings with them, but we do, you know, we're in touch on a sort of more or less on a weekly basis."*
>
> **NHS 3_RTC**

> *"We have regular standardisation. I think there's three or four a year … . Plus we can always contact them if we have any queries. And we have regular feedback from them, and we have reports from them on how the students are doing. Also, if there was a problem they would get in touch with us."*
>
> **NHS 13_DGH**

The close working relationship was particularly strong when colleges were used to provide certification for the competence qualification. There was more cohesion amongst the people involved, which included internal verifiers from different trusts.

"All the [internal verifiers] from all the different trusts that are using the college, they all network, so they support each other as well. It's very rare that there's ever a slip up with the ones that use the college or people don't feel supported because there's always somebody to talk to and that's really important as well."

NHS 5_RTC

Another interviewee noted that FE colleges were better at enforcing deadlines than when using a distance provider which could have implications for ensuring trainees would be able to complete their training within two years.

"A number of things really, I'm not...and that's another problem, I suppose, where you might have an online course as opposed to college and that is...although they do have deadlines they're not so strictly enforced really online, so they tend to think they've got plenty of time.

NHS 11_DGH

There were, however, a number of negative comments about FE colleges stemming from interviewees from four NHS organisations. Interviewees spoke about some FE colleges being inadequate and their organisations therefore having switched to using a distance provider, often with added study days provided by the hospital trust.

"We were having real problems with the local college. And quite a few of our staff were going there to teach because they simply didn't have anyone teaching pharmacy, they had people who were qualified in, say, maths trying to teach about pharmacy topics. So we went and supplemented it, and that's how we found out that they don't really care about the subject, they care about the numbers that pass. Because they actually told us not to fail people because then you get a bonus. So at that point, we decided to look around."

NHS 8_RTC

"I personally was very concerned about the professionalism and the delivery of the content with my previous face-to-face provider for the BTEC. … [T]here was

> *no structured syllabus, structured timetable from the syllabus, not all the teaching*
> *positions were filled, there were a lot of gaps. Obviously the students are*
> *supposed to have a certain number of guided learning hours and that wasn't*
> *being met."*
>
> **NHS 9_DGH**

Resonating with findings from work stream 1, interviewees described that the main support for trainees came from assessors employed by the distance providers. Support from head office or helplines was another avenue for receiving support from distance providers.

> *"[Trainees] now [have] a number they can phone if they've got any issues or any*
> *queries, where they can phone for support. That's quite newly set up and they*
> *find that useful. And, they've got a named tutor via [distance provider] as well."*
>
> **NHS 2_DGH**

The working relationships with distance providers and NHS organisations did not appear as strong as those with FE colleges as holding regular meetings with distance providers did not appear to take place in the same manner. Several interviewees spoke of not knowing as much about the progress of their trainees through the distance provider and instead would rely on speaking directly with trainees.

> *"We have been kept in the dark a little bit about [distance provider] qualification."*
>
> *…*
>
> *"[W]e don't really know what they're doing, because we haven't got access to*
> *what the students are doing …."*
>
> **NHS 2_DGH**

4.8.2   Community

Almost all community pharmacy employers, apart from Community 4_MLM, used distance providers for the delivery of both the knowledge and competence qualification. In the discussion of work stream 1 findings the way in which the knowledge and competence qualifications were delivered in community settings was discussed and therefore the main focus here is on interviewees' views on the support provided by education providers.

Management staff (e.g. education and training managers) within community pharmacy organisations would have a point of contact at the education provider to discuss any issues

relating to the qualifications and trainees undertaking them. For example, one interviewee discussed having frequent communication with the education provider to discuss any issues, for example, if a trainee was falling behind with their work.

> *"We have regular dialogue with our training provider. So if they come back to us and highlight that we've got students that are struggling or students that are behind, we would then contact our area managers at local level to say, look, you've got a colleague here who's struggling with the course, really need to understand what some of the challenges are, what the barriers are or what the resistances are. Actually can we enter into a conversation with that individual and the supervising pharmacist to understand those in a little bit more detail, but also build an action plan in terms of how we can overcome them. So we would mobilise the support this end. So I very much see it as a triangulation effect. We work closely with our supervising pharmacists and our trainees, with our area managers and with our training providers together with our head office function, to make sure that we're all working in alignment and that all the cogs are working to ensure they support each other."*
>
> **Community 13_LM**

More direct support for trainees and their supervising pharmacist would come from assessors employed by education providers. As discussed in the findings of work stream 1, assessors working for the education provider played a key role in supporting community trainees through the completion of their qualifications. Assessors (or 'markers') were also referred to by many interviewees from community pharmacy organisations as another key source of support for trainees.

> *"Then they do have an assessor that comes from [distance provider] themselves to have a one to one chat with them and see how they're progressing and then obviously they're doing their observations in their actual assessment sign off."*
>
> **Community 11_MLM**

It was apparent that there were mixed views as to the level of support received from education providers. The level of support trainees and their supervising pharmacist (who may also require support in supporting their trainees) received appeared variable between assessors. This was particularly apparent with two interviewees who had experience with different assessors.

> *"The current girl on the course now, her marker is amazing. She will say, give me a ring, send me a letter, let me know if you've got any problems and she explains things thoroughly. She's really good. But the marker that we had with my girl who has passed, she was not so great."*
>
> ***Community 15_Sup***

Assessors in Community 4_MLM would visit trainees' sites as they managed and delivered both the knowledge and competence qualifications to their own trainees as an approved centre. The involvement of assessors across the other organisations where distance providers were used varied, with some describing having no visits from assessors and other saying they did have visits.

> *I:"Does the [assessor] come out and visit the store or is it all?*
>
> *R: "No. No they don't."*
>
> ***Community 15_Sup***

> *"They do have an assessor that comes from [distance provider] themselves to have a one to one chat with them and see how they're progressing and then obviously they're doing their observations in their actual assessment sign off."*
>
> ***Community 11_MLM***

It appeared that in a number of cases the trainee and supervising pharmacist may not communicate frequently with an assessor, or have little contact with them, and instead speak with someone manning the helpdesk from the distance provider.

> *"[W]e don't have a specific person, whoever is on the helpdesk, yes, so anyone who answers the phone can answer your query, unless it's related to a particular assignment or something, which has come back, to be resubmitted, and if there's an issue regarding it, then we would contact the person who has marked it. But generally we would just ask the helpdesk yes."*
>
> ***Community 12_Sup***

For example, when speaking with a pharmacy manager from one community pharmacy, they described liaising with an education department rather than speaking directly with a named contact from the distance provider when they required assistance.

> *I:"I mean, do you have, like, a named contact then for [distance provider]?"*
>
> *R: "No, no it's just, they've got an education department so they get put through to there."*
>
> ***Community 9_I***

It appeared that the satisfaction with the education providers was variable. A few interviewees from community employers discussed how they switched the education provider they were using because they were not happy with the service they were receiving. For example, one interviewee described conducting a pilot with three distance providers to explore which providers were most supportive. They noted that without sufficient support from education providers, progress and completion rates would be negatively affected.

> *"I'm using a number at the moment … because I'm doing a pilot. So I'm currently using [three distance providers]."*
> *…*
> *"[I]n the past I've used solely [name of distance provider]. I guess the reason for the pilot is all of the courses, for me the fundamental difference between the providers is the difference in the support they offer. Actually the more we've become closer to technicians and some of the challenges they experience on the ground we absolutely need a training provider that is supportive of our trainees. My experience of some of our technicians is they tend to be sent a pack and then they're left to their own devices to work through it. That absolutely adversely affects completion rates, compliance, progress through the course, so it was absolutely necessary that we undertook a pilot to look at what was out there in the market …."*
>
> ***Community 13_LM***

The use of expert witnesses to provide testimonies of witnessing trainees' demonstration of competence was common within community pharmacy organisations and there was some support offered to expert witnesses from the education provider.

> *I:"Did you and the ACT both do some training to be an eye witness?"*
>
> *R: "No, they just sent some paperwork we had to read through, and there was an assessment which you do but don't need to hand in, just to make sure that you've understood. It's like a booklet, which we both read and sent off and we got a certificate back saying that you are a qualified expert witness."*

Community 3_LM

The level of support supervising pharmacists received, either from education providers or their employing organisations may be lacking. One pharmacy manager stated how it would be useful to have some kind of support or training in order to look after trainees

"When it all started a few years ago, with [distance provider], I was given no sort of information, I was kind of lost in that respect. [inaudible 23:59] so for the tutor it was a lot of me trying to find information which was hard at the beginning, but now that this is my fourth trainee, I find it, but I think for new tutors, new pharmacists who are becoming NVQ3 tutors, I think it would help if they could have a CPD day or something for how to train and assess NVQ3 technicians."

Community 12_Sup

4.9 Assessment

This section focuses on how assessments were conducted in trainees' place of work. This includes the way in which the employing organisation was involved in assessments relating to educational qualifications, predominantly the competence one, and any additional assessments conducted in the workplace.

4.9.1 NHS organisations

Interviewees from NHS organisations discussed how there were assessors in the workplace working alongside trainees to observe competence in different areas contributing to the completion of the competence qualification. There were also internal verifiers – often including the lead for pharmacy technician education and training – who would be needed in many sites as almost half of NHS organisations were approved centres, eligible to deliver pharmacy technician qualifications.

"We've got three internal verifiers. Anybody that I assess, obviously I can't internally verify. I mainly assess in the logistics and stores area, and what they call the soft skills, like health and safety, that sort of thing. So any of those units can be internally verified by one of the others. We've just got another one training, almost finished as well. We all have four IVs."

NHS 8_RTC

Outside of assessments for the knowledge and competence qualifications, trainees would typically undergo additional assessments to assess their competence in different areas within the hospital setting. For example, dispensing logs, or handling controlled drugs.

> *R: "[T]hey do in-house competencies for various areas."*
>
> *I: "Would that include then, say, accurately dispensing a number of items?"*
>
> *R: "Yes, yeah."*
>
> *I: "And what other?"*
>
> *R: "We do one for controlled drugs, completing the registers, etcetera, we do one for topping up stock, ward stock, and there's one for completing emergency boxes as well."*
>
> **NHS 11_DGH**

Furthermore, annual appraisals of trainees were performed in hospitals and a number of interviewees said they conducted appraisals with trainees more regularly, such as quarterly.

> *"We have a formal 13 week review, where we obviously…it's like an appraisal, where we check where they're up to and make sure they're not missing the deadlines, that sort of thing."*
>
> **NHS 14_TH**

4.9.2   Community

The use of expert witness testimonies was common across community pharmacy organisations, with assessors from the education providers assessing remotely based on evidence they were sent or at times visiting the pharmacy and observing the trainee (i.e. peripatetic assessment). However, in a few of the medium and large community pharmacy organisations (including Community 4_MLM, an approved centre) qualified assessors were employed within the organisation. They could assist trainees and their supervising pharmacist in observing competence. For example, one interviewee that was a training facilitator within her organisation described how she and two of her fellow training facilitators were qualified to undertake assessments and observations and could therefore visit pharmacies to help with this.

> *"We've done an assessor's qualification, which means that we can assess the competency based side of the NVQ QCF which it is now. So we can also be used in that role, as an assessor, or we're just used sometimes there as a*

witness, and just as support for them. It's particularly useful in branches, where if they're very, very busy and they may be struggling to find time to sit down and write things up, you can go in and do observations, based on what they're doing, and write accounts down of what you've seen them do, which is quite a useful tool to have as well."

Community 2_LM

The use of additional assessments and training beyond that covered by the knowledge and competence qualifications was discussed with interviewees. Though many interviewees did not mention any additional ways trainees were assessed outside of those they received for their qualifications, one interviewee mentioned some additional assessments relating to, for example, data protection and information governance:

"Data protection policies, information governance, internally we'll have things like social media policies, all of these things about talking about patients on Facebook or Twitter; so those kind of things. So there will be different policies in place within the NHS, those kind of get alluded to but not directly talked about within information governance and data protection."

…

"Then there will be an e-test, so an e-assessment at the end, which just tests their application of knowledge and do they really truly get…so we'll give them some scenarios for them to think about and what would they do in that case. So it isn't about…because actually interestingly the tick box is they've read it, and for us it's about are they actively doing it. So we probably go that little bit further. So to satisfy the NHS would be that they've read it."

Community 5_LM

Annual appraisals were in place in community pharmacies. Interviewees often discussed these as a means to check on the performance of trainees in general, which could also include a review of progress on trainees' completion of the pharmacy technician qualifications. Appraisals were a way for trainees to be assessed in the workplace, much in the same way as other staff.

"We do annual staff appraisals."

…

"We have a trainee matrix and we go through that and see what they need to work on, what they have developed over the year."

4.10 Study time

4.10.1 NHS organisations

Across the NHS organisations, interviewees spoke of regular study time for trainees each week. Though this did vary between sites in terms of the length of time available, trainees in all NHS organisations could expect a certain amount of study time each week. For example, in one region, the recommendation for study time was half a day every other week or, at busier times, every week.

> *"Yeah they do, they get a given recommended study time which is, our recommendation is that they get a half day every other week, or the equivalent of that. And they can use that time to do either their NVQ work, or their college work if they haven't any NVQ work. And then we also identify times when there might be heavier workload periods with the college assignments, and during those periods we would actually give them a little bit extra study time, so we would probably recommend them having a half day every week, in the workplace. But they are expected to do some work in their own time as well."*
>
> ***NHS 3_RTC***

In other sites there may not have been as much study time (e.g. 12 hours per month) for trainees, however, it was regular and was part of their contract.

> *"As part of their contract they get twelve hours protected study time on top of their college day a week so they get twelve hours a month which is split up into three half days; two half days are for them to self-direct and then the other one is formulated, a facilitated study clinic where I sit with them and just work in a corner and so if any of them have got any questions they can ask me and talk to each other and stuff."*
>
> ***NHS 9_DGH***

In one hospital trainees were given a particularly generous amount of study time to work on their qualifications.

> *"Yes, they would get approximately a day a week minimum, as well as a day to attend college, so you're looking at maybe two days a week."*

The study time available for trainees in hospital could be linked to their supernumerary status, which was mentioned by several interviewees.

"It's in their contract that they are supernumerary, so we do try and treat them... For annual leave requests, we do treat them separate to the rest of the staff."

NHS 6_DGH

Although they may have had supernumerary status in their contracts, trainees may still be relied upon for contributing to their team and therefore did not have complete freedom to study when they wanted.

"In theory, they're supernumerary. So for instance, if a course comes up that we want to send them away on or if something special comes up they want to do, we just say they're doing it."

…

"But generally speaking, they're very much relied upon in the departments."

NHS 8_RTC

To allow trainees dedicated study time, interviewees described the availability of hospital libraries and quiet study areas.

"We have a study room so the students are given half a day study every week, so they get half a day and then they're obviously usually in the study room. But actually this year I've noticed that a lot of them go up to the hospital library. So obviously they can access the library like any other employee, so they often go up there. But we also do have a lot of books, so we have all the recommended reading material that they need. We have lots of resources in that respect. So, yeah, they don't have to buy anything."

NHS 10_TH

"We've got a good library here and they go over there to study, they've got PCs and there's plenty of books, etcetera, so they can have a nice, quiet working environment with a desk and a PC to do their work. We do have laptops and PCs here they can use if they want to stay in the department and look things up.

We've got access to books obviously with medicines information and we have a few books of our own that they can access as well."

NHS 11_DGH

4.10.2 Community

Across the community pharmacy organisations taking part in this research it appeared that whether or not study time was given, or how much study time was given, was not consistent. For example, study time given to trainees could vary considerably depending on how busy the pharmacy was.

"They do get study time, but it is very regulated around how busy the branches are at the time. So we will try and organise that they get an afternoon or a morning once every two weeks. But then that is subject to who's on holiday at the time within the branch."

Community 11_MLM

"So it may not necessarily be consistent because some of these techs are going to be in far busier stores than other stores and obviously the number of staff in each store will vary. So the majority of them will get some dedicated study time. It may not necessarily be consistent from store to store, but it's for them to agree with their supervising pharmacist."

Community 13_LM

Study time commonly appeared to be more spontaneous than planned, based around when there was downtime in the pharmacy during quiet periods.

"We tend to open our pharmacies between, even if they work 100 hour contracts, they'd be open 78-84 hours a week. So you get a lot of down time inevitably. So there's always opportunity within a normal working week to get those ad hoc meetings to be able to support the training that's needed. So you're always going to have that peak and trough of busy dispensing activity and focus being on that and then other activities. So usually within the 84 hours there's an ability to be able to do that. If you're a very busy dispensing pharmacy, then you'll have more pharmacists and more opportunity to allow that to happen."

Community 10_Sup

In a few instances, interviewees described how trainees may get up to a few hours of study time per week when the pharmacy was not busy. In other cases it appeared that this amount of study time would not be available, usually because the pharmacy was too busy to offer this. The manager would be responsible for agreeing study time based on the feasibility of having a member of staff take time off for studying.

> *"Yes, study time is up to the manager, you know, we don't get told by head office that we need to give them a certain amount of time, it is up to the manager. Because, we're a busy practice as well, I can't give them too much time but I give them one hour every two weeks. I have two technicians and I thought about giving them one hour each every week but we struggled with that, so one hour every two weeks and in that one hour they can get quite a bit of work done. But, when it's quiet I tell them they are more than welcome to get their course work out and if there are any questions they want to ask they can ask me."*
>
> *Community 3_LM*

As many interviewees described, such as the pharmacy manager below, it may not always be possible for a trainee to have study time in the workplace and therefore they would end up having to do much of their studying at home.

> *"It's not always possible for the candidate to go and get the training time in the work time that they require. They end up doing an awful lot of it at home."*
>
> *Community 15_Sup*

When trainees did have study time in the workplace they would often go to the staff room or consultation room.

> *"We've got computers in all of our consultation rooms so again if a consultation room isn't being used they can go in there and they can access that computer."*
>
> *Community 6_LM*

Besides materials received from education providers, the resources and facilities available to trainees during study time in their workplace were generally those available in the pharmacy, including a range of reference books.

> *"There's the reference sources that you would see standard so your BNF your Drug Tariff, your over the counter sales booklets."*
>
> *Community 11_MLM*

Interviewees described how trainees could have access to IT facilities in the branch. However, in a couple of cases the interviewee described how the set up was not ideal. For example, there may be a limited number of computers in the pharmacy or there were restrictions on the websites that could be accessed from the workplace.

> *"IT access in branch isn't always ideal, because obviously there's the dispensary computer, the consultation room computer, and that's about it, and if they're both in use they can't go on the computer to…which is a stumbling block that I'd like to get over, but it's the reality of where we're at unfortunately."*
>
> ***Community 4_MLM***

> *"We're only allowed to access websites that [our organisation] run themselves, so to access them we have to use the intranet and then pick the websites that we're allowed to enter through them so sometimes that means that you can't get access to the best knowledge in store as well, so most of the time you end up, like if anybody asks me a question or I need to look something up, I just use my phone."*
>
> ***Community 14_LM***

4.11 Time taken to complete qualifications and completion rates

This section considers the completion rates of trainees undertaking their work experience within community and hospital settings. Not all interviewees were able to share information relating to completion rates, however, some further insights into completion rates were offered by interviewees from education providers, covered in the work stream 2 findings and more insights into completion times are discussed in the work stream 4 findings.

4.11.1 NHS organisations

Across the NHS organisations, most interviewees described how their organisation had high completion rates. There were a few instances where trainees would drop out but it was not considered a major problem and the attrition was usually attributed to issues outside of the control of the employing organisation.

> *"We do have some who for whatever reason...we do have some that withdraw part way through the year and that may be because they've decided pharmacy is not for them or things are happening in their personal life that mean they can't*

perhaps carry on with the study programme et cetera so they withdraw. But generally speaking most people finish."

NHS 1_RTC

"No, we've got a really, really good success rate, we've got 100 per cent success rate. The only time, you know, a couple of times, and I'm going back over years here, you know, we might have someone who's not been able to complete for health reasons. But that would be the only thing and that hasn't happened very often."

NHS 3_RTC

Trainees in hospital would be on fixed-term, two-year contracts and therefore there would be stricter boundaries on completing the training within a two year time frame.

"[T]hey are educated from the moment they join the organisation until two years later when they finish that training contract."

NHS 9_DGH

Whilst it appeared that there were not many issues with trainees completing their education and training within two years, one interviewee mentioned that some NHS trusts were not doing well to manage the performance of trainees across this timespan. If a trainee did not complete their qualifications in two years the contract would still cease and the trust would no longer be responsible for this individual.

"I think what the trusts are not very good at doing is performance managing learners that are not performing very well because they know they're on a two year contract and that eventually if they don't finish the NVQ then they don't get the qualification and then they don't have to worry about them so that's the end of it. So they're not very good at performance managing those learners."

NHS 1_RTC

4.11.2 Community

Eight interviewees worked within an individual pharmacy as a pharmacy manager or owner and could not comment on the organisation's overall completion rates for trainees but a few of these interviewees commented how they had not had issues with trainees dropping out

during their education and training whilst working with them. A few others were acting as the supervising pharmacist for the first time, so could also not comment on completion rates in their pharmacy.

The other eight interviewees from community pharmacy (representing medium sized multiples, large multiples and a supermarket) had more insight into the completion rates of trainees finishing their education and training across their organisations. Overall, most community employers described that their trainees had high completion rates and the number of drop outs was considered quite low.

> *"In the past ten years or so we've had probably about three drop out, not complete the course. Other than that, everyone has gone through. We've put through over 100 techs now since 2000, so we get them there eventually."*
>
> ***Community 4_MLM***

There were, however, issues with trainees completing the qualifications in two of the large community pharmacy employer as discussed by the interviewees from these organisations. For example, one interviewee described how most trainees in their organisations would not complete the pharmacy technician courses.

> *"I think the number of trainees absolutely struggle to complete the course full stop. Even within the legal window that they've got to complete, which is what, five or six years? But yes, they really struggle. We've put processes and mechanisms in place now to try and help that and try and enable people to keep on track, but completion with the course is, yes, very low levels of completion."*
>
> ***Community 13_LM***

> R: *"It isn't as high as it is for our medicines counter assistant course and dispensing assistant courses, it is lower, which again would go back to why we're trying to work with the training organisation to better support technicians, the trainee technicians."*
>
> I: *"I suppose the majority do complete it? Is that fair to say?"*
>
> R: *"I wouldn't say the majority do complete it, I think it's probably less than fifty per cent complete it."*
>
> ***Community 5_LM***

The above interviewee shared her views as to why there was a relatively low completion rate in her organisation. It was seen to be an issue with the amount of work trainees had to undertake over the course of two years and the level of detail the course content covered.

> *"I suppose my view would be that they often – certainly from a community setting – don't realise what they actually undertake, it is a massive time investment, a day a week, that they are looking at over a two-year period. … [S]o when the materials land I think some of them are quite surprised at the level of depth of content, and I think that stops people progressing and they struggle with that."*
>
> **Community 5_LM**

Reasons for taking longer to complete the qualifications were discussed by a few interviewees and included maternity leave, sickness or changes in supervising pharmacist that could cause delays to one's progression through the courses.

> *"We do have some people take longer but that can be for a whole range of reasons. It could be because they've taken a break for maternity leave, or sickness, or in some cases where we've had as pharmacists leave the branch so they haven't had somebody to supervise them for a short period of time then we arrange an extension in those circumstances as well."*
>
> **Community 6_LM**

4.12 Summary of key findings

- **Apart from one community pharmacy organisation that was an approved centre, all used distance providers to deliver the knowledge and competence qualifications to their trainees.**

- **NHS organisations used FE colleges and distance providers for knowledge qualifications and some used these education providers for the competence qualification; many NHS organisations were approved centres for the delivery of competence qualifications.**

- **Most trainees in community and NHS organisations were female, and the ages varied; it appeared that hospital trainees were younger based on some data available.**

- **In community pharmacy, trainees were generally the only trainee pharmacy technician in the pharmacy and may be not work with a registered pharmacy technician.**

- **Trainees in NHS organisations usually worked alongside another trainee in their year and always worked with other registered, more senior, pharmacy technicians.**

- **Community trainees were line managed by a supervising pharmacist that acted as main source of support.**

- **Hospital trainees were line managed by a pharmacy technician (e.g. lead of education and training) who was usually a qualified assessor and internal verifier.**

- **Most support for community trainees in completing their education and training requirements came from the supervising pharmacist (e.g. pharmacy manager); non-pharmacist staff provided support if, for example, there were other pharmacy technicians present; some larger community pharmacy organisations had a higher level support from management in the form of training leads and, in a few instances, qualified assessors.**

- **NHS organisation trainees were generally supported by work based assessors – including a main assessor and subject specialists – and a lead for pharmacy technician education and training and other pharmacy technicians or trainees.**

- **Additional assessments beyond those conducted for knowledge and competence qualifications included performance reviews/appraisals and learning about organisational policies; trainees in NHS organisations were assessed in additional competencies, for example, dispensing accuracy as well.**

- **Trainees in hospital received regular study time, often for approximately half a day per week and this was generally specified in their contract; trainees in community usually did not receive regular study time, and it was commonly less than that given to hospital trainees.**

- **Completion rates were considered to be high by interviewees from most community and all NHS organisations.**

Section 5: Work stream 3 findings

Work stream 3 involved conducting a range of semi-structured telephone interviews with representatives from awarding bodies of pharmacy technician qualifications and members of staff from the GPhC. The presentation of findings is divided accordingly between the role of awarding bodies and the role of the GPhC in the quality assurance and approval of pharmacy technician qualifications and education providers.

5.1 Research participants

A total of three semi-structured telephone interviews were conducted with interviewees representing awarding bodies in GB involved in external verification of course centres delivering pharmacy technician qualifications. Two semi-structured telephone interviews were conducted with members of staff at the GPhC involved in the quality assurance of pharmacy technician qualifications.

5.2 Interviews

The researcher conducted semi-structured telephone interviews between June and July, 2014, with research participants whilst they were in their place of work or at home. Interviews lasted between 24 and 46 minutes. As noted in section 2.1.5, interviews covered, for example, the quality assurance processes in place across awarding bodies and the GPhC and the individuals involved in these processes.

5.3 Role of awarding bodies

There are three awarding bodies that award pharmacy technician qualifications in the GB. The development of the qualifications happens with a team of subject specialists to ensure occupational standards of the sector skills council, Skills for Health, educational standards of the pharmacy regulator, the GPhC, and the qualification standards regulator (Office of Qualifications and Examinations Regulation (Ofqual); Scottish Qualifications Authority) are met. An awarding body's qualification can be accredited once all parties are satisfied that the awarding body has met the standards. If standards change then there will be a new process of development of the qualification to ensure it meets the relevant standards.

After a qualification is accredited the awarding body is available to offer the course through different education providers / course centres (i.e. FE colleges, distance providers or employing organisations) which are approved by the awarding body. Centres then need to meet the quality assurance processes of the awarding body which are normally described as external verification, the main focus of this section.

5.3.1 Individuals involved

The main members of staff involved in the quality assurance of course centres offering pharmacy technician qualifications were external verifiers or 'qualification consultants,' as they were referred to by one awarding body. Hereafter, they will be referred to as external verifiers. They would be specialists in the area of education they are involved in quality assuring, and therefore had pharmacy backgrounds (pharmacists or pharmacy technicians) as a requirement. They were often employed by an education provider as a member of staff involved in the delivery of pharmacy technician qualifications as their main role, and acted as an external verifier of other course centres part-time. These individuals would normally comprise a team of around three or four, though they would conduct external verification independently. A senior lead would be in place with extensive experience in quality assuring centres to support other members of the team where necessary.

> *"At the moment there's only three pharmacy qualification consultants that work with [awarding body], myself and two others, but I'm the point of call if they need any guidance around the pharmacy qualification, and if they're out on a visit and they're not quite sure about something they can call upon me. And [awarding body] can call upon me as well when they're looking at development or anything different that they want to do with the qualifications."*
>
> **Awarding body 1**

5.3.2 Course centre approval and ongoing quality assurance

In order for a course centre to offer an awarding body's qualification they would have to go through an initial approval process that would require potential course centres to demonstrate their ability to effectively deliver the qualification as specified by the awarding body. Aspiring course centres would start by submitting an application to the awarding body, providing information about the course centre resources and staff and their ability to offer a pharmacy technician qualification. An external verifier employed by the awarding body could then take a lead role in examining the information provided by the prospective course centre.

One interviewee described what would be involved in the initial approval process at their organisation and what they would be looking for when visiting a course centre applicant. Essentially, the course centre would be required to have the appropriate resources and staff and internal quality assurance (or internal verification) processes along with necessary policies (e.g. health and safety; equal opportunities) in place.

> *"You would be looking at physical resources but also you'd be looking at staffing resources as well, because the assessment strategy indicates that if it's a*

knowledge qualification then the knowledge units that are delivered … by a pharmacy registrant. When you've got the competence qualification, which is the NVQ level three in pharmacy service skills, then you have to have qualified assessors and internal quality assurers and the centre has to manage the process, the NVQ assessment centre has to be able to manage the process. So when you're giving approval you're looking at all of this, their start up, to make sure they've got the right resources and the right staff, they've got the right recording processes, all of their management processes, they've got policies in place for health and safety, equal opportunities, that they've got a continuing professional development structure in place for their assessors and their [internal quality assurers]."

Awarding body 1

Once a course centre was approved and eligible to deliver pharmacy technician qualifications, the awarding body would continue to ensure the course centres were meeting their standards through quality assurance processes, generally on an annual basis which can be considered 'external verification' (though some may refer to this as 'quality assurance').

I'd call it external verification, so you're verifying that they meet the standards that the awarding body has set and those standards have been set.

…

It's six months...well it's two visits a year so they get two visits.

Awarding body 2

"The initial specification is qualification approval and then after that they will be inspected against a set of criteria generally every year to make sure they're maintaining the level required from the approval that was given to them. Though it is kind of a re-approval but it's more of a quality assurance process."

Awarding body 1

The external verification would essentially be used to ensure that the standards set out in the approval (e.g. internal quality assurance checks in place; appropriate staff in place; appropriate assessments being used) were still being upheld by the course centre. The

process of quality assurance in general, however, was to ensure course centres were meeting minimum standards, and therefore there could be a lot of variation in the quality of the delivery of the qualifications across course centres.

> *"There are always centres that are better than others that. I mean what the quality assurance process is looking at is the minimum requirements. There might be centres that really do excel at their delivery and they're giving, they're just delivering a really good programme, but then you might have one that just about scrapes through but they are still meeting the minimum requirements."*
>
> ***Awarding body 1***

The outcomes of the external verification would all be documented on an evaluation form completed by the external verifier. The form would be completed by the external verifier which would be linked to grading criteria of how the education provider was performing against the standards specified by the awarding body and action points for improvements could be recommended. One interviewee described how the form would be linked to the NVQ Code of Practice, when considering the competence qualification, and that the knowledge qualification (BTEC in Pharmaceutical Science) was assessed for the appropriateness of assignment briefs, time for trainees to work on them, and marking and feedback has been done to a good standard.

> *"[Our report is] made up of a series of questions with sanctions if you answer no to some of them, that follow the NVQ Code of Practice. For the BTEC it's different … So you look at the assignment briefs, you make sure that they've been double checked by an internal verifier at the centre before they were given to a student, that they're signed and dated, that the learner's had enough time to do the work, the work that's come in has been marked properly, you're looking for spelling, grammar, punctuation, corrections, that content is correct and that the correct grading has been allocated and that feedback is good."*
>
> ***Awarding body 2***

The process of external verification was described by interviewees as a process that would often begin through arranging a site visit to the course centre which may be preceded by examining samples of work completed by trainees (e.g. parts of their competence portfolio or completed exams/assignments). One interviewee described this process conducted by their awarding body to sample competence portfolios and assignments for the knowledge qualification.

"It depends what type of centre it is. A lot of them have gone onto electronic portfolios now and because you get passwords for those and you can access them anywhere I'll tend to perhaps do those before I go out and do the centre visit, so that you can go with questions to talk about."

…

"I do have some that have assignment work that's online that you can access as well for the BTEC. For the BTEC you can also do postal, so if they've only got a few learners you can get assignments posted to you so that you can look at those again in advance." …

"We do look at a range and until you get there you don't know what that's going to be, so you just ask for a variety of folders. I always ask for named folders because I would like to know that I've got some choice in the name and there wasn't somebody they were particularly hiding. And I ask them for additional folders to ones that you've named that show a range of activities so that you can pick somebody randomly on that day."

Awarding body 2

Another interviewee described speaking to learners undertaking the qualification to consider their perspective on the delivery of the qualification. They would also hold discussions with staff, including the centre manager to discuss their processes and internal quality assurance procedures.

"I always interview a learner, I always speak to one or two learners just to get their take on it, and that's surprising what you get told. And also a discussion with the centre, what their processes are, looking at their internal quality assurance strategy, best sampling regimes. It's looking at that and the evidence that you see in the learners' portfolios should match everything that they're telling you that they're doing. So I usually start the visit with a discussion with the centre manager and staff that are available, which could be assessors and IQAs, just ask them how's it going. And it's quite amazing what you can gain from that."

Awarding body 1

The quality assurance process undertaken by the awarding body would result in different levels of ratings and these were termed differently by the different awarding bodies. Depending on the outcome of the visit there would be certain restrictions placed on the

course centre. One awarding body described the outcomes for course centres that could come out of their external visits: 'low risk,' 'medium risk' (which was the status given upon initial approval) and 'high risk.' 'High risk' would be a cause of concern and the course centre would not be able to register new trainees. A 'medium risk' outcome would require the course centre to make changes to their delivery before they would be able to offer certificates to trainees, and 'low risk' was a centre that was largely doing well, but could have a few action points to work on for additional improvement to their delivery of their qualifications.

> *"The outcomes that you have is either a low risk, a medium risk or a high risk. If a centre comes out as a high risk then they will be stopped registering any more learners and they might even, if it's really risky, then it might be that the integrity of what they've done already would be questioned and they could even be closed down. Whereas a low risk would be a centre that is meeting all of the quality assurance inspection requirements but they probably have got one or two actions … There might be some improvement notices that are given or an action notice that's given, but it won't affect the integrity of the qualification that is being offered and certificated. Now the medium risk is where they can still register learners onto the programme but they can't certificate them because their processes need actions and they need improving. And if you get a medium risk then they won't be able to apply for any of the certificates for the learners until there's been a quality qualification consultant monitoring visit."*
>
> ***Awarding body 1***

Some issues that may present themselves to external verifiers included problems with having the appropriate staff in post, which appeared to be the most common issue, or issues to do with the number of assessors.

> *"It could be that they haven't got the staff in place, they haven't got enough assessors or internal quality assurers for the number of learners that they've got on the programme."*
>
> ***Awarding body 1***

> *"It's usually a staffing issue. It's usually either staff members have left and not been replaced that were key members of staff like the internal verifiers that are causing a sanction to come about."*

Besides being involved in external verification processes with the course centres, awarding bodies would support course centres, usually through the help of the external verifier assigned to the course centre. The external verifier served as a point of contact for the education provider and the awarding body was available to support course centres with any queries they had. This support role of the external verifier was exemplified by one interviewee who described how they supported the course centres they monitored:

> *"Through the action plans and it's, again, through feedback from the visit, from verbal feedback that you give and then the written report that they give, it's pretty specific and it will give them SMART objectives to show how they've got to improve. They could also request an advisory visit as well, so in between the inspection visits they could request that the qualification consultant goes out and gives them some training on a certain aspect.*
>
> *…*
>
> *"They email me in between times, yeah, so if they've got any queries they email, if I can answer them I do, if I can't I refer them upwards maybe onto … the assessment or the development team at [awarding body]."*
>
> ***Awarding body 1***

The support could also be more involved: another interviewee described supporting a course centre develop assignments for their knowledge qualification.

> *"There's only one centre that I had that's had such poor assignments really, the assignment were so poor that there is no way a learner would ever achieve that they were given a sanction. Again that centre to be fair to them they pulled themselves around, they needed some support in how to write assignments they'd never done it."*
>
> *…*
>
> *"There was actually 'a button they could have pressed' that would have said can somebody help me write these assignments, they'd just not seen it before."*
>
> ***Awarding body 2***

5.4 Role of the GPhC

The GPhC both recognises and accredits pharmacy technician qualifications. The recognition process undertaken with awarding bodies can occur because the qualifications of the awarding bodies have been through an approval process already with input from the GPhC and standards of Skills for Health and Ofqual feeding into their development. As an interviewee from the GPhC described, the knowledge and competence qualifications of awarding bodies could simply be 'recognised' whereas the knowledge qualifications for two of the main distance providers had to be accredited directly, unlike other distance providers that were approved by awarding bodies (Table 4).

> *"Recognition is recognising a national award that is countrywide. So it will be national occupational standard. So we recognise awarding bodies – the BTEC and the diploma for knowledge and skills for a pharmacy technician. But we actually directly accredit just the Level 3 knowledge that's delivered by [two distance providers]."*
>
> ***GPhC 1***

The reason for carrying out direct accreditation of distance providers as opposed to having all providers being recognised was described by an interviewee from the GPhC, as being due to funding issues in community pharmacy. Community pharmacies, the main employers using distance providers, would have difficulty securing public funding to access national qualifications and therefore often needed to pay privately for the qualifications; distance providers were usually less expensive than paying tuition at an FE college.

> *"[F]rom our point of view it would be better if everybody could access the national qualifications because then they can access public funding and everything. However I suppose traditionally the qualifications that people could access through the community, so when you're working in community pharmacy you don't probably have access to public funding and publically funded qualifications. So the community pharmacies needed a way to be able to send their students, or their trainees sorry, through a qualification and they would pay for them privately because there'd be no access to any public funding."*
>
> ***GPhC 1***

5.4.1 Individuals involved

For the accreditation and recognition process, a quality assurance manager for education from the GPhC would oversee and guide a panel of three members who would deliberate on whether the distance provider met the standards and could be recommended to the registrar for being eligible to deliver the qualification. The panel members would include a team leader and two other members: one that must be a pharmacy technician and a lay member, both acting independently from the GPhC.

> *"The accreditation panel consists of a team leader and a team member who has got to be a pharmacy technician, but a member of the team has got to be the same registered group as who we're accrediting that's in the legislation in the Pharmacy Order. And the other person is a lay member who represents patients and the public … all accreditation teams … they're independent, so they make decisions on behalf of the GPhC and make recommendations to the registrar. I'm there to make sure the process is adhered to. If there is anything that pertains to regulation or anything like that then that's what I'm there for."*
>
> **GPhC 1**

As noted by a panel member, the quality assurance manager for education was available if panel members needed advice on any issues.

> *"[The quality assurance manager]'s not really supposed to kind of take part in the process, but if there are any issues that come up where we need the advice of the GPhC [they are] kind of the GPhC in person for us."*
>
> **GPhC 2**

Also, a rapporteur would be present making notes and producing a report documenting the points discussed at the accreditation meeting which c/would then be shared with the panel and distance provider.

> *"We have a rapporteur who takes a record of the visit or the accreditation event and will then write a report, a record that will then have to go through a process where we will obviously have a look at it ourselves and then we will send it to the provider for them just to agree on the accuracy of the record."*
>
> **GPhC 1**

5.4.2 The accreditation process

Currently the GPhC accredits knowledge qualifications for two distance providers. The accreditation process would involve examining the distance providers' structures in place for the delivery of the qualification, including training materials used and staff involved.

> *"Accreditation is actually visiting, making sure that you've got the structures in place, the teachers in place, the right materials and that kind of thing. So you do it directly."*
>
> **GPhC 1**

The accreditation process would start with the distance provider sending documentation to the GPhC outlining how their qualifications meet the educational standards. The documents would be reviewed by the panel ahead of a pre-event meeting with the distance provider, which preceded the main accreditation event meeting.

> *"I would say that when I get the documentation I will get about a month to look at it before the pre-event, and during that time the pharmacy technician is mapping [evidence of the qualification meeting the standards]. The pre-event normally takes place two to three weeks before the actual event if everything is in good order, if it's not in good order then we have to reschedule the main accreditation event."*
>
> **GPhC 2**

The pre-accreditation meeting is an opportunity for the panel and the distance provider to discuss any issues with, for example, evidence presented of how the qualification would meet educational standards. One interviewee discussed some other issues that could be raised with a distance provider in a pre-accreditation meeting, usually relating to lack of evidence of how the qualification can ensure education standards are met. This could help the distance provider to address these issues before the main accreditation meeting. The following issues were described as examples of lacking evidence presented by the distance provider in a recent pre-event meeting:

> *"We brought up the robotics, for instance, we brought up the issue that, you know, they say they do equality and diversity but there's no evidence of that, they say that they look after students with disabilities but I would like a real student to tell me about how they've helped them through their doing the course with their disability. So it's about wanting more concrete evidence really. So there's usually two or three people from the company who come along and we*

will tell them where we think the significant gaps are that they need to address before the event, and where we are likely to pursue questions, so that they have kind of a little bit of time – I mean they've got a fortnight basically – in which to get themselves ready."

GPhC 2

One of the GPhC interviewees described how the GPhC was generally very supportive throughout the process and worked hard to provide help to a distance provider seeking accreditation/re-accreditation.

"I mean I think the GPhC – and I would say this about the MPharm as well – they work exceptionally hard to support the providers of the education, you know, whether this is the university or an awarding body, or a private company who are doing it, they work very hard to make absolutely sure they know what they should be doing and that they provide us with the right kind of evidence in order that they are approved/accredited. But their attitude is not like Ofsted who are very kind of that they're looking to fail you, I think, or that's how it feels to me anyway, that they've got their standards and they come and they look, and they don't say anything."

GPhC 2

The main accreditation event would be a time for the distance provider to respond to any queries and make any changes that were deemed appropriate from the previous 'pre-event' meeting.

"When you actually get to the accreditation event that is the formal event and you as a company or a provider, you stand or fall by that event. So if you haven't taken any heed of the hints that were given at the pre-event, you've chosen to ignore things, leave things alone, not address, that not be prepared for the questions that are going to be asked, then if you fall down at that hurdle you fall and there's no way back. Because a report will be written, it's public, and you've got nowhere to go apart from to start all over again."

GPhC 2

The panel could then recommend that the course centre be accredited if they were satisfied with the proposed provision of the qualification(s). The ultimate authority to accredit a

programme, however, would lie with the GPhC registrar who makes the decision based on the panel report.

> "All accreditation teams … make decisions on behalf of the GPhC and make recommendations to the registrar."
>
> …
>
> "[Course centres are] in a state of flux until the registrar agrees because it is only a recommendation on the registrar. And he may say, do you know what I don't agree with your decision. It's unlikely. He sometimes will ask for further information, but that's not actually happened on a pharmacy technician programme as yet."
>
> **GPhC 1**

If a distance provider successfully received accreditation they would be given accredited status for a period of three years.

> "It's every three years and they have to submit evidence and complete the documentation to demonstrate how they meet our education standards. That will be a submission document along with a whole range of evidences that they've got to reference within each of the standard."
>
> …
>
> The reason why it's three years in the methodology is because the programmes are two years, so it's two years plus one. So it's consistent with MPharm degree where it's five years … an MPharm plus pre-reg."
>
> **GPhC 1**

At the end of a three-year accreditation period, an education provider can then be re-accredited, which may not involve a formal visit from the GPhC as with initial accreditation. Conversations with trainees that have undertaken the qualification will, however, take place during reaccreditation to gather the views of trainees on the delivery of the qualification.

> "[For] reaccreditation, so we don't have to visit then because we've already seen those things unless there was a big change to their systems. So they've come here for a two day process with which we have a range of meetings with different staff. So the senior staff if it's big enough, then we would, sort of, have a discussion with the junior staff if you will. … We also speak to a number of

people who have undertaken or are undertaking the actual qualification
themselves."

GPhC 1

If the distance provider disagreed with the outcomes, or accreditation was withdrawn from a provider due to the provision of the qualification not meeting necessary standards, an education provider can choose to appeal by going to an appeals committee.

"[I]f there is a disagreement in that the provider disagrees with the outcome … or
we withdraw accreditation where something has happened where the original
provision is not actually now meeting the standard, they can appeal and they've
got sixty days to do that. They make an appeal after they get the decision from
the registrar they can make an appeal to the appeals committee."

GPhC 1

There was no regular form of quality assurance after accreditation/re-accreditation. There was, however, an interim process that required education providers to send annual reports to the GPhC to keep them abreast of any changes to the provision of their accredited qualifications.

"They have to produce a report annually for us to keep, just to make sure any
changes, you know, any change of direction of the company and those kinds of
things just so we keep an eye on it. If anything does come up that changes their
accreditation then what happens is that we will go back to the original team and
say, they have just changed their assessment regulation because of this and the
team will then decide on how that's going to affect their accreditation. If we think
it's going to significantly change it, it could trigger another visit but that goes for
anything that we accredit."

GPhC 1

There may be issues with not having close monitoring in place as one accreditation panel member, who also had involvement as an external verifier of FE colleges, discussed. This interviewee had witnessed changes in, for example, staffing between visits which would affect the provision of the qualification, something which may not be picked up or shared with the awarding body – or GPhC in the case of the distance providers they accredit – without regular monitoring visits.

"My experience as [an external verifier] is that I can go to a college, for instance, one year and everything is absolutely champion, and then in between my one visit and another, say over the summer holidays, a teacher might leave and they employ somebody else who is clearly not suitable, and the whole thing just takes a dive. And that would be a criticism you could say with the system that we've currently got in the GPhC, that because there isn't any annual monitoring … ."

GPhC 2

This interviewee noted that quality monitoring visits from the GPhC would be desirable, however, it would be difficult for the GPhC to support such an effort. Regardless of the additional monitoring this interviewee did appear satisfied with the accreditation process that was undertaken, considering it robust and adequate for its purpose.

"I feel content when I've left an event that we've given them a good grilling and that we satisfy ourselves that the product that's going to be used and sold is what it says on the tin. … I think on the whole I would say, yes, the GPhC process is robust."

…

"I think probably some sort of ongoing quality monitoring would be good, but I'm not quite sure how that would be done really, because I mean what Edexcel and City & Guilds do is very expensive, they pay people like us to go out for a day twice a year to any number of centres and spend a day grilling people, and that's an expensive process."

GPhC 2

5.4.3   The recognition process

The GPhC have a 'recognition' process for Edexcel and City and Guilds knowledge and competence qualifications for pharmacy technicians. For the other main awarding body, SQA, the GPhC undertakes an accreditation of the knowledge qualification as the qualification was not part of the national occupational standards list laid out by Skills for Health.

"Scotland … don't have the equivalent knowledge base Level 3 qualification like City & Guilds and Edexcel have down here. ... So what they've had to do as an awarding body is develop a qualification, a knowledge based qualification in Scotland that can be accessed in Scotland, where we directly have to accredit because it's not on the national occupational standards list in Scotland."

GPhC 1

The GPhC recognises the City and Guilds and Edexcel qualifications with a meeting with the awarding body, which is considered to be similar to accreditation, but a step back from direct accreditation, looking at the processes that the awarding body has in place for quality assuring course centres rather than doing this directly.

> *"We don't actually visit each of the delivery people to do it. Accreditation is actually visiting, making sure that you've got the structures in place, the teachers in place, the right materials and that kind of thing. So you do it directly. Whereas recognition is a step back. You wouldn't be going to all of the organisations that City and Guilds deal with, but you look at City and Guilds processes with which they deal with the centres. So it's just a one step removed but essentially the same thing."*
>
> **GPhC 1**

As with accreditation the common outcome of the recognition process would be recognition status for a period of three years.

5.5 Summary of key findings

- **For awarding bodies, one external verifier with subject speciality (i.e. pharmacy technician) is involved in quality assuring and supporting course centres.**

- **For awarding bodies, an external verifier is involved in 6-monthly or annual visits to ensure course centres continue to meet minimum standards.**

- **Sanctions/restrictions can be placed on course centres not fulfilling standards laid out by awarding bodies.**

- **The GPhC recognises the qualifications and quality assurance processes of awarding bodies.**

- **The GPhC directly accredits the knowledge qualification for two distance providers and are involved in the accreditation of the knowledge qualification in Scotland; accreditation lasts three years; external visits do not take place in the interim period before re-accreditation.**

- **GPhC not involved in ongoing monitoring / quality assurance processes as with awarding bodies though request annual reports from course centres they accredit.**

Section 6: Views from interviewees on pharmacy technician education and training

The focus of the preceding results sections 3 to 5 was more on the processes involved in, for example, delivering and managing and supporting training (work stream 1 and 2, respectively) and recognising and accrediting qualifications (work stream 3) so these were presented separately for each group of interviewees. However, interviewees in all work streams commented on a range of cross-cutting and more general issues relating to pharmacy technician education and training, and these are presented together in this section. These include interviewees' views on the qualifications and their fitness for purpose for current practice, perceptions of the differences between education providers, the structure of training and comments about the clarity of roles of pharmacy technicians. In order to preserve interviewees' anonymity, quotes in this section are presented with reference to the work stream (1: education providers, 2: employing organisations, and 3: awarding bodies and GPhC), rather than identifying individual organisation IDs.

6.1 Need for revision of education standards and qualifications to reflect current practice

This section considers comments about pharmacy technician education standards. The need to revise the education standards to be more in line with current practice was a common theme arising from interviews with all stakeholder groups.

> *"I think it's a terribly academic course for such a practice based field … [trainees] want the facts and they want to be able to put those facts into practice now, and so therefore you've got to decide well what's important, what do we leave in, what might they use and what can we just get rid of."*
>
> *…*
>
> *"I think we're giving an awful lot of underpinning knowledge to stuff that they would never actually do in practice, so therefore that underpinning knowledge is null and void… so the two things don't really sit comfortably together."*
>
> ***Work stream 1 – FE college***

> *"Yeah, I think the standards need looking at in some ways to reflect the progress that pharmacy is making. I do get feedback from the students and their*

supervisors asking me why they need to know pharmaceutical chemistry and everything in such detail."

Work stream 1 – Distance provider

"They're working to the standards of the qualification, and there are areas of it that aren't relevant, and there are areas that are done differently in community, and maybe don't work. So I understand that, obviously, to be trained as a technician, you've got to be trained in all different areas, but I don't think that the diploma facilitates the differences in different areas, if that makes sense."

Work stream 1 – Distance provider

Several interviewees from community pharmacy organisations also suggested that standards needed updating to be more in line with current practice. One interviewee felt the qualifications were somewhat biased towards the hospital sector.

"I think the qualification is very heavily weighted to secondary care, for a pharmacy technician operating in that [sector] … ."

Work stream 2 – Community

Another two interviewees felt there needed to be more emphasis on what the community pharmacy technician would do day to day. It appeared that interviewees did not agree with having some standards in place for tasks that would not be routinely carried out in community pharmacy (e.g. extemporaneous preparation). (Two interviewees from NHS organisations also felt that learning about extemporaneous preparations was outdated.) One interviewee suggested having core and optional units that could differentiate the qualifications more between community and hospital pharmacy.

"I think it's just making sure that the emphasis is there on what a tech has to do day to day. There's still the requirement for them to know all about extemporaneous practice, and that just doesn't happen in the majority of pharmacies anymore. It's like we've got an entire module on how to actually make medicines, and it's like yeah, they're going to come out of this knowing how to make a suppository and how to make a tablet from scratch and how to make a cream from scratch, and they'll never use it and it'll probably just stress them out revising for that particular exam, but it's in the standards so we need to

> *do it. Now, they might need to know that if they're going to be a tech in a hospital in a manufacturing unit, but in community they're never going to have to do that.*
>
> *…*
>
> *"I think it would probably be useful to have core mandatory community and mandatory hospital units and then ... have some optional ones."*
>
> **Work stream 2 – Community**

The need to update standards for education and training in line with current practice was expressed by a number of interviewees from NHS organisations as well. For example, one interviewee described how there could be more focus on visiting wards and medicines management within the standards, as currently the contents focused on tasks that were often conducted by pharmacy assistants.

> *"The NVQ, it's quite behind with the times, really ... they don't do any medicines management in the NVQ, so it's a shame really that we don't really get them to go on the wards as much as what I'd like them to do, because they've got all these other standards that they need to achieve."*
>
> *…*
>
> *"The NVQ is outdated and that needs changing, because we have pharmacy assistants now that do the majority of what's in that NVQ around ordering and maintaining stock on the ward and issuing stock, and really we're putting them through areas that, as a technician, they'll never work [in] again, so ... I think the NVQ needs updating."*
>
> **Work stream 2 – NHS organisation**

Another NHS trust interviewee commented on how additional training had to be provided to trainees around ward-based roles of pharmacy technicians to supplement their training.

> *"Our trainees have to go to college and they spend hours on making suppositories and emulsions and things from scratch that they never ever use again, whereas there is nothing in the qualification about ward based roles. … They work alongside patients, they work in multi-professional teams, with the pharmacist, with other healthcare employees as well. Their role is around, as I say, checking patient's own drugs, carrying out medication histories and that's their role. That isn't at all reflected in the training. So we have to do that*

Comments about the pharmacy technician qualifications being out of date and in need of revision were also raised by interviewees from work stream 3.

"I think the GPhC needs to be looking at its own standards and revamping those, because they're similarly starting to get out of date, and as we're working with them we're finding repetition and things that we think, oh, we shouldn't be asking this anymore because it doesn't apply any longer. So the kind of review process should be happening."

Work stream 3

A number of interviewees from work stream 3 described the education standards as being quite prescriptive, restricting the way in which the qualification was delivered, which may explain the view of the lack of relevance of some aspects of the course. Another interviewee from work stream 3 commented how the standards needed to be laid out clearly/ explicitly as there was a variety of ways people could complete pharmacy technician qualifications.

"However I have to say that the pharmacy technician education standards are a little bit more prescriptive than the pharmacist one … But with pharmacy technicians we have to be a little bit more realistic because of the different ways people access those qualifications."

Work stream 3

A few comments related to pharmacy technicians being a regulated profession, and the importance of conveying the significance of this to trainees throughout their education and training within the standards. One interviewee believed that the importance of accountability and professional standards was not reinforced sufficiently.

"I think it is a little bit of a problem because subject to how good the staff are that are training the student technician, once they've qualified they then have to register and I'm not sure that that message of importance gets across very well. Once you're registered you are now accountable and you're then working to the same standards as the pharmacist. I'm not sure that GPhC or possibly the mentors that are looking after the students, even [distance provider], give the importance that it needs on that. So like the fact that you're now registered you

will have to do CPD yearly there are a lot of newly qualified and long-time qualified technicians out there that still don't understand. They've signed and registered because they know they have to because they've got to do it to do the job, but they're not necessarily understanding what their signing up means."

Work stream 2 – Community

Many interviewees from both NHS organisations and community pharmacy employers commented on the importance of instilling elements of **professionalism** in pharmacy technicians, given their professional status, with some suggesting that professionalism should probably feature more strongly in the qualifications.

"Professional attitude and behaviour, because essentially with pharmacy technicians now being a registered profession, they need to meet those standards of conduct."

Work stream 2 – NHS organisation

"In order to register with GPhC you've got to look at their professionalism, and there have certainly been PTs, not in my trust but in other trusts, who have completed academically but there has been some concern over their professionalism as to whether they register or not."

Work stream 2 - NHS organisation

Another interviewee spoke about incorporating more professional/ leadership skills into the standards.

"They're going to go on to be professionals so I think they need to know about leadership. I'm not saying they've got to go out and be like Winston Churchill. … Leadership comes at all different levels, and skills to be able to lead … and I think if professionalism is covered, whether that could be changed at all."

Work stream 2 - NHS

An interviewee from work stream 3 also commented on how the education standards did not incorporate elements of professionalism, with certain attitudes and behaviours being important for pharmacy professionals to possess. The interviewee suggested that the competence qualification did not successfully incorporate this, so assessors could not focus on this when assessing trainees.

> *"I just feel that possibly there should be something in our standards, in the NVQ standards which relates to behaviour and attitude, so that assessors feel comfortable, that's something that they would say that they're not able to say the student's demonstrated competency in."*
>
> ***Work stream 1 – Distance provider***

Another issue that was raised, in relation to the content that had to be covered for the qualifications, was perceived **workload**. A number of interviewees from work stream 1 spoke about how the breadth of content – especially the knowledge qualification – was perhaps wider than necessary and that there was a lot of subject material to cover and assess trainees on.

> *"I think there would be organisations who might think it was a little on the heavy side with some science … ."*
>
> ***Work stream 1 – Distance provider***

Given the extent of the qualifications, a few of interviewees from FE colleges thought that there should be more credit given for undertaking such a large qualification and that it could be deemed to be a level 4 or 5 qualification rather than level 3.

> *"You're subjecting the students to doing a qualification that's disproportionate to the level. A decision needs to be made about whether that qualification needs to be level 5 or 4. If it is, make it 5 or 4. If it needs to be 3, treat it as a 3, it's as straightforward as that."*
>
> ***Work stream 1 – FE college***

Although the knowledge qualification was considered large – particularly from the perspective of interviewees from FE colleges offering the BTEC (knowledge) qualification – a few interviewees commented on the advantage of doing this qualification over other level 3 pharmacy technician knowledge qualifications. It would allow a trainee to earn Universities and Colleges Admissions Service (UCAS) points which may have implications for future career aspirations for pharmacy technicians who may wish to study pharmacy or other subjects at university.

> *"[One awarding body] has UCAS points attached to it, whereas, the [the other] doesn't for some bizarre reason, because it's the same qualification, but there is that, and some of our students do go on to study pharmacy at university."*

Work stream 1 – FE college

Several interviewees spoke of the heavy workload the qualifications put on trainees.

"I think it's a big workload to be doing and during the space of having to be doing it in a year as well, I think it's quite demanding."

Work stream 2 – Community

"It has been quite difficult because the [distance provider] course … the work that's involved on a day to day basis in a pharmacy and then the work that they're expected to do on the course is quite difficult to supervise them. You don't really have time during your working day to do that. So [trainee] has had to do an awful lot of it in her own time and then come back in and ask particular questions about certain areas rather than us working together, it's been very much a lone project for her."

Work stream 2 – Community

Given the amount of work required for trainees to complete, some of the burden may be placed on supervising pharmacists in community pharmacy. For example, one interviewee, a pharmacy manager, highlighted how he invested a lot of additional time outside of normal working hours to support his trainee at their home.

"I've spent hours and hours and hours with them at home as well. So marking through work, going through the assessment criteria, making sure that everything's done."

Work stream 2 – Community

6.2 Need for a clearer role for pharmacy technicians

In this section, the focus is on comments made by interviewees in all three work stream about pharmacy technician roles and the need for more clarity on pharmacy technician roles and responsibilities in the workplace. This clarity is required, as without it it is difficult to define/ determine/ design education and training that fits these needs and requirements and is indeed fit for purpose.

One interviewee from work stream 1, for example, described how some learners were not clear as to why they had to study certain subjects (e.g. pharmaceutical chemistry), and that a

more clearly defined role may alleviate some of the ambiguity around what may be required to perform the role.

> *"I think there's some lack of clarity as to why things are needed, and I think that comes from the fact that the role isn't defined very well within community pharmacy. If we understood that a technician would be expected to do X, Y and Z, and would have the opportunity to do it as well, then I think people would recognise that the role is maybe more than it currently is expected to be."*
>
> **Work stream 1 – Distance provider**

Another interviewee talked about the lack of utility of what was being learned in the qualification for those working in community pharmacy.

> *"They don't always use what they've been taught because the role is basically the same, even if they've done the qualification. There's not very much scope for them to evolve that role … that's more because the setup in community pharmacy has remained the same. So there's not new services for pharmacy to provide."*
>
> **Work stream 1 – Distance provider**

Several interviewees from community pharmacy (work stream 2) talked about the ambiguity around the current role of pharmacy technicians in the workplace. For example, one interviewee commented on the similarity between the roles of level 2 staff (i.e. dispensers) and level 3 staff (pharmacy technicians).

> *"[T]he roles of Level 2 and Level 3, they are the same thing … ."*
>
> **Work stream 2 – Community**

Another interviewee described how pharmacy technicians in their organisation would go on to become accuracy checking technicians as there was not a big role for pharmacy technicians in community pharmacy.

> *"There isn't really currently a massive role that technicians play in a community pharmacy setting. In my organisation our technicians progress on to becoming accuracy checking technicians, and our accuracy checkers are all technicians, so they do move into that … ."*
>
> **Work stream 2 – Community**

A greater number of interviewees from community pharmacy employing organisations reflected on how pharmacy technicians in community may not have the same opportunities to do different tasks and put into practice what they had learned from their level 3 qualifications compared to their counterparts in hospital pharmacy.

> *"I think sometimes technicians in community … aren't given the credit for what they could do, and given the chances to expand. Whereas community pharmacy in general there is a lot that we could offer to people out there, different services and types of services if the infrastructure from the NHS or the CCGs or the commissioning bodies were put in place to be able to extend those services. I think until that's there, the role of the technician in community for a lot of people will not differ much from a dispenser. Because the opportunities aren't there."*
>
> ***Work stream 2 – Community***

Due to more clearly defined roles, with more job opportunities for pharmacy technicians in hospital pharmacy, there was some inter-sector mobility, as the following quote illustrates:

> *"Now, as far as the work they do in the pharmacy, it's not much different from what they were already doing as a dispensing assistant, because there's not much scope to go beyond what they've been doing already, without doing the qualifications. In that respect, that's the downside of the course in a community pharmacy, because in a hospital they can do a lot more. A couple of my ex-students, finished the NVQ3 course and as soon as they finished and got the qualification, they left to go to the hospital, because they get better job opportunities there, better pay, and there are so many other benefits in a hospital, whereas it's restricted ... in the community."*
>
> ***Work stream 2 – Community***

Interviewees from NHS organisations also drew on the differences between pharmacy technician roles in hospital and community sectors.

> *"I think they need to look at the broader role of the technician …. I think there is still this misconception that the role between hospital and community pharmacy technicians can be very, very different and I think now that registration has come in that's a lot better but I still think there are people working under alleged titles of technician in community that are not actually performing to the role of the technician or have the appropriate qualification. So I think there's still a little bit of streamlining to be done."*

Work stream 2 – NHS organisation

Different practice between hospital and community and the transition from community to hospital, for example, could pose challenges for those moving sector, as some additional training was required.

Oh just from my own experience in recruiting. So often you will find that when you offer a place to somebody who's community trained – and I was community trained – when you make that transition into hospital, you're having to retrain in certain areas. And you would expect a certain amount of that, 'cause it's a change in practice base and induction, but it is very… it's a very different model.

Work stream 2 – NHS organisation

Interviewees from NHS organisations also discussed the development of the role of pharmacy technicians, recognising the progressive role pharmacy technicians were playing in the pharmacy workforce in hospitals. They described more ward-based activity taking place.

"[Trainees] spend a couple of rotations up there on the wards which I think is fantastic because obviously that's the way technician roles are going is kind of to the wards and medicines management. And they help counsel and discharge patients from the wards and they get observed on doing that."

Work stream 2 – NHS organisation

Finally, an interviewee in work stream 3 also spoke about the need to establish a clear role for pharmacy technicians so that the competence required for the role, and thus the educational requirements, could support this.

"It needs that whole review again, it's everybody working together because ... well, first of all you need to know what the role of the pharmacy technician is because education and assessment is around the competence for the role. So what is the role of the pharmacy technician, has that moved on?"

Work stream 3

6.3 Perceived differences in quality between different education providers

Another theme emerging from the data related to perceived differences between the quality of the qualifications delivered by FE colleges and distance providers, and this is considered in this section. Differences were something that was raised more regularly by interviewees from FE colleges than distance providers in work stream 1, with FE colleges commonly viewing their own courses as more demanding and rigorous than the qualifications offered by distance providers.

> *"A pharmacy technician can hold either a [distance provider name removed] qualification in pharmacy services, or the same from the [distance provider name removed], and both of these are distance learning methods. In my opinion, nowhere near as academically rigorous as the one where you have to attend college … ."*
> *…*
> *"I think that is something that is important; you know, that if you are a pharmacy technician and you've got one of three qualifications, that each qualification should be of equal standard."*
>
> ***Work stream 1 – FE college***

Interviewees suggested there was a need for parity across pharmacy technician qualifications undertaken from the different education providers.

> *"[The GPhC] certainly need to be making sure that they are confident that the courses being offered meet the requirements, because when I look at the BTEC specification, it is way more involved than some of the other means to registration, and some of them are done by distance learning, and without the dialogue that I have with students, I'm not quite sure how successful that can be."*
>
> ***Work stream 1 – FE college***

> *"If you have a look at the different qualifications that are accredited by the GPhC, there's no balance to any of them. Some are like the BTEC, where you're thinking wow, that's a rather big qualification, and some are very small, where you think you could probably knock that out in 10 months."*
>
> ***Work stream 1 – FE college***

> *"There is a big risk between pharmacy technician education in hospital and pharmacy education in community pharmacy for pharmacy technicians, mainly because of the, sort of, distance learning component, as opposed to, you know, coming into college one day a week, but, you know, I just think that that would be one way in which you could standardise it, if they all had to deliver the same qualification, no matter who you are, where you work, you do the same qualifications … ."*
>
> **Work stream 1 – FE college**

Some interviewees in work stream 2 also commented on the provision of the qualifications from the education providers. For example, one interviewee from a community pharmacy organisation commented on the lack of consistency in the qualifications across the three main distance providers.

> *"It's not consistent, or the delivery of what these three organisations [are] doing is not consistent with what the level of rigour I see around the other programmes."*
>
> **Work stream 2 – Community**

Another interviewee from community pharmacy considered the education received from FE colleges would likely be superior to that received by distance providers.

> *"The actual course in general from [distance provider] is very good, the same as the standard of all the distance learning courses that are out there. I just personally don't feel that distance learning courses are the best for students to learn what they're doing. I think they would be better off going to college like your standard - like a hospital technician would do. Because I feel that the students in the shop can be very isolated and they haven't got that learning background from professionals. They're having to learn it all from books and online courses, which I'm not a fan of. But that's my personal opinion. I understand why they do distance learning it's because they don't want to release a member of staff out of the shop to go to college, and the courses are in comparison, cheaper than going to college. But I feel the students miss out on a lot."*
>
> **Work stream 2 – Community**

Several interviewees in NHS organisations commented on their experience of differences between different types of education providers. One spoke about the learning environment in FE colleges being very supportive with more contact amongst tutors and peers being available. In contrast, those using distance providers would have to be more highly motivated and take control of their learning and progress as there were not as many set deadlines and structure in place.

> *"There [are] differences, but a lot of that is because of the environment obviously because if you're in a college setting you have peer support from your other learners within the classroom. You also have direct contact with your tutor so you can have that interface discussions etcetera. So it's really the mode of study that's different and we tend to be very careful about who we allow to do the distance learning programmes. So it tends to be a lot of people that have studied previously, maybe graduates that are now doing the preregistration trainee pharmacy technician programme, who are used to being able to motivate themselves … because you do need to be able to motivate yourself whereas when you're going to college or being set deadlines it's quite a formal process."*
>
> **Work stream 2 – NHS organisation**

Comments from NHS organisations about support they received from FE colleges aligned with the views of some interviewees from FE colleges. Interviewees discussed the stronger level of support available to trainees using FE colleges compared to those using distance providers.

> *"I do feel that the delivery that the college, I'm not saying it's superior but it's far more intense and detailed than somebody who is just delivering an online qualification, where maybe there's no face-to-face contact with the learner. How are they ensuring that that learner is getting the support they need?"*
>
> **Work stream 1 - FE college**

One interviewee from an FE college commented on her experience of working with trainees that struggled with the lack of support they had from a distance provider. She also raised the issue of providing appropriate levels of support to individuals who may have learning needs and that this may not be as easily facilitated through distance learning.

> *"There's a limit to the amount of person contact with the student. It might be a phone call but … I've had students in the past who have come onto my course in the college who have come off [distance provider name removed] or similar*

> *courses because they've struggled because they've found that a lack of actual support has been very hard for them. I think it's very hard for students who have disabilities and need learning support or those kind of things to be supported through a whole bundle of workbooks that are just posted out to you and you're left to get on with it and send them in when they're done."*
>
> ***Work stream 1 – FE college***

Interviewees from work stream 3 did not consider there to be any real issues with the quality of the courses provided by the range of education providers, however, one interviewee mentioned how a smaller training provider may be more likely to give rise to sanctions. This was due to the relative infrastructure in place in FE colleges, which generally had a range of staff and internal quality assurers, whereas a smaller provider may lose an important member of staff who may not be replaced easily.

> *"An FE college has got a great infrastructure, of course, and you know that they've got a quality department, a host of internal verifiers they could call on, a lot of experience, usually have different teachers of the BTEC as well. Whereas a small training provider or an independent training provider is usually made up of maybe one or two key individuals. This is where when those key individuals leave that can sometimes get a sanction."*
>
> ***Work stream 3***

Another interviewee from work stream 3 raised the issue of the differences in the way assessments could be conducted for the knowledge qualification, reflecting on the change in assessment the awarding body adopted, moving from assignments to exams. This interviewee thought that the exam format was better because they felt learners would be forced to revise and learn material ahead of the exam. They felt assignments did not demand the same extent of learning from trainees.

> *"In terms of the quality of the output I now feel that it's a better quality because the learners have to learn, they have to revise and they sit this controlled assessment and they have to learn the information that they've been taught. Whereas with an assignment it could be internet research plagiarism from cut and paste and what have you, and I'm not quite sure of the depths of that learning."*
>
> ***Work stream 3***

This interviewee went on to talk about the differences between the criteria for passing exams versus assignments, with assignments in her view seeming easier to meet pass criteria. Though this was based on anecdotes, it raised, again, the issue of the mode and level of assessments that exist and their potential ability to challenge trainees to the same extent.

> *"[There is an issue with] the difference in the quality between [two awarding bodies named] because, again, anecdotally I've been told that some of the assessments or the assignments from [one] for the pass criteria are particularly minimal and it could just be filling in a word on a table, whereas the assessment for [another] is more robust. So how do you then assure that you've got the same pharmacy technician on the register?"*
>
> **Work stream 3**

Another interviewee also raised the issue of assignments as they may not promote trainees' deeper learning of the material.

> *"Also, when somebody's doing an assignment, and they're just writing it up and getting it sent off, again it could be something that they've kind of almost learnt by rote, and they're regurgitating an answer, but the understanding and practice isn't there."*
>
> **Work stream 1 – Distance provider**

In contrast, another interviewee raised the issue of having only exams, as this mode of assessment may not suit all trainees.

> *"I think there's a downside to just having exams because if you're not good at taking exams that doesn't necessarily mean that you're not a good pharmacy technician."*
>
> **Work stream 3**

Another interviewee spoke about their concerns with the way in which assessment of competence was conducted for qualifications undertaken with distance providers, where external observations were not undertaken.

> *"It's the competence that I'm worried about more, that I have the concerns over, whether the people are actually being assessed. There's no direct observation if they're using [distance provider]. It's the way [distance provider] manage their system. They don't actually go out into people's workplaces and do direct*

observations, yet they would sign them off on six pieces of evidence. So I do have concerns in that way."

Work stream 2 – NHS organisation

Another issue raised around the differences between education providers related to the flexibility in the way the qualifications were delivered. Interviewees recognised the importance of offering flexibility to employers and trainees as it was not always an option for trainees to attend an FE college.

"Students tend to do the course with us because they perhaps are not able to take out a day a week to go into a college, and I suppose it's the flexibility of learning in their own time and something that fits in with work and with family commitments and other things. So I think it's probably advantageous in that sense."

Work stream 1 – Distance provider

"I think that [using FE colleges] is a good way of receiving training, but it's not always that practical for someone to be able to do that every week. But if you were asking for someone to do sort of day release, that could be a lot more difficult, than giving them a daily workshop, that would happen just once every couple of months, or once every three months, that would be over a day or two days."

Work stream 2 – Community

"If you go one day a week I would have to bring someone in, it's not very practical at all."

Work stream 2 – Community

A final issue relating the differences in delivery between distance providers and FE colleges was raised by an interviewee from work stream 3. This interviewee reflected on how the delivery of pharmacy technician qualifications by distance may not be ideal, as this relied considerably on the supervising pharmacist in community pharmacy, with considerable variation in the support offered by them.

> *"Some of the providers just do workbooks, and the printed workbooks, that get sent to the students, they get this great big box full of workbooks that they've to fill in and I'm not always convinced. I mean I know when I go to the accreditation event we'll probe, and they'll say, oh yes, all our pharmacists [supervising trainees] are trained, know what they're doing, and all the rest of it; but I mean this is not how human beings behave. And there will be some who will be fantastic with their students, and there will be other people who will just say, I've paid this money to [distance provider], you, over there have got this set of workbooks, get on with it."*
>
> ***Work stream 3***

6.4 Issues around structure of pharmacy technician work-based training

This section briefly considers the way in which pre-registration pharmacy technician training is currently structured. Comparisons between the training of pharmacists through pre-registration training and that received by trainee pharmacy technicians were made by several interviewees from community pharmacy employing organisations. It was apparent that some interviewees considered the structure of pharmacy technician training as more relaxed compared to pre-registration training for pharmacists where the GPhC provided more guidance and had more overall involvement.

> *"In my organisation we do – even though it's not a requirement of the programmes – we do have an assigned tutor, so their store pharmacist will be their tutor, so they've got another person who they can go to. Now it is very much light touch, very, very different from what we do with the pre-reg pharmacists where it's a lot more structured because that's the guidance that we have from GPhC and that they've got, and they're more actively involved as pre-reg pharmacists obviously and signing off to standards and so on."*
>
> *…*
>
> *"With the pre-reg pharmacists every week or every other week there is protected time for them to spend time, that isn't the case with trainee technicians, we've never gone into that."*
>
> ***Work stream 2 – Community***

One interviewee commented that there may be a need for conducting formal periodic reviews with trainees in the same way as pre-registration pharmacists, every thirteen weeks, or every six months so that the GPhC could be informed of progress in the same way they were with pre-registration pharmacists.

> *"We should be giving feedback like with the pre-reg, every thirteen weeks they've got an appraisal, which, if they're satisfactory then we don't say anything to the GPhC, but if there is any issues, then we do send them some information about the trainee. And I think there should be something similar for NVQ3 technicians, because they're going to be registered with the body anyway, after two years, so why not start, if not every 13 weeks, at least every six months, we should be sending some sort of feedback to GPhC about training."*
>
> ***Work stream 2 – Community***

The requirements for the supervising pharmacist of trainee pharmacy technicians were not seen as the same as with becoming a pre-registration tutor, where the tutor would need three years of experience as illustrated in this quote:

> *"There isn't the same restrictions on, we don't say that they've got to have three years' experience, and so on, and so forth, in fact it can actually be quite a developmental thing for the pharmacist to be tutoring the technician to begin with."*
>
> ***Work stream 2 – Community***

Several other interviewees discussed that there may be a need for supporting supervising pharmacists in their role. They spoke about the recent guidance for tutors produced by the GPhC which was useful, but accepted that more active support for tutors may be necessary in their organisations to facilitate their development as tutors.

> *"I think we absolutely need to be crystal clear on the role and the responsibilities and accountabilities of those that supervise. I think the GPhC guidance is it's kind of making a step in that direction, but yes, I think some of it is, it's almost a cultural change as well. We need to think about how we do that and create a culture of learning. Yes, so no formal support but obviously any of the other support mechanisms that are available to our trainees are equally available to our supervising pharmacists."*
>
> ***Work stream 2 – Community***

> *"There's some good guidance coming out and recently if you look at guidance for tutors.*
>
> *…*
>
> *"We can use that as a tool … so we could say, well, okay, in our organisation this is what we want from our tutors. This is what we expect from our tutors and this is how we're going to increase that capability so we've got that bank of tutors within our organisation that's delivering that consistent service. At the minute we've got some excellent tutors within our organisation. Absolutely brilliant but if we're being honest we've got some who probably need some development as well."*
>
> **Work stream 2 – Community**

Two interviewees from work stream 3 spoke of the desire for there to be more equity across the way in which education providers were accredited and training sites approved. For example, one interviewee thought that the GPhC should monitor pre-registration pharmacy technician trainees the same way they monitored pre-registration pharmacist trainees.

> *"I personally I think it should go the same way as the pharmacist qualifications do in that they approve centres."*
>
> *…*
>
> *"I think [the GPhC] should do exactly the same as they do with the pre-reg pharmacists they should do with the pre-reg pharmacy technicians."*
>
> **Work stream 3**

Another interviewee mentioned how the GPhC would accredit pharmacist education providers (universities) directly for the delivery of the MPharm degree, and also had a system in place for approving pre-registration pharmacist training sites; yet the equivalent was not carried out for pharmacy technicians.

> *"When the GPhC accredit all the universities they go through quite a stringent process … they actually go to the place where it's being delivered. And, again, I think there's something around quality assurance of the training places as well because for the pre-reg pharmacist the training sites are approved by the GPhC."*
>
> **Work stream 3**

6.5 Summary of key findings

- **Interviews from each work stream commented on the need for revising pharmacy technician education standards to be more relevant to current practice.**

- **Some interviewees from work stream 1, and particularly work stream 2, commented on the need for incorporating elements of professionalism and accountability into the standards and qualifications.**

- **Some interviewees considered the qualifications high in workload with a small number believing the BTEC knowledge qualification was arguably beyond level 3**

- **The prescriptive nature of pharmacy technician education standards was highlighted.**

- **Issues with the differences in assessment (exams vs. assignments) used across different education providers was raised as a potential issue with assessment methodology.**

- **Some interviewees perceived there to be differences in the content and quality of qualifications offered by distance providers and FE colleges; the need for more parity was raised.**

- **Issues with the current structure and monitoring arrangements for trainees' work-based training were raised; more parity between the monitoring of pre-registration pharmacy technicians and pharmacists was raised by some.**

- **More regulation around the requirements to be a supervising pharmacist of pre-registration pharmacy technicians was raised as was the need for support available to supervising pharmacists.**

Section 7: Work stream 4 findings

Work stream 4 involved conducting a questionnaire survey of recently registered pharmacy technicians and the findings are considered in this section. Comparisons are made between respondents who used different education providers and respondents that trained in community versus hospital pharmacy.

7.1 Response rate

A total of 646 out of 1457 responses were received by the cut-off date of 06 August 2014 giving an overall response rate of 44.3%. Of the 646, 14 respondents had trained outside of the UK, and they were excluded. (Only four responses were received after the cut-off date and were excluded.) Therefore, responses from 632 respondents were considered for analysis.

7.2 Respondent characteristics

A total of 550 respondents (88.0%) were female; with 90.7% being female in community pharmacy, 77.4% in hospital. The relationship between sector and gender was significant (X^2 (1, N=604) = 20.021, p <.001) with higher proportions of females being represented in community than in hospital. The average age of respondents was 35.26 ± 10.22. There were differences in the spread of ages across sector and this is illustrated in Figure 1. Respondents that trained in community were significantly older (36.86 ± 10.28) than those that trained in hospital (29.91 ± 8.33) ($t(258)$= 8.030, p<.001).
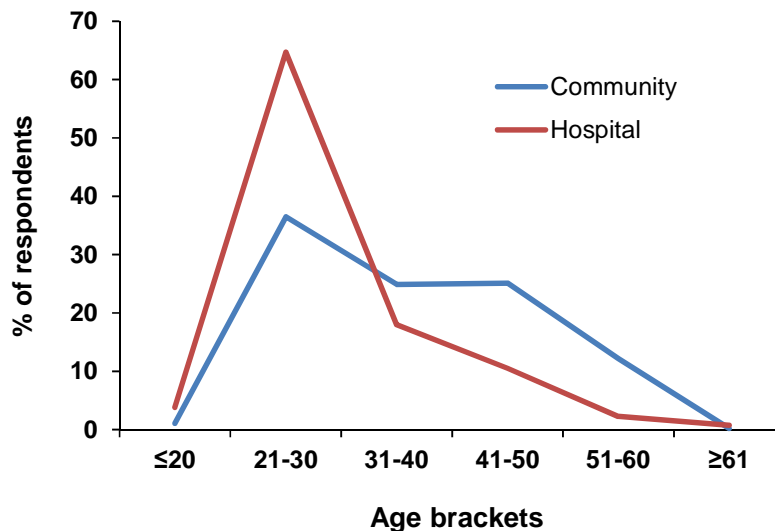
Figure 1: Spread of age brackets across sector

Respondents came from a wide range of ethnicities though the majority (79.3%) of respondents were White British, 77.5% in community and 84.2% in hospital. The ethnicities of all respondents that provided details are provided in Table 6.

Table 6: Ethnicity or respondents (n=623)

	n (%)		n (%)
White		Mixed	
British	494 (79.3)	Other	2 (.3)
Other	36 (5.8)	Black African / White	0 (0)
Irish	3 (.5)	Asian / White	0 (0)
Asian or Asian British		Black Caribbean / White	0 (0)
Indian	37 (5.9)	Chinese or other ethnic group	
Pakistani	12 (1.9)	Other	9 (1.4)
Other	8 (1.3)	Chinese	3 (0.5)
Bangladeshi	5 (0.8)		
Black or Black British			
African	9 (1.4)		
Caribbean	4 (0.6)		
Other	1 (0.2)		

7.3 Pre-registration training arrangements

This section considers the arrangements for pre-registration training including the setting in which pre-registration training was undertaken and trainees' working hours and salaries. Table 7 below shows the setting where respondents undertook their pre-registration training. The majority of respondents trained in community (75.9%), 21.3% trained in hospital and 2.9% trained in a sector other than hospital or community.

Table 7: Pre-registration training setting of respondents (n=626)

Setting	n (%)
Community	
Independent	104 (16.6)
Small chain (2-4 stores)	30 (4.8)
Medium sized multiples (5-25 stores)	33 (5.3)
Medium to large sized multiples (26-100 stores)	46 (7.3)
Large multiple (> 100 stores)	203 (32.4)
Supermarket	59 (9.4)
TOTAL	**475 (75.9)**
Hospital	
Teaching	60 (9.6)
District general	59 (9.4)
Specialist	11 (1.8)
Private	3 (0.5)
TOTAL	**133 (21.3)**
Other[a] **TOTAL**	**18 (2.9)**

[a] including prison service; pharmaceutical industry.

A total of 614 (97.2%) of participants provided information about their working hours as a trainee with the average number of hours worked per week being 34.07 ± 7.28.

The salary of trainees was examined and is presented below alongside the salary respondents said they earned following registration. Only figures for those working full time hours (≥35 hours per week) were included as part time hours (<35 hours per week) were highly variable (see Table 8). As a trainee, 211 (45.3%) of community and 113 (87.6%) of hospital were working full time. As pharmacy technicians, 216 (55.7%) were working full time in community and 125 (87.6%) were working full time in hospital.

Table 8: Salaries of trainees and pharmacy technicians in hospital and community

	Trainee		Pharmacy technician	
	Community (n= 211)	Hospital (n= 113)	Community (n= 216)	Hospital (n= 125)
Salary (£)	*n (%)*	*n (%)*	*n (%)*	*n (%)*
≤ 9,000	12 (4.7)	13 (11.5)	0	0
10,000 – 13,999	101 (39.6)	9 (8.0)	38 (17.6)	0
14,000 – 17,999	105 (41.2)	75 (66.4)	90 (41.7)	6 (4.8)
18,000 – 21,999	18 (7.1)	12 (10.6)	55 (25.5)	99 (79.2)
≥22,000	4 (1.6)	0 (0)	13 (6)	14 (11.2)
Prefer not to say	15 (5.9)	4 (3.5)	20 (9.2)	6 (4.8)

Note. The 'other' sector category has been removed from the table as the number of respondents falling in this category was very small (n=18).

Salaries across sector were compared using statistical analyse. Analysis using a Mann-Whitney U test showed that the salary bands for trainees in hospital were significantly higher than those in community (U= 10383.000, Z = -3.388, p=.001). Furthermore, the salary bands as pharmacy technicians in hospital were higher than those in community (U= 7415.500, Z = -7.4267 p< .001).

7.4 Funding of education qualifications

Respondents were asked to state how their knowledge and competence qualifications were funded and these results are presented in Table 9.

Table 9: Funding for knowledge and competence qualifications

	Knowledge		Competence	
	Community (n= 474)	Hospital (n= 132)	Community (n= 474)	Hospital (n= 133)
	n (%)	n (%)	n (%)	n (%)
Entirely by me	27 (5.7)	1 (0.8)	26 (5.5)	0 (0)
Mostly by me	12 (2.5)	0 (0)	5 (1.1)	0 (0)
Equally by me and my employer	14 (3.0)	1 (0.8)	11 (2.3)	1 (0.8)
Mostly by my employer	27 (5.7)	0 (0)	28 (5.9)	0 (0)
Entirely by my employer	394 (83.1)	130 (98.5)	402 (85.2)	132 (99.2)

The majority of respondents from both community and hospital stated that the knowledge and competence qualifications were funded entirely by their employers. Chi-square analysis showed that community trainees were significantly more likely to pay for their knowledge

qualification than hospital trainees (X^2 (4, N=606) = 21.140, $p <$.001); community trainees were also significantly more likely to pay for their competence qualification than hospital trainees (X^2 (4, N=605) = 20.259, $p <$.001).

7.5 Knowledge qualification

This section of results focuses on section A in the questionnaire, which asked about the knowledge qualification and covers the education provider that trainees used and trainees' views on the content of qualifications, the way they were delivered and the support trainees received from their education provider.

7.5.1 Education provider used

Table 10 shows the education providers that were used by respondents in the different sectors. The education provider delivering the knowledge qualification could be an FE college, distance provider or 'other' (e.g. independent provider). Due to the small number of respondents classifying their education provider as 'other' (n= 9) this category has been excluded from further comparisons and analyses. Those that did not work in community or hospital (i.e. 'other' sector; n= 18) were also excluded.

Table 10: Education provider used by sector			
	Community (n= 462)	Hospital (n= 132)	Other (n= 18)
	n (%)	*n (%)*	*n (%)*
FE college	26 (5.6)	103 (78.0)	5 (27.8)
Distance provider	429 (92.9)	28 (21.2)	12 (66.7)
Other[a]	7 (1.5)	1 (0.8)	1 (5.6)

[a] including blended learning using FE college and distance provider and details of provider not stated.

As can be seen from Table 10 above, most trainees in community (92.9%) used a distance provider for their knowledge qualification and most trainees (78.0%) in hospital used an FE college. The relationship between sector and education provider used was statistically significant (X^2 (1, N=603) = 313.373, $p <$.001). Trainees in community were more likely to use a distance provider; trainees in hospital were more likely to use an FE college.

7.5.2 Views on the knowledge qualification

Respondents were presented with a series of statements relating to the content of the knowledge qualification, the delivery and support available from the education provider and the assessment methods and feedback. Agreement ratings for these statements are presented in Table 11. A comparison is made between respondents that used FE colleges and distance providers.

As can be seen from Table 11, most respondents agreed with the statements about the knowledge qualification and respondents that used FE colleges and distance providers did not differ significantly for most statements. Differences between the groups were considered by conducting comparative tests. Significant differences between FE colleges and distance providers were highlighted in bold font in Table 11. The findings from these tests were as follows.

- **h** – trainees that used FE colleges had higher levels of agreement than distance providers in believing the education provider cared about their progress (U= 27780.500, Z= -2.353, p=.019).

- **j** – Trainees that used distance providers had higher levels of agreement than FE colleges in believing there were an appropriate number of exams to complete (U=17205.00, Z= -2.143, p= .032).

- **k** – Trainees that used distance providers had higher levels of agreement than FE colleges in believing they received regular written feedback from the education provider on the assessments they completed (U=25830.000, Z= -3.516, p< .001).

- **l** - Trainees that used FE colleges had higher levels of agreement than distance providers in believing they received regular verbal feedback from the education provider on the assessments they completed (U= 18031.000, Z= -6.708, p<.001).

Table 11: Agreement ratings for the knowledge qualification

		Education provider used										
		FE college (n = 137)						Distance provider (n = 472)				
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Not applicable	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Not applicable
	Statement	n (%)	n (%)	n (%)	n (%)	n (%)	n	n (%)	n (%)	n (%)	n (%)	n (%)	n
	CONTENT												
a	The content was relevant to my practice as a <u>trainee</u> pharmacy technician	4 (2.9)	2 (1.5)	7 (5.1)	75 (54.7)	49 (35.8)	0	2 (0.4)	24 (5.1)	26 (5.5)	251 (53.3)	168 (35.7)	1
b	The content is relevant to my practice as a <u>registered</u> pharmacy technician	4 (3.0)	4 (3.0)	11 (8.1)	70 (51.9)	46 (34.1)	1	2 (0.4)	21 (4.5)	36 (7.8)	243 (52.5)	161 (34.8)	7
c	c) The content was presented in a way that stimulated my learning	6 (4.4)	10 (7.4)	21 (15.6)	68 (50.4)	30 (22.2)	0	4 (0.8)	36 (7.6)	51 (10.8)	248 (52.7)	132 (28.0)	1
	DELIVERY AND SUPPORT												
d	I knew who to contact from the educational provider when I needed assistance with the knowledge-based content	4 (3.0)	4 (3.0)	6 (4.4)	55 (40.7)	66 (48.9)	1	1 (0.2)	19 (4.1)	24 (5.2)	190 (40.9)	230 (49.6)	6
e	I felt comfortable asking questions to someone from the education provider when I required assistance	6 (4.4)	3 (2.2)	8 (5.9)	57 (42.2)	61 (45.2)	0	1 (0.2)	21 (4.6)	48 (10.5)	179 (39.0)	210 (45.8)	11
f	I felt supported by staff from the education provider	5 (3.7)	3 (2.2)	15 (11.0)	64 (47.1)	49 (36.0)	0	1 (0.2)	21 (4.5)	72 (15.5)	189 (40.6)	182 (39.1)	5
g	The education provider gave clear instructions on tasks I needed to do	5 (3.7)	10 (7.4)	16 (11.8)	58 (42.6)	47 (34.6)	0	4 (0.9)	30 (6.4)	47 (10.0)	220 (47.0)	167 (35.7)	4
h	**The education provider cared about my progress***	**5 (3.7)**	**1 (0.7)**	**25 (18.4)**	**51 (37.5)**	**54 (39.7)**	**0**	**3 (0.6)**	**29 (6.2)**	**108 (23.1)**	**191 (40.9)**	**136 (29.1)**	**3**
	ASSESSMENT												
i	There were an appropriate number of <u>assignments</u> I was required to complete	7 (5.2)	9 (6.7)	11 (8.2)	62 (46.3)	45 (33.6)	3	5 (1.1)	20 (4.2)	41 (8.7)	275 (58.3)	131 (27.8)	0
j	**There were an appropriate number of <u>exams</u> I was required to complete***	**4 (4.3)**	**12 (12.8)**	**15 (16.0)**	**39 (41.5)**	**24 (25.5)**	**41**	**3 (0.7)**	**14 (3.3)**	**59 (14.0)**	**237 (56.4)**	**107 (25.5)**	**50**
	FEEDBACK												
k	**I received regular <u>written</u> feedback from the education provider on the assessments I completed****	**8 (6.0)**	**10 (7.5)**	**11 (8.2)**	**53 (39.6)**	**52 (38.8)**	**3**	**2 (0.4)**	**13 (2.8)**	**16 (3.4)**	**206 (43.8)**	**233 (49.6)**	**2**
l	**I received regular <u>verbal</u> feedback from the education provider on the assessments I completed****	**8 (6.0)**	**13 (9.7)**	**12 (9.0)**	**60 (44.8)**	**41 (30.6)**	**2**	**75 (17.4)**	**119 (27.7)**	**68 (15.8)**	**97 (22.6)**	**71 (16.5)**	**41**
m	I received feedback in a timely manner	8 (5.8)	12 (9.9)	14 (10.2)	66 (48.2)	37 (27.0)	0	7 (1.5)	32 (6.8)	46 (9.8)	241 (51.3)	144 (30.6)	2
n	The feedback I received helped me to improve my learning	5 (3.6)	10 (7.3)	18 (13.1)	60 (43.8)	44 (32.1)	0	3 (0.6)	19 (4.1)	68 (14.5)	225 (48.1)	153 (32.7)	2

Note. Not applicable responses excluded from valid percentage; Comparisons between education providers: *$p<.05$; **$p>.01$; ***$p<.001$.

7.5.3   Overall satisfaction with the knowledge qualification

Participants were asked, '*Overall, how satisfied were you with the knowledge-based components you completed?*' and the responses to this question can be found in Table 12.

Table 12: Overall satisfaction with the knowledge qualification

	FE college (*n*= 135)	Distance provider (*n*= 472)
	n (%)	*n (%)*
Completely dissatisfied	1 (0.7)	2 (0.4)
Mostly dissatisfied	2 (1.5)	10 (2.1)
Somewhat dissatisfied	4 (3.0)	9 (1.9)
Neither satisfied nor dissatisfied	5 (3.7)	11 (2.3)
Somewhat satisfied	31 (23.0)	60 (12.7)
Mostly satisfied	62 (45.9)	233 (49.4)
Completely satisfied	30 (22.2)	147 (31.1)

Both the majority of respondents using FE colleges for their knowledge qualification and those using distance providers were satisfied overall. However, results from a Mann-Whitney *U* test showed that respondents using a distance provider were more highly satisfied overall than those using FE colleges (*U*= 27017.500, *Z* = -2.911, *p*= .004).

7.5.4   Time taken to complete knowledge qualification

Participants were asked to specify the time it took them to complete the knowledge-based components of their education and training requirements, these results are displayed in Table 13.

Table 13: Time taken to complete knowledge qualification across sector according to type of education provider

	Community (n= 454)		Hospital (n= 131)	
	FE college (n= 26)	Distance provider (n= 428)	FE college (n= 103)	Distance provider (n= 28)
	n (%)	*n (%)*	*n (%)*	*n (%)*
2 years or less	24 (92.3)	195 (45.6)	103 (100)	25 (89.3)
More than 2 years and up to 3 years	2 (7.7)	185 (43.2)	0 (0)	2 (7.1)
More than 3 years and up to 4 years	0 (0)	38 (8.9)	0 (0)	0 (0)
More than 4 years	0 (0)	10 (2.3)	0 (0)	1 (3.6)

Note. Only four respondents stated 'other' for education provider, and two of these did not give details of this provider, therefore this category of education provider has been excluded.

A chi-square test showed there was a significant relationship between sector and length of time taken to complete the knowledge qualification (X^2 (3, *N*=625) = 106.654, *p* <.001). Trainees in hospital were more likely to finish the knowledge qualification in two years or less whereas community trainees were more likely to take longer than 2 years to complete.

In order to account for whether working full time (≥35 hours per week) or part time (<35 hours per week) affected completion times, further analysis was done on the sample of community respondents only (the vast majority (97.7%) of those in hospital completed in two years or less so were not included in this analysis). There was no relationship between part time vs. full time working hours and time to completion (X^2 (3, N= 465) = 1.571, p=.670) suggesting that working hours did not influence completion times. Those in community took significantly longer to complete the knowledge qualification than those in hospital and working hours did not appear to impact this.

7.6 Competence qualification

This section focuses on the findings from questionnaire section B and is about trainees' views on the competence qualification and their assessors.

7.6.1 Education provider

A breakdown of the education provider respondents used to complete their competence qualification is provided in Table 14.

Table 14: Education provider used by sector			
	Community (n= 443)	Hospital (n= 131)	Other (n= 18)
	n (%)	*n (%)*	*n (%)*
FE college	21 (4.7)	38 (29.0)	3 (16.7)
Distance provider	411 (92.8)	18 (13.7)	10 (55.6)
NHS hospital / NVQ provider	8 (1.8)	74 (56.5)	5 (27.8)
Other[a]	3 (0.7)	1 (0.8)	0 (0)

[a] Other responses included respondent's own employer or no information stated

As can be seen from Table 14 above, the majority of respondents who had undertaken their training in community (92.8%) had used a distance provider for their competence qualification whereas the majority of those who trained in hospital (56.5%) used a NHS hospital / NVQ provider: approved NHS centres (hospitals or regional training centres) that could manage deliver the qualification. The relationship between education provider and sector was significant: community trainees were more likely to use a distance provider whereas hospital trainees were more likely to use a NHS hospital / NVQ provider (X^2 (2, N= 588) = 351.648, p <.001).

Very few respondents stated they used an 'other' education provider (e.g. independent provider), and therefore these respondents are excluded from further subgroup comparisons in the following sections. Additionally, as there were very few respondents working in the 'other' sector, they are excluded when sector comparisons are made.

7.6.2 Change in education provider for competence and knowledge qualification

Whether or not trainees used the same or a different education provider for the knowledge and competence qualification was considered (see Table 15). The majority of community pharmacy trainees (95.4%) had used the same education provider for the knowledge and competence qualification, whereas the majority of those trained in hospital (62.9%) used a different provider, mostly due to using an FE college for the knowledge qualification and a NHS hospital / NVQ provider for the competence qualification.

Table 15: Changes in education provider for knowledge and competence qualifications		
	Community (n= 455)	**Hospital (n= 132)**
	n (%)	*n (%)*
Same	434 (95.4)	49 (37.1)
Different	21 (4.6)	83 (62.9)

A chi-square test showed that hospital trainees were more likely to use a different education providers than their community counterparts (X^2 (2, N=605) = 237.090, $p < .001$).

7.6.3 Views on competence qualification

Respondents' views on the content of the competence qualification were considered. This included the delivery and support offered by education providers as well as views on assessment and feedback received. Table 16 displays the frequencies of agreement responses to three statements across respondents that used the three different education providers.

As can be seen from Table 16, the majority of respondents agreed that the content of the competence qualification was relevant to their practice as a trainee and as a pharmacy technician. Views of whether there were too many pieces of evidence to collect to demonstrate competence for units/modules of the competence qualification were varied, with levels of agreement spread more evenly across respondents that used the three different education providers.

Table 16: Agreement ratings for the content of the competence qualification by education provider

Statement	FE college (n= 63)						Distance provider (n= 438)						NHS hospital / NVQ provider (n= 86)					
	SD	D	N	A	SA	NA	SD	D	N	A	SA	NA	SD	D	N	A	SA	NA
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
a The content was relevant to my practice as a <u>trainee</u> pharmacy technician**	1 (1.6)	1 (1.6)	3 (4.8)	24 (38.7)	33 (53.2)	0	4 (0.9)	13 (3.0)	36 (8.2)	235 (53.7)	150 (34.2)	1	1 (1.2)	2 (2.3)	2 (2.3)	38 (44.2)	43 (50.0)	1
b The content is relevant to my practice as a <u>registered</u> pharmacy technician*	1 (1.6)	3 (4.8)	4 (6.3)	28 (44.4)	27 (42.9)	0	3 (0.7)	17 (3.9)	41 (9.5)	228 (52.8)	143 (33.1)	5	1 (1.2)	4 (4.7)	2 (2.3)	36 (41.9)	43 (50.0)	1
c There were too many pieces of evidence to collect to demonstrate competence in each unit / module	1 (6.2)	22 (36.1)	12 (19.7)	16 (26.2)	10 (16.4)	1	11 (2.5)	91 (20.8)	99 (22.6)	126 (28.8)	111 (25.3)	0	4 (4.7)	21 (24.7)	16 (18.8)	25 (29.4)	19 (22.4)	1

Note. SD = strongly disagree; D = disagree; N = neither agree nor disagree; A= agree; SA= strongly agree; NA = not applicable; not applicable responses were excluded from valid percentage; Comparisons between education providers: *p<.05; **p>.01; ***p<.001.

Kruskal Wallis tests on agreement ratings for the content of the competence qualification showed there was a significant difference in the agreement ratings across the different education providers for statement a ($H(2)$= 13.816), p= .001) and statement b ($H(2)$= 9.214, p= .010) but not statement c ($H(2)$= 5.131, p = .077).

In order to explore this comparison in more detail, three follow up Mann-Whitney U tests were conducted with adjusted significance level of .017 (.05/3) for each statement that a significant difference. For statement a, trainees using FE colleges ranked significantly higher in agreement levels than those using distance providers (U= 10967.500, Z = -2.722, p= .006) as did those using NHS hospital / NVQ providers (U= 15487.000, Z = -2.900, p= .004). There was no significant difference between agreement levels for those using FE colleges and NHS hospital / NVQ providers ($p > .05$).

For statement b, trainees that used NHS hospital / NVQ providers ranked significantly higher in agreement levels than those using distance providers (U= 15222.000, Z = -2.921, p= .004); there were no significant differences in agreement levels between those using NHS hospital / NVQ providers versus FE colleges, or FE colleges vs distance providers.

7.6.4 Overall satisfaction with competence qualification

Table 17 displays the frequencies of overall satisfaction levels with the competence qualification across respondents that used the three different education providers.

Table 17: Overall satisfaction with the competence qualification by education provider

	FE college (n= 63)	Distance provider (n= 440)	NHS hospital / NVQ provider (n= 87)
	n (%)	*n (%)*	*n (%)*
Completely dissatisfied	1 (1.6)	4 (0.9)	1 (1.1)
Mostly dissatisfied	0 (0)	12 (2.7)	2 (2.3)
Somewhat dissatisfied	1 (1.6)	16 (3.6)	4 (4.6)
Neither satisfied nor dissatisfied	3 (4.8)	23 (5.2)	1 (1.1)
Somewhat satisfied	13 (20.6)	86 (19.5)	15 (17.2)
Mostly satisfied	28 (44.4)	213 (48.4)	41 (47.1)
Completely satisfied	17 (27.0)	86 (19.5)	23 (26.4)

The majority of respondents felt satisfied overall with the competence qualification regardless of which education provider they used. Findings from a Kruskal-Wallis test showed there were no significant differences in the overall satisfaction with the competence qualification across the different education providers used ($H(2)$= .120, p= .942).

7.6.5 Views of assessors(s)

Respondents were asked a series of questions about their assessors who was defined to respondents as "*an individual that had responsibility for marking / approving your portfolio of evidence that you used to demonstrate professional competence. … The assessor(s) may have worked in the same workplace as you or in an external organisation (e.g. distance / online provider).*" Respondents were also advised that the assessor did not include "*an individual at your training site who acted as an 'expert witness' by observing you demonstrate competence that you documented in your portfolio (e.g. a supervising pharmacist)*".

7.6.5.1 Named assessor

Respondents were asked if they had a named assessor. The findings from this question are presented in Table 18, split by education provider.

Table 18: Named assessor(s) allocation by education provider			
	FE college (n= 63)	Distance provider (n= 438)	NHS hospital / NVQ provider (n= 87)
	n (%)	*n (%)*	*n (%)*
Yes	61 (96.8)	330 (75.3)	79 (90.8)
No	0	84 (19.2)	3 (3.4)
Don't know	2 (3.2)	24 (5.5)	5 (5.7)

The majority (>95%) of individuals using an FE college for their competence portfolio stated they had a named assessor. Of those using a distance provider, most of whom trained in community, the majority had a named assessor, however, 84 (19.2%) did not. Those using an NHS hospital / NVQ provider, most of whom worked in hospital, had a named assessor.

A Chi-square test showed there was a significant relationship in the allocation of named assessors across the three education providers (X^2 (4, *N*=588) = 34.827, *p* <.001) as trainees using FE colleges were more likely to have a named assessor compared to those using distance providers.

7.6.5.2 Job title of assessors

Respondents were asked to select the job title of their assessor(s), and these responses are displayed by education provider in Table 19.

Table 19 shows that most trainees using an FE college or NHS hospital / NVQ provider as their education provider had a pharmacy technician as an assessor whereas most of those that used a distance provider had a pharmacist or did not know the job title of their assessor.

Table 19: Job titles of assessor(s) by education provider

	FE college (n = 63)	Distance provider (n= 439)	NHS hospital / NVQ provider (n= 87)
	n (%)	*n (%)*	*n (%)*
Pharmacy technician	48 (76.2)	59 (13.4)	79 (90.8)
Pharmacist	10 (15.9)	173 (39.4)	10 (11.5)
Other[a]	3 (4.8)	11 (2.5)	2 (2.3)
Don't know	4 (6.3)	222 (50.6)	1 (1.1.)

Note. Values do not add to 100% as respondents could have more than one assessor.
[a] 'Other' responses included 'accuracy checker'; 'operations manager'; or information not provided.

Chi-square tests compared the relationships between the types (i.e. job title) of assessor(s) trainees had across the different education providers.

- Pharmacy technician assessors in FE college and NHS hospital / NVQ providers were significantly more likely to be pharmacy technicians than in distance providers (X^2 (2, N=589) = 266.120, p <.001).

- Assessors in distance providers were significantly more likely to be pharmacists than in FE college and NHS hospital / NVQ providers (X^2 (2, N=589) = 34.820, p <.001) .

- Respondents that used distance providers were significantly more likely to not know the job title of their assessor (X^2 (2, N=589) = 105.731, p <.001).

- There was no relationship between respondents stating 'other' and the education provider they used for the competence qualification.

7.6.5.3 Contact with assessors

Respondents were asked to select an option that best described the majority of the contact they had with their assessor(s). The type of contact could be face-to-face, at a distance (e.g. by telephone or email) or other. The responses provided are displayed in Table 20. Contact with assessors was predominantly face-to-face for trainees who used FE colleges or NHS hospital / NVQ providers, whereas the majority of contacts with assessors under distance providers were by telephone or e-mail. This difference was statistically significant (X^2 (4, N=586) = 341.618, p <.001).

Table 20: Contact with assessor(s)

	FE college (n = 63)	Distance provider (n= 439)	NHS hospital / NVQ provider (n= 87)
	n (%)	*n (%)*	*n (%)*
Face-to-face	54 (85.7)	34 (7.8)	75 (86.2)
At a distance[a]	9 (14.3)	379 (86.9)	9 (10.3)
Other[b]	0	23 (5.3)	3 (3.4)

[a] (e.g. by telephone/email/post).
[b] 'Other' responses included: no contact with assessor; both face-to-face and at a distance equally; details not stated.

7.6.5.4   Views on assessor(s)

Respondents were asked to state their level of agreement with a series of statements about their assessor(s) and results are displayed in Table 21. The majority of respondents agreed with the statements listed. The exception for this was for respondents that used distance providers with regards to receiving regular verbal feedback from the assessor(s) where more disagreed (n= 178; 45.6%) than agreed (n= 155; 39%).In order to compare agreement levels to the statements across the three education providers, Kruskal Wallis tests were conducted. Five of these tests showed a significant difference in agreement levels across the three education providers; these are highlighted in bold font in Table 17. Further paired comparisons using Mann-Whitney U tests were conducted across the three different education providers to examined where these differences may lie leading to the significant result and the *p* value was adjusted to 0.17 accordingly. An overview of results are as follows.

Statements a, b, d

Significant differences between respondents that used FE colleges and NHS hospital / NVQ providers having higher levels of agreement than those that used distance providers (*p*s <.001). No significant difference between respondents that used FE colleges or NHS hospital / NVQ providers (*p*=.120).

Statement e

Respondents that used FE colleges and distance providers had higher agreement levels than those that used NHS hospital / NVQ providers (*p*s<.01). No difference between respondents that used FE colleges or those that used distance providers (*p*=.121).

Statement f

Respondents that used FE colleges had higher agreement levels than those that used distance providers (*p*=.012). No significant difference between respondents that used FE colleges and NHS/NVQ providers or between distance providers and NHS/NVQ providers.

Table 21: Agreement ratings relating to views on assessor by education provider

	Statement	FE college (n= 63)						Distance provider (n= 439)						NHS hospital / NVQ provider (n =87)					
		SD	D	N	A	SA	NA	SD	D	N	A	SA	NA	SD	D	N	A	SA	NA
		n (%)	n (%)	n (%)	n (%)	n (%)	n(%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
a	**I had a good relationship with my assessor(s)*****	2 (3.2)	0	3 (4.8)	19 (30.2)	39 (61.9)	0	8 (1.9)	22 (5.3)	133 (31.8)	150 (35.9)	105 (25.1)	19	1 (1.2)	3 (3.5)	6 (7.0)	34 (39.5)	42 (48.8)	1
b	**I could ask questions to my assessor(s) when I required assistance*****	2 (3.2)	0	4 (6.3)	19 (30.2)	38 (60.3)	0	12 (2.9)	39 (9.4)	65 (15.7)	182 (44.4)	115 (27.8)	25	1 (1.2)	3 (3.5)	9 (10.6)	30 (35.3)	42 (49.4)	2
c	I received regular <u>written</u> feedback from my assessor(s) on the assessments I completed	3 (4.8)	5 (7.9)	2 (3.2)	22 (34.9)	31 (49.2)	0	2 (0.5)	7 (1.6)	27 (6.2)	190 (44.0)	206 (47.7)	6	4 (4.7)	8 (9.3)	6 (7.0)	31 (36.0)	37 (43.0)	1
d	**I received regular <u>verbal</u> feedback from my assessor(s) on the assessments I completed*****	4 (6.5)	3 (4.8)	4 (6.5)	19 (30.6)	32 (51.6)	1	75 (19.2)	103 (26.4)	57 (14.6)	82 (21.0)	73 (18.7)	48	4 (4.7)	8 (9.4)	8 (9.4)	31 (36.5)	34 (40.0)	2
e	**I received feedback from my assessor(s) in a timely manner****	3 (4.8)	3 (4.8)	6 (9.5)	17 (27.0)	34 (54.0)	0	6 (1.4)	20 (4.6)	41 (9.4)	204 (47.0)	163 (37.6)	4	4 (4.7)	15 (17.4)	9 (10.5)	32 (37.2)	26 (30.2)	1
f	**The feedback I received helped me to improve my competence***	2 (3.2)	1 (1.6)	5 (7.9)	19 (30.2)	36 (57.1)	0	6 (1.4)	17 (3.9)	43 (9.9)	205 (47.2)	163 (37.6)	4	1 (1.2)	6 (7.0)	8 (9.3)	36 (41.9)	35 (40.7)	1
g	My assessor(s) cared about my progress	2 (3.2)	0	8 (12.7)	12 (19.0)	41 (65.1)	0	8 (1.9)	12 (2.8)	116 (26.9)	142 (32.9)	153 (35.5)	7	2 (2.3)	2 (2.3)	12 (14.0)	26 (30.2)	44 (51.2)	1

Note. SA = strongly disagree; D = disagree; N = neither agree nor disagree; A= agree; SA= strongly agree; NA = not applicable; not applicable responses excluded from valid percentage; other' responses for education provider, which included respondent's own employer or no information stated were removed (n=4) from this table. Comparisons between education providers: **p<.05; **p>.01; ***p<.001.*

7.6.5.5 Overall satisfaction with assessor(s)

Respondents were asked to state the overall satisfaction with their assessor(s) and the results of this question are displayed in Table 22, below.

Table 22: Overall satisfaction with the assessors

	FE college (n= 61)	Distance provider (n= 436)	NHS / NVQ provider (n= 87)
	n (%)	*n (%)*	*n (%)*
Completely dissatisfied	0	6 (1.4)	2 (2.3)
Mostly dissatisfied	1 (1.6)	8 (1.8)	2 (2.3)
Somewhat dissatisfied	1 (1.6)	9 (2.1)	6 (6.9)
Neither satisfied nor dissatisfied	2 (3.3)	42 (9.6)	3 (3.4)
Somewhat satisfied	11 (18.0)	58 (13.3)	9 (10.3)
Mostly satisfied	12 (19.7)	162 (37.2)	31 (35.6)
Completely satisfied	34 (55.7)	151 (34.6)	34 (39.1)

As can be seen from Table 22 above, the majority of respondents were satisfied with their assessor(s), regardless of the education provider they used. A closer examination of satisfaction level with assessor(s) using a Kruskal-Wallis test showed there were significant differences in the overall satisfaction with assessors across the different education providers (H(2)= 6.611, p= .037).

Follow-up analyses using Mann-Whitney U tests showed that respondents who used FE colleges were more satisfied, overall, with assessors than those who used distance providers (U= 10740.500, Z = -2.563, p= .010). No significant differences were found in overall satisfaction with assessor(s) between FE colleges and NHS hospital / NVQ providers or distance providers and NHS hospital / NVQ providers.

7.6.5.6 Time taken to complete competence qualification

Table 23 displays the length of time trainees in different sectors took to complete the competence qualification. Almost all respondents (n= 127; 99.2%) who trained in hospital completed in two years or less whereas most of those who trained in community (n= 229; 51.8%) took more than beyond two years. Chi-square test showed this relationship to be significant (X^2 (1, N=604) = 105.509, p<.001).

In order to account for full time (≥35 hours per week) and part time hours (<35 hours per week) and the effect on completion times, further analysis was done on the sample of community respondents; the vast majority (97.7%) of those in hospital completed in two years or less so we not included in this analysis. There was no relationship between part time vs. full time working hours and time to completion (X^2 (3, N=463) = 4.533, p= .205) suggesting that working hours did not influence completion times for community trainees.

Those in community would take longer to complete the competence qualification than those in hospital and working hours did not have an impact on this.

Table 23: Time taken to complete competence qualification by sector and type of education provider

	Community			Hospital		
	FE college (n= 21)	Distance provider (n= 410)	NHS hospital / NVQ centre (n= 8)	FE college (n= 38)	Distance provider (n= 18)	NHS hospital / NVQ centre (n= 74)
	n (%)	*n (%)*	*n (%)*	*n (%)*	*n (%)*	*n (%)*
2 years or less	18 (85.7)	188 (45.9)	4 (50.0)	38 (100)	15 (83.3)	74 (100)
More than 2 years and up to 3 years	2 (9.5)	180 (43.9)	4 (50.0)	0 (0)	2 (11.1)	0 (0)
More than 3 years and up to 4 years	0 (0)	34 (8.3)	0 (0)	0 (0)	0 (0)	0 (0)
More than 4 years	1 (4.8)	8 (2.0)	0 (0)	0 (0)	1 (5.6)	0 (0)

Note. Other' responses for education provider, which included respondent's own employer or no information stated were removed (n=4) from this table.

7.7 Views of experience in the workplace during training

This section considers the views respondents had on their experience in the workplace during their pre-registration training.

7.7.1 Views on support in the workplace during training

Respondents' views on their experience in the workplace during training, based on a number of statements, are displayed in Table 24.

As can be seen from Table 24, most respondents agreed with being well supported as trainees by their employing organisation, line managers and colleagues. Most respondents also felt their workplace had appropriate facilities to help them complete their qualifications, that their employer cared about their progress, that they had a clear role as a trainee pharmacy technician and also felt confident to work in a different sector from the one they trained in. Ratings for all statements were examined in more detail with comparative analyses. *Mann-Whitney U* tests compared agreement levels between community and hospital across the range of statements. An overview of results follows.

Statements a, c, d, e, g
Respondents that trained in hospital had significantly higher levels of agreement compared to respondents that trained in community (ps<.05).

Statement f
Respondents that trained in community had significantly higher levels of agreement compared to respondents that trained in hospital (p<.001).

Table 24: Views on support in the workplace during training

	Statements	Community (n= 475)					Hospital (n= 133)				
		SD	D	N	A	SA	SD	D	N	A	SA
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
a	**I felt well supported by my employing organisation as a trainee pharmacy technician****	38 (8.0)	77 (16.2)	73 (15.4)	172 (36.3)	114 (24.1)	4 (3.0)	10 (7.5)	15 (11.3)	63 (47.4)	41 (30.8)
b	I felt well supported by my line manager in the workplace as a trainee pharmacy technician	34 (7.2)	77 (16.2)	46 (9.7)	169 (35.6)	149 (31.4)	3 (2.3)	9 (6.8)	23 (17.3)	54 (40.6)	44 (33.1)
c	**I was well supported by my other colleagues in the workplace as a trainee pharmacy technician****	11 (2.3)	42 (8.9)	73 (15.4)	216 (45.6)	132 (27.8)	2 (1.5)	2 (1.5)	16 (12.0)	61 (45.9)	52 (39.1)
d	**My workplace had appropriate facilities (e.g. books; computers; internet access etc.) to help me complete the knowledge- and competence-based components***	28 (5.9)	51 (10.7)	58 (12.2)	214 (45.1)	124 (26.1)	3 (2.3)	9 (6.8)	18 (13.5)	58 (43.6)	45 (33.8)
e	**My employer cared about my progress*****	34 (7.2)	56 (11.8)	102 (21.5)	169 (35.7)	113 (23.8)	1 (0.8)	9 (6.8)	19 (14.3)	61 (45.9)	43 (32.3)
f	**I felt isolated as a trainee pharmacy technician in my place of work*****	124 (26.2)	161 (34.0)	96 (20.3)	75 (15.8)	18 (3.8)	57 (42.9)	50 (37.6)	12 (9.0)	9 (6.8)	5 (3.8)
g	**I had a good work-life balance as a trainee pharmacy technician****	36 (7.6)	112 (23.6)	103 (21.7)	168 (35.4)	55 (11.6)	7 (5.3)	19 (14.3)	26 (19.5)	57 (42.9)	24 (18.0)
h	I had a clear and well defined role as a trainee pharmacy technician	27 (5.7)	80 (16.9)	87 (18.4)	210 (44.3)	70 (14.8)	5 (3.8)	17 (12.8)	30 (22.6)	52 (39.1)	29 (21.8)
i	I feel competent to work in a different sector from the one I trained in	6 (1.3)	41 (8.6)	97 (20.5)	226 (47.7)	104 (21.9)	2 (1.5)	15 (11.3)	27 (20.3)	59 (44.4)	30 (22.6)

Note. SA = strongly disagree; D = disagree; N = neither agree nor disagree; A= agree; SA= strongly agree; 'other' sector (n=18) have been excluded from this table; statistical differences between community and hospital: *p<.05; **p<.01; ***p<.001.

7.7.2 Study time

Participants were asked to state how much study time they had each week while training, and the results of this are presented in Table 25. A Mann-Whitney U test showed that trainees in hospital were given significantly more study time than those in hospital (U= 20367.500, Z = -6.462, p<.001). It was most common for trainees in community to receive up to two hours of study time per week (35.7%) or no study time (33.2%), whereas most trainees in hospital would receive up to four hours (70.7%).

Table 25: Study time by sector

	Community (n= 473)	Hospital (n= 133)
	n (%)	*n (%)*
None	157 (33.2)	16 (12.0)
Up to 2 hours	169 (35.7)	29 (21.8)
More than 2 hours and up to 4 hours	88 (18.6)	65 (48.9)
More than 4 hours and up to 6 hours	34 (7.2)	12 (9.0)
More than 6 hours	25 (5.3)	11 (8.3)

7.7.3 Overall satisfaction with experience in the workplace during training

The following table displays the range of responses relating to the overall satisfaction respondents had with their experience in the workplace as a trainee. Most respondents were satisfied overall with their experience in the workplace during training. A Mann-Whitney U test showed that trainees in hospital had significantly higher overall satisfaction with their experience in the workplace during training than those in community (U= 23818.000, Z = -4.458, p<.001).

Table 26: Overall satisfaction with experience in the workplace as a trainee

	Community (n= 475)	Hospital (n= 133)
	n (%)	*n (%)*
Completely dissatisfied	19 (4.0)	1 (0.8)
Mostly dissatisfied	41 (8.6)	2 (1.5)
Somewhat dissatisfied	59 (12.4)	10 (7.5)
Neither satisfied nor dissatisfied	47 (9.9)	7 (5.3)
Somewhat satisfied	81 (17.1)	24 (18.0)
Mostly satisfied	150 (31.6)	56 (42.1)
Completely satisfied	78 (16.4)	33 (24.9)

7.8 Open comments

In Section D of the questionnaire respondents were given the opportunity to leave comments relating to the previous three sections that considered the knowledge and competence qualification and respondents' experience in the workplace during training. Comments could

be made in relation to Section A (knowledge qualification and provider), Section B (competence qualification and provider) and Section C (work experience). This part of the report focuses on the themes stemming from the comments made.

7.8.1   Number of comments

A total of 389 respondents (61.5%) left one or more comments relating to sections A, B and C. Of these, 295 (76%) were from community, representing 62% of respondents that trained in community; 78 (20%) from hospital, representing 59% of respondents that trained in hospital; 11 from an 'other' sector, representing 61% of respondents that trained in an 'other' setting; and the sector of five was unknown.

An overview of the themes arising from the comments from each section follows. The presentation of comments are divided between respondents that used FE colleges and distance providers in Section A; FE colleges, distance providers and NHS hospital / NVQ provider in Section B; and between the two main sectors (community and hospital) in Section C. Respondent ID number and sector of work experience setting are provided with quotes.

7.8.2   Section A (knowledge qualification and provider)

Comments from Section A are presented firstly from respondents that used FE colleges and subsequently from those that used distance providers.

7.8.2.1   FE colleges

A total of 79 comments were from respondents who used FE colleges. Overall, there were more negative than positive comments. Numerous comments related to the quality of the teaching standards, such as poorly taught lessons and respondents being critical of teachers.

> *"Teachers regularly went off on random tangents and could not control the class. Teachers lost my, and other students' work."*
>
> ***ID 1274 - hospital***

There were a number of comments that suggested some aspects of the course were outdated or superfluous to what respondents needed to know for their role as pharmacy technicians. Comments about the number of assessments being quite high were also made.

> *"Far too many assessments required for the course. Teachers pressured too hard with the amount of units and assessments."*
>
> ***ID 58 - hospital***

Another common theme arising from the data highlighted that the content of the course may lack relevance to a trainees' practice. For example, there were a number of comments relating to the content of the course being more relevant to community than hospital pharmacy:

"Overall the college course was good. My entire class was from NHS hospitals and at times quite a lot of what we covered was only applicable in a community setting."

ID e154 - hospital

"Catered more towards community pharmacy whilst majority of students were based in hospitals."

ID 682 - hospital

Positive comments were fewer in number and were largely around receiving good support from staff at the FE college.

"Excellent support and learning from my college"

ID 1129 - community

"I think that going to college helped me and that it motivated me to do my best. I found that it was easy for me to keep up with the work because I knew I had a deadline, I also think that the support given by the assessor was very helpful."

ID e32 - hospital

There were also a number of generic positive comments made by respondents such as the following:

"The knowledge based element was very enjoyable and covered the basic understanding required."

ID 1329 - hospital

7.8.2.2 Distance providers

Two-hundred and twenty-three respondents who used distance providers left comments relating to their knowledge qualification and provider (Section A). The majority of comments related to lack of support provided by the distance provider and a lack of consistency and support from assessors employed by the distance provider.

"I was assigned to a particular assessor, but hardly ever spoke to her. Therefore, I asked my questions to whoever answered the phone."

ID 288 - community

"It would be helpful if more than one person covered the same module. I had an occasion where the person marking my work was on long-term sick. I was put through to someone else who told me what to do and it turned out to be wrong. I was frustrated I wasted my time."

ID 922 - hospital

Some respondents that used distance providers made comments about the extent of work they were required to complete for the knowledge qualification, noting that it appeared excessive, as exemplified by the following quote:

"The time limit given to complete each module was too short. Trying to complete the module in the set time limit was very difficult considering there was no study time at work and all studying had to be completed at home."

ID 64 – community

As with FE there were some comments that considered the qualification was not relevant to practice as trainee, such as the following quote:

"Too much information which is not used in every day practice ... ."

ID 152 - community

Positive comments related to the content of the qualification material being useful or interesting to study.

"The knowledge based section was very good. My knowledge of ailments and drug interactions and how they react in the body has increased. I found this very interesting and really enjoyed learning about how the body worked"

ID 1167 - community

"This was the most interesting part of the course in which I really felt I was learning something."

ID 1103 - community

There were also a number of more generic comments that were positive about the qualification delivered by distance providers.

"Found this very straightforward, felt that what I needed to know was in the modules."

ID 80 - community

"I loved these work books. A great and easy way to learn."

ID 530 - community

7.8.3   Section B (competence qualification and provider)

Respondents' comments relating to Section B are presented in the following order: FE colleges, distance providers and NHS hospital/ NVQ providers.

7.8.3.1   FE colleges

Thirty-five comments were left by respondents that used FE colleges. Common themes related to too much evidence being required for the portfolio of evidence documenting competence.

"I felt there were too many pieces of evidence to collect to demonstrate competence in each unit/module."

ID 1337 - community

"The number of pieces of evidence may have been reduced through more observations."

ID e120 - hospital

A number of respondents commented on the difficulty in completing the qualification as a trainee suggesting they found the workload quite heavy, however, this may reflect more on the setting in which they trained rather than the education provider they used.

"It was easy done in a busy pharmacy. [I] had to write everything at home - no time at work place."

ID e141 - community

Relating to the heavy workload, some respondents commented on the repetition of evidence that they had to collect across modules.

"Some of the criteria was repeated in several units which seemed unnecessary"

ID e14 - hospital

7.8.3.2 Distance providers

There were 138 comments left from respondents that used distance providers, and a common theme related to having issues with their assessor(s) from the distance provider.

"Some assessors are very picky. Some did not read answers carefully so I had to repeat myself on several occasions."

ID 775 - community

A number of comments from respondents also described how it was not always clear what evidence was required to collect for different competencies in the portfolio.

"I often received feedback that some pieces of evidence could be mapped across several units, which is positive, but I would have liked to have been informed earlier on which units I had completed. This would have meant I could avoid duplicating evidence."

ID 1203 - community

Another theme emerging from the comments related to the number of pieces of evidence to collect. Similar to comments made by respondents that used FE colleges, respondents thought there were too many.

"Too many competence based components to complete for each unit, very time consuming. Some elements not relevant to current practice. E.g. preparation of extemporaneous preparations – may be useful in the future."

ID 340 - community

A few comments suggested that the qualification was not always relevant to community practice and therefore the evidence to demonstrate competence was hard to gather in the community setting.

"Evidence [wasn't] always relevant to community which sometimes made them hard to complete in community pharmacy."

ID 383 - community

There were, however, some positive comments which demonstrated that these respondents enjoyed completing the competence qualification.

"I found these enjoyable and never struggled for examples but there was a lot of work involved."

ID 885 - community

"Fully enjoyed this part of the training. I feel I learn much better doing hands on training."

ID 94 - community

7.8.3.3 NHS /hospital NVQ providers

There were 43 comments left from respondents that used NHS hospital/NVQ providers for the competence qualification. As with respondents using FE colleges or distance providers, a number of those using NHS hospital/NVQ providers made comments that suggested workload was heavy and that there was repetition in the evidence they needed to collect.

"There were some competencies where I felt the number of examples of evidence required was excessive, such as providing evidence to show I understood the difference between branded and generic drugs."

ID e40 - hospital

In addition to the issues with workload and repetitiveness of the qualification, there were also some comments about the relevance of the content.

"A lot of repetitiveness in NVQ and a few too many irrelevant sections."

ID 58 - hospital

Other comments related to receiving good support from the education provider – which was also the employing organisation.

> *"Excellent support and moral support was given."*
>
> **ID 1139 - hospital**

Some more generic positive comments about enjoying completing the qualification were also made by respondents.

> *"I thoroughly enjoyed completing the competence-based components and felt fully supported throughout."*
>
> **ID 523 - hospital**

7.8.4 Section C (work experience)

Respondents' comments from Section C are presented firstly from those that trained in community pharmacy followed by those that trained in hospital pharmacy.

7.8.4.1 Community

There were 254 comments left by respondents that trained in community pharmacy relating to their work experience (Section C). The strongest theme related to the lack of study time.

> *"There never seemed to be any time given to study in the workplace as a busy store. Most of my study was completed at home with brief times during the work day to ask questions and discuss queries with my manager."*
>
> **ID e75 - community**

> *"The training/study time could be greatly improved as there wasn't a lot of time given in work."*
>
> **ID 885 - community**

Comments around support were divided, with some commenting on the lack of support they received in the workplace.

> *"I was disappointed by my experience of lack of support from line manager. Something could be put into place to ensure the trainee doesn't have the same experience as I had."*
>
> **ID e98 - community**

"Pharmacist was no support at all … ."

ID e9 - community

On the contrary, some respondents commented on receiving good support.

"I work in a very busy pharmacy so was able to gain a lot of experience from other staff members whilst I was training. I understand that others may struggle if not in a similar situation to me, so I am very grateful to my employer."

ID 33 - community

"I had complete support and was encouraged to learn in the workplace."

ID 536 – community

Another common finding was respondents perceiving that they were performing a role similar to a pharmacy technician and some also commented that their role during training, and also since registration, was very similar to that of a less qualified member of support staff, such as a medicines counter assistant or dispenser.

"I found it hard to gather experience and evidence for my NVQ as I was being primarily used as a medicine counter assistant."

ID e5 - community

"I completed my course in the pharmacy I've been in for 8 years. My job has not changed from before the course to during to after completing the course, despite the fact I'm now a technician, I'm still doing the same job as a dispenser. My knowledge through the course and now as a technician was not and is not tested in the setting I'm in (community pharmacy) so was pointless me doing the course. I did not receive any "special experience" for doing the course to help me, instead it would appear doing my job is experience enough."

ID 884 - community

7.8.4.2 Hospital

There were 61 comments left from respondents that trained in hospital pharmacy. They related to support, and the role they performed in the workplace. A few more generic

comments about the benefits of training were also made, as illustrated by the following quote:

> *"The experience in my workplace allowed me to easily move from trainee to qualified technician. It allowed my knowledge and confidence to grow, putting my other aspects of the training into action."*
>
> ***ID 601 - hospital***

Comments about support were quite positive with a number of respondents commenting on the strong support they had received from colleagues in the workplace.

> *"Working in a hospital based setting allowed for more units to be covered as there are so many different aspects to detail and maintain. Anything problematic could easily be solved with the support team you have."*
>
> ***ID 444 - hospital***

> *"I felt supported and I had a good working relationship with all of my colleagues."*
>
> ***ID e71 - hospital***

The other common finding was that respondents felt that the role they had during their training was not like a student or trainee, detracting from the purpose of being there to learn and develop and instead the focus being on contributing to service delivery.

> *"I was treated more as a pharmacy technician rather than a trainee technician which meant my study time was sometimes compromised."*
>
> ***ID 1071 - hospital***

> *"Most rotations were very good about allocating study time but some treated me as a normal member of staff not a student there to learn."*
>
> ***ID 1310 - hospital***

7.9 Current role as pharmacy technician

In Section E of the questionnaire, respondents were asked about their current role, working as a pharmacy technician. Thirty-one (4.9%) were not working as a pharmacy technician at the time of completing the survey, so they were not included in the analyses presented below.

7.9.1 Current working arrangements

The work setting where respondents were based at the time of completing the survey are presented in Table 27. A total of 556 of participants provided information about their current working hours as a pharmacy technician of which the average number of hours respondents worked per week was 34.31 ± 7.05.

Table 27: Current work setting (n= 588)		
		n (%)
Community		
	Large multiple (> 100 stores)	164 (27.9)
	Independent	91 (15.5)
	Supermarket	51 (8.7)
	Medium to large sized multiples (26-100 stores)	48 (8.2)
	Small chain (2-4 stores)	31 (5.3)
	Medium sized multiples (5-25 stores)	27 (4.6)
	TOTAL	**412 (70)**
Hospital		
	Teaching	66 (11.2)
	District general	59 (10)
	Specialist	16 (2.7)
	Private	4 (0.7)
	TOTAL	**145 (24.7)**
Other[a]	**TOTAL**	**31 (5.3)**

[a] 'Other' included working in the prison service, as a locum in different settings, GP surgery and pharmaceutical industry.

7.9.2 Job mobility: Sector where pre-registration training was undertaken compared to current sector

The movement in sector was considered by comparing the sector in which respondents undertook their pre-registration training and the sector in which they were working as a pharmacy technician at the time of completing the survey. The data in Table 28 is presented in descending order from the most common form (no movement) of mobility to least common (from 'other' sector to community).

Table 28: Job mobility (n=586)

Movement between sectors	n (%)
No movement	523 (89.2)
community to hospital	31 (5.3)
hospital to community	9 (1.5)
community to 'other'[a]	9 (1.5)
hospital to other	9 (1.5)
'other' to hospital	4 (0.7)
'other' to community	1 (0.2)

[a] including: prison service; pharmaceutical industry.

7.9.3   Overall satisfaction with current role as pharmacy technician

Respondents' overall satisfaction with their roles as current pharmacy technicians in community and hospital are provided in Table 29. The majority of respondents were satisfied, overall, with their role as a pharmacy technician. There was no significant difference in satisfaction levels between sector (U= 26665.500, Z = -1.887, p= .059).

Table 29: Overall satisfaction with current role as pharmacy technician

	Community (n= 450)	Hospital (n=132)
	n (%)	*n (%)*
Completely dissatisfied	3 (0.7)	2 (1.4)
Mostly dissatisfied	12 (2.9)	0
Somewhat dissatisfied	11 (2.7)	8 (5.6)
Neither satisfied nor dissatisfied	18 (4.4)	4 (2.8)
Somewhat satisfied	69 (16.8)	16 (11.1)
Mostly satisfied	189 (46.0)	65 (45.1)
Completely satisfied	109 (69.0)	49 (34.0)

7.9.4   Views on being a registered pharmacy technician

Respondents were asked to shared their views on a range of statements related to being a registered pharmacy technician. They rated their level of agreement with four statements and these results are presented in Table 30, with the majority of respondents from community and hospital agreeing with the four statements. Comparisons of agreement levels across sector were conducted using Mann-Whitney U tests and these revealed one significant difference (highlighted in bold in Table 30): those working in hospital felt they had a more clearly defined role in the workplace than those in community (U= 10740.500, Z = -2.563, p= .010).

Table 30: Views on being a registered pharmacy technician by sector

	Community (n= 411)					Hospital (n= 145)				
	SD	D	N	A	SA	SD	D	N	A	SA
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
My role in the workplace is clearly defined*	16 (3.9)	39 (9.5)	52 (12.7)	217 (52.9)	86 (21.0)	0	9 (6.2)	14 (9.7)	72 (50.0)	49 (34.0)
I understand the responsibility that comes with being a registered pharmacy professional	2 (0.5)	3 (0.7)	10 (2.4)	190 (46.2)	206 (50.1)	0	0	3 (2.1)	60 (41.4)	82 (56.6)
I am aware of the standards of conduct, ethics and performance associated with being a pharmacy professional	2 (0.5)	0	5 (1.2)	179 (43.7)	224 (54.6)	0	0	2 (1.4)	56 (38.6)	87 (60.0)
I understand my continuing professional development (CPD) requirements as a pharmacy professional	4 (1.0)	6 (1.5)	13 (3.2)	180 (43.9)	207 (50.5)	0	0	3 (2.1)	59 (40.7)	83 (57.2)

*Note. SA = strongly disagree; D = disagree; N = neither agree nor disagree; A= agree; SA= strongly agree; comparisons between community and hospital: *p<.05,**p<.01, ***p<.001.*

7.10 Summary of key findings

This section considers the key findings from work stream 4 in brief.

RESPONDENT CHARACTERISTICS AND PRE-REGISTRATION TRAINING ARRANGEMENTS

- **The majority of respondents were female and White British; hospital trainees were younger than community trainees.**

- **The majority of respondents (75.9%) undertook pre-registration training in community pharmacy.**

- **Trainees in hospital and those working in hospital following registration as pharmacy technicians received higher salaries than those in community**

- **Community trainees were more likely to contribute to the funding of their knowledge and competence qualifications.**

- **Hospital trainees were more likely to complete their knowledge and competence qualifications in two years or less whereas community trainees were more likely to take longer than two years.**

KNOWLEDGE QUALIFICATION

- **The majority of community trainees used a distance provider and the majority of hospital trainees used an FE college for the knowledge qualification**

- **Trainees who used FE colleges for the knowledge qualification had higher levels of agreement that their education provider cared more about their progress and received regular verbal feedback on assessments than those who used distance providers.**

- **Trainees who used distance providers had higher levels of agreement that they had a more appropriate number of exams to complete and regular written feedback than those who used FE colleges.**

- **The majority of respondents felt satisfied, overall, with the knowledge qualification though those that used a distance provider were more satisfied.**

- **Open comments from some respondents suggested there were aspects of the qualification that were not relevant to practice.**

COMPETENCE QUALIFICATION

- **The majority of community trainees used a distance provider for the competence qualification; more than half of hospital trainees used a NHS hospital / NVQ provider and approximately one-third used an FE college.**

- **The majority of respondents agreed the competence qualification was relevant to their practice as a trainee and as a registered pharmacy technician.**

- **The majority of respondents felt satisfied, overall, with the competence qualification regardless of which education provider they used.**

- **Open comments from some respondents suggested there was a heavy workload and repetition with the evidence they needed to collect for the portfolio.**

ASSESSOR(S)

- **Trainees using FE colleges or NHS / NVQ providers were more likely to have named assessors from the education provider for the competence qualification than those using distance providers.**

- **Most trainees using an FE college or NHS hospital / NVQ provider for their education provider had a pharmacy technician as an assessor whereas most of those that used a distance provider had a pharmacist or did not know the job title of their assessor.**

- **Trainees that used distance providers for the knowledge qualification were more likely to have contact at a distance (e.g. telephone; mail) whereas those that used FE colleges or NHS hospital / NVQ providers were more likely to have face-to-face contact.**

- **Most respondents, regardless of education provider used for the competence qualification, agreed that they had a good relationship with their assessor, could ask them questions when required, received regular written feedback, feedback in a timely manner and feedback that helped improve competence and that the assessor cared about their progress.**

- **The majority of respondents were satisfied, overall, with their assessor(s).**

- **Open comments from some respondents that used distance providers suggested there were sometimes issues with the assessors (e.g. lack of consistency or being 'picky' when assessing).**

EXPERIENCE IN THE WORKPLACE DURING TRAINING

- **Most respondents agreed that they were well supported by their employing organisation, line managers and colleagues as trainees. Most respondents also felt their workplace had appropriate facilities to help them complete their qualifications, that their employer cared about their progress, that they had a clear role as a trainee pharmacy technician and also felt confident to work in a different sector from the one they trained in.**

- **Respondents who trained in hospital had significantly higher agreement levels than those that trained in community with regards to feeling supported by their employing organisation and colleagues as a trainee, that they had appropriate facilities (e.g. books; computers), that their employer cared about their progress and that they had a good work-life balance as trainees; respondents that trained in community had significantly higher agreement levels with regards to feeling isolated in their place of work.**

- **Hospital trainees received more study time than community trainees**

- **Respondents using a distance provider were more highly in overall satisfaction than those using FE colleges.**

- **The majority of trainees in community would receive up to two hours of study time per week or no study time; the majority of trainees in hospital would receive up to four hours of study time.**

- **The majority of respondents were satisfied, overall, with their experience in the workplace during training, though respondents that trained in hospital had significantly higher levels of satisfaction.**

- **Open comments from some respondents suggested that trainees in community were not working towards the role of a pharmacy technician during training, and did not make that transition once qualified; comments from those that trained in hospital suggested they were not treated as students/trainees and instead as a normal member of staff which detracted from their learning.**

RESPONDENTS' ROLE AS A PHARMACY TECHNICIAN

- **The majority of respondents (70%) were working in a community pharmacy as a pharmacy technician at the time of completing the survey; 24.7% were working in hospital.**

- **The majority of respondents continued working as a pharmacy technicians in the same sector they had trained in; the most movement between sectors as a trainee to as a pharmacy technician was from community to hospital (5.3% of respondents).**

- **As pharmacy technicians, the majority of respondents agreed with having a clearly defined role in the workplace, had an understanding of the responsibility associated with being a registered pharmacy professional, had an awareness of the standards of conduct, ethics and performance and understood CPD requirements; those in hospital had significantly higher levels of agreement in having a clearly defined role in the workplace compared to those working in community.**

- **The majority of respondents were satisfied with their role as a pharmacy technician.**

Section 8: Discussion

This final section of the report draws on the findings from all work streams of the programme of the work undertaken and considers these together in this discussion, synthesising key findings together.

8.1 Overview of programme of work completed

The programme of work aimed to better understand the quality of pharmacy technician initial (pre-registration) education and training delivered by providers and awarding bodies. Five objectives were set to address this aim:

- to describe the quality and delivery of courses;
- to describe the infrastructure supporting delivery; and
- to describe the GPhC's approach to recognising and accrediting courses.
- to profile the trainee population; and
- to elicit trainee views on course delivery, especially perceived strengths and weaknesses.

Given the broad set of objectives, the research team set out to achieve them through developing four related work streams.

Workstream 1:

> This was the first work stream conducted as part of this programme of work and considered the views of education providers. A total of 23 semi-structured interviews were conducted with representatives from pre-registration pharmacy technician education providers with good knowledge of the delivery of pharmacy technician qualifications in their organisation. Seventeen interviews were conducted with representatives from FE colleges and six with distance providers.

Workstream 2:

> This work stream commenced towards the end of work stream 1 and captured views of employing organisations. It involved conducting semi-structured interviews with representatives from pre-registration pharmacy technician employers who worked closely with trainees or were in more senior positions (e.g. superintendent; training manager); all had a good understanding of work-based training for pre-registration pharmacy technicians and the support available to them. A total of 16 interviews were conducted with representatives from community pharmacy organisations and 15 with NHS organisations (hospitals / NVQ training centres).

Workstream 3:

> This was the final qualitative branch of this research and captured the views of members of staff from awarding bodies and the GPhC and focused on the approval / accreditation process of pharmacy technician qualifications. In this work stream, a total of five semi-structured interviews were completed: three with members of staff from pharmacy technician qualification awarding bodies and two with representatives of the GPhC. All interviewees had experience in the approval / re-approval of course centres and / or accreditation of pharmacy technician qualifications.

Workstream 4:

> This work stream involved a survey of recently registered pharmacy technicians, was completed following work streams 1 and 2 and was informed by both of these. The survey involved administering a questionnaire, by post and electronically, to 1457 pharmacy technicians who had registered between February 2013 and February 2014.

8.2 Strengths and limitations

One of the key strengths of this programme of work was that it was the first major study examining pharmacy technician education and training in the UK. As such it provides a range of novel findings that highlight the strengths and weaknesses, and overall quality, of the provision of pharmacy technician education and training in its present form. Furthermore, it provides a platform for future research in the area as the findings span a range of issues from the perspective of multiple stakeholders including education delivery, quality assurance processes, work-based training and support, and role clarity.

The mixed methods approach – using qualitative methods in work streams 1 to 3 and quantitative methods in work stream 4 – was beneficial. The qualitative work streams provided rich insights into the education delivery and work-based training arrangements and support across a wide range of organisations. More generalisale findings were achieved through a census survey of recently registered pharmacy technicians who had undertaken the level 3 qualifications and work experience completed in the UK that is now a requirement for registration with the GPhC.[5]

The utility of four work streams that focused on different stakeholders was a further strength of this research as the views of pharmacy technician education and training were obtained from all angles. The views of education providers and awarding bodies, employing organisations, the GPhC and recently registered technicians were captured in this research

allowing comparisons to be made across different work streams. The synthesis of these findings leads to a more holistic overview of the current state of pharmacy technician education and training.

A potential limitation of this research relates to the 'broad-brush' approach adopted. A range of topics were considered in each work stream and the level of detail and focus on an individual issue investigated was restricted. Whilst this approach can lack depth in particular areas, the lack of prior research in the area steered the research team to cover a range of issues to gain much needed insights into pharmacy technician education and training. Further studies in this area can focus on individual aspects such as the content of the knowledge and competence qualification in isolation or the support trainees receive in the workplace.

8.3 Overview of findings and their implications

This part of the discussion has been divided into a number of subsections that broadly cover the research findings and their implications for the pharmacy technician education and training as it is currently and as it evolves. It will begin with a section to profile trainees, which – as there is no register or list of people training for a pharmacy technician qualification – is crucial to gain a better understanding of this novel group of pharmacy professionals about which little is known. The following section will focus specifically on the role of different types of education providers, i.e. FE colleges, distance providers, and NHS organisations, in delivery of the pharmacy technician qualifications. As the majority of learning occurs in the workplace, the next section will discuss work-based training and the role of the employing organisations, with a particular focus on the two main sectors where training occurs, i.e. hospital and community pharmacy. As any qualification needs to be up to date and fit for purpose, a final section will discuss views on the role of pharmacy technicians and the implications this has for content, delivery and assessment of their pre-registration education and training.

8.3.1   Trainee profile

This section focuses on the characteristics of trainees as explored in work stream 1 and 2 and examined in a wider sample of participants in work stream 4.

It was clear from findings from work stream 1, and then later in work stream 4, that there were differences in the trainee profile that used the different education providers. Work stream 1 highlighted how FE colleges tended to cater mostly to hospital trainees whereas distance providers catered mostly to community trainees. This was then corroborated in work stream 4 which demonstrated that the majority of those that trained in hospital used an

FE college to complete their knowledge qualification whereas most of those that trained in community used a distance provider. For the competence qualification there were further differences between community and hospital sectors: hospital trainees tended to use an FE college or a NHS hospital / NVQ provider and the majority of those in community used a distance provider.

Findings from work stream 1 and 2 provided insights into characteristics of the population of pre-registration pharmacy technicians, showing the feminised nature of the profession and the wide range of ages. Results from the survey of recently registered pharmacy technicians (work stream 4) showed that the majority of recently registered pharmacy technicians (550; 88%) were female; most were white British (494; 79.3%) and trained in community (475; 75.9%). These findings bear resemblance to those of a registrant survey in 2013[19] where 90% of pharmacy technicians were female, 86% White British and 53% as working in community for their main job. The average age of respondents in this present research was 35, with the ages of respondents who trained in community differing from those who trained in hospital. Those who trained in hospital were younger, with an average age of 30 and the majority (68.5%) under 30, whereas the average age of those training in community was 37, with the majority (62.4%) being aged above 30. This may relate to the differences in how individuals were recruited to train as pharmacy technicians. Work stream 2 showed how in community pharmacy trainees tended to have a history of working with the employer and move on to become pharmacy technicians based on the needs of the store. In hospital, in many cases trainees could be recruited for a two-year training contract and candidates could be external, perhaps without the same background experience as those in community. However, further research would need to explore this, and investigate whether there are key differences in, for example career intentions or role expectations for those training and / or working in the two main pharmacy sectors.

8.3.2 The delivery of pharmacy technician qualifications and the role of education providers

This section focuses on the way in which the knowledge and competence qualifications were delivered to trainees across the different education providers. The focus is on the delivery across community and hospital pharmacy as very few trainees worked in other sectors as highlighted in survey findings from work stream 4.

The majority of trainees in hospital used an FE college to complete the knowledge qualification and would attend the college for a full day of study per week during term time over a period of two years. The majority of those in community would use a distance provider and complete their qualifications mostly in their own time. For the competence

qualification, involving collecting evidence of competence in a portfolio, those in hospital generally used an FE college or completed this within their hospital as many hospitals were found, in work stream 2, to be approved centres for these qualifications (i.e. NHS hospital / NVQ provider). Those in community would often use a distance provider and this would usually be the same distance provider used for the knowledge qualification.

Findings from work stream 1 showed that staff from FE colleges and distance providers delivering knowledge and/or competence qualifications tended to be a mixture of subject specialists and pharmacy professionals (including qualified assessors and/or internal verifiers) across education providers. The number of these staff members involved in the qualification varied, with some FE colleges or independent distance providers having a small number of staff and larger distance providers having more staff (i.e. assessors) involved in the delivery of the qualification(s). The staff within NHS hospitals/ NVQ providers involved in the delivery of the competence qualification were pharmacy technicians, many of whom were qualified assessors and/or internal verifiers.

Assessors had a key role to play in the competence qualification as they would be responsible for signing off a trainee as competent in a particular area (e.g. issuing prescribed items; ordering stock). The role of the assessor differed depending on the education provider used. For FE colleges and NHS hospital / NVQ providers the assessor would be another member of staff, often a pharmacy technician, in the workplace. FE colleges often worked in partnership with hospitals that had a qualified assessor in the workplace observing trainees, or have a peripatetic assessor, that could sign off trainees and the FE college would oversee the certification of the qualification; other hospital sites were approved centres and could oversee the certification of their own trainees. Assessors working for distance providers, that appeared to include some pharmacists as well as pharmacy technicians, did not typically have close contact with the trainees they assessed for both the knowledge and competence qualification. This was evident from survey findings where many respondents did not know the job title of their assessor and most had contact with their assessor(s) that was at a distance.

The way in which trainees were assessed for the knowledge qualification differed between education providers and this appeared to be linked to the awarding body that approved the centre. Some centres would use predominantly summative assignments to assess modules whereas other centres would use written exams. Furthermore, the way in which the written examinations were completed could differ, mainly between FE colleges and distance providers. When using a distance provider the exam would need to be sat in the pharmacy where the trainee worked and exam conditions needed to be enforced and monitored by the

supervising pharmacist. In contrast, those using FE colleges would sit exams in the college setting with other trainees, invigilated by a teacher.

Interviewees from education providers explained how feedback was provided, with those in FE colleges describing that there were opportunities for face-to-face discussions about work, and that written feedback was also provided. This finding resonated with those from work stream 4 where survey respondents that used FE colleges for the knowledge qualification showed stronger levels of agreement for receiving verbal feedback compared to those that used distance providers, though the opposite was true concerning written feedback. These findings together demonstrate the way in which feedback is delivered is different across education providers and that the opportunity for face-to-face discussions may be less common for those using distance providers.

Support offered by education providers differed, mainly between the ways in which it was provided by FE colleges and NHS hospital / NVQ providers versus distance providers. There was less formal tuition and support received by trainees that used distance providers. Comments from interviewees from community pharmacy organisations, where most trainees using distance providers were based, recognised the important role of supervising pharmacists working alongside trainees as a source of support alongside that given by education providers. In contrast, there appeared to me more support available for those in hospital where there were qualified work-based assessors present who were involved in the assessment of the competence qualification.

From the perspective of trainees (work stream 4), there appeared to be no particular problems with content, delivery and support, and assessment and feedback for the knowledge qualification. Most survey respondents provided favourable responses to a range of statements relating to this and had high levels of overall satisfaction with the knowledge qualification. Some differences between those that used distance providers and FE colleges were, however, present. For example, trainees that used distance providers had higher levels of agreement than those attending FE colleges in believing there were an appropriate number of exams to complete the knowledge qualification. Additionally, trainees who used FE colleges felt their education provider cared about their progress more than those who used distance providers. This may relate to the close working relationships with members of staff from FE colleges and trainees that used this type of education provider. There may be a closer relationship between teaching staff at FE colleges and trainees and their employing organisation (usually hospitals) than those relationships that exist with distance providers as interviewees described how this close bond was necessary in developing the course and having regular two-way feedback.

When survey respondents were asked about their overall satisfaction with the competence qualification the majority felt mostly or completely satisfied. Views on the amount of evidence required for the portfolio were varied, though no differences across the three education providers (FE colleges; distance providers; NHS / NVQ providers) were found. Considering the relevance of the content of the qualification, those that used FE colleges and NHS hospital / NVQ providers agreed more than those that used distance providers that the content was relevant to their practice as a trainee.

A difference in the way competence was assessed was noticeable. Distance providers would often use expert witness observations as opposed to having assessor observations and would also use professional discussions over the telephone. FE colleges and NHS / NVQ providers would have assessors observe trainees in their place of work to assess competence; in the case of NHS hospital / NVQ providers, the assessors would work alongside the trainee in the same hospital site. From work stream 4, survey respondent views on their assessors for the competence qualification varied according to the education provider used with those using FE colleges and NHS hospital / NVQ providers feeling more strongly that they had a good relationship with their assessor, could ask questions when needed, and received regular verbal feedback than those that used distance providers. Furthermore, respondents using FE colleges and distance providers had significantly higher levels of agreement than those using NHS hospital / NVQ providers in believing they received feedback from their assessors in a timely manner. Additionally, those who used FE colleges had significantly higher levels of agreement that the feedback they received helped them improve competence

8.3.2.1 Quality assurance processes

When discussing the delivery of pharmacy technician qualifications in work stream 1, the ways in which the quality of the qualifications offered was discussed. Ensuring the quality of courses offered by education providers was often discussed in terms of quality assurance processes in place. Interview findings showed that quality assurance procedures in place across education providers included internal verification / quality assurance by qualified internal verifiers within the organisations. Internal verification covered a process of double-checking marking undertaken by assessors and ensuring consistency in assessment decisions across learners for qualifications. Internal verifiers performing this role for the competence qualification would hold a level 4 qualification in order to be able to do this; some would hold an appropriate qualification for undertaking internal verification for the knowledge qualification.

In addition to internal verification there were independent external verification visits (i.e. external quality assurance) from awarding bodies to ensure internal verification activities were being upheld. Interviewees from education providers described how these ensured that the qualifications they were offering were meeting required standards that satisfied the awarding body. If there were issues with their systems, then they may receive a sanction from the awarding body and may face difficulties in the ability to provide certification for qualifications until issues (e.g. replacing a member of staff) were resolved.

Findings from work stream 4 provided insights from the perspective of awarding bodies and the role they played in approving and reapproving education providers, entitling them to offer, and to continue to offer, their qualifications. Awarding bodies employed external verifiers / quality assurers to visit course centres on a bi-annual or annual basis. These individuals would be pharmacy professionals, familiar with the nature of the qualifications they were dealing with, and it appeared that many held a position in an FE college as their main job. Their role involved ensuring education providers were fulfilling requirements to offer the qualifications: e.g. having appropriate internal verification processes and staff in place. They also supported education providers with any general queries and could take feedback from them.

The GPhC would 'recognise' the qualifications and quality assurance processes undertaken for the majority of pharmacy technician qualifications as they had been through an accreditation process demonstrating that qualifications meet national occupational standards of Skills for Health. There were two distance providers that had one of their qualifications accredited directly by the GPhC. For these two qualifications the GPhC did not undertake external verification visits of the providers, as with awarding bodies, though annual reports outlining any changes to provision would need to be sent by distance providers to the GPhC. A process of re-accreditation would take place three years after accreditation.

8.3.3 Work-based training and the role of employing organisations

This section focuses on the workplace where trainees were based to complete the work-based training requirements of registration, with a particular focus on differences in the two main sectors, hospital and community pharmacy.

Findings from work stream 2 showed that trainees from hospital settings were recruited to an individual hospital site on two year training contracts, the time typically taken to complete their knowledge and competence qualifications and work-based training requirements. Prior to this, candidates may have previously worked as dispensers or assistant technical officers, or were university graduates. In community pharmacy, many trainees were previously experienced dispensers and would progress through to pharmacy technician training in a

pharmacy that required a pharmacy technician. This pharmacy would typically be the same branch they had experience of working in as a dispenser.

Findings from work streams 1 and 2 showed differences in the arrangements for pre-registration training between the two sectors. A number of hospitals were equipped with work-based assessors that could witness and sign off competence of trainees as well as offer support with the knowledge qualification, though this was largely done by the education provider. There were also generally more than one trainee in a workplace enabling peer support. Furthermore, trainees commonly worked alongside a number of different healthcare and pharmacy professionals, such as other pharmacy technicians, who could act as role models and could be seen as a development aid. This was not common in community pharmacies, where trainees may not work alongside another pharmacy technician or trainee. Though a trainee could receive support from all colleagues, when it came to support for completing the qualifications, the supervising pharmacist played the central role.

The facilities and resources in place to support learning in the workplace (e.g. computers; study materials) were less favourable in community pharmacies as there was not typically access to study rooms and equipment / materials as available in hospitals. Survey respondents who had trained in hospital had significantly higher levels of agreement in believing their workplace had appropriate facilities.

Throughout the completion of the qualifications, and during work-based training, those in hospital received more regular – often contracted – study time to work on their qualifications compared to those who were based in community. Those in community commonly had no formal arrangements but had more spontaneous study time when there was downtime within the pharmacy. Findings from the survey in work stream 4 also showed that trainees in community were more likely to take longer than two years, whereas those in hospital would generally finish within two years. This may be linked with the finding that trainees in hospital were on two-year training contracts and also that they received more study time that would facilitate the completion of work.

Findings from work stream 4 also showed differences in the arrangements for training between community and hospital pharmacy. Whilst the majority of respondents that trained in community and hospital pharmacy had their education qualifications funded by their employer, hospital trainees were more likely to have the costs of their knowledge and competence qualifications funded by their employer. Additionally, differences in salary were highlighted from the survey, with hospital trainees receiving significantly higher salaries than those in community, both whilst training and after registration.

Most survey respondents agreed that they had been well supported by their employing organisations, line managers and colleagues as trainees, however, those in hospital felt more supported by colleagues and their employing organisation. This may be linked to the finding that trainees in community were often the only trainee undergoing training, and the feelings of isolation were stronger in community than hospital as findings from the survey showed. No differences in views of support received from line managers were found suggesting trainees in both sectors were in agreement that their line managers (generally pharmacy education and training leads in hospital and supervising pharmacists in community) were supportive.

8.4 The current shape of pharmacy technician education and training

This section considers views from all stakeholders on pharmacy technician education and training on its fitness for purpose. The differences in education delivery and work-based training arrangements across community and hospital sectors are also considered.

The qualitative research conducted in work streams 1 to 3 revealed a perceived need for education standards to reflect current practice. Some interviewees commented that some education and training standards were not necessarily relevant and were outdated, e.g. extemporaneous preparations. Others noted that more attention could be given to medicines management and ward-based activities (in the case of hospital-based training). Others commented on the need for aspects of professionalism to be incorporated into the standards given the need for pharmacy technicians to adhere to standards as registered professionals.[4] The need for the level of depth of the content in the knowledge qualification was also challenged by some interviewees and was considered excessive by some.

Comments around the way in which pharmacy technician education and training is regulated by the GPhC were raised, often with reference and comparison to pre-registration training for pharmacists. Some interviewees felt the GPhC's role in pharmacy technician education was more relaxed compared to pharmacists as the GPhC provided structure to pharmacist pre-registration training (progress reports; registration assessment). The absence of requirements for pharmacy technician training premises and those with tutoring responsibilities, similar to those in place for pre-registration pharmacist training premises, was also noted. As pharmacy technicians are registrants alongside pharmacists, this disparity in involvement from the GPhC was undesirable for some interviewees.

The issue around the role of pharmacy technicians arose from all work streams. Comments from interviewees highlighted the ambiguity in the role of pharmacy technicians, mainly within community settings where the difference between dispensers and pharmacy

technicians was not clearly delineated. Comments from a number of interviewees suggested that the role of hospital trainees and pharmacy technicians is more varied and clear, supporting the utility of what is learned in these qualifications.

Findings from the survey of recently registered technicians showed also that those who used NHS hospital / NVQ providers (predominantly hospital trainees) agreed more than those who used distance providers (predominantly community trainees) that the content of the competence qualification was relevant to them as a registered pharmacy technician. Moreover, those working as pharmacy technicians in hospital had significantly higher levels of agreement than those in community that their role in the workplace was clearly defined. Findings from the survey also showed that hospital trainees and pharmacy technicians received significantly higher salaries than those in community. The opportunity to conduct a wider range of activities in hospital settings and having a clearer job description along with a higher salary may attract pharmacy technicians from community into hospital settings. Survey findings provided some support for this, with a number of respondents (*n*= 31; 5.3%) having moved from community to hospital since completing training.

The need for pharmacy to play a larger role and to become more patient focused has been made clear in the past.[20] This will necessitate change to the roles of pharmacy staff and the skills mix of pharmacy staff to allow members of the pharmacy team to hold appropriate responsibilities. The perceived role pharmacy technicians could have in community pharmacy in the absence of a responsible pharmacist under proposed changes to supervision requirements have been explored in recent research.[21] In that research, differences in opinion were found between pharmacists and pharmacy technicians in what pharmacy technicians could do in the absence of a supervising pharmacist. Issues with pharmacists relinquishing control may be present, and appropriate delegation may not take place.[22]

8.5 Conclusion

This programme of work has aided the understanding of the present landscape of pharmacy technician pre-registration education and training. The views of multiple stakeholders obtained in this research have facilitated well-rounded insights into the way in which pharmacy technician qualifications are delivered and assessed and how work-based training is completed alongside them. The route to registration as a pharmacy technician is considerably varied, with numerous education providers offering the qualification, modes of study available and settings to complete work-based experience in. This poses challenges in ensuring parity in education and training experiences for those individuals undertaking education and training to become pharmacy technicians.

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