



London Pharmacy Education and Training

An analysis of the initial education and training standards for pharmacy technicians and views on their fitness for purpose

A report to the General Pharmaceutical Council

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Acknowledgements

This report presents research commissioned by the General Pharmaceutical Council and undertaken by researchers at the London Pharmacy Education and Training and UCL School of Pharmacy.

The project team would like to thank all the people who kindly agreed to participate on this study and those people who offered to participate but due to time constraints were not able to be interviewed.

The project team would also like to thank Tess Fenn for her help with designing the key organisational relationships diagram found in the glossary.

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List of abbreviations

ACCAC	Qualifications Curriculum and Assessment Authority for Wales
APTUK	Association of Pharmacy Technicians UK
ASHP	American Society of Health-System Pharmacists
BTEC	Business and Technology Education Council
CPD	Continuous professional development
FEC	Further education colleges
FPF	Foundation Pharmacy Framework
GPhC	General Pharmaceutical Council
HEE	Health Education England
IET	Initial education and training
IQA	Internal verifier/quality assurer
LPET	London Pharmacy Education and Training
LPWG	London Pharmacy Workforce Group
NAPRA	National Association of Pharmacy Regulatory Authorities
NHS	National Health Service
NOS	National Occupational Standards
NPA	National Pharmacy Association
NVQ	National Vocational Qualifications
OfQual	Office of Qualifications and Examinations Regulation
PTPT	Pre-registration trainee pharmacy technician
QCF	Qualification and Credit Framework
SCQF	Scottish Credit and Qualifications Framework
SQA	Scottish Qualifications Authority
SSC	Sector Skills Council
SVQ	Scottish Vocational Qualifications
UCL SoP	University College London School of Pharmacy
VBR	Values based recruitment

Executive Summary

Introduction

The initial education and training (IET) of pharmacy technicians is vocational and comprises simultaneous part-time study and employment. Two qualifications are required – a knowledge-based qualification and a competence-based one. The pharmacy regulator, the General Pharmaceutical Council recognises or accredits these qualifications using its ‘Standards for the initial education and training of pharmacy technicians’.

The principal objective of the analysis presented in this Report was to understand the scope of the current IET standards for pharmacy technicians and the extent to which the employers of pharmacy technicians and other stakeholders think the current IET standards are fit for purpose.

Methods and processes

This Report describes a cross-sectional qualitative thematic analysis of the IET standards for pharmacy technicians and presents current views on their fitness for purpose; the Report is presented in 2 parts:

- (1) A description of the current standards and comparison of the standards against the standards for pharmacists and support staff roles;
- (2) A thematic presentation of the views, considerations and perceptions of employers and other stakeholders who are engaged with the IET of pharmacy technicians.

Findings and discussion

The Report presents the outcome of this thematic analysis and indicates a number of recommendations and developments for the current IET standards.

The Report highlights that there were disparities in funding opportunities (though it is questionable that this is within the scope of the IET standards to address). Values based recruitment (VBR) as a new process was raised by stakeholders and there was general consensus that clarification of recruitment criteria and minimum academic ability should be more standardised. There was a strong sense that the academic length and level of IET should be more dependent on a clearer role and scope for pharmacy technicians. Different modes of IET delivery were considered to result in disparities in the quality of education and training outcomes.

A further recommendation is that the knowledge-competency programme link needed to be strengthened and more robustly assessed. Assessment methods were thought to need improvement and the standards should include more guidance on the code of conduct. It was also suggested that IET of pharmacy technicians should more closely mirror that of pharmacists and that accountabilities needed to be more clearly defined. Further support was also thought

necessary for education and training providers – that is a stronger culture of learning in the workplace. A more outcome focussed approach to the monitoring and quality assurance of the IET process was also advised.

Finally, clarifying responsibilities and lines of communication between education and training providers was also highlighted.

Conclusions

In conclusion, all the current IET standards were considered to be essential. There are parts of the curricula that were not considered to be current or contemporary and which could benefit from revision (the addition of areas that reflect the current scope of practice of pharmacy technicians and the removal of others). Further clarification of the role and the core training needs for pharmacy technicians was considered essential.

The length of the IET as well as the academic level were considered by stakeholders and education providers to be appropriate with changes only thought necessary if the role of the pharmacy technician evolves further i.e. if the scope of practice widens to include more patient-facing practice.

In particular, the mode of delivery of IET was generally considered to result in variable quality outcomes and it was suggested that the standards should reflect a more blended approach to learning. The current IET standards for pharmacy technicians are aimed at Awarding Bodies and education and training providers and it is suggested that their scope should be widened to include employers, pre-registration trainee pharmacy technicians (PTPTs) and other stakeholders involved in the IET process. The addition of clear guidance about how the IET standards could be met in working healthcare environments was also thought to be a useful addition.

1. Introduction

1.1 Background

The General Pharmaceutical Council (the GPhC) is the independent regulator for pharmacists, pharmacy technicians and pharmacy premises in Great Britain. It came into being on 27 September 2010. The registers of pharmacists and pharmacy technicians provide protection for patients and public by ensuring that only those qualified, competent and with a duty to maintaining high standards can practice as registered pharmacy professionals in Great Britain.

1.1.1 Pharmacy technician initial education and training

A new registrant group

Pharmacy technicians have been registered for several years and registration with the GPhC became compulsory on the 1st July 2011¹. Prior to that, the technician role existed but was unregulated (although a system of voluntary registration began in 2007).

Pharmacy technicians are a vital part of the pharmacy team and mainly work in community pharmacies, hospitals and the pharmaceutical industry under the supervision of a pharmacist (though the situation is changing and pharmacy technicians are becoming more autonomous in a number of areas). Pharmacy technicians prepare medicines/healthcare products and supply them to patients often with additional advice and guidance. Pharmacy technicians are involved with working in the following areas:

- aseptic dispensing;
- clinical trials;
- dispensing;
- information technology;
- management of staff;
- manufacturing – including extemporaneous preparation;
- medicines information;
- medicines management;
- quality control;
- procurement;
- training and development of staff.

¹ The Pharmacy Order 2010. Available from: <http://www.legislation.gov.uk/ukdsi/2010/978111487358>

The education and training of pharmacy technicians

The IET of pharmacy technicians is vocational and comprises of simultaneous part-time study and employment. Two qualifications are required² – a knowledge-based qualification and a competence-based one. They can be taken simultaneously, they can overlap, or they can be taken consecutively. Some courses are taught face to face, mainly in further education colleges and NHS trusts/Health Boards, but others are delivered at a distance. The route to registration as a pharmacy technician is:



Assessment

At several points during the period of part-time training, PTPTs are assessed by assessors, in some cases 5/6 times per year, in other cases much more frequently. Assessor judgments are internally verified/quality assured by an internal verifier/quality assurer and also externally by another external verifier/quality assurer.

Recognised qualifications

PTPT qualifications (Level 3) and other pharmacy support staff qualifications (Level 2) are overseen by Skills for Health, the Sector Skills Council for Health. During 2007-10, Skills for Health convened a review of the National Occupational Standards (NOS), undertaken by an expert cross-sector pharmacy group and it was decided that the previous competence qualification level 3 NVQ/SVQ in Pharmacy Services would be replaced by the level 3 NVQ QCF Diploma in Pharmacy Service Skills (and the equivalent in Scotland). In addition, the knowledge qualifications were also revised from a level 3 National Certificate in Pharmacy Services to a level 3 Diploma in Pharmaceutical Science (and the equivalent in Scotland). The new QCF qualifications were commenced in September 2010. All units in the pharmaceutical science knowledge qualification are mandatory, regardless of the sector of practice. For the revised pharmacy service skills competence qualification however, there are 14 core units which are applicable to everyone, but also three optional units which are chosen depending on the sector in which the PTPT is working; i.e. hospital or community. PTPTs are only assessed for competence in their own area(s) of practice.

Prior to compulsory registration in July 2011, the pharmacy regulator accepted a wide range of qualifications as acceptable indicators of competence. When registration became compulsory, however, the list was narrowed down to:

² General Pharmaceutical Council. Criteria for registration as a pharmacy technician. 2013. London: General Pharmaceutical Council.

Pearson (<http://qualifications.pearson.com/en/home.html>)

- BTEC National Diploma Pharmaceutical Science (Knowledge) (500/9939/S)
- Level 3 Diploma (NVQ)(QCF) Pharmacy Service Skills (Competence) (500/9578/X)

City & Guilds (<http://www.cityandguilds.com>)

- Level 3 Diploma Pharmaceutical Science (Knowledge) (500/9959/0)
- Level 3 NVQ Diploma Pharmacy Services Skills (Competence) (500/9576/6)

SQA (Scottish Qualifications Authority (http://www.sqa.org.uk/sqa/CCC_FirstPage.jsp))

- National Certificate in Pharmaceutical Science (Knowledge) (G753 04)
- National Certificate in Pharmacy Services (Knowledge) (GA6P 46)
- Level 3 SVQ Pharmacy Services (Competence) (G759 23)
- Level 3 SVQ/Level 6 SCQF Pharmacy Services (Competence) (GA08 23)

These three Awarding Bodies – Pearson, City and Guilds and the SQA approve courses delivered by Further Education Colleges (FECs) and NHS trusts/Health Boards. In addition to issuing awards, the three Awarding Bodies also provide external verification/quality assurance of assessments. The degree of scrutiny that an Awarding Body applies to an approved centre (FEC/NHS trust/Health Board) is risk-based.

The GPhC ‘recognises’ courses quality assured and awarded by the three Awarding Bodies but it does not visit individual education and training providers (FEC/NHS trust/Health Board/Distance Learning Provider) as part of the process.

In addition to franchised courses, the National Pharmacy Association and Buttercups Training, both private providers, deliver qualifications through distance learning. The courses are not quality assured by an Awarding Body, the GPhC accredits them directly.

1.2 Purpose of the project

The principal objective of the analysis is to understand the scope of the current IET standards³ for pharmacy technicians and the extent to which the employers of pharmacy technicians and other stakeholders think the current IET standards are fit for purpose.

1.3 Project Objectives:

- 1) Initiate project – produce a project initiation document;

³ General Pharmaceutical Council. Standards for the initial education and training of pharmacy technicians. 2010. London: General Pharmaceutical Council.

- 2) Describe literature and bibliography of IET of pharmacy technicians including a gap analysis comparing the IET standards of pharmacy technicians with the IET standards of pharmacists and the wider pharmacy team;
- 3) Schedule interviews;
- 4) Design interview template;
- 5) Complete interviews;
- 6) Transcribe interviews;
- 7) Describe themes emerging from interviews;
- 8) Produce report including thematic analysis;
- 9) Deliver report to GPhC;
- 10) Close and evaluate project.

1.4 Project Scope:

Analysis of the current education and training standards

The analysis aimed to describe the current education and training standards for pharmacy technicians and compare them to the standards for pharmacists and support staff roles.

The second part of the analysis sought to present views from employers about whether the standards were fit for purpose - that is whether they equip pharmacy technicians for their role.

Employers were to be asked to discuss the current IET standards in detail including:

- what is essential and why?
- what could be removed and why?
- what is missing and why?
- what should be added and why?
- whether the length of the education and training is right?
- whether the mode of delivery is right?
- whether the academic level right?
- how they think the pharmacy technician role may change in the future and the implications of that for IET

The analysis was expected to include at least 20-30 employer interviews. The main stakeholder groups across Great Britain (GB) were to be covered including:

- Pharmacy Voice, the umbrella body for community pharmacy
- the three NHS systems in GB
- Further education colleges delivering pharmacy technician qualifications
- Health Education England
- NHS Education Scotland
- Welsh Centre for Pharmacy Professional Education
- Buttercups

- National Pharmacy Association
- Association of Pharmacy Technicians UK

The GPhC was particularly keen to understand how pharmacy technicians are perceived, and used, by sector and by GB country.

1.5 Exclusions

IET standards for pharmacists and professional requirements for support staff (although a comparison will be made in the literature search to identify gaps and areas of similarity with the IET standards for pharmacy technicians).

1.6 Project Team

The project was conducted by researchers from London Pharmacy Education and Training and the UCL School of Pharmacy. The project was led by Professor Ian Bates (UCL School of Pharmacy), a pharmacist with many years of experience in pharmacy education and health services research. Dr Helena Rosado (UCL School of Pharmacy) a pharmacist with research experience of education and training was a co-investigator. Mr Christopher John (London Pharmacy Education and Training) a pharmacist working in education and training in the NHS provided project and quality management expertise to the project. Mrs Dalgeet Puaar (London Pharmacy Education and Training) a pharmacy technician working in education and training in the NHS provided expertise on the delivery and management of pharmacy technician qualifications.

1.7 Research overview:

The project team undertook a cross-sectional qualitative thematic analysis of the IET standards for pharmacy technicians and views on their fitness for purpose. The analysis was undertaken in 2 parts:

- 1) Description of the current standards and comparison of the standards against the standards for pharmacists and support staff roles.
- 2) Thematic presentation of the views from employers and other stakeholders.

The first part of the analysis involved a literature search and described how the standards have been interpreted in practice. A gap analysis compared the standards against the standards for pharmacists and support staff and made evidence-based explanations for differences. The project team also undertook a review and survey of accessibility to current training and education provision in this sample group, which fed into the gap analysis to provide 'snapshot' information on associations between standards and provision.

The second part of the analysis adhered to the scope described above. The Project Team developed an interview template incorporating the themes and questions that the GPhC had

requested to be asked. Stakeholders that the GPhC had identified (and others identified by the project team) were contacted to participate in a semi-structured interview conducted by a member of the project team. Responses from participants were allowed to be open-ended to allow for theme identification. Interviews were recorded on an electronic audio format (permission was sought from the participant). Electronic audio recordings were stored in password protected, secure data storage facilities at the London Pharmacy Education and Training Offices in Paddington, London. Verbatim transcripts of the recorded interviews were produced on Microsoft Word® and held on secure pass-word protected drives on the UCL School of Pharmacy and London Pharmacy Education and Training computer servers. Only members of the project team had access to the transcripts. Responses to the semi-structured interview, as detailed on the transcripts were examined by 2 reviewers independently who identified themes and used a structured coding method for extraction (using a modified Miles & Huberman approach⁴). The methodology used a 'sample to redundancy' approach – an appropriate stance when semi-structured interviews are involved. Analysis of the consistency of coding and themes was undertaken and this final report additionally includes a weighted matrix analysis of the numbers of the coded themes where appropriate. The sample was based on the suggested stakeholder list supplied described in the scope and stratified by sector and by GB country. There was a target of 20-30 employer interviews.

The final report was a collaborative approach between researchers and those delivering education and training for pharmacy technician qualifications in practice. The final report underwent a process of validation and professional scrutiny by an external reference group – in this case the London Pharmacy Workforce Group (LPWG) will serve this purpose. The LPWG brings together senior and experienced pharmacy professionals from NHS organisations and independent organisations providing NHS services. The LPWG co-ordinates and oversees workforce development for pharmacy staff working in London in all providers of NHS services across London. Its purpose is to ensure that pharmacy is able to carry out its leadership role in optimising medicines usage, self-care and Public Health at all points of the health and social care systems, working with fellow health care workers, patients / those living with disability and long-term conditions, and carers as appropriate.

1.8 Assumptions

There was an assumption that the project team had up-to-date knowledge and other contextual insights into aspects of the IET of pharmacy technicians. It was also assumed that a redundancy of themes would be reached within the target of 20-30 employer interviews. Another assumption was that there would be a range of themes for analysis rather than a single emerging theme.

⁴ Miles, M., Huberman, A. (1994). *Qualitative Data Analysis*, 2nd Ed. London: Sage.

2. Methods and Processes

The project team undertook a cross-sectional qualitative thematic analysis of the IET standards for pharmacy technicians and views on their fitness for purpose.

The subsequent analysis was undertaken in 2 parts:

- 1) Description of the current standards and comparison of the standards against the standards for pharmacists and support staff roles.
- 2) Thematic presentation of the views from employers and other stakeholders.

2.1 Description of the current standards and comparison of the standards against standards for pharmacists and support staff roles

A search of national and international literature was undertaken covering the time period since 2000. The aim was to identify, summarise and analyse the literature relating to the initial and early years education and training not only for pharmacy technicians but also pharmacists so comparisons could be made. While the primary focus was the United Kingdom, international learning and literature from Canada and the United States (countries with registered pharmacy technicians) were also drawn upon. The literature search was intended to provide information about current pharmacy education policy and regulation.

Search terms were kept broad to maximize the retrieval of reference and included the following:

- Education;
- Training;
- Pharmacy Technicians;
- Pharmacists;
- Competency Framework;
- Standards;
- Scope of practice.

Databases assessed were:

- Cochrane Database of Systematic Reviews;
- Embase;
- Medline;
- Science Direct.

2.2 Thematic presentation of the views of employers and other stakeholders

The aim was to undertake a cross-sectional qualitative thematic analysis of the IET standards for pharmacy technicians and views on their fitness for purpose.

2.2.1 Sample – identification, size and stratification

A qualitative sampling approach was taken. A sample of interviewees was identified who could provide views and perceptions on the IET of pharmacy technicians. Participants were chosen from across Great Britain and sectors of pharmacy including:

- Awarding Bodies that approved level 3 pharmacy technician qualifications across the United Kingdom;
- Community Pharmacy Employers;
- Education Providers (Further Education Colleges, Distance Learning Providers and Awarding Body Approved NVQ/SVQ Centres) offering level 3 pharmacy technician qualifications;
- Hospital Pharmacy Employers;
- Stakeholders (Education Commissioners, Professional Leadership Body and Trade Associations).

Thirty potential participants were identified from a database held at the GPhC, the contacts database hosted by London Pharmacy Education and Training (which has been used annually to undertake the National NHS Pharmacy Establishment and Vacancy Survey) and from other contacts lists. This sample size was expected to be large enough during the interview process to reach the point where no new themes emerged i.e. a ‘sample to redundancy’ approach. The potential participants were stratified according to sector of practice and geography (England, Scotland and Wales).

2.2.2 Interviews

An interview invitation was designed (see appendix 1) that included a request to participate in an independent research project, the benefits of the research, information about the interview process and confidentiality and contact details of the researcher to respond to if they were interested in scheduling a telephone or face-to-face conversation to take part. The invitation was sent via email to the potential participants and non-responses received a follow-up email and finally a phone call in some instances. Once participants had agreed to be interviewed, their preference for a telephone or face-to-face interview was followed and an interview schedule (see appendix 2) explaining the interview process and the GPhC’s document ‘Standards for the initial education and training of pharmacy technicians’ was sent via email.

The Project Team developed an interview questions template (see appendix 3) incorporating the themes and questions that the GPhC had requested to be asked. A semi-structured interview approach was used so that the researcher would be able to probe and follow lines of discussion not limited to the interview questions in the template. The researcher had experience in conducting semi-structured interviews and undertook a practice interview with a member of the London Pharmacy Education and Training Vocation Qualifications team and a pharmacy

professional at The Whittington Hospital, London in order to test the interview questions template. The questions were structured under the headings:

- GPhC IET standards for pharmacy technicians e.g. which are considered to be essential;
- GPhC IET standards use in practice;
- IET process – e.g. academic level;
- Current and future scope of practice for pharmacy technicians.

Open questions were designed to encourage participants to elaborate answers without being led down a particular route. Responses from participants were allowed to be open-ended to allow for theme identification. Interviews were recorded on an electronic audio format (permission was sought from the participant). Electronic audio recordings were stored in password protected, secure data storage facilities at the London Pharmacy Education and Training, London. Verbatim transcripts of the recorded interviews were produced on Microsoft Word® and held on a secure pass-word protected drives on the UCL School of Pharmacy and London Pharmacy Education and Training computer servers. Only members of the project team had access to the transcripts.

2.2.3 Thematic analysis

Responses to the semi-structured interview, as detailed on the transcripts were examined by two reviewers independently using a modified Miles and Huberman approach involving: data reduction, data display and conclusion drawing/verification. The data reduction process involved extracting meaning in the large quantity of complex data through the development of summary themes from the raw data. The data reduction and condensing began during the interview phase and continued throughout the interviews and subsequent transcribing. The organising of the raw data into transcripts aided the ongoing search for patterns, links and relationships. The themes were coded: a process of closely inspecting the text in the transcripts and looking for recurrent themes and marking similar passages with a code so all the data could be examined for examples of similar cases and patterns for later retrieval and conclusion drawing. Once no new themes (categories of data) were encountered the interview recruitment process was ceased. The coding of the data by labelling facilitated its storage and retrieval. In this study, the data was coded descriptively and classified as:

- Personal Perception
or
- Personal Concern
or
- Objective Fact
or
- Personal Recommendation

Data display was critical to ensure an effective analysis so a series of cross-sectional matrices were created. A matrix tabulated the coded themes from the transcripts that were stratified by sector and geography (e.g. community pharmacy in Scotland) with links to the illustrative evidence text. The themes were also mapped to the IET standards for pharmacy technicians. This enabled a building of consistency of views and recommendations. The thematic analysis is described in this report in the sections titled “data from interviews”. Each section includes a weighted summary of the main perceptions, concerns and recommendations as summarised in table 1. Detailed views and recommendations were identified by sector and geography as indicated in table 2.

Table 1: Weighted codes from the interview summaries included in the “data from interviews” sections.

Interviews' summary weighted code	
+	View or recommendation by a low number of interviewees and/or Interviewees did not feel particularly strongly about the view or recommendation
++	View or recommendation by a medium number of interviewees and/or Interviewees did not feel particularly strongly about the view or recommendation
+++	View or recommendation by a medium number of interviewees and/or Interviewees felt particularly strongly about the view or recommendation
++++	View or recommendation by a high number of interviewees and/or Interviewees felt particularly strongly about the view or recommendation

Table 2: Sector and geography used in the “data from interviews” sections.

Sector	Geography
Awarding Bodies	East Midlands
Community Pharmacy Employers	England
Education Providers	Kent, Surrey and Sussex
Hospital Pharmacy Employers	London
Stakeholders	North East
	North West
	Scotland
	South West
	Thames Valley
	United Kingdom
	Wales
	Yorkshire and The Humber

3. Findings: Literature Review

The literature search revealed a number of documents about education and training in pharmacy. A bibliography is given in appendix 4. An analysis of the literature covers the following areas:

- IET standards for pharmacy technicians;
- Comparing the IET standards for pharmacy technicians, pharmacists and pharmacy support staff;
- Quality of education and training;
- Scope of Practice
- Patient safety and patient-centred professionalism
- Seamless professional development;
- International approaches.

3.1 Initial education and training standards for pharmacy technicians

Pharmacy technician qualifications are approved against the GPhC's IET standards and criteria. Awarding Bodies and education and training providers need to meet the standards and criteria to have their pharmacy technician competency or knowledge-based qualification approved.

The curriculum requirements for competency-based qualifications are built on the National Occupational Standards (NOS)⁵. There is flexibility in the optional National Occupational Standards a trainee must complete to reflect differences in practice across pharmacy sectors and practice in England, Scotland and Wales. The curriculum requirements for knowledge-based qualifications reflect their level within the national qualifications framework and are intended to ensure consistency between pharmacy sectors and across England, Scotland and Wales. Therefore minimum standards of competence and qualification are assured and to the same standard and criteria regardless of the pharmacy sector and geographical locations whilst allowing transferability of skills and knowledge.

3.2 Comparing the initial education and training standards for pharmacy technicians, pharmacists and pharmacy support staff.

3.2.1 Pharmacists

The standards for the initial education and training of pharmacists⁶ are for the schools of pharmacy. MPharm degree accreditation methodology involves testing the standards and complements the Quality Assurance Agency's quality check on higher education. This is a key

⁵ Skills for Health. National Occupational Standards. Available from:

<http://www.skillsforhealth.org.uk/standards/item/215-national-occupational-standards>

⁶ General Pharmaceutical Council. Standards for the initial education and training of pharmacists. 2010. London: General Pharmaceutical Council

distinction between the initial education and training of pharmacists and those of pharmacy technicians as generally pharmacy technician courses are recognised (only the National Pharmacy Association and Buttercups Training's distance learning qualifications are accredited).

Accreditation means that all the processes of an MPharm programme have been reviewed for quality assurance purposes to ensure that it meets the standards and accreditation criteria. Recognition on the other hand relates to the approval of national qualifications delivered across Great Britain -these qualifications are mapped to the Qualifications and Credit Framework and agreed NOS so the GPhC recognises the quality assurance of the Awarding Bodies qualifications but does not directly accredit specific providers. However, like with accreditation, the initial education and training standards for pharmacy technicians are tested during the recognition process.

The initial education and training of pharmacists differs from pharmacy technicians as the four-year MPharm degree (underpinning knowledge) is currently separate from the 52-week pre-registration training (attainment of competence) i.e. the underpinning knowledge and competence elements run consecutively rather than concurrently as they usually do for pharmacy technicians. However, the standards for pharmacists were written with the expectation that an integrated degree combining academic study and pre-registration training might be a future model. Although schools of pharmacy are not responsible currently for delivering pre-registration training, outcome levels for an MPharm degree and pre-registration training are defined and the MPharm degree is viewed as a preparation for pre-registration training. The initial education and training standards for pharmacists are more structured than those for pharmacy technicians. For instance, the standard is presented along with criteria to meet the standard, evidence required to meet the standard and guidance on meeting the standard. For Fpharmacy technicians all that is presented are the standard and the criteria to meet the standard. The assumption here is that the more structured standards for pharmacist reflects accreditation of MPharm programmes whereas the standards for pharmacy technicians generally reflect recognition of qualifications.

The initial education and training standards for pharmacists and those for pharmacy technicians cover similar areas:

- Patient and public safety;
- Monitoring, review and evaluation of initial education and training;
- Equality, diversity and fairness;
- Selection processes;
- Curriculum delivers the required outcomes/standards;
- Support and development for PTPTs;
- Support and development for those involved with teaching and learning;
- Responsibilities for the management of initial education and training are defined;
- Resources and capacity must be in place to deliver the required outcomes/standards;

- Outcomes of initial education and training.

The following initial education training standards for pharmacy technicians are not found in the initial education and training standards for pharmacists:

- Definition of appropriate academic level;
- Relevance to current practice and national standards;
- Appropriate standards of assessment;
- Assessment strategy demonstrates required outcomes;
- Effective monitoring and evaluation of standards of assessment.

The standards that are more explicit to the IET of pharmacy technicians are mainly about assessment (though assessment is briefly covered in the outcomes section for pharmacists i.e. 'Assessment must test competence and the achievement of the learning outcomes in this standard'). This may be an attempt to achieve parity with quality between the different Awarding Bodies as in the case of pharmacists assessment quality is covered, in the main by the QAA. For instance, standard 12 states that 'For competency based qualifications, the assessment strategy must follow the agreed SVQ/QCF Assessment Strategy for Pharmacy Services Qualifications.'

The assessment strategy (an example of which is referenced⁷) deals with assessment, sources of evidence and quality control. The SVQ/QCF qualifications are based on the NOS and assess the application of skills, knowledge and understanding to the standards required in the workplace. There is an expectation that much of the evidence for assessment for the qualifications will be gathered as PTPTs carry out tasks in their workplace – this is comparable to the approach taken by pre-registration trainee pharmacists. The assessment strategy also sets out roles and responsibilities for approved assessment centres, assessors, internal verifiers/quality assurers, expert witnesses and others. Requirements for sources of evidence are defined including observations of practice, witness testimonies, professional discussions and simulations. External quality control is in the form of external verification for monitoring approved assessment centres performance. The external verifier/quality assurer/consultant is the key link for Awarding Bodies in the quality assurance and verification of the assessment of PTPTs performance in the workplace i.e. ensuring internal verifiers/quality assurers correctly validate assessors' decisions' in assessment.

In practice the assessment of competence must be carried out by direct observation of a trainee by a trained assessor or an expert witness. If an expert witness is the sole source of performance evidence (rather than direct observation by an assessor) the assessor must undertake a professional discussion with the trainee in order to establish competency. For distance learning

⁷ Skills for Health. Assessment strategy for the SVQ in Pharmacy Services Qualifications at Level 2 and Level 3 QCF Certificate / Diploma in Pharmacy Service Skills (NVQ/SVQ) at Level 2 and Level 3. Available at:

http://www.sqa.org.uk/files_ccc/Pharmacy_Services_for_the_SVQ_QCF_Assessment_Strategy_2010.pdf

providers this is often done outside the direct context of the work situation whereas for NVQ/SVQ assessment centres delivering direct observation, an assessor views a trainee undertaking a task in the context of the work situation and decides whether a trainee is competent or not on that basis.

It can be difficult to ascertain the difference between 'knowing how' and 'showing how' when not undertaking directly observed assessment of a trainee i.e. relying on witness testimonies and professional discussions. Ensuring pharmacy technicians 'show how' is essential to develop practitioners who are safe. This is different from the approach with pharmacists where the outcomes described in the initial education and training standards, set out the expectations of a pharmacy professional, the skills required in practice and the context of initial education and training including how the outcomes are described and assessed (a competence and assessment hierarchy is used known as Miller's triangle - knows: knows how: shows how: does). For pharmacy technicians, the learning outcomes for the competency-based qualification are based on the NOS and the learning outcomes are listed for the knowledge-based qualification. There is no explicit description of the expectations of a pharmacy technician as a professional nor is there a competence and assessment hierarchy – competence is a minimum standard. For pharmacists, the competence element of training requires pre-registration trainee pharmacists to be assessed against performance standards described in the GPhC's Pre-registration manual and to undertake a registration assessment near the end of the 52-week training period.

3.2.2 Pharmacy Support staff

The GPhC require that all staff working in a pharmacy, whatever sector, are appropriately trained for the role they undertake. It is difficult to make a direct comparison between pharmacy technicians and pharmacy support staff as there are no IET standards for the latter. However, it is useful to describe the roles of pharmacy support staff and their minimum training requirements.

For pharmacy support staff such as dispensing assistants (pharmacy assistants) who are involved in the dispensing process, this means they must meet the GPhC's minimum training requirements⁸, which are the relevant modules of the Level 2 NVQ (QCF) Certificate in Pharmacy Service Skills or Level 2 NVQ (QCF) Certificate in Pharmaceutical Science (or equivalent in Scotland). A dispensing assistant might work in community or hospital pharmacy and have varying roles and responsibilities. Pharmacists have a professional obligation to ensure dispensing/pharmacy assistants are competent to the minimum training requirements or undertaking training towards them in the areas in which they are working. The GPhC has recognised a number of Awarding Bodies to deliver the Level 2 knowledge and competency-based dispensing assistant qualification. A number of distance learning courses are also accredited (which are equivalent to the qualification).

⁸ General Pharmaceutical Council. Policy on minimum training requirements for dispensing/pharmacy assistants and medicines counter assistants. 2011. London: General Pharmaceutical Council

Medicines counter assistants are involved with sale of over-the-counter medicines working under the supervision of a pharmacist and must undertake an accredited counter assistant course (or the relevant units of a GPhC-recognised dispensing assistant or Level 2 NVQ (QCF) Certificate in Pharmacy Service Skills (or equivalent in Scotland)) so that they are able to offer advice on common ailments and know when to refer to a member of the public to a pharmacist.

Dispensing assistants course content must cover ‘the GPhC underpinning knowledge criteria’ based on the specified units of the Pharmacy Services Skills level 2 NVQ (QCF) knowledge and underpinning framework (or equivalent in Scotland) and for each section of the framework, the transfer of the underpinning knowledge into the workplace must be demonstrated through the use of a variety of methods. Medicines counter assistants courses must cover the knowledge and understanding of specified units of the Level 2 NVQ (QCF) Certificate in Pharmacy Service Skills (or equivalent in Scotland).

The GPhC’s policy on minimum training requirements for dispensing/pharmacy assistants and medicines counter assistants makes it clear that it is the pharmacists’ obligation to ensure pharmacy support staff meeting minimum training requirements. This is monitored and evaluated in a variety ways (including feedback from inspectors’ visits). The absence of initial education and training standards mean that there is a greater focus of responsibility on the pharmacist to ensure competence. In comparison pharmacy technicians are regulated by the initial education standards and are primarily the responsibility of the Awarding Body. Across the pharmacy team, it can be seen that there is a hierarchy of testing of the standard of education and training, with direct accreditation the process for pharmacists, recognition (generally) for pharmacy technician qualifications and a balance of policy and recognition for pharmacy support staff (but no testing of courses against standards other than meeting the GPhC’s accreditation criteria)^{9,10}.

3.3 Quality of education and training

The Pharmacy Order 2010 authorised the GPhC to implement standards of education and training of pharmacy technicians – these enable the GPhC to approve courses appropriately and robustly. Therefore the standards must ensure high quality training and that the qualifications awarded deliver comparable/equivalent levels of both knowledge and competence. The recent report ‘the quality of pharmacy technician education and training’¹¹ included research involving interviews with education and training providers (FECs, distance learning providers and employing organisations) and Awarding Bodies aimed primarily at describing the quality and delivery of

⁹ General Pharmaceutical Council. Accreditation and Recognition of Pharmacy Technician Programmes. 2010: London. General Pharmaceutical Council.

¹⁰ General Pharmaceutical Council. The accreditation of pharmacy courses leading to registration in Great Britain. 2013: London. General Pharmaceutical Council.

¹¹ Jee, S., Willis, S., Pritchard, A., and Schafheutle, E. The quality of pharmacy technician education and training – a report to the General Pharmaceutical Council. 2014. Available at:

http://www.pharmacyregulation.org/sites/default/files/quality_of_pharmacy_technician_education_and_training.pdf

approved pharmacy technician qualifications. There were comments from interviewees that the IET standards for pharmacy technicians needed revising so they are more relevant to current practice – some interviewees felt that this was because the standards were quite prescriptive restricting the way in which the qualification was delivered. A number of interviewees also commented on the need for incorporating elements of professionalism and accountability into the standards and qualifications. Another finding was the perception that in the community pharmacy sector, PTPTs were often the only trainee and may not work alongside pharmacy technicians whereas in NHS hospitals PTPTs worked alongside other trainees and other pharmacy technicians and more senior pharmacy technicians. PTPTs in community pharmacy were also not thought by some interviewees to be working towards the role of pharmacy technician and often did not make the transition once qualified. This has implications for the parity of professional socialisation of pharmacy technicians across sectors. Additionally the research indicated that the content of the knowledge qualification did not reflect up-to-date practice and was beyond level 3 within the Qualifications Credit Framework, that there were differences in quality across different education providers.

Another key theme highlighted by the report was assessment practice. Assessments of knowledge undertaken through FECs and distance learning providers varied in terms of the methods (assignments versus written assessments) and how they were undertaken (e.g. written assessments sat at college versus sat in a pharmacy under exam conditions). Interviewees questioned whether an assignment only approach (as delivered by some distance learning providers) embedded learning as well as an exam (as delivered by the FECs). Only one type of assessment method for knowledge was also reported as being used by a number of education and training providers – this deviates from the GPhC's IET standard 12 which states 'For knowledge based qualifications, assessment must be through a number of assessment methods'.

Finally, the research highlighted views that there was no parity with the structure and monitoring arrangements in place with the initial education and training standards for pharmacists and suggested more regulation around the requirements of the supervisor of the trainee.

3.4 Scope of Practice

A review (in England) of the development of extended pharmacy technician roles in hospital/community practice over the last decade or so e.g. the accredited checking pharmacy technician has facilitated the refocusing of pharmacists work on more patient-centred activities¹². Clinical pharmacy technicians are undertaking medicines reconciliation and also support discharge management in hospitals so are developing from traditionally supply and counselling roles. Standards for IET for pharmacy technicians will need to reflect this evolution of role.

¹² Medical Education England. Review of Post-registration Career Development of Pharmacists and Pharmacy Technicians. Background paper. 2012. Available at: <http://hee.nhs.uk/healtheducationengland/files/2012/10/MPC-WSII-Background-Paper-v1.0.pdf>

Legislation and key policies define the roles and responsibilities of the pharmacy workforce (though there are some differences between the community and hospital sectors). Legal definitions dictate the functions of the pharmacist's role particularly around the sale and supply of medicines and this has an impact on the pharmacy technician's scope of practice and responsibilities. In community pharmacy dispensing and supply remains the core activity. The roles and responsibilities of members of the pharmacy team is usually determined by a number of factors including the requirements of the employer, the structure/size of the community pharmacy, the experience, skills and competence of pharmacy technicians and pharmacy support staff as well as assessing the needs of patients. A pharmacy technician's role is defined by its boundaries with the other members of the pharmacy team and dependent on the context of their workplace though in community pharmacy this means working under the supervision of a pharmacist. Under the legislation, supervision arrangements are under review and future changes will have implications for the education and training of pharmacy technicians as new definitions and requirements for supervision (including roles and level of autonomy) will impact on a pharmacy technician's scope of practice. There is greater autonomy for pharmacy technicians working in the NHS across a number of roles in primary and secondary care¹².

3.5 Patient safety and patient-centred professionalism

The failure of care at Mid Staffordshire hospitals, the Vale of Leven in Scotland and Abertawe Bro Morgannwg University Health Board hospitals in Wales have triggered a renewed focus on patient safety and patient-centred professionalism. Professor Don Berwick was asked by the government to carry out a review of patient safety in England¹³ and one of the recommendations he made was:

“Mastery of quality and patient safety sciences and practices should be part of the initial preparation and lifelong education of all healthcare professionals, including managers and executives.”

Pharmacy technicians care for patients and public through medicines supply and counselling/advice. Indeed, compulsory registration was introduced in 2011 to improve protection for patients¹² to ensure that pharmacy technicians supporting the delivery of pharmacy services are properly trained, under a duty to undertake continuing professional development (CPD) and maintain high standards. Pharmacy technicians are accountable for their professional practice and in providing care for patients, must appreciate the extent of their responsibilities, capability, knowledge and understanding including when to refer to other professionals or raise concerns when patient care is being compromised. Pharmacy technicians must also be clear about how to apply the GPhC's standards of conduct, ethics and performance to practice¹⁴. In preparation for

¹³ National Advisory Group on the Safety of Patients in England. A promise to learn – a commitment to act. Improving the Safety of Patients in England. 2013. Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/226703/Berwick_Report.pdf

¹⁴ General Pharmaceutical Council. Standards of Conduct, Ethics and Performance. 2012. London: General Pharmaceutical Council

revising its standards of conduct, ethics and performance (which apply to all pharmacy professionals and pre-registration trainees) the GPhC has begun a discussion on patient-centred professionalism so that patients and public can be confident that they are receiving care from professionals who are wholly focused on patient-centred care. The GPhC gives an example of professionalism being effective communication and involving patients with decisions about their care. Having conversations with patients that are tailored to their needs and their preferences, not using a 'one-size-fits all' approach to communication, taking every opportunity to make sure a pharmacist or pharmacy technician talks to a patient about their medication is an example that the GPhC gives about what is meant by patient-centred. Currently there is no definition of pharmacy professionalism. Research conducted on MPharm students¹⁵ has indicated that the learning of professionalism is best achieved by having role models available in a practice setting. These findings have been backed up by evidence from the United States¹⁶ which supported the influence of role models on the professional socialisation of pharmacy students.

3.6 Seamless professional development

In preparing for their professional role, PTPTs need to be made aware that they will be responsible for identifying their own development needs, maintaining professional practice and undertaking CPD. Therefore a seamless evolution from a PTPT to a foundation practitioner to advanced practitioner is required. Professional development frameworks facilitate this approach. The Foundation Pharmacy Framework¹⁷ (FPF) for pharmacy technicians builds on the competencies that pharmacy technicians have already been assessed against in their entry qualifications. The FPF will be under continued review to make sure that it reflects current practice. Consequently, to maintain a seamless flow through pharmacy technicians' career development, IET requirements and the competencies for advance practice will also need to be revisited.

There are other professional development frameworks available for pharmacy technicians covering final checking of dispensed items, medicines management and consultation skills. It has been stated that final checking and medicines management sit in advanced practice. However, as the scope of practice evolves these competencies may be required at an earlier stage of a pharmacy technician's development. There will need to be a shared agreement about responsibility and accountability between employers, pharmacists and pharmacy technicians as currently there is no legal requirement that final accuracy checking, medicines management or consultations need to be carried out by a pharmacy technician.

¹⁵ Schafheutle, E., Hassell, K., Ashcroft, D., Hall, J., and Harrison, S. Professionalism in Pharmacy Education – report to the Pharmacy Practice Research Trust. 2010. Available from: <http://www.pharmacy.manchester.ac.uk/about-us/press-releases/professionalisminpharmacy/>

¹⁶ Kelley, K., DeBisschop, M., Donaldson, A., Hogue, V., Joyner, P., Schwinghammer, T., and Rife, W. Professional socialisation of pharmacy students: do we have the right ingredients and the right formula for success. 2009. Available from: <http://www.sciencedirect.com/science/article/pii/S1877129709000379>

¹⁷ Association of Pharmacy Technicians UK. Foundation Pharmacy Framework. 2014. Available from: <http://www.aptuk.org/about-us/education/foundation-pharmacy-frameworkfpf/>

During 2007-2010, Skills for Health in its review of the NOS for Pharmacy created the following standards for continuing practice though they were not adopted into the level 3 qualification):

- Final accuracy checking of dispensed medicines and products;
- Taking a medication history;
- Determining the suitability of an individual's own medicines for use.

This makes seamless professional development challenging as Skills for Health review and develop the NOS, the GPhC are responsible for the initial education and training standards and the APTUK produce the Foundation Pharmacy Framework.

3.7 International approaches

3.7.1 Canada

The National Association of Pharmacy Regulatory Authorities (NAPRA) represents provincial and territorial licensing authorities across Canada with a mandate to protect the public. NAPRA produces a document 'Professional Competencies for Canadian Pharmacy Technicians at entry to Practice'¹⁸ and describes entry to practice competency requirements thereby enabling a formalisation of the pharmacy technician profession and facilitates labour mobility across Canada. The prime aim of the document is to guide the development of educational outcomes, educational programme accreditation standards and national competency assessment examinations. It also provides student pharmacy technicians, pharmacy technicians and the public with information on the expected competencies of a pharmacy technician entering practice. The competencies described provide an overview of what a pharmacy technician is able to do on entry to practice rather than how a pharmacy technician is expected to perform tasks (which are described in a separate standards of practice document). The overall framework is generally described as function-based (to reflect the technical aspects of the pharmacy technician's role) but with some elements of a client-based approach (i.e. a closer alignment with patient needs). The professional competencies reflect a shift in practice toward the pharmacy technician supporting pharmacists with medicine history taking and information gathering as an extension to the traditional role of supporting the supply of medicines.

The expanded scope of practice of pharmacy technicians depends on the province in which they work and is regulated by the local regulatory authority. Scope of practice may therefore vary between jurisdictions but the core competencies expected of pharmacy technicians on day 1 of practice must be consistent nationally in order to facilitate labour mobility.

¹⁸ National Association of Pharmacy Regulatory Authorities. Professional Competencies for Canadian Pharmacy Technicians at entry to Practice. 2014. Available from:

http://napra.ca/Content_Files/Files/Comp_for_Cdn_PHARMTECHS_at_EntrytoPractice_March2014_b.pdf

NAPRA stresses the importance of clearly describing the respective roles of pharmacists and pharmacy technicians as they work in the same pharmacy environment with the joint goal of achieving optimal medicines-related outcomes for patients. Roles are described and it is stressed that both professions are responsible for their actions and accountable to the public.

3.7.2 United States of America

The American Society of Health-System Pharmacists (ASHP) is one of the largest accredited providers of continuing education for pharmacists in the United States. The ASHP produces 'Accreditation Standards for Pharmacy Technician Education and Training Programmes'¹⁹ the prime aim of which is to protect the public but they are also used as a guide for programme development (although more stringent regulations may apply in individual states or as governmental agency requirements. The ASHP standards allow some degree of flexibility for the development of educational programmes. Like Canada, the ASHP states that the role of the pharmacy technician is evolving and varies between states and settings. Again the complimentary role of pharmacy technicians to pharmacists is highlighted. A 'Model Curriculum for Pharmacy Technicians' is an ASHP document that defines education training programme goals though it is stated that educational goals may be added by a programme director (the person responsible for the educational programme). The goals reflect current and future functions and responsibilities of pharmacy technicians at entry level though unlike the Canadian approach, it does not constitute a competency framework.

¹⁹ The American Society for Health-System Pharmacists. Accreditation Standards for Pharmacy Technician Education and Training Programmes. 2013. Available from: <http://www.ashp.org/DocLibrary/Accreditation/Regulations-Standards/Pharmacy-Technician-Education-and-Training-Programs.pdf>

4. Findings: Thematic Analysis

4.1 Themes

Table 3 lists the main themes resulting from the cross-sectional qualitative analysis of the interviews. Each theme is described and discussed in the following sections.

Table 3: Main themes extracted from the cross-sectional qualitative analysis.

Meeting the standards of the Initial Education and Training for Pharmacy Technicians
<p><i>Funding opportunities</i> Current variability in funding opportunities and its impact on the IET standards</p>
<p><i>Recruitment</i> Current variability in recruitment policies and its impact on the IET standards</p>
<p><i>Academic level and length of the IET</i> Current workload for knowledge and competency development to meet the IET standards</p>
<p><i>Mode delivery</i> Meeting the standards through different modes of delivery</p>
<p><i>Scope of practice</i> Current and future roles for pharmacy technicians and its impact on the IET programme</p>
<p><i>Knowledge and competency programme</i> IET curriculum and the role of the pharmacy technician</p>
<p><i>Link between knowledge and competency</i> Consolidation of knowledge and understanding during the IET process</p>
<p><i>Assessment</i> Fitness for purpose of assessment methods</p>
<p><i>Code of conduct</i> Professionalism - from education and training providers to PTPTs</p>
<p><i>Support available to PTPTs</i> Variability and importance of the support structure available to PTPTs to meet the IET standards</p>
<p><i>Support available to education and training providers</i> Variability and importance of the support structure available to E&T providers to meet the IET standards</p>
<p><i>Collaborations between educations and training providers</i> Variability and importance of collaborations between E&T providers to meet the IET standards</p>
<p><i>Monitoring and quality assurance of the IET process</i> Fitness for purpose of monitoring and quality assurance systems to meet the IET standards</p>
<p><i>Standards of IET – meeting the professional needs</i> Fitness for purpose of the current IET standards</p>

4.1.1 Funding opportunities

Perceptions	Funding opportunities have a significant impact on the standards of IET of PT	++++
	There is disparity in funding opportunities between hospital and community	++++
	The apprenticeships scheme is frequently used for funding	++
Concerns	There are concerns about funding opportunities and disparities	++++
	There are concerns about the use of apprenticeships scheme for funding	+
Recommendations	Disparities in funding opportunities should be addressed	+++

Link to the GPhC standards

- 1.4 Provision of appropriate support relating to health, conduct and professional progression is available to pre-registration trainee pharmacy technicians
- 5 Trainees must be supported to acquire the necessary skills and experience through induction, effective supervision, an appropriate and realistic workload, personal support and time to learn
- 5.1 Trainees must have access to pharmacists and/or pharmacy technicians who are able to act as role models and provide professional support and guidance
- 8 The education and training facilities, infrastructure, leadership and other staffing must be sufficient to deliver outcomes.
- 8.2 There must be:
 - sufficient staff to deliver the education and training and support trainees' learning
 - appropriately qualified and experienced staff
 - access to appropriate learning resources;
 - facilities are fit for purpose.

Data from interviews

A strong perception was captured during the interview process which was associated with the availability of funding opportunities for the IET of pharmacy technicians. There was a widely held general agreement that limited availability of funding opportunities had a significant impact on the IET process; interviewees also repeatedly highlighted the disparity between funding for pharmacy technician training in community pharmacies compared with hospitals.

In the secondary care sector there was thought to be a generally greater “*financial incentive*” and that the attribution of additional training funds could be highly dependent on the performance of an education and training provider. When completion rates were high, secondary care employers were described as being provided with further funding resulting in a continued student supply to FECs. In addition, PTPTs were also thought to make a greater effort to succeed and to retain their job. “*Money provides motivation*”; possibly for this reason, it was suggested there was a real effort from both hospitals and FECs to provide a strong education and support structure to achieve higher completion rates. A potential problem described with the current funding scheme was the variability in financial contributions to salary and training support across the country. As an example, in certain regions there was 100% paid salary with a contribution for training, in other regions the training was 100% funded and there was a 50% contribution to the salary; these

differences were cited as triggering tensions regarding the amount of time that should be spent as a trainee or as an employee.

Apprenticeship schemes were referred to as being used as a funding route, particularly in the hospital sector, in an attempt to overcome funding constraints and the need to employ pharmacy technicians. However, interviewees said that the use of apprenticeships for the IET of pharmacy technicians may particularly influence the recruitment process; excellent candidates (e.g. those with higher degrees) may potentially be excluded because they did not fit the age-related criteria for apprenticeships and cannot afford a salary reduction as apprenticeship salaries were lower than NHS Agenda for Change salaries.

Funding opportunities in the primary care and community sector were reported as being very limited and a significant amount of money had to be invested by the employer on staff training. Such financial circumstances were perceived by some of the interviewees as one of the main factors affecting the quality of training and the completion rates in the community sector. In order to better adjust to the training needs, community pharmacies typically used distance delivery training packs; this option had a greater financial incentive and geographical spread compared with attendance at FECs. In addition, because primary care teams are typically smaller compared with hospitals, it was felt to be very challenging to establish adequate protected learning time and to maintain a strong trainee support infrastructure. The disparity of wages between sectors was also thought to have an impact on recruitment since *“some community pharmacists do not want to train pharmacy technicians because they think they will leave to go to hospital pharmacy because that is where the pay is”*.

Discussion

It is questionable that the purpose of the IET standards for pharmacy technicians is to smooth out funding flows – especially as the GPhC (and indeed other regulators) is not directly involved in the funding process for pharmacy technician qualifications. However, if resources are lacking it can be challenging for PTPTs to acquire the necessary skills – especially if there is not an appropriate or realistic workload as this limits time to learn. In addition, poor access to role models may restrict professional progression if the trainee feels more like an employee rather than a trainee preparing for joining a profession. This links to the Standards for Registered Pharmacies²⁰, in which standard 2.2 states ‘staff have the appropriate skills, qualifications and competence for their role and the tasks they carry out, or are working under the supervision of another person while they are in training’ - the responsibility here lies with the pharmacy owner whereas it is the responsibility of the Awarding Body or training provider to meet the IET standards. Further clarity may be required to describe responsibilities for providing appropriate support to PTPTs and who is responsible and when i.e. what is the employer responsible for and what is the Awarding Body or training provider responsible for. There is also variability with funding for pre-registration trainee pharmacists

²⁰ General Pharmaceutical Council. Standards for Registered Pharmacies. 2012. London: General Pharmaceutical Council

across Great Britain. Within the NHS managed sector there are varying levels of salary support and funds for training programmes. In community pharmacy, there is some provision within the General Pharmaceutical Services contract in England to fund the pre-registration trainee pharmacist salary. The same issue with the IET standards for pharmacists arises – who is responsible for providing adequate resources?

An apprenticeship is an employed position with training funded (according to the age of the apprentice) and incorporated within an employment contract. The Pharmacy Advanced Level Apprenticeship²¹ is a framework of qualifications that usually takes 2 years to complete. This provides apprentices with the opportunity to gain recognised qualifications whilst earning a wage and the employer with lower salary costs. The qualifications within the Pharmacy Advanced Level Apprenticeship meet the requirements for professional registration with the GPhC though the apprenticeship framework itself is not required in its entirety. Apprenticeships allow government funds to be accessed to support training costs though there are issues as funding usually stops for candidates over the age of twenty-three and this could preclude excellent older PTPTs. There is a question as to whether the IET standards for pharmacy technicians need to reflect that the quality of training delivered must be consistent whatever the source of funding is. As some interviewees cited increased administrative and assessment burdens requiring additional capacity for education and training providers, the IET standards could state that this should be taken into account when providing these qualifications.

The government's trailblazers scheme in England²² involves employers designing pharmacy apprenticeships that best meet their needs. Trailblazers are groups of leading employers within pharmacy working together to develop new apprenticeship standards – this is to ensure that apprentices are enrolled on a scheme that has been designed and approved by employers. Therefore consideration should be given as to how these schemes are reflected in the IET standards for pharmacy technicians.

²¹ Skills for Health. Apprenticeships. Available from: <http://www.skillsforhealth.org.uk/standards/item/219-apprenticeships>

²² HM Government. Future of apprenticeships in England: guidance for trailblazers. 2014. Available from: <https://www.gov.uk/government/publications/future-of-apprenticeships-in-england-guidance-for-trailblazers>

Summary

Higher availability of funds for IET of PT (Hospital)

- ✓ Greater opportunity for investment in a IET structure
- ✓ Availability of funds influences recruitment of trainees
- ✓ Possibility to use of more expensive training programmes (college)
- ✓ Greater probability of having several trainees at once
- ✓ Strengthened trainee support infrastructure
- ✓ Higher financial incentive encourages achievement of high completion rates



Lower availability of funds for IET of PT (Community)

- ✓ Investment in a IET structure is challenging and relies on pharmacy own financial means
- ✓ Availability of funds influences recruitment of trainees and workforce numbers
- ✓ Need to use better value training programmes (distance learning)
- ✓ Increased burden to the pharmacy E&T lead/team to support trainees
- ✓ Maintenance of support infrastructure is very challenging
- ✓ Lower financial incentive may affect performance and motivation



4.1.2 Recruitment

Perceptions	Recruitment process has a significant impact on the IET process	++++
Concerns	There are limitations for not having standards for recruitment criteria	++++
Recommendations	Clarification needed for recruitment entry requirements	++++
	Recruitment should include minimum academic ability	+++
	Recruitment should include values, behaviours and commitment to the career	++++

Link to the GPhC standards

- 2 All selection procedures must be open, fair and designed to identify those applicants who will practise safely and effectively and uphold the standards of the profession
 - 2.1 Selection policies and procedures must provide those submitting the application and those making the selection decisions with the information they need to make informed choices
 - 2.2 Those responsible for selection must be trained to apply selection guidelines consistently and fairly. They must be trained to be able to promote equality and diversity and follow current equal opportunities legislation and good practice

Data from interviews

“The recruitment process is key to the success or output”; for this reason, many organisations reported developing their own set of recruitment criteria in line with the GPhC standards to ensure that the best candidates were being selected for the IET of pharmacy technicians. There

was however concern expressed that some education and training providers and employers may not be investing so much effort during the recruitment process.

Interviewees stated that there were varying recruitment policies and the consequences were a variety of PTPTs from different backgrounds and a great range in academic ability. In the community pharmacy sector it was suggested that many pharmacy support staff (dispensing assistants/pharmacy assistants/medicines counter assistants), having previously completed a Level 2 qualification, then progress on to the Level 3 qualification (i.e. the IET for pharmacy technicians) without completing any GCSEs (or the equivalent qualification in Scotland) and it was noted that this often resulted in PTPTs with lower academic ability frequently requiring extra support to succeed in the Level 3 qualification, which was thought to be particularly challenging to address if the knowledge-based training was undertaken through a distance learning programme and/or with limited support provided from education and training providers. PTPTs with higher academic ability may also present a problem as they may find the training too basic and potentially show less commitment to the studies.

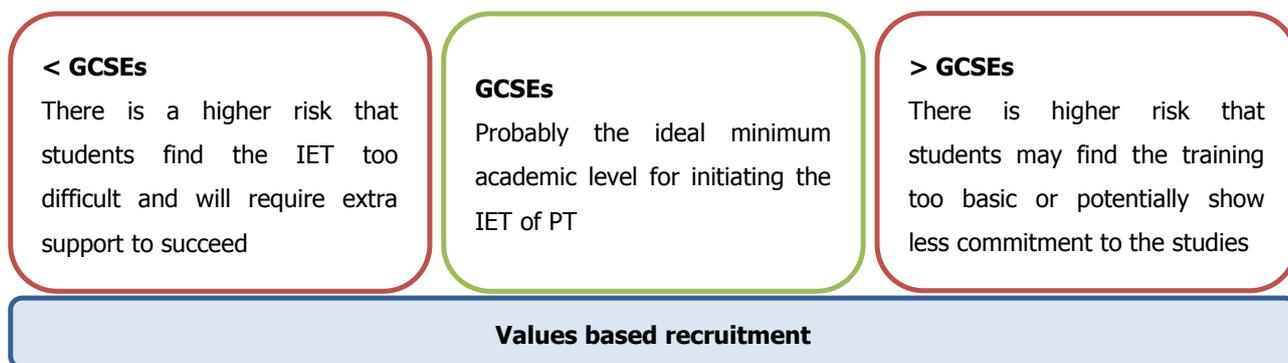
For the majority of the interviewees, it was stated that as pharmacy technicians are registered professionals, it would be valuable to specify recruitment criteria and minimum academic ability, with GCSEs (or the equivalent qualification in Scotland) being perceived as the ideal minimum academic level for entry into the IET of pharmacy technicians. It was also thought to be essential that all individual education and training providers should be fully aware of the complete training process so that they can better seek the right attributes of potential PTPTs. In addition, the majority of the interviewees agreed with the concept of VBR, a process which has been adopted by some organisations. The assumption was that PTPTs would show understanding of professional attitudes and behaviours, capacity to communicate better with patients and other healthcare professionals as well as an overt commitment to a career as a pharmacy technician.

Discussion

The recruitment of PTPTs is currently undertaken by employers who will specify recruitment criteria including academic qualifications. Applicants applying for a PTPT post either at a hospital or in a community pharmacy will usually be expected to have four GCSEs (or the equivalent qualification in Scotland) at Grade C or above, or the equivalent, including English, science and maths although there are no official entry requirements. The GPhC standards do not specify entry requirements but do state that applicants are identified who can practise safely and effectively. The government has a widening participation agenda across education and therefore balancing academic ability with attitudes, values and behaviours is increasingly an approach being taken across professions in order to produce high calibre healthcare professionals.

VBR is a key priority for Health Education England (HEE)²³. VBR is an approach which attracts and recruits students, PTPTs and employees on the basis that their individual values and behaviours align with the values of the NHS Constitution. This is meant to take place as part of existing recruitment processes which assess aptitude and skills. The purpose of VBR is to ensure that the right workforce is recruited with not only the right skills and knowledge but also with the right values, attitudes and behaviours to support effective team working to provide excellent patient care and experience. HEE’s VBR Framework sets out national core requirements to assess students, trainees and employees for the values of the NHS Constitution alongside their aptitude and skills. The GPhC IET standards for pharmacy technicians do not currently define the content of selection policies and procedures but consideration could be given to the standards requiring that such policies and procedures consider values, attitudes and behaviours alongside knowledge and skills.

Summary



4.1.3 Academic level and length of the IET

Perceptions	Current academic level (level 3) and length (2 years) is appropriate	+++
	Current academic level (level 3) is a very high level 3	++++
	Current academic level (level 3) and length (2 years) possibly needs to be higher	+++
Concerns	The current workload is extensive for a level 3 in 2 years	++++
Recommendations	Essential to clarify the role of the PT and then decide the academic level and length of the IET	++++

Link to the GPhC standards

- 5 Trainees must be supported to acquire the necessary skills and experience through induction, effective supervision, an appropriate and realistic workload, personal support and time to learn
- 10 The programme must be delivered at Qualifications and Credit Framework level 3, Scottish Credit and Qualifications Framework level 6 or equivalent

²³ Health Education England. Evaluation of Values Based Recruitment (VBR) in the NHS. 2014. Available from: <http://hee.nhs.uk/wp-content/blogs.dir/321/files/2014/09/VBR-evidence-literature-review-full-report.pdf>

10.1 The programme is delivered at the appropriate level

10.2 Systems must be in place to ensure that any changes to the frameworks are implemented

Data from interviews

There was a general consensus that the current IET programme was too extensive for completion within 2 years and did not compare with other Level 3 qualifications; *“it is classed as a level three but everyone says it is a very high level three and the college will tell you the amount of assessment in it is really equivalent to a level four qualification”*. It was suggested that it would be of benefit to have better clarification of the scope of practice and role of the pharmacy technician in order to subsequently define the academic requirements for IET; however, a more formal role definition could be particularly challenging in the community sector where teams are typically smaller and *“everybody chips in”*.

Opinions were divided regarding the future choice of academic level and length of the IET. The majority of the interviewees agreed with the IET for pharmacy technicians continuing as a Level 3 qualification and completing within 2 years since *“some students [PTPTs] struggle with the course as it is”*. Two interviewees from Scotland also stated that the qualification should not be time-bound and registration should occur when PTPTs meet the knowledge and competency requirements. Furthermore that the programme should be reviewed to meet the academic Level 3 within the 2 years of training and a greater effort should further be invested post-qualification training to develop extended roles. Though if the core role of the pharmacy technician did need to be enhanced it was recommended that the level and length of the IET might have to be increased; for some interviewees this path was assumed to be inevitable.

Discussion

The Level 3 qualification is equivalent to A-levels in England and Wales and Highers in Scotland. In both the Qualifications and Credit Framework²⁴ (England and Wales) and the Scottish Credit and Qualifications Framework²⁵, one credit point represents an average of 10 hours of learning time. The pharmacy technician qualifications are constructed from units which are composed of learning outcomes (what the trainee needs to know, understand or do) and assessment criteria (these specify whether the learner has met the learning outcomes at the required level). The time that is taken to complete a unit e.g. provide a safe and effective pharmacy service (Level 3 Diploma in Pharmacy Service Skills) assigns its credit value. For instance a unit with a credit value of 3 represents 30 hours of learning. The qualifications have been placed on the respective frameworks in England, Scotland and Wales based on the credit value of all the units that they are made up of. Although perceptions from the interviews were that the total number of learning hours to

²⁴ Qualifications and Credit Framework (QCF). Available from:

<http://www.accreditedqualifications.org.uk/qualifications-and-credit-framework-qcf.html>

²⁵ Scottish Credit and Qualifications Framework (SCQF). Available from: <http://scqf.org.uk/>

undertake the qualifications might be greater than the total for a Level 3 and raise the qualification to a Level 4 there was no agreement amongst interviewees to do this until further definition of the role and scope of practice of pharmacy technicians is provided. For instance, currently Final Accuracy Checking is defined as advanced practice in the APTUK’s Foundation Pharmacy Framework though this is an additional standard (see section 4.6) that was not originally adopted as part of the Level 3 qualification but available as a standard for continuing practice for pharmacy technicians and set at Level 4. There was no consensus of views about incorporating e.g. Final Accuracy Checking into the IET of pharmacy technicians. Therefore a tighter definition of the role of the pharmacy technician on entry to practice would facilitate where this skill sits in their professional development. There is a similarity here with the IET of pharmacists as there are discussions currently about where independent prescribing should sit in their education i.e. within pre-qualification education or during Foundation training.

Summary



4.1.4 Mode of delivery

Perceptions	Face-to-face contact has advantages	++++
	Distance learning has advantages	+++
Concerns	There are limitations to face-to-face delivery	++
	There are limitations to distance learning	+++
Recommendations	Possibly explore blended learning	+++

Link to the GPhC standards

- 5** Trainees must be supported to acquire the necessary skills and experience through induction, effective supervision, an appropriate and realistic workload, personal support and time to learn
- 5.1** Trainees must have access to pharmacists and/or pharmacy technicians who are able to act as role models and provide professional support and guidance
- 8.2** There must be:
- sufficient staff to deliver the education and training and support trainees’ learning
 - appropriately qualified and experienced staff
 - access to appropriate learning resources
 - facilities that are fit for purpose

9 The programme must develop the required skills, knowledge and understanding

9.1 For competency based qualifications, the programme covers the knowledge, skills and understanding set out in appendix 1

9.2 For knowledge based qualifications, the programme covers the knowledge and understanding set out in appendix 2

Data from interviews

Evidence from interviews suggested that the mode of delivery may have a significant impact on the IET of pharmacy technicians. Although current modes of delivery were thought to meet the IET standards, it was reported that there is variability in the education and training programmes delivered and that they may not all efficiently equip PTPTs to take up the role of the pharmacy technician.

The majority of the interviewees agreed that face-to-face contact had great advantages, particularly because it facilitates peer interaction and support, encouraging professional discussions and providing networking opportunities. Another advantage of this mode of delivery that was cited was the immediate support available from teachers and tutors as well as the protected time for learning in a controlled environment, which is evident in a FEC environment but can be very variable when undertaking a distance learning programme.

Although face-to-face delivery can have clear advantages, the practicality of this mode was described as being particularly challenging when training pharmacy technicians in primary care and community pharmacy settings. In certain regions of UK (e.g. Scotland) where the limited number and geographical location of the colleges does not meet the needs of independent community pharmacies or in situations where the IET is undertaken in national companies, the distance learning resources were considered an acceptable alternative option due to geographical spread, i.e. the large distances that PTPTs would need to travel to attend a FEC. Another reason indicated for preference of distance learning over FEC attendance in the community sector was the lower financial cost of the distance learning resources, since there were perceived to be considerably restricted funding opportunities compared with the secondary care sector.

Distance delivery programmes were therefore considered well accepted in the community sector, and they may possibly be the only option in the independent sector. However, as with other modes of delivery, it was proposed that distance learning may have some disadvantages. It was noted that primary care and community pharmacy teams are typically smaller compared with hospitals and training tends to be more isolated, particularly in small community - for this reason the quality of training can also be subject to variance. In a congested community environment, interviewees advised that it can be very challenging to establish protected time for learning and networking opportunities, and many PTPTs and education and training providers may not appreciate the importance of this aspect of the training. PTPTs going through a distance learning programme were judged as relying on the employer's support, significantly increasing the burden

to the supervising pharmacist or education and training lead. A number of interviewees overtly suggested that there may be inadequate support provided to PTPTs going through the distance learning programme, particularly with the independent community pharmacy sector.

Distance learning was also thought to restrict: demonstration of the acquisition of some 'practical' competencies and skills (e.g. microbiology), performance assessment and the application of knowledge into practice, particularly the professional aspects of the pharmacy technician role. There was a perception that colleges (FECs) were more controlled in these fields, with more robust quality assurance of learning compared with distance learning providers and more focussed quality assurance checks of distance learning were recommended since it was noted that some programmes show mistakes in the on-line resources (such as a high number of spelling and grammatical mistakes) leading to the perception that the course was not of a high standard. Possibly for the various reasons described, community pharmacy PTPTs going through distance learning programmes were perceived as less educationally capable and required further development of professional confidence and attitude compared with hospital PTPTs attending FECs.

Nevertheless it was advised that distance learning provides flexibility for both the PTPT and the employer since it can incorporate several learning styles without the need to undertake the programme during a fixed day or time. With the steady growth of internet and technology, some interviewees felt that there were now new developments involving more practical approaches and efforts have been made to create further networking opportunities for distance PTPTs, such as online forums and a designated contact for support at the distance learning provider. By bringing together the best of face-to-face and distance learning, some employers have been exploring the possibility of using blended learning in the future, and some organisations are already providing this innovative type of training with excellent feedback.

The quality of the programme was assessed by some interviewees to be variable and dependent on the PTPT and the education and training provider delivering the course regardless of mode of delivery.

Discussion

The IET of pharmacy technicians is currently composed of a knowledge-based and a competence-based qualification. PTPTs undertaking the Level 3 knowledge-based qualification at FECs generally attend one-day per week for class-room based learning. FECs in Scotland also offer the knowledge-based qualification on a full time basis. There are also FECs that offer the knowledge-based qualification as distance learning and in some cases this involves using technology to support learning e.g. virtual learning environments. Distance learning programmes are usually delivered online and via other paper-based resources. Some distance learning programmes include supplementary class-room based learning – a blended learning approach. There was a perception from interviewees that there was a disparity between the standard of distance learning

programmes and face-to-face learning at FECs so a possible alteration for the IET standards for pharmacy technicians might be that the balance between these two modes of delivery is carefully considered in order to bridge the gap i.e. distance learning programmes demonstrating more of a blended learning approach so that all modes of delivery are equally effective in developing the knowledge, skills and understanding required of pharmacy technicians.

Summary

	Face-to-face contact	B L E N D E D	Distance learning
Advantages	<ul style="list-style-type: none"> Facilitates peer interaction and support Encourages professional discussions Greater networking opportunities Immediate support to trainees from teachers and tutors Protected time for learning in a controlled environment 		<ul style="list-style-type: none"> Higher geographical spread Lower financial cost Higher flexibility for learners and employers
Disadvantages	<ul style="list-style-type: none"> Lower geographical spread Higher financial cost Lower flexibility for learners and employers 	L E A R N I N G	<ul style="list-style-type: none"> Growing opportunities for more practical approaches Growing network opportunities (online forums)
			<ul style="list-style-type: none"> Higher variability in peer interaction and networking opportunities Increased burden to the educational supervisor Higher variability in trainee support structure Higher variability in protected learning time Demonstration of the acquisition of some practical competencies and skills may be challenging

4.1.5 Scope of practice

Perceptions	There is great opportunity to develop the role of the PT	++++
	Scope of practice varies between sectors and organisations	+++
Concerns	Supervision rules have a strong impact on the role of the PT	+++
Recommendations	Clarify the role of the pharmacy technician	++++
	Clarify professional responsibilities in the pharmacy team	+++

Link to the GPhC standards

9 The programme must develop the required skills, knowledge and understanding

9.1 For competency based qualifications, the programme covers the knowledge, skills and understanding set out in appendix 1

9.2 For knowledge based qualifications, the programme covers the knowledge and understanding set out in appendix 2

Data from interviews

Pharmacy services' needs were reported as changing; as pharmacists progress to more clinical and prescribing roles, the scope of practice for pharmacy technicians was noted as evolving and moving away from solely concentrating on dispensing and associated activities. It was highlighted that there was currently an available skill mix within the pharmacy team and therefore a great

opportunity for pharmacy technicians to further support and collaborate with the pharmacist in order to gradually expand the role of the pharmacy technician. Not all pharmacy technicians were described as currently undertaking extended roles but, for many pharmacies, they were thought to be indispensable and should therefore be encouraged to develop further skills.

Supervision rules were suggested as having an impact on the pharmacy technician’s role; although there are limitations to the scope of practice, recent regulation as a profession may potentially trigger the possibility of technicians performing a wider range of extended roles (Table 4), some of which were previously undertaken by pharmacists. An interviewee stated “*With the current re-balancing and changes to legislation, the role of the pharmacy technician can become really important, not just in terms of supervision but in what they can deliver to the patient in the absence of a pharmacist*”.

Table 4: View from interviewees regarding the present and future role of pharmacy technicians.

Scope of practice of pharmacy technicians – present and future
Primary care and community sector
supporting and collaborating with the pharmacist
dispensing and leading the dispensary
accuracy checking
public health agenda
patient focus
consultation skills
patient counselling
healthy lifestyles
smoking cessation
weight management
sexual health advice
advising people with dependence issues
monitoring of blood pressure
monitoring of drugs
monitoring of glucose
management of diabetes
ordering blood tests
immunisations (with appropriate training)
medicines management
medicines optimisation
elementary medicines reviews
information management
skills for health - health and social integration

Secondary care
more multi-disciplinary work, supporting and collaborating with the pharmacist
Dispensing
taking ownership of the medicines supply chain
accuracy checking
patient focus
more work on the ward
clinical decision making
medicines management
medicines optimisation
medication history
medication assessment
specialist areas (aseptic dispensing, manufacturing)
audit and research
clinical trials

Although there were core commonalities, the current scope of practice for pharmacy technicians was felt to vary significantly across sectors and between community pharmacies or NHS trusts/Health Boards. For example, final accuracy checking was initially developed in the secondary care sector and then expanded to primary care and community pharmacy. The scope of practice was also reported to vary across geographical location; in London, for example, possibly due to the high number of pharmacists, patient focused roles developed slower compared to regions outside London and in more rural areas where pharmacy technicians were more valuable on the wards.

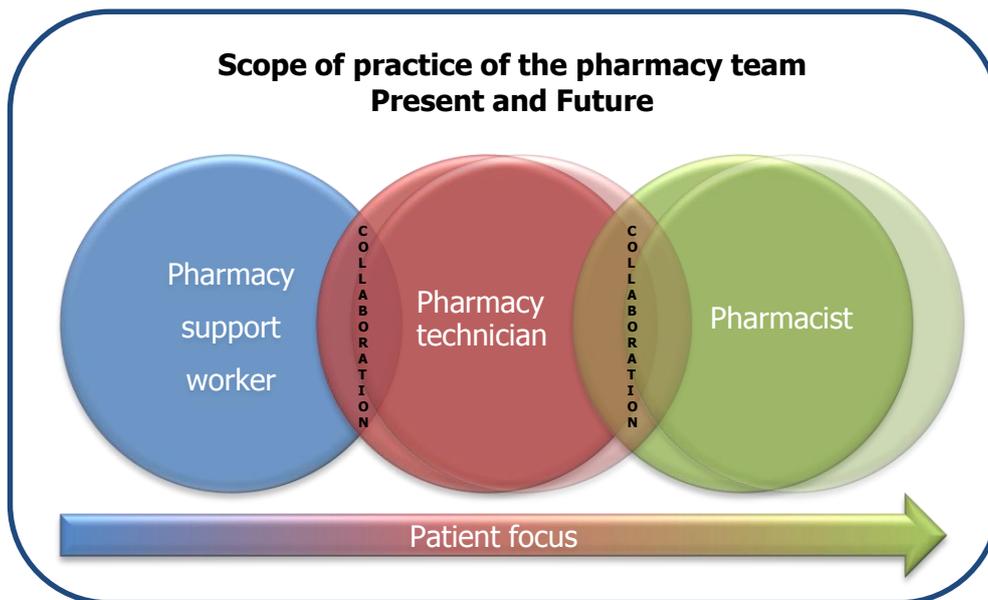
The need to clarify the role of the pharmacy technician and professional responsibilities was expressed so that healthcare professionals can safely practice within their competencies. With pharmacy assistants undertaking some of the dispensing activities, it was advised that pharmacy technicians will be able to be more patient focused, increasingly working in hospital wards and making a solid contribution to public health.

Discussion

Section 4.4 described how key legislation and policies define the roles and responsibilities of the pharmacy workforce and this means that the current scope of practice of pharmacy technicians has to be contained within these boundaries – particularly the supervision regulations in community pharmacy. This has inevitably led to greater freedom for developing a wider scope of practice in hospitals as was described in the data from the interviews. It is therefore likely that the legislative framework has had a greater influence on the scope of practice (rather than differences across sectors in applying the IET standards for pharmacy technicians) and until the Department of

Health’s Rebalancing Medicines Legislation and Pharmacy Regulation Programme Board²⁶ have completed their review it might be premature to alter the IET standards for pharmacy technicians at this stage. However, for those pharmacy technicians entering the profession where a wide scope of practice is possible it would seem sensible that the IET standards adequately prepare them for this and so providing more optional units within the curricula might be an approach to this. This would create flexibility until revised supervision requirements are finalised.

Summary



4.1.6 Knowledge-competency curriculum

Perceptions	Current underpinning knowledge programme is appropriate	+++
Concerns	Current scope of practice of the IET is outdated	++++
	Current curriculum does not focus enough on patient care and safety	++++
Recommendations	Clarify the role of the PT to enable IET improvement	++++
	Increase teaching focus on patient care and safety including teaching of code of practice, ethics and conduct	++++

Link to the GPhC standards

- 9** The programme must develop the required skills, knowledge and understanding
- 9.1** For competency based qualifications, the programme covers the knowledge, skills and understanding set out in appendix 1
- 9.2** For knowledge based qualifications, the programme covers the knowledge and understanding set out in appendix 2

²⁶ HM Government. Rebalancing Medicines Legislation and Pharmacy Regulation Programme Board. Available from: <https://www.gov.uk/government/groups/pharmacy-regulation-programme-board>

- 10** The programme must be delivered at Qualifications and Credit Framework level 3, Scottish Credit and Qualifications Framework level 6 or equivalent
- 10.1** The programme is delivered at the appropriate level
- 10.2** Systems must be in place to ensure that any changes to the frameworks are implemented
- 11** The curriculum must remain relevant to current practice and national standards
- 11.1** In the processes of programme review and development, advances in pharmacy practice and developments potentially impacting on pharmacy are taken into account

Data from interviews

There was a general consensus from the interviewees that the current IET programme is extensive. However, when questioned if any units or subjects could be removed from the current standards, most interviewees agreed that the underpinning knowledge was necessary, especially to ensure sector transferability, although the teaching depth could possibly be adjusted, both in the knowledge and competency components, according to the relevance to practice.

It was noted that some PTPTs appear to have difficulty applying much of the knowledge into practice. More integration and transferability was requested since there were opinions that PTPTs should be capable of learning, understanding and demonstrating their skills by efficiently linking their knowledge into practice. Another identified problem was that the current standards were open to interpretation and therefore the different education and training providers may deliver a variable focus to each learning unit. It was also thought to be of value to clarify outcomes to ensure consistency in IET.

Opinions were divided as to the content that should feature in the IET qualifications, i.e. what was considered to be core to the profession and this was possibly closely related to the fact that the role of the pharmacy technician was not well defined. Interviewees also agreed that there were significant differences in the skills necessary across sectors and organisations and that these should be captured when developing a transferable qualification. Table 5 summarises interviewees' suggestions regarding future revision of the current teaching curriculum.

Table 5: Suggestions proposed by interviewees for future revision of IET curriculum.

Reduce depth
extemporaneous preparations
manufacturing
ordering, receiving and maintaining pharmaceutical stock
general science
chemistry
dispensing
aseptic dispensing
Add or increase depth

ethics, professionalism, accountability, behaviours
patient centred care
accuracy checking
patient safety
robotic dispensing
communication skills
IT systems
clinical trials
leading the dispensary
dispensing errors
ward work
clinical decision making
medicines management
medicines review
medication history
research

The current underpinning knowledge programme incorporates basic scientific principles which were generally considered essential since it develops PTPTs to a fundamental level of understanding about the science of medicines. For a number of interviews the basic science was an important subject although it was proposed that the teaching depth could possibly be reduced or removed from the curriculum if a minimum academic level was established as a recruitment requirement. Less relevant areas for the current practice or of which the depth of teaching could be revised in the IET standards included extemporaneous preparations and manufacturing; these subjects could feature in the knowledge component only or as an optional unit in the competency component.

One of the themes that raised significant debate during the interview process was final accuracy checking; a number of interviewees thought that this should be a core competency for the role of the pharmacy technician and should therefore be included in the IET. In contrast, many interviewees believed that IET PTPTs would not have sufficient professional confidence and should only perform accuracy checking post-qualification. There was also a suggestion to incorporate a probation period (e.g. checking 1000 items) during pre-registration training to strengthen PTPTs' confidence.

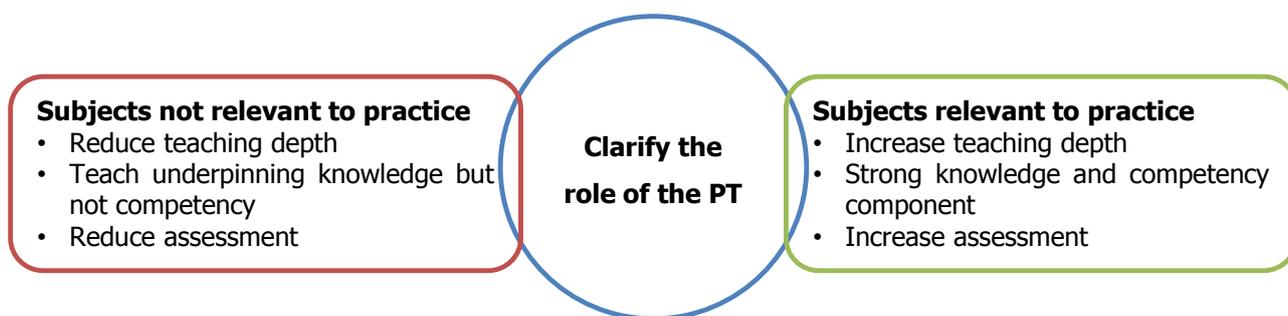
There was a general view that the IET standards were outdated since they are very heavy in knowledge, regulation, processes and significantly miss the patient centred approach. Also suggested was that there should be a greater emphasis on patient engagement and communication skills as well as a higher content about patient safety. Moreover, several interviewees believed that more focus should be given to the teaching of the code of practice,

ethics and conduct, particularly in the competency component, since this would also have a significant impact on patient care and safety.

Discussion

As discussed in section 2.1.1, currently all units in the knowledge-based qualification are mandatory and there are 14 core units for the competence-based qualification which are also mandatory but also three optional units which can be selected depending on the area of practice in which the PTPT is working – usually hospital or community. As pharmacy technician qualifications are overseen by Skills for Health and based on the NOS it would seem timely to review and update these. Consideration should be given to the currency of the NOS based on the views described above. In assessing what to include, breadth depth of subject areas within the curriculum should still add up to a level qualification.

Summary



4.1.7 Link between knowledge and competency

Perceptions	Knowledge-competency link is adequate	++
Concerns	Knowledge-competency link is inadequate	+++
Recommendations	Knowledge-competency link needs further strengthening	++++
	Knowledge-competency link needs to be assessed	++++

Link to the GPhC standards

- 9** The programme must develop the required skills, knowledge and understanding
- 9.1** For competency based qualifications, the programme covers the knowledge, skills and understanding set out in appendix 1
- 9.2** For knowledge based qualifications, the programme covers the knowledge and understanding set out in appendix 2
- 12.4** For knowledge based qualifications, assessment must be through a number of assessment methods and involve the candidate using knowledge in a way that demonstrates their understanding of the links between various subjects and their relevance to practice

Data from interviews

The link between knowledge and competency was stated as being dependent on the education and training provider and it was mentioned that a real effort was being made by some education and training providers to use techniques such as role-play learning, analysis of case-studies and prescriptions and more practical approaches. However, a number of interviewees believed that the knowledge-competency link needed strengthening and PTPTs must better understand that both components are important for professional development.

One of the problems identified was that the knowledge and competency programmes frequently do not overlap since some of knowledge was not “used directly” in practice. This was understood to be particularly true in the community pharmacy sector where PTPTs may just use a fraction of what they were learning and not understand why they were learning all the units in the qualifications. One of the perceived advantages of the Scottish one-year full-time knowledge programme was that PTPTs tend to less frequently question the importance of the knowledge component; this programme alternative provides more time for developing skills at college (FEC) with a strong support infrastructure and PTPTs are not continuously comparing it with activities (functional tasks) in the workplace.

It has also been suggested that programme development and teaching may not necessarily involve a practising pharmacist or pharmacy technician; education and training providers may rely on biologists, chemists and biochemists with limited knowledge of pharmacy practice and this may be conditioning an inefficient connection between knowledge and practice. *“We do have a massive shortage of pharmacy technicians and pharmacists teaching on these courses and that pharmacy input is really important”*.

There was also an observation that the link between knowledge and competency was more challenging in the distance learning mode since *“some of the meaning can be lost”*, consolidation of knowledge was therefore more challenging and PTPTs may not apply what they have learnt. Moreover, assessors were seen as frequently assessing competency by observation and action, and so the application of knowledge may not be tested. In this context, it was recommended that there should be more clarity on training responsibilities and accountabilities to ensure the knowledge and competency were contextually and educationally linked for the PTPT.

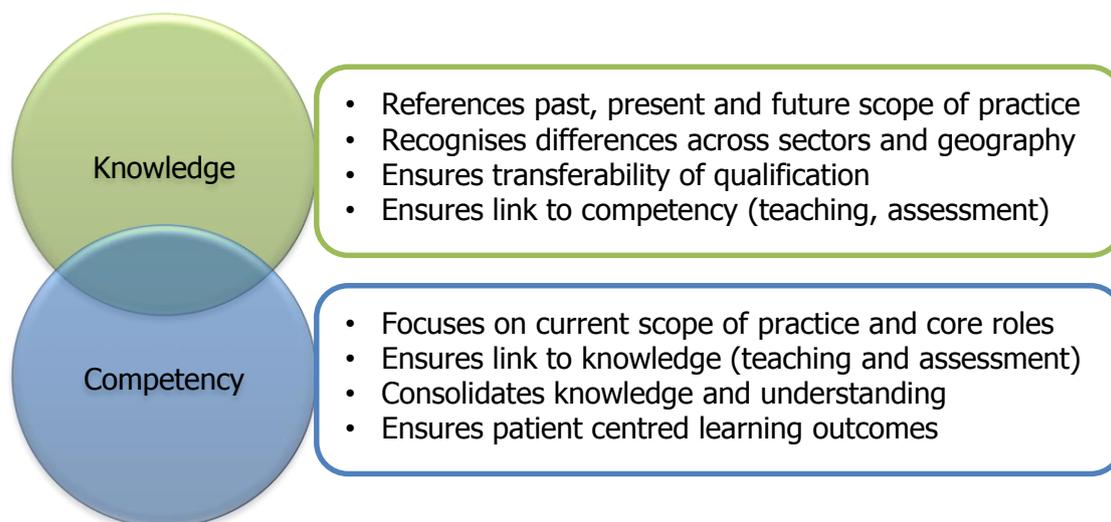
Discussion

Linking the knowledge and competence based qualifications more closely could support more effective and efficient IET for pharmacy technicians. Any review of these qualifications could consider how a stronger connection might be achieved and this will support the development of high quality pharmacy technicians entering practice who are fully able to communicate their knowledge, skills and values for the benefit of patients and public. Thought could be given to how the boundaries between the two qualifications are managed including possible greater integration

so that the PTPT has opportunities to seamlessly move between the knowledge-based and competence-based learning environments – this should further embed knowledge and practice.

There are parallels here with the IET of pharmacists. Current education arrangements for the IET of pharmacists are a four-year undergraduate degree (Master of Pharmacy or MPharm – accredited by the GPhC) followed by a separate year of pre-registration practice-based training leading to registration as pharmacist with the GPhC. The process of becoming a pharmacist is thus divided into two parts and completely separate in terms of curriculum, quality assurance and outcomes. This could create a gap in how the concept of linking theory to practice is managed which might make it difficult to deliver day 1 pharmacists who can provide holistic patient care – Modernising Pharmacy Careers Work Stream I made proposals (in England)²⁷ to bridge this gap by changing pharmacist education to a five year integrated course with two six-month placements (major placements) and concurrent graduation and registration (see Figure 1). Funding for these arrangements is currently being considered by the Government. The proposed practice placements are intended to be consistent and deliver a learning experience that embeds professionalism and the associated skills, knowledge, values and behaviours. In a similar way, employers of PTPTs should work with education and training providers to ensure that PTPTs have a sound learning experience during their work-place learning. This can be challenging as it is often a balancing act between assigning staffing and resources to education and training or to service provision. The boundary between knowledge-based learning and competence-based learning should be easier to navigate and this could be reflected in the IET standards.

Summary



²⁷ Medical Education England. Review of pharmacist undergraduate education and pre-registration training and proposals for reform. 2011. Available from:

http://hee.nhs.uk/healtheducationengland/files/2012/10/MPC_WSI_Discussion_Paper.pdf

4.1.8 Assessment

Perceptions	Assessment methods are fit for purpose	+++
	Different types of assessments produce different types of PTs	++
Concerns	Assessment methods are not fit for purpose	++++
Recommendations	Assessment methods need improvement	+++

Link to the GPhC standards

- 1.3** Assessment and monitoring systems are in place to ensure that pre-registration trainee pharmacy technicians are able to practise safely and effectively at a level that is consistent with their stage of education and training. Causes for concern should be addressed promptly
- 6.2** Staff involved with the delivery and/or assessment of the programme must undergo a designated period of training and development in teaching, learning, assessment and trainee support
- 12** The assessment strategy must assure appropriate standards of assessment
- 12.1** For competency based qualifications, the assessment strategy must follow the agreed QCF/SVQ Assessment Strategy for Pharmacy Services Qualifications
- 12.2** For knowledge based qualifications, the assessment strategy must assure appropriate standards in assessment and include:
- verification of assessment decisions
 - requirements for tutors, trainers and assessors
 - marking criteria, including the minimum to achieve a pass
 - policies for resits and resubmissions
 - procedures for suspected plagiarism and/or malpractice
 - appeals procedures
- 12.3** For knowledge based qualifications, question papers, including the independent assessment, must be developed by subject experts from the pharmacy sector and directly relate to and include all the subject areas
- 12.4** For knowledge based qualifications, assessment must be through a number of assessment methods and involve the candidate using knowledge in a way that demonstrates their understanding of the links between various subjects and their relevance to practice
- 13** The assessment strategy must ensure that trainees can demonstrate the required outcomes and practise safely and effectively according to the standards of proficiency and other relevant standards and guidance when they register
- 13.1** The assessment strategy ensures that trainees can demonstrate the required outcomes
- 13.2** For competency based qualifications, the assessment strategy ensures that, on completion of the programme, trainees can practise safely and effectively
- 14** There must be effective monitoring and evaluation mechanisms in place to ensure appropriate standards in the assessment
- 14.1** There are effective monitoring and evaluation mechanisms in place to ensure appropriate standards in the assessment

Data from interviews

There is a perception that assessment methods can be subjective in order to meet educational needs and this is compounded by the different organisational and geographical challenges. There is currently no established assessment structure and this is raising questions if the current system is fit for purpose.

One of the main concerns identified is the insufficient application of knowledge into practice by assessment of PTPTs' understanding in the workplace. There are currently differences in the assessment criteria between Awarding Bodies regarding the transfer of knowledge into practice, particularly the evidence of knowledge and understanding during the competency training. In the community sector, trainers report that PTPTs frequently do not understand the reason for some components of the knowledge programme since not all components of learnt skills are effectively used in practice. In addition, because distance learning programmes are traditionally used in the community sector, there is a greater concern that PTPTs may not retain the knowledge required. Undoubtedly, there are *"very good assessors who take their job incredibly seriously"* and accurately assess the knowledge components; however, there is also a perception that some NVQ assessors may not have the in-depth awareness of the underpinning knowledge programme to inform their assessment of competence. In the distance learning delivery model, PTPTs may spend several weeks collecting evidence in the attempt to build a portfolio and this may be *"slightly devaluing the meaning of assessment"*.

If pharmacy technicians *"could be observed in practice and be assessed and marked against their performance in real life or in a simulated environment, the outcomes of that in terms of feedback to them as an individual would be much more powerful, similarly to pre-reg pharmacists to some extent"*. In addition, there may be variation in PTPTs' portfolios and the benchmark of the various remote assessors may be different across the different education and training providers. There are also concerns about assessors signing off PTPTs' portfolios without having never met the PTPT or observing their performance.

For a small minority of PTPTs (e.g in remote areas), it might be challenging and less cost effective to undertake peripatetic assessment within their workplace; the alternative makes use of an expert witness and this is raising concerns if this *"is the best assessment model for the students [PTPTs] and ultimately for the patients or whether it is just the best business model for the training organisation"*.

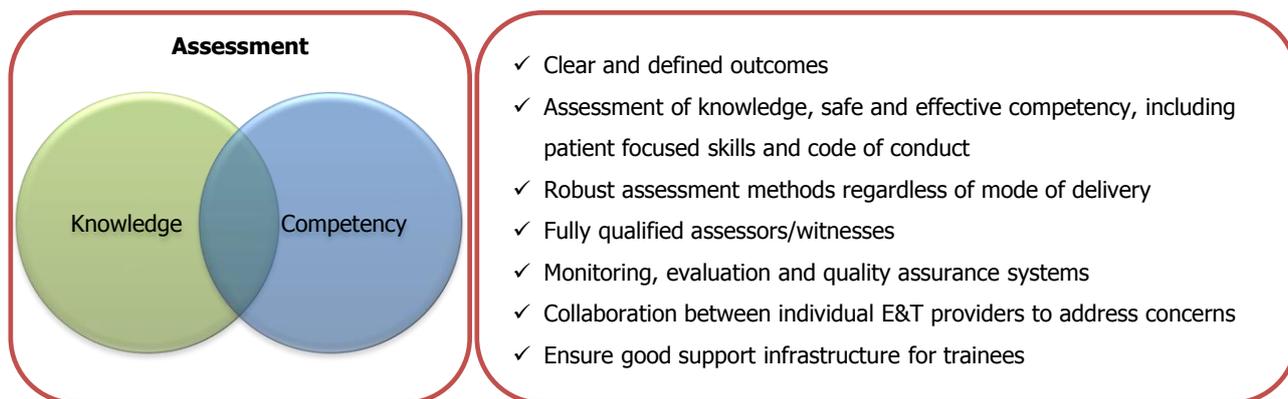
There is a concern that in certain situations there may be a close relationship between the assessor and the PTPT, with assessment relying on only one person's observation and interpretation of competency. There should be thus more training for witnesses for evidence of knowledge and competency and a wider variety of evidence within the different areas such as witness tests, BTEC evidence, written questions and professional discussion to ensure that PTPTs have the understanding.

Nevertheless, for a number of interviewees, mainly in the hospital sector, the current assessment methods were considered to be fit for purpose when appropriately executed and the current NVQs/SVQs' assessment training was justifiable. There is opportunity for improvement as assessment processes may need updating in the future to meet the role of the pharmacy technician, by including a more patient orientated view and also a more continuous assessment of professional behaviour. An adjustment of workload could also be considered since PTPTs are occasionally given large number of assignments to complete.

Discussion

PTPTs undertaking the competence-based qualification collate evidence in their place of employment for each unit e.g. confirm prescription validity. Assessors (who are required to hold an assessor qualification at Level 3 and usually from the Awarding Bodies who provide the knowledge and competence qualifications) are employed by the workplace or the education and training provider (FEC or distance learning provider) to assess the PTPTs' competence. This occurs through direct observation of the PTPT completing tasks and activities by assessors employed in the workplace, peripatetic assessors (often employed by FECs) or by Expert Witnesses. When Expert Witnesses are used a peripatetic or remote assessor must undertake a professional discussion with the PTPT in order to establish competence (see section 4.2.1). As with the different modes of delivery described earlier, it is possible that the interviewees' perceptions of subjectivity of assessment may relate to the different assessment methods used and the amount of contact between assessors and PTPTs. Availability of on-site assessors might mean feedback to PTPTs is provided on a more frequent and ongoing basis whereas for peripatetic and remote assessors this would be less frequent and potentially more challenging to assess competence. However, some organisations use a number of assessors for a PTPT and this in itself can also lead to differences in assessment practice. There are parallels here with pre-registration trainee pharmacists who are employed by larger multi-site organisations and if the pre-registration trainee is undertaking training on a different site to their tutor, the tutor will be reliant on supervisors and other staff endorsing evidence that the pre-registration trainee pharmacist has produced in order to assess whether the pre-registration trainee pharmacist has reached the required standard. The IET standards for pharmacy technicians states 'for competency based qualifications, the assessment strategy must follow the agreed QCF/SVQ Assessment Strategy for Pharmacy Services Qualifications' and as discussed in section 4.2.1 this includes setting out roles and responsibilities for all staff involved, requirements for sources of evidence etc. so one approach might be for the IET standards for pharmacy technicians to describe evidence that would support that the assessment strategy is being followed to the required quality.

Summary



4.1.9 Code of conduct

Perceptions	Current teaching of code of conduct is appropriate	++
Concerns	Teaching of code of conduct is not sufficiently embedded in the training programme	++++
	Standards of code of conduct are variable (PTPTs or registered pharmacy technicians)	++
Recommendations	Standards should include more elements around code of conduct	++++
	Code of conduct should be taught both in the knowledge and competency components	++++

Link to the GPhC standards

- 1.3 Assessment and monitoring systems are in place to ensure that pre-registration trainee pharmacy technicians are able to practise safely and effectively at a level that is consistent with their stage of education and training. Causes for concern should be addressed promptly
- 1.4 Provision of appropriate support relating to health, conduct and professional progression is available to pre-registration trainee pharmacy technicians
- 1.5 Trainees are not allowed to complete an accredited or approved programme if they are a risk to patients and the public
- 1.6 Training providers delivering an accredited or approved programme use the Code of Conduct for Pre-registration Trainee Pharmacy Technicians to ensure that professionalism is embedded in trainees and to act as a guide to what constitutes acceptable and unacceptable practice, attitudes and behaviours in relation to fitness to practise
- 5.1 Trainees must have access to pharmacists and/or pharmacy technicians who are able to act as role models and provide professional support and guidance

Data from interviews

Evidence from interviewees suggested that there is currently variability in the education of the code of conduct to PTPTs, including professionalism, responsibility and accountability as well as attitudes and behaviours. There was also thought to be variability in the standard of professionalism and behaviour of registered pharmacy technicians. Most interviewees from

colleges (FECs) believed that the current teaching of the pharmacy technician code of conduct is appropriate and colleges are making a real effort to improve education in this area; in contrast, a majority of interviewees believed that the teaching of the code of conduct is not sufficiently embedded in training programmes and needs to be improved. In addition, it was recommended that during recruitment a greater effort should be invested in VBR for the selection of the PTPTs based on attitudes and behaviours expected from a healthcare professional.

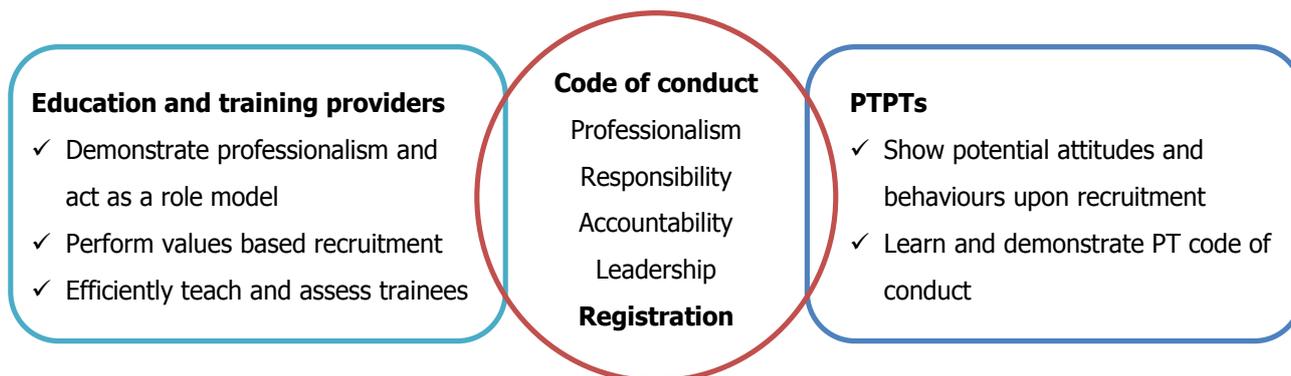
One of the concerns raised during interviews was that registered pharmacy professionals sometimes do not demonstrate the required attitudes and behaviours and are therefore unlikely to disseminate those values to PTPTs. Also raised was that many professionals are unaware of responsibilities within the pharmacy team; they possibly qualified years ago without contemporary training, they may have always worked in a particular way, assuming that all responsibility falls on the pharmacist and not understanding the meaning of a “registered professional”. Interviewees suggested that the teaching of the code of conduct may be difficult to achieve, particularly with the distance learning programme, so it would be of value to clarify roles and responsibilities, the meaning of being a registered professional and the boundaries of practice. It was suggested that registered professionals should play a significant role at developing and leading others, making a contribution back into the workplace and fostering a culture of self-directed learning and continuous professional development.

Discussion

Data from the interviews indicates that the IET standards for pharmacy technicians should contain more elements of the Code of conduct for pre-registration pharmacy technicians²⁸. The current IET standards refer to the Code of conduct. Also described is the link with VBR so the standards could potentially describe key points of the IET process when the Code of conduct must be discussed e.g. recruitment, induction and as part of the training programme so that should issues of conduct arise these can be identified quickly. The IET standards could also suggest other opportunities for raising awareness of the Code of conduct.

²⁸ General Pharmaceutical Council. Code of conduct for pre-registration trainee pharmacy technicians. 2011. London: General Pharmaceutical Council

Summary



4.1.10 Support available to PTPTs

Perceptions	A strong PTPT support infrastructure is essential for a successful IET process	++++
Concerns	Funding opportunities have a strong impact on PTPT support structure	++
	There are concerns about PTPT support provision in the community pharmacy sector	+++
Recommendations	PTPT support structure should mirror pre-registration trainee pharmacists	+++
	There should be an educational supervisor accountable for the IET	+++
	The GPhC should have knowledge and control over the IET of pharmacy technicians	+++

Link to the GPhC standards

- 1.1 Supervision is in place to ensure that the practice of pre-registration trainee pharmacy technicians does not jeopardise patient safety
- 1.2 Pre-registration trainee pharmacy technicians only undertake tasks in which they are competent, or are learning to be competent, under adequate supervision
- 1.4 Provision of appropriate support relating to health, conduct and professional progression is available to pre-registration trainee pharmacy technicians
- 1.5 Trainees are not allowed to complete an accredited or approved programme if they are a risk to patients and the public
- 5 Trainees must be supported to acquire the necessary skills and experience through induction, effective supervision, an appropriate and realistic workload, personal support and time to learn
- 5.1 Trainees must have access to pharmacists and/or pharmacy technicians who are able to act as role models and provide professional support and guidance
- 8.1 All training providers must have a pharmacist or pharmacy technician who has professional responsibility and sufficient authority to deliver outcomes

Data from interviews

Interviewees cited the importance of maintaining a strong PTPT support infrastructure in all areas of the IET process to ensure that PTPTs are successful in their studies and future career. However, it was reported that the level of support provision could be very different across sectors. In the community pharmacy sector, particularly in small independent pharmacies, the creation and establishment of a support structure was thought to be very challenging to achieve due to the lower number of staff members and limited funding opportunities compared to the hospital sector. Moreover, there were concerns with supervising pharmacists not allocating sufficient time for PTPTs, increasing the variability in the IET quality and support infrastructure.

Also in the community pharmacy sector it was identified that there is a higher number of pharmacy support staff progressing from Level 2 to Level 3 qualifications, i.e. the IET for pharmacy technicians; these PTPTs are usually perceived as less academically capable and thus requiring extra support to succeed in the Level 3 qualification. Inadequate PTPT support was felt therefore to have a strong impact on the qualification success rates, particularly if the 'knowledge' training was undertaken through a distance learning programme and/or with limited support provided from education and training providers.

There was a suggestion that the level of support provision could be very different between pre-registration pharmacists and PTPTs. A designated educational supervisor is recommended during the IET of pharmacy technicians in the GPhC's 'Guidance on tutoring for pharmacists and pharmacy technicians'²⁹. In contrast, it is a requirement to appoint a designated tutor for pre-registration trainee pharmacists and many of the interviewees believed that more parity between the two professions would be of value. There was general agreement that there should be a named educational supervisor overseeing the training and held accountable for the process. *"You do need someone who is accountable and culpable, an official tutor who will take them through the programme, oversees them and helps put things right when they go wrong on the spot so that you learn by doing"*. Although not a requirement, interviewees described many organisations as having an established a PTPT support structure which includes a designated educational supervisor (or equivalent) who is accountable and/or responsible for PTPT's training.

A number of interviewees raised concerns about the GPhC currently not having knowledge and control of the number of pharmacy technicians in IET and that this may have implications on efficient provision of PTPT support. It was suggested that it would therefore be beneficial if the GPhC had stronger involvement in pharmacy technician workforce planning, mirroring the pre-registration pharmacist training to an extent so that serious problems could be more easily, efficiently and equally addressed in the future.

²⁹ General Pharmaceutical Council. Guidance on tutoring for pharmacists and pharmacy technicians. 2014. London: General Pharmaceutical Council

Discussion

In many NHS trusts/Health Boards there are assessors and internal verifiers/quality assurers who are available to provide support for PTPTs. Support is also available from the PTPT's line manager and other members of the pharmacy team. The level of support within NHS trusts/Health Boards will depend on the number of staff assigned to the IET of pharmacy technicians – this can vary according to the size of the organisation and the historical allocation of resources to this area as well as the culture of the pharmacy department with respect to the development of the pharmacy technician workforce. Therefore it is not surprising that data from the interviews highlighted that infrastructure support in the community pharmacy sector was challenging to achieve due to the lower numbers of staff compared with NHS trusts/Health Boards. It is perhaps beyond the scope of the IET standards to describe exactly how resources should be assigned for the IET of pharmacy technicians. However interviewees suggested greater parity between the IET standards for pharmacy technicians and pharmacists – advising that there should be a role accountable for the IET of pharmacy technicians in a similar way to pre-registration trainee pharmacist tutor role. There is a potential role for the APTUK, as the professional leadership body to provide support and advice for those supporting the training of pharmacy technicians – particularly assessors and internal verifiers/quality assurers. As the professional leadership body for pharmacists, the Royal Pharmaceutical Society is also in a position to support pharmacists who are involved with the IET of pharmacy technicians.

Another recommendation from interviewees was that the GPhC should provide information about the total number of PTPTs undertaking training in order to inform workforce planning. Again, it is arguable that workforce planning is beyond the scope of the IET standards and is not part of the role of the GPhC as a regulator. Indeed this is not the role of other professions regulators. However, the total number of pre-registration trainee pharmacists undertaking training at any time is data that the GPhC holds and is useful information for workforce planners seeking to achieve balance between the number of pharmacy graduates and the number of pre-registration trainee pharmacist placements. Knowledge of the total number of PTPTs may be useful to assess trends and plan for the allocation of resources.

Summary



4.1.11 Support available to education and training providers

Perceptions	Support structure available for E&T providers has an impact on the IET of pharmacy technicians	+++
	There is suitable training available for college teachers and assessors	+++
Concerns	There is variability in support structure available for educational supervisors	+++
	Many pharmacy professionals do not recognise their need for professional development	+++
Recommendations	Develop a stronger support network for all E&T providers	+++
	Develop a structured induction for educational supervisors	+++
	Instil a culture of CPD and developing others as part of the professional role	+++

Link to the GPhC standards

- 6** Those involved in providing the teaching and learning must be supported to acquire the necessary skills and experience through induction, effective mentoring, continuing professional development and personal support
- 6.1** Supervising pharmacists and pharmacy technicians must have an identified source of support from the training provider
- 6.2** Staff involved with the delivery and/or assessment of the programme must undergo a designated period of training and development in teaching, learning, assessment and trainee support

Data from interviews

Views were expressed by interviewees that all education and training providers have to ensure that the quality of programme delivery and assessment meets the IET standards and the requirements of the Awarding Bodies including external verification/quality assurance. It was therefore felt to be important that there should be a strong support network for all the individuals involved in the IET of pharmacy technicians. Regarding the teaching of the “knowledge” programme and assessment, evidence from interviews suggested a general contentment with the availability of suitable teaching and the assessor’s qualification. However, the support and training structure currently available for tutors and educational supervisors was thought to be variable and thus could affect the quality of the IET.

A number of interviewees, particularly in the community sector, believed that there should be more structure around tutoring, with development of a strong support network for education and training providers. Also thought to be essential was the need to shape *“a very clear role for the tutor that can be explained to that big store manager so they know what is meant to be happening”*. The need for development and improvement of suitable education, training or qualification for tutors may not necessarily involve a teaching qualification, but rather what was recommended was an induction or training to learn the standards, how to motivate and support PTPTs and basic mentoring skills.

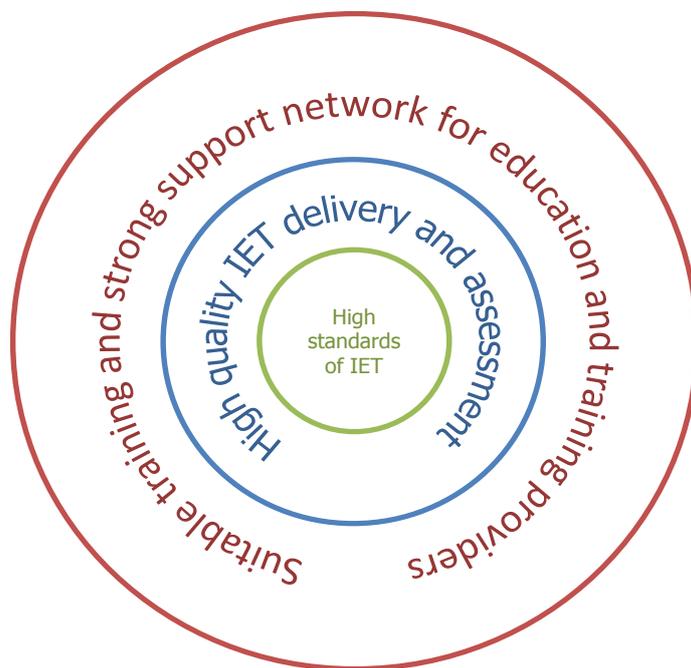
One potential problem interviewees identified was that, although a good support infrastructure might be already available for a number of educational supervisors, it requires each individual to recognise that they need that support. It was also proposed that pharmacy technicians as healthcare professionals should be accountable for their own practice, have the responsibility to ensure their role as a tutor or as an assessor is performed effectively and that they should reflect on their practice. Additionally, interviewees held that pharmacists and pharmacy technicians should be responsible healthcare professionals and the GPhC would also expect to see a certain level of continuous professional development.

The majority of interviewees believed that regulation of educational supervisors would be unnecessary and, particularly in the community pharmacy sector, there is a greater need for flexibility around tutoring due to the smaller pharmacy teams. Nevertheless, views were expressed that tutors should prove their competency, possibly by meeting a teaching standard that would ensure public safety and also strengthen confidence levels in tutoring abilities. Tutoring and mentoring were described as being a strong component of a pharmacist or a pharmacy technician’s role and should therefore be recognised as part of continuous professional development. *“Anybody that is a pharmacist is already regulated, a registered professional, so we have to start to instil a culture and a mindset whereby pharmacists start to appreciate that developing others in the profession is part of their role and it would be a shame if we had to regulate it; we need to start thinking about how the profession builds a culture where we take responsibility pro-actively for developing others”*.

Discussion

The IET standards state that ‘Supervising pharmacists and pharmacy technicians must have an identified source of support from the training provider’ – this was not clearly expressed in the data from the interviews and it was therefore recommended that networks of education and training providers could be created to provide support. A possible approach for the IET standards would be to provide suggested evidence that this particular standard is being met e.g. meetings with supervisors to discuss concerns – especially with respect to PTPTs in difficulty. A number of training providers within the NHS operate a system of training agreements that are agreed with employers and clearly set out who is responsible for specific areas of the PTPTs’ learning and development. Training agreements could be cited as possible evidence for meeting the IET standards. The IET standards could also make reference to the GPhC’s Guidance on tutoring for pharmacists and pharmacy technicians²⁹. In addition the IET standards could support a culture of learning for all those involved with the IET of pharmacy technicians by again describing evidence for how this standard could be met e.g. all staff involved with supervising, training and assessing PTPTs should have this responsibility clearly defined in their job descriptions. Although continuing professional development is a mandatory requirement for pharmacists and pharmacy technicians many staff involved with training and supervision also have a multitude of other responsibilities so it is possible that their CPD records may not always focus on the training aspects of their role within their scope of practice. Awarding Bodies do stipulate requirements for assessors to undertake standardisation and CPD but this is limited to these roles and currently the GPhC requires nine CPD records annually relevant to the scope of practice. The IET standards could provide additional guidance that individuals involved with IET must undertake CPD that is specific to this role. This could also be considered in the GPhC’s current work on Continuing Fitness to Practice.

Summary



4.1.12 Collaborations between education and training providers

Perceptions	Collaborations between E&T providers is essential	++++
	Current communication between E&T providers is appropriate	++
Concerns	Current communication between E&T providers needs strengthening	+++
Recommendations	Clarify responsibilities and lines of communication between E&T providers	++++

Link to the GPhC standards

- 1 There must be clear procedures to address immediately any concerns about patient safety arising from pharmacy technician education and training involving patients and the public
- 1.3 Assessment and monitoring systems are in place to ensure that pre-registration trainee pharmacy technicians are able to practise safely and effectively at a level that is consistent with their stage of education and training. Causes for concern should be addressed promptly
- 4.1 The standard will be demonstrated by systems and policies that encompass the following information about roles and responsibilities, lines of accountability and authority to act of those involved in education and training together with the timing of monitoring reports and reviews. All aspects of education and training must be covered, including:
 - entry to education and training
 - quality of teaching and learning (including the curriculum)
 - appraisal of and feedback to trainees
 - assessment of trainees
 - supervision, including training
 - educational resources and capacity
 - appeals
 - malpractice and plagiarism

- 4.3** Any problems identified through the gathering and analysis of quality data should be addressed promptly and the actions taken clearly documented. It must be clear who is responsible for this
- 7** Education and training must be planned and maintained through transparent processes which show who is responsible at each stage
- 7.1** All education and training will be supported by a defined management plan with a schedule of responsibilities as well as defined structures and processes to ensure the maintenance of standards in the arrangement and content of education and training to ensure effective delivery

Data from interviews

Efficient communication between the various organisations involved in IET of pharmacy technicians was considered to be essential and clear links between organisations were also thought useful for effectively and quickly addressing any potential issues that may arise throughout the IET process. The current level of collaboration between the individual education and training providers was described as variable. It was suggested that it would be of value to better clarify education and training responsibilities in order to create an integrated programme with strong links between the knowledge and competency components. Robust collaboration links between all the different organisations were postulated to reduce the need for continuous control and inspection.

Strong collaborations between employers and colleges (FECs) or distance learning providers were also thought to be essential to efficiently address any potential problems with PTPTs' attitudes and behaviours as these should be continuously monitored and assessed, because they are the foundation for future professional performance, and any concerns should be reported promptly. There were issues reported in the past where such feedback was not exchanged between the college (FEC) the employer, and this was also described as true for distance learning providers since the level of engagement and communication with employers may be limited. At present, it was indicated that there was no clear line of communication or responsibility because this is currently not established as a requirement in the IET standards. However, it was also signalled that there has been a real effort by many to maintain and develop a strong collaboration structure and a number of interviewees, mainly from FECs, reported their contentment with their individual situation.

Discussion

The IET standards state that clear structures, processes, responsibilities and accountabilities must be in place for the IET of pharmacy technicians. Data from the interviews suggests that lines of communication and collaboration between employers and education and training providers could be stronger – therefore it might be beneficial to add some guidance to the standards that gives some examples of how this should work. For instance, as described earlier, training agreements are used by many organisations involved in the IET of pharmacy technicians and are an example of how these specific standards can be met.

Summary

Knowledge	Competency	✓ Defined responsibilities and accountabilities ✓ Clear links and lines of communication ✓ Efficient and frequent communication ✓ Strong collaboration
Assessment		
Monitoring and quality assurance		

4.1.13 Monitoring and quality assurance of the IET process

Perceptions	The GPhC does not need to be involved in the monitoring and quality assurance process unless there are serious issues	++++
Concerns	E&T processes may not always meet the IET standards	+++
	There is variability between E&T processes	++++
	There may be variability in monitoring and quality assurance criteria	++
Recommendations	Standards should include more robust criteria for dealing with problems, monitoring and quality assurance , including outcomes	++++
	Awarding Bodies should strengthen monitoring and quality assurance by focusing on outcomes	++++
	The GPhC should have knowledge and control over PTPTs	+++
	The GPhC should have more oversight of the monitoring and quality assurance of the IET	+

Link to the GPhC standards

- 1 There must be clear procedures to address immediately any concerns about patient safety arising from pharmacy technician education and training involving patients and the public
- 1.5 Trainees are not allowed to complete an accredited or approved programme if they are a risk to patients and the public
- 3 All aspects of pharmacy technician education and training must be based on principles of equality, diversity and fairness and meet the requirements of all relevant legislation
- 3.1 Information about equality and diversity issues must be collected routinely, analysed, recommendations developed, implemented and monitored
- 3.2 Equality and diversity training records must be collected routinely and fed into quality management and enhancement mechanisms where appropriate
- 3.3 Information about how issues are identified and addressed as part of the quality management and enhancement systems and how outcomes are disseminated should be collected and reported
- 4 The quality of pharmacy technician education and training must be monitored, reviewed and evaluated in a systematic way
- 4.1 The standard will be demonstrated by systems and policies that encompass the following information about roles and responsibilities, lines of accountability and authority to act of those involved in education and training together with the timing of monitoring reports and reviews. All aspects of education and training must be covered, including:
 - entry to education and training

- quality of teaching and learning (including the curriculum)
- appraisal of and feedback to trainees
- assessment of trainees
- supervision, including training
- educational resources and capacity
- appeals
- malpractice and plagiarism

4.2 There must be procedures in place to check the quality of teaching, learning and assessment and to ensure that standards are being maintained. These must be monitored using a variety of methods and approaches such as staff appraisal, student feedback, patient feedback and peer review

4.3 Any problems identified through the gathering and analysis of quality data should be addressed promptly and the actions taken clearly documented. It must be clear who is responsible for this

Data from interviews

Feedback from interviewees indicated that monitoring and quality assurance of the IET process is undertaken by Awarding Bodies to ensure that GPhC IET standards are maintained. There was a perception that colleges (FECs) are more controlled and a number of interviewees, mainly from colleges (FECs), agreed that the current system is suitable and robust. However, some employers had concerns regarding the quality of teaching at college (FEC) and distance learning programme contents; for example, as mentioned previously, some distance learning programmes show a high number of spelling mistakes leading to the perception that the course is not of a high standard. More focussed monitoring and quality assurance was therefore recommended, with possible involvement of the GPhC.

Although a real effort was thought to be made by the Awarding Bodies to ensure that all education and training providers meet the GPhC standards and that there is consistency across learning centres, there was also currently conceived to be a significant variability in delivery of the IET raising concerns about the teaching not meeting the standards: *“I’m not sure at the moment if the standards are delivered consistently, people have different approaches. I feel the GPhC should have a bit more oversight of the people who are approved to deliver the training”*.

Monitoring of training delivery is undertaken using criteria established by the Awarding Bodies and, although the process is in line with the GPhC standards, there was a concern articulated that there may be variability in the quality assurance processes. It was ventured that this could be particularly serious in areas such as “validating and issuing prescriptions” since they are closely associated to patient safety. Moreover, colleges (FECs) were suggested to tend to rely more on Awarding Body and Ofsted (or equivalents in Scotland and Wales) audits and inspections, meeting their requirements and not referring back to the GPhC IET standards directly. A recommendation was that it would be beneficial if the IET standards included more robust criteria rather than guidance, since it is significantly more challenging to evaluate, monitor and quality assure guidance. In the future, there was an idea identified that the Awarding Bodies could also be

responsible for monitoring outcomes (e.g. success rates, student's employability, patient benefit) and these should be clearly stated in the IET standards.

Any potential problems during the IET (e.g. patient safety, support to PTPTs) were described as being managed by each individual education and training provider. Since the Awarding Bodies closely monitor the process, many interviewees agreed that it would be unnecessary for the GPhC to be involved unless there were serious issues or concerns. However, it would be of value if IET organisations registered with the GPhC, in a similar way as for the pre-registration pharmacist training, stating how the standards are going to be met.

Although policies tend to be very similar across large organisations, the current standards do not specify criteria to address potential problems or to report education and training issues, and this was viewed as potentially triggering situations of inequality and unfairness to PTPTs. Further clarification in the standards was advised, including criteria to raise serious concerns or complaints about education and training providers. Moreover, another suggestion was that the professional body could potentially provide further input and advice dealing with challenging situations since *"if problems do arise it is quite possible that students [PTPTs] just give up that course and then there is no possibility of registration"*.

Potential problems were identified regarding the fact that PTPTs do not currently have to register with the GPhC during their IET; serious concerns will not be documented and important information collected during training will not be transferred if there was a change of employer. If registration is required for the safety and protection of the patients, it should be extended to PTPTs. Moreover, feedback is currently collected from PTPTs but the information is analysed or processed by the education and training provider and it is not used at a wider level. *"I think when it comes to feedback from the students [PTPTs] there could or should be a mechanisms where students could feedback to the delivery centre or the employer and then a mechanism for those comments to be feedback to the GPhC so that there is a kind of two-way communication channel in that the GPhC working to liaise with the key stakeholders to try and make sure the standards are fit for purpose with an interest in the key stakeholders"*. It was thought therefore to be beneficial if the GPhC had more robust information and control over the pharmacy technician workforce and where they are undertaking their training, in a similar fashion to the pre-registration pharmacy training, so that feedback and potential problems could be more easily, efficiently and equitably addressed in the future.

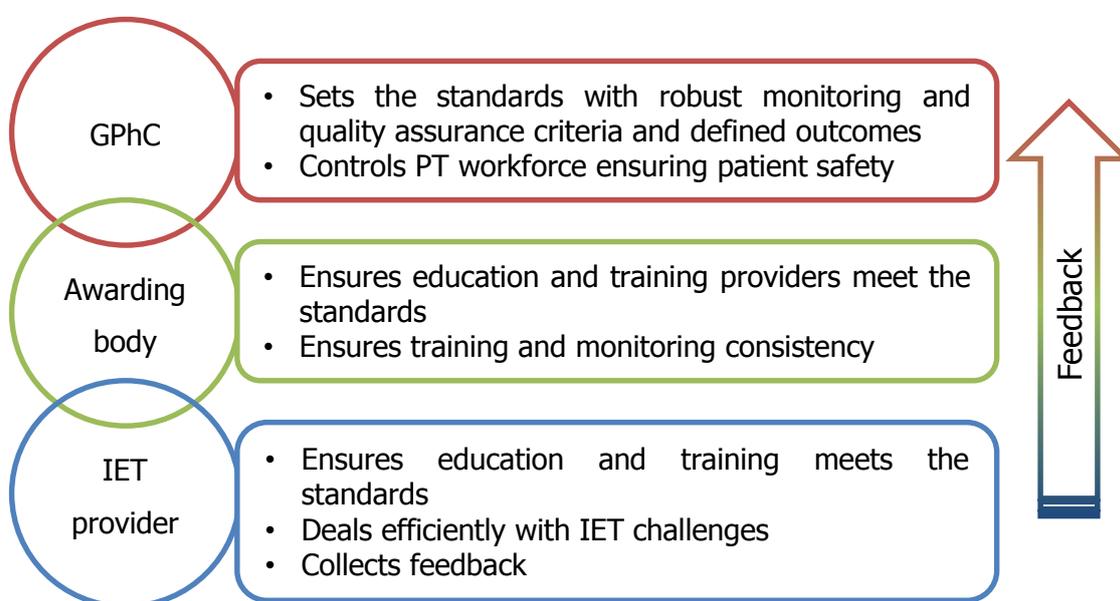
Discussion

Data from the interviews suggest that there is a hierarchy of regulation of the IET which tends to focus more on the Awarding Bodies and the education regulators Education Scotland/Estyn/Ofsted and that the visibility of the GPhC's IET standards could be greater and better integrated into the quality assurance processes of the Awarding Bodies and education and training providers. The approach currently taken by FECs and distance learning providers with quality assurance includes internal verification/quality assurance of assessments that involves

ensuring that assessors are operating in a consistent manner and making the correct decisions. Internal verifiers/quality assurers are required to hold the appropriate qualification that is usually from the Awarding Bodies (in a similar way to assessors). Like assessors, internal verifiers/quality assurers may be employed in the workplace, peripatetic or remote - this inevitably will mean differences in approach with quality assurance. However, external verification/quality assurance from Awarding Bodies is a further layer of quality assurance that oversees the whole process and ensures that standards are met.

There were recommendations from interviewees that varied to the extent in which the GPhC should be involved with the quality of IET. Most Awarding Bodies rely on their verification processes to ensure quality. However, the GPhC does directly accredit two education and training providers for their knowledge-based qualifications – they are not required to follow verification processes as they are not franchised to deliver for an Awarding Body. As discussed in section 4.2.2 the differences in accreditation and recognition of qualifications for pharmacy technicians and pharmacists has possibly resulted in a slightly different approach to the IET standards with those for pharmacists including additional sections on guidance to meet the standards. Consideration could be given to aiming the IET standards for pharmacy technicians at a wider audience and including guidance sections.

Summary



4.1.14 IET standards - meeting the professional needs

Perceptions	Current IET standards are fit for purpose	+++
Concerns	Current IET standards are outdated	++++
	Current IET standards are open to interpretation	++++
	There are concerns about implementation of current IET standards by some E&T providers	+++
Recommendations	Clarify the role of the PT to then set the IET standards	++++
	IET standards should provide (measurable) criteria rather than guidance	++++
	IET standards should focus further on patient and qualification outcomes	++++
	IET standards should be future proof	++++

Data from interviews

There was a general agreement that the IET standards should be developed and implemented by all education and training providers, including Awarding Bodies, colleges, distance learning providers and employers as well as. *“Everyone who has a role to play in education and training should be aware of the standards”*.

A number of interviewees agreed that the current IET standards were generally fit-for-purpose although it was felt that they did not fully meet the profession’s needs or indeed those of patients and public. Standards were also thought to be open to interpretation raising significant concerns about appropriate implementation by some education and training providers not meeting the requirements.

A strong partnership between all organisations involved in the education and training process was suggested for further development and implementation of the IET standards; employers should dictate what should be incorporated in the qualification and develop the standards in partnership with the regulatory body; employers must also ensure that, together with colleges and distance learning providers, they are delivering the qualification to the standards; and Awarding Bodies will act as the *“protectors of the standards”*.

Table 6 summarises interviewees’ opinions regarding the revision of the standards for IET of pharmacy technicians, which should essentially reflect the current and future scope of practice of the profession and the pharmacy needs. It was reported that pharmacy technicians should take ownership of the medicines supply chain, from order, storage, and distribution to dispensing and the therefore the standards should reflect the professional element of the role and leadership around processes, training the pharmacy technician as the *‘captain of the dispensary’* and as a responsible and accountable professional. Moreover, it was also considered essential to incorporate into the standards a strong patient centred component of the role, with emphasis on patient care and safety, since it was thought that the role of the pharmacy technician is moving away from the concentration in dispensing.

Table 6: Summary of interviewees’ opinions regarding revision of standards of IET of pharmacy technicians.

Standards for IET of pharmacy technicians should:
reflect current scope of practice of the pharmacy technician
reflect the role of the pharmacy technician within the pharmacy
acknowledge differences between pharmacy sectors and organisations in a single transferable qualification
be future proof, reflecting future capability of pharmacy technicians
efficiently train pre-registration pharmacy technicians in core roles
focus further on patient outcomes, care and safety
focus further on behavioural and professional aspects, responsibility and accountability
describe clear learning outcomes particularly associated to patient care and safety
describe clear outcomes for the qualification, such as success rates and student’s employability
clarify education and training responsibilities, links and lines of communication
include robust criteria to facilitate evaluation, monitoring and quality assurance of the qualification

As discussed previously, further clarification of the role and the core training needs for pharmacy technicians was considered essential to facilitate the development of a stronger qualification of suitable academic level, with relevant curriculum and effective recruitment requirements and assessment methods. A number of interviewees thought that, at present, PTPTs and post-registration pharmacy technicians may undertake very similar roles, reinforcing the need for clarification of the role and the professional registration requirement. Nevertheless, several interviewees agreed that professional registration was advantageous since it affirms professional recognition, responsibility and accountability and it was also thought to be of benefit for the progression of pharmacy technicians to extended roles.

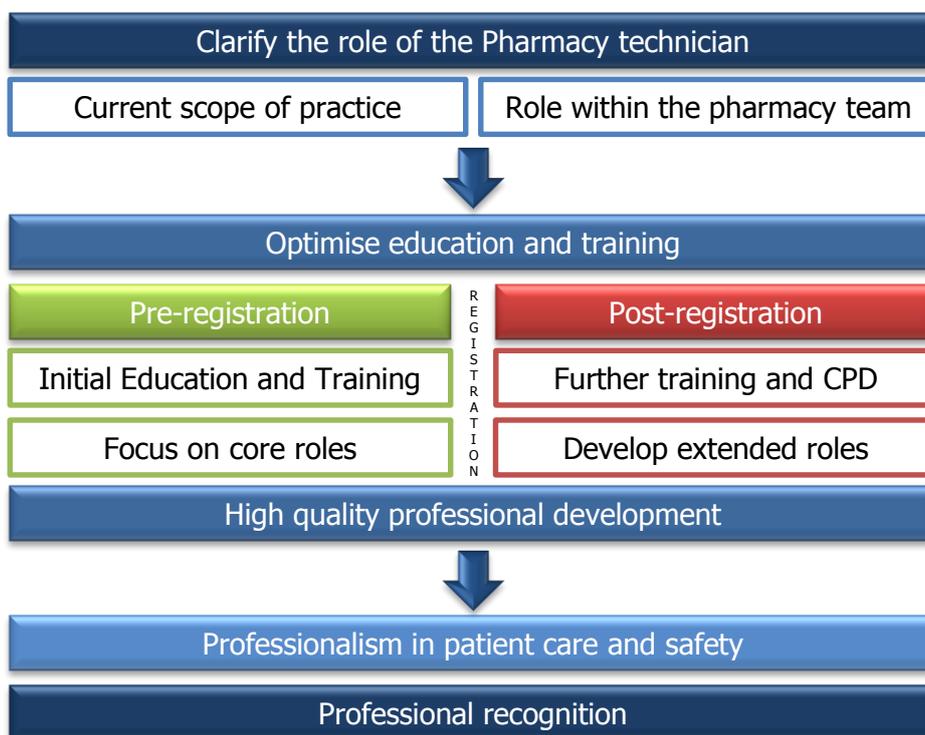
“We need to insure that we create a profession, a cohort of pharmacy technicians that can stand on their own two feet, that they have a voice, they can demonstrate to both the regulator that they are safe and patient orientated, but also to the profession that they have a place and only then, when we get into that space, we would be able to see movement in the profession of pharmacy led by or enabled by pharmacy technicians. The profession of pharmacy must recognise the value of pharmacy technicians”.

Discussion

Opinions were given during interviews that the IET standards were open to interpretation and should include measurable criteria rather than guidance on how to meet the standards. This would be a departure from the structure of the current IET standards for pharmacy technicians and pharmacists (as discussed previously the latter contains guidance). The need for consistency in meeting the IET standards through clearly defined and measurable criteria should be balanced against flexibility in the way in which the qualifications are delivered which might lend itself more to reflecting current and future scope of practice of a pharmacy technician.

The current IET standards for pharmacy technicians would need to be restructured if they are to be more patient and qualification outcome focussed and more fit for the future. Learning outcomes are listed in the IET standards in the curriculum requirements for competency-based qualifications and are based on the NOS – these are planned to be updated and consideration could be given to creating a flexible framework of pharmacy NOS that cover the whole scope of practice across all sectors and geographies with the option of adding in NOS as the role of the pharmacy technician evolves. Further work would be required to understand how the IET standards could be made more patient outcome focussed. Evidence from other professions such as medicine indicates that education and training standards have yet to be fully linked to patient outcomes. However, there is a consistent emphasis on patient safety in education and standards across the healthcare professions. The General Medical Council are currently reviewing the standards for undergraduate and postgraduate medical education and training and have consulted on new draft standards³⁰ which are structured around four themes with patient safety woven throughout. Each theme has a defined purpose and responsibilities are demarcated. Each standard is underpinned by clearly listed requirements.

Summary



³⁰ General Medical Council. Standards for medical education and training: a public consultation on our draft standards. 2015. Available from: [http://www.gmc-uk.org/Standards for medical education and training_consultation document_non writeable.pdf_60242366.pdf](http://www.gmc-uk.org/Standards%20for%20medical%20education%20and%20training_consultation_document_non_writeable.pdf_60242366.pdf)

5. Summary of Key Findings

Funding opportunities		
Current variability in funding opportunities and its impact on the IET standards		
Perceptions	Funding opportunities have a significant impact on the standards of IET of PT	++++
	There is disparity in funding opportunities between hospital and community	++++
	The apprenticeships scheme is frequently used for funding	++
Concerns	There are concerns about funding opportunities and disparities	++++
	There are concerns about the use of apprenticeships scheme for funding	+
Recommendations	Disparities in funding opportunities should be addressed	+++

Recruitment		
Current variability in recruitment policies and its impact on the IET standards		
Perceptions	Recruitment process has a significant impact on the IET process	++++
Concerns	There are limitations for not having standards for recruitment criteria	++++
Recommendations	Clarification needed for recruitment entry requirements	++++
	Recruitment should include minimum academic ability	+++
	Recruitment should include values, behaviours and commitment to the career	++++

Academic level and length of the IET		
Current workload for knowledge and competency development to meet the IET standards		
Perceptions	Current academic level (level 3) and length (2 years) is appropriate	+++
	Current academic level (level 3) is a very high level 3	++++
	Current academic level (level 3) and length (2 years) possibly needs to be higher	+++
Concerns	The current workload is extensive for a level 3 in 2 years	++++
Recommendations	Essential to clarify the role of the PT and then decide the academic level and length of the IET	++++

Mode delivery		
Meeting the standards through different modes of delivery		
Perceptions	Face-to-face contact has advantages	++++
	Distance learning has advantages	+++
Concerns	There are limitations to face-to-face delivery	++
	There are limitations to distance learning	+++
Recommendations	Possibly explore blended learning	+++

Scope of practice		
Current and future roles for pharmacy technicians and its impact on the IET programme		
Perceptions	There is great opportunity to develop the role of the PT	++++
	Scope of practice varies between sectors and organisations	+++
Concerns	Supervision rules have a strong impact on the role of the PT	+++
Recommendations	Clarify the role of the pharmacy technician	++++
	Clarify professional responsibilities in the pharmacy team	+++

Knowledge and competency programme		
IET curriculum and the role of the pharmacy technician		
Perceptions	Current underpinning knowledge programme is appropriate	+++
Concerns	Current scope of practice of the IET is outdated	++++
	Current curriculum does not focus enough on patient care and safety	++++
Recommendations	Clarify the role of the PT to enable IET improvement	++++
	Increase teaching focus on patient care and safety including teaching of code of practice, ethics and conduct	++++

Link between knowledge and competency		
Consolidation of knowledge and understanding during the IET process		
Perceptions	Knowledge-competency link is adequate	++
Concerns	Knowledge-competency link is inadequate	+++
Recommendations	Knowledge-competency link needs further strengthening	++++
	Knowledge-competency link needs to be assessed	++++

Assessment		
Fitness for purpose of assessment methods		
Perceptions	Assessment methods are fit for purpose	+++
	Different types of assessments produce different types of PTs	++
Concerns	Assessment methods are not fit for purpose	++++
Recommendations	Assessment methods need improvement	+++

Code of conduct		
Professionalism - from E&T providers to PTPTs		
Perceptions	Current teaching of code of conduct is appropriate	++
Concerns	Teaching of code of conduct is not sufficiently embedded in the training programme	++++
	Standards of code of conduct are variable (PTPTs or registered pharmacy technicians)	++
Recommendations	Standards should include more elements around code of conduct	++++
	Code of conduct should be taught both in the knowledge and competency components	++++

Support available to PTPTs		
Variability and importance of the support structure available to PTPTs to meet the IET standards		
Perceptions	A strong PTPT support infrastructure is essential for a successful IET process	++++
Concerns	Funding opportunities have a strong impact on PTPT support structure	++
	There are concerns about PTPT support provision in the community pharmacy sector	+++
Recommendations	PTPT support structure should mirror pre-registration trainee pharmacists	+++
	There should be an educational supervisor accountable for the IET	+++
	The GPhC should have knowledge and control over the IET of pharmacy technicians	+++

Support available to E&T providers		
Variability and importance of the support structure available to E&T providers to meet the IET standards		
Perceptions	Support structure available for E&T providers has an impact on the IET of pharmacy technicians	++++
	There is suitable training available for college teachers and assessors	+++
Concerns	There is variability in support structure available for educational supervisors	++++
	Many pharmacy professionals do not recognise their need for professional development	+++
Recommendations	Develop a stronger support network for all E&T providers	++++
	Develop a structured induction for educational supervisors	+++
	Instil a culture of CPD and developing others as part of the professional role	++++

Collaborations between educations and training providers		
Variability and importance of collaborations between E&T providers to meet the IET standards		
Perceptions	Collaborations between E&T providers is essential	++++
	Current communication between E&T providers is appropriate	++
Concerns	Current communication between E&T providers needs strengthening	+++
Recommendations	Clarify responsibilities and lines of communication between E&T providers	++++

Monitoring and quality assurance of the IET process		
Fitness for purpose of monitoring and quality assurance systems to meet the IET standards		
Perceptions	The GPhC does not need to be involved in the monitoring and quality assurance process unless there are serious issues	++++
Concerns	E&T processes may not always meet the IET standards	+++
	There is variability between E&T processes	++++
	There may be variability in monitoring and quality assurance criteria	++
Recommendations	Standards should include more robust criteria for dealing with problems, monitoring and quality assurance , including outcomes	++++
	Awarding Bodies should strengthen monitoring and quality assurance by focusing on outcomes	++++
	The GPhC should have knowledge and control PTPTs	+++
	The GPhC should have more oversight of the monitoring and quality assurance of the IET	+

Standards of IET – meeting the professional needs		
Fitness for purpose of the current IET standards		
Perceptions	Current IET standards are fit for purpose	+++
Concerns	Current IET standards are outdated	++++
	Current IET standards are open to interpretation	++++
	There are concerns about implantation of current IET standards by some E&T providers	+++
Recommendations	Clarify the role of the PT to then set the IET standards	++++
	IET standards should provide (measurable) criteria rather than guidance	++++
	IET standards should focus further on patient and qualification outcomes	++++
	IET standards should be future proof	++++

6. Conclusions

All the current IET standards were felt to be essential. There were parts of the curriculum that were not considered to be current that could benefit from revision (for example, the addition of areas that reflect the current scope of practice of pharmacy technicians and the removal of others). The length of the IET as well as the academic level were thought to be appropriate subject to adjustment if the role evolves further; if, for example, the scope of practice widens to include more patient-facing practice. The mode of delivery of education and training was considered to result in variable quality of outcomes and it was suggested that the standards should reflect a more blended and flexible approach to the design and delivery of learning and training. Standards should include more robust criteria for the monitoring of progress and quality assurance; Awarding Bodies should strengthen monitoring and quality assurance by focusing on outcomes.

Much now hinges on clearly defining the role of the pharmacy technician and setting IET standards accordingly. Completion of the review of the legislation concerned with supervision arrangements may provide a direction of travel for this desired clarity. Agreeing core areas of the role of the pharmacy technician on entry to the register should be a useful starting point from which a scope of practice could emerge and develop. Agreement will need to be reached as to how the scope of practice is described and formulated. There are difficulties in dealing with pharmacy technicians in isolation as their role has boundaries with other members of the pharmacy team namely pharmacists and pharmacy support staff. The professional leadership bodies (the Association of Pharmacy Technicians UK and the Royal Pharmaceutical Society) both have a role to play in defining and supporting roles and agreeing developmental standards that go beyond those set out by the GPhC in the initial education and training standards for pharmacists and pharmacy technicians. Defining and describing clear roles for each member of the pharmacy team, their scope of practice and the boundaries between them on entry to the register is one possible approach to realising appropriate IET standards for each of the professional groups and pharmacy support staff. It is also useful to compare approaches taken by other professions.

The current IET standards for pharmacy technicians are aimed at Awarding Bodies and education and training providers; it is suggested that the scope of the standards should be widened to include employers, pre-registration trainee pharmacy technicians and other staff involved in the IET process. Including pragmatic guidance about how the standards could be met is also considered to be a useful addition.

7. Validation and professional scrutiny of the report

The final report underwent a process of validation and professional scrutiny by an external reference group – the London Pharmacy Workforce Group (LPWG). The LPWG brings together senior and experienced pharmacy professionals from NHS organisations and independent organisations providing NHS services. The LPWG co-ordinates and oversees workforce development for pharmacy staff working in London in all providers of NHS services across London.

The LPWG considered the report to be comprehensive, valid and answered the questions that the project set out to ask. Members also stated broad agreement with the report's recommendations. Self-reflection on practice, playing a key role in improving the patient experience and modernising self-practice to meet the evolving medicine and pharmacy-related needs of patients were suggested as also being worthy of consideration. One member suggested greater emphasis on the significant underfunded workload that employers take on (voluntarily) in order to achieve registration of pharmacy technicians. The same member said that it was left to employers to decide how much resource to dedicate to pharmacy technician training and this resulted in considerable variation in the quality of education. The level of work required to deliver NVQs/SVQs was also stated as a barrier to increasing the number of PTPTs required by workforce planning. Finally a comment was made that the report would be of interest to community pharmacists who could provide a sector-specific sense check.

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Glossary

Assessment

The process used by an assessor when they consider the evidence presented and judge it against the standards and the principles for judging evidence.

Assessment Centre

An organisation that gains approval from an Awarding Body to offer QCF/SVQ qualifications to PTPTs. Getting approval means an assessment centre has to prove it has the necessary resources and knows what has to be done to provide QCF/SVQ assessment including quality assurance. The Awarding Body external verifier/quality assurer/consultant will monitor the assessment centre usually twice a year (but frequency of monitoring is also based on risk) to ensure the assessment centre can still meet the requirements to offer QCF/SVQ assessment.

Assessment Criteria

Criteria that establishes what a trainee will be able to do i.e. the PTPTs level of skill/knowledge. The criteria are written in observable terms.

Competence Based Qualifications

Competence-based qualifications mean that evidence of being able to carry out certain tasks to the minimum standards in a real working environment as well as having sufficient knowledge has to be provided.

Education Scotland

National body supporting quality and improvement in Scottish Education.

Estyn

Education and training inspectorate for Wales.

External verifier/quality assurer/consultant

The external verifier/quality assurer/consultant is appointed by the Awarding Body and monitors, quality assures and supports the whole operation of an assessment centre. They will visit the assessment centre usually twice a year (though frequency of visits is also based on risks) to carry out checks. Monitoring can also be conducted remotely.

Evidence

Tangible proof that all assessment criteria are met. These will include: records of observation, questioning, witness testimony, reflective account, work product etc and all the records of assessment.

Expert Witness (EW)

An expert witness testimony is a statement by an individual who has observed a PTPT carrying out a task. The expert witness is a person who has recognised vocational competence and who the assessment centre has identified as being acceptable for providing testimony of the PTPT's practice. The expert witness makes a judgement on whether or not the evidence witnessed meets the standards.

Internal verifier/quality assurer (IQA)

The person who verifies/quality assures that practice meets the required standard (as identified by the Awarding Body and ACCAC/Ofqual/SQA), the assessment process is complete, correct and ensures that the evidence is appropriate to the evidence requirements. The internal verifier/quality assurer can also help agree appropriate assessment methods, sort out any problems or queries that may arise and support assessor development.

Level

The QCF provides different levels of qualifications which are common to all vocational areas i.e. the level indicates the complexity (challenge) of a qualification, which ranges from Entry to Level 8. To gauge the complexity of levels within the QCF: GCSEs grades A - C are equivalent to level 2; GCE A-levels are level 3; and a PhD is the maximum level 8. The SCQF compares the wide range of Scottish Qualifications. It covers achievements from school, college, university and many work-based qualifications.

Mandatory/ Core Units

Compulsory units which are seen as essential for all pharmacy trainees irrespective of your work setting e.g. Ensure your own actions reduce the risk to health and safety.

National Occupational Standards (NOS)

NOS describe the **minimum** standards for work practice. They are developed by Sector Skills Councils which represent employees in a specific sector. When combined with an assessment strategy they can be offered as a qualification.

Observation

PTPTs are observed by the assessor or the agreed expert witness(es). An account of the observation will be written, filmed or taped.

Office of Qualifications and Examinations Regulation (OfQual)

OfQual has responsibility for the approval and regulation of **all** qualifications for post 16 year olds in England and Northern Ireland. The Qualifications Curriculum and Assessment Authority for Wales (ACCAC) and the Scottish Qualifications Authority (SQA) undertake this role for Wales and Scotland respectively.

Office for Standards in Education, Children's Services and Skills (Ofsted)

Ofsted inspects and regulates services that care for children and young people, and services providing education and skills for learners of all ages. Ofsted is a non-ministerial department.

Pre-registration trainee pharmacist

A pre-registration trainee pharmacist is undertaking the final period of training before registering as a pharmacist. The General Pharmaceutical Council (GPhC) requires pre-registration trainee pharmacists to undertake a training period of at least 52 weeks in order to demonstrate their competence against a range of practical and professional criteria known as “Performance Standards”. Providing a pre-registration trainee pharmacist meets these standards they will be eligible to sit the registration assessment in order to join the register of practising Pharmacists.

Pre-registration trainee pharmacy technician (PTPT)

A PTPT is undertaking the GPhC approved level 3 qualifications necessary to register as a pharmacy technician. The training involves both practical experience and study at a further education college or by distance learning.

Pharmacist

A pharmacist is a registered professional who is an expert in medicines and their use. The majority of pharmacists practice in hospital pharmacy, community pharmacy or primary care pharmacy.

Pharmacy Assistant

Pharmacy assistants and dispensing assistants work alongside pharmacy technicians and under the supervision of a registered pharmacist in both hospital and community settings. Staff falling into this category will have a range of roles and responsibilities and therefore different job titles including and not limited to dispenser, dispensing assistant, medicines counter assistant and pharmacy assistant.

Pharmacy Technician

A pharmacy technician is a registered professional who is part of the pharmacy team, working on the supply of medicines and products to patients and working under the supervision of a pharmacist.

Portfolio of Evidence

The format that the PTPT uses to present their evidence. Assessment records are also held in the portfolio, which can be paper or electronic.

Qualifications and Credit Framework (QCF)

The QCF recognises achievement through the award of credit for units and qualifications.

Qualification

A full QCF/SVQ qualification made up of all the required mandatory and optional units.

Simulation

A simulation is a realistic exercise set up to replicate a real work situation. The use of simulation is limited and is specified within each individual Unit within a qualification. Simulation used outside this must be approved by the external verifier/quality assurer/consultant. A simulation should only be used to cover a requirement that cannot be met in the workplace. A practical at a further education college is an example of a simulation.

Sector Skills Councils (SSCs)

SSCs are responsible for developing the NOS on which the QCF qualifications are based. The SSC for health and pharmacy is Skills for Health.

Trainee pharmacy assistant

Trainee pharmacy assistants undertake the level 2 qualification (Certificate in Pharmacy Service Skills or Certificate in Pharmaceutical Science) or units that relate to their area of work (their employer decides which units need to be completed). Trainee pharmacy assistants receive on the job training and their practical skills and experience are assessed.

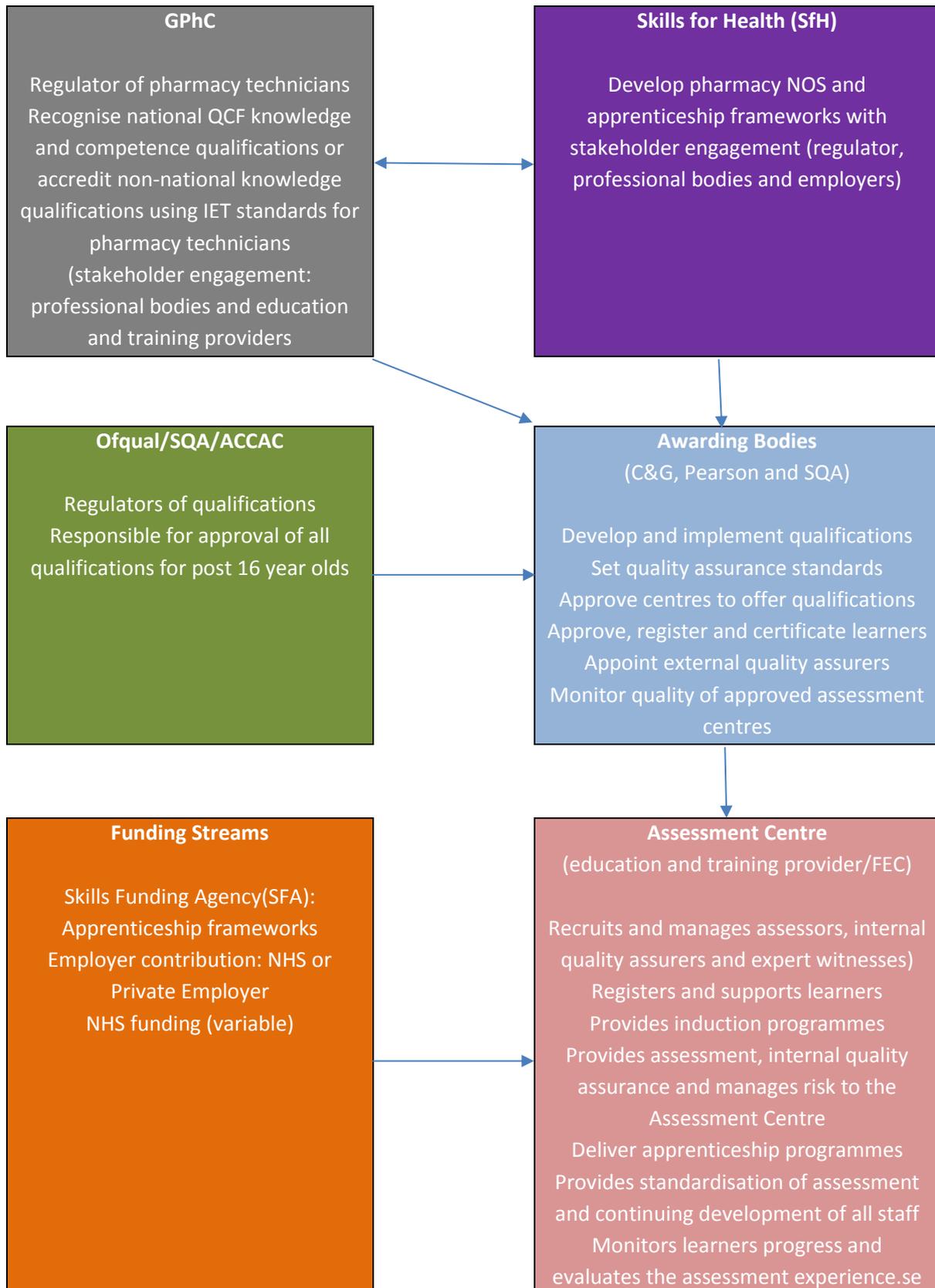
Unit

A group of related specific skills or work tasks e.g. ordering pharmaceutical stock; issuing prescribed items.

Witness Testimony

A witness testimony is a statement by an individual who has observed a PTPT carrying out a task. The witness role is essential as it confirms the authenticity of the evidence. All witnesses must be approved by the assessor and internal verifier/quality assurer. These statements can be written or taped. It is the responsibility of the assessor to make a judgement on whether or not the evidence meets the standards and to ensure the validity of a witness statement; this can be carried out by questioning the learner or additional questioning of the witness.

Key organisational relationships – pharmacy technician qualifications



Appendix 1

Analysis of the initial education and training standards for pharmacy technicians and views on their fitness for purpose – invitation to participate in a research study

The General Pharmaceutical Council (GPhC) has commissioned London Pharmacy Education and Training (LPET) and University College of London (UCL) School of Pharmacy to undertake an independent research project to understand the scope of the current initial education and training (IET) standards for pharmacy technicians (PTs) and the extent to which PT employers think these standards are fit for purpose.

Benefits of this research

Since 2011, the IET of PTs must adhere to [GPhC standards](#). As part of this research, we are inviting a select group of employers for an interview to better understand how these standards are being perceived and if they equip PTs for their role. Your input is important to this work; the evaluation will contribute to a better understanding of the PT profession and the GPhC anticipates that it will benefit you and your organisation in the future. The GPhC will make this analysis publicly available later this year and will use it as a key informative document on developing new education and training standards for PTs.

Interview process and confidentiality

Before the interview, we will send out a short overview of the questions to you. We intend to conduct these interviews in March, preferably face-to-face, but of necessity, by telephone or web-link and we estimate that the interview process will take approximately 30-40 minutes or less.

Your responses will be anonymised and kept strictly confidential and will only be used for the purposes of this workstream.

Next steps

We would like to invite you to participate in this important work. Please call or email back. If you are not able to participate in this study we would be really grateful if you could recommend a colleague from your organisation or professional sector.

We would like to thank you in advance for considering this invitation. If you have any further questions, please do not hesitate to contact one of the members of our team.

Team members	Job title and affiliation	Contact
Professor Ian Bates <i>Project Sponsor</i>	Professor of Pharmacy Education at UCL	i.bates@ucl.ac.uk
Mr Christopher John <i>Project Lead</i>	Assistant Director at LPET	Christopher.John@chelwest.nhs.uk
Mrs Dalgeet Puaar <i>IET for PTs Advisor</i>	Vocational Qualifications Manager at LPET	Dalgeet.Puaar@chelwest.nhs.uk
Dr Helena Rosado <i>IET Researcher</i>	Research Associate at UCL	h.rosado@ucl.ac.uk

Analysis of the initial education and training standards for pharmacy technicians and views on their fitness for purpose – interview schedule

The interview process

We will be conducting a semi-structured interview to gather your views of the current GPhC initial education and training standards for pharmacy technicians and their fitness for purpose. If you are not familiar with the GPhC standards, you may wish to read the attached document. You can also find information on <http://www.pharmacyregulation.org/initial-PT>.

Possible topic discussion points

General questions about the GPhC initial education and training standards

We would initially like to discuss the standards in general, including your opinion on what you consider to be essential, what could be changed and who the standards should be aimed at.

Initial education and training process

We would like to have your views on the initial education and training process such as the appropriateness of the current academic level, the length and mode of delivery as well as the assessment and how the process currently meets the standards. We will also be discussing the level of support given to colleges, education and training providers and pre-registration trainee pharmacy technicians

The use of GPhC initial education and training standards in practice

We will be discussing how consistently the standards are used in practice, what could be changed to ensure their consistent use and the parity between the initial education and training of pharmacy technicians and pharmacists.

Current and future scope of practice for pharmacy technicians

Finally, we would like to discuss your view of the current and future scope of practice for pharmacy technicians, the initial education and training curriculum and how the standards would best meet the needs of initial education and training providers and trainees.

Data privacy

- As part of this process, we are recording the interviews. This will allow us to accurately consolidate and analyse the multiple responses.
- Any quotations will be anonymised and placed into clear English context in our review; we shall not be publishing or releasing full transcripts into the public domain;
- Audio recordings and transcripts will be stored in password protected, secure data storage facilities;
- Only members of the Project Team will have access to the recordings and transcripts for analysis purposes.

We would like to thank you again for participating in this important study. If you have any further questions, please do not hesitate to contact one of the members of our team.

Team members	Job title and affiliation	Contact
Professor Ian Bates <i>Project Sponsor</i>	Professor of Pharmacy Education at UCL	i.bates@ucl.ac.uk
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Dr Helena Rosado <i>IET Researcher</i>	Research Associate at UCL	h.rosado@ucl.ac.uk

Interview Questions

General questions about the GPhC IET standards

1. What IET standards do you consider essential and why?
2. What IET standards could be removed and why?
3. What IET standards are missing and what should be added and why?
4. What could be changed about the IET standards and why?
5. Who should the IET standards be aimed at (Awarding Bodies, employers)?

IET process

6. In your view, what would be the appropriate academic level and length for education and training of a pharmacy technician?
7. Which modes of delivery are available for educating and training pharmacy technicians?
8. How does mode of delivery affect fitness for purpose of the standards?
9. In your view, how fit for purpose are the assessment of competence methods in the IET standards?
10. What support should be given to colleges and education and training providers to ensure they meet the standards?
11. What support should be given to PTPTs to help ensure that the IET standards are being met?

The use of GPhC IET standards in practice

12. How consistently are the IET standards used in practice?
13. What could be changed/added to ensure consistent use of the IET standards between education and training providers (program taught, assessment)?
14. How does the IET of pharmacy technicians differ from that of pharmacists?
15. What could be changed/added to ensure parity between the IET standards of pharmacists and pharmacy technicians?

Current and future scope of practice for pharmacy technicians

16. What is your view of the current scope practice for pharmacy technicians (in your sector) and to what extent do the standards match this current scope of practice?
17. How do you think the pharmacy technician role may change in the future and what would be the implications of that for IET and future standards?
18. To what extent does the curriculum described in the IET standards match current practice?
19. How should the curriculum change to match future practice?
20. What level of regulation is needed around the requirements to be a tutor of a pre-registration trainee pharmacy technician?

Further comments

21. What other comments do you have about the IET standards?

Notes

- Questions should be appropriate for employers and other stakeholders.
- Recruitment: values of candidates – may come up in question 3
- Standards in general – Questions 1, 2, 3, 4 and 5
- Academic level (II, III or IV) and length (currently 2 years) – Question 6
- Modes of delivery and assessment: face-to-face vs distance learning – Questions 7 and 8
- Modes of assessment: assignments vs portfolios vs observation vs exams – Question 9
- Support for E&T providers: induction, training, any problems with PTPTs or patient safety – Questions 10 and 11
- Use of GPhC IET standards in practice – Question 12 and 13
- Parity between E&T provider and between pharmacists and PT – Questions 14 and 15
- Current and future scope of practice – Question 16-20
 - Taking on more of the technical aspects of the pharmacist's role;
 - Taking on more patient facing work according to the skill level required;
 - Public health advice;
 - Medicines reconciliation;
 - Diagnostics e.g. INR testing, chlamydia testing.
- Any other views – Question 21

Authors' Biographies



Helena Rosado

Helena Rosado is a Research Associate at the UCL School of Pharmacy. Her current work is centred in the field of pharmacy practice research and evaluation, particularly related to pharmacy education and training, antimicrobial stewardship and expert practice in clinical applications. Before taking up this post, she worked as a Post-doctoral Research Fellow in drug discovery and development, focusing on mechanisms of antibiotic resistance and novel ways to tackle infectious disease. She holds an MPharm from the University of Lisbon and a PhD in Pharmaceutical and Medical Microbiology from the University of London.



Christopher John

Chris is Assistant Director (Quality & Development) at London Pharmacy Education and Training (LPET) – an NHS service commissioned by Health Education England. Chris leads on the Annual Report, Quality Management and the business plan – acting as project sponsor for developmental projects including the LPET website, eLearning and quality accreditations. Chris is an accredited Myers Briggs (stage 1) practitioner, a 360° leadership feedback facilitator and actively mentors multi-disciplinary members of the healthcare team. Chris also works as Workforce Development Lead for the Royal Pharmaceutical Society leading responses to work-force related consultations from government bodies as well as delivering thought leadership papers.



Dalgeet Puaar

Dalgeet is pharmacy technician that works for London Pharmacy Education and Training as the Vocational Qualifications Manager. Dalgeet takes overall responsibility for vocational qualifications for pharmacy staff across London. Dalgeet manages the PTPT cycle - agreeing funding, numbers of commissions, training agreements with employers, Service Level Agreements with Colleges and Assessment Centres and reporting on recruitment & retention. Dalgeet manages the LPET Vocational Qualifications Team, together they deliver the assessor qualification, IQA qualification, Intermediate Level Apprenticeship in Health (Pharmacy Services) and Level 3 in Pharmacy Services Skills (QCF).



Ian Bates

Ian Bates holds the Chair of Pharmacy Education at the UCL School of Pharmacy and also Professor of Integrated Care Education at Whittington Health. He is a Faculty Fellow of the Royal Pharmaceutical Society and a Fellow of the Royal Statistical Society. Professor Bates is the Director of Education Development for the International Pharmaceutical Federation (FIP), leading an international team in partnership with WHO and UNESCO, and additionally Editor-in-Chief of *Pharmacy Education*. He is the independent Expert Advisor for the Royal Pharmaceutical Society on educational matters. He was appointed a Fellow of the International Pharmaceutical Federation (FIP) in 2013 in recognition of his global leadership in international education development, and has additionally received a Lifetime Achievement Award from UKCPA.

