General Pharmaceutical Council
Survey of 2014-2015 Pre-registration Pharmacy Technician Training
General Pharmaceutical Council Survey of 2014-2015 Pre-registration Pharmacy Technician Training

Our thanks are given to:

James Beckles, Damian Day and Paul Stern at the GPhC

All the pharmacy technicians who gave their time to participate in the pilot and the main survey.

The stakeholders who reviewed and inputted to the draft survey questionnaire.

Professor Patricia Black, Keele University for input to the survey questionnaire and report.

June 2016

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List of abbreviations

ACCAC Qualifications Curriculum and Assessment Authority for Wales
APTUK Association of Pharmacy Technicians UK
BTEC Business and Technology Education Council
CPD Continuous Professional Development
GPhC General Pharmaceutical Council
IET Initial Education and Training
IQA Internal verifier/quality assurer
NPA National Pharmacy Association
NVQ National Vocational Qualifications
PTPT Pre-registration Trainee Pharmacy Technician
SQA Scottish Qualifications Authority
SVQ Scottish Vocational Qualifications
EXECUTIVE SUMMARY

As part of a programme of research to support the review of educational standards, the General Pharmaceutical Council (GPhC) commissioned a national survey of recently registered pharmacy technicians in 2015. The survey was undertaken collaboratively by the University of Bradford (UoB) and Information by Design (IbyD), working closely with the GPhC.

The research objectives were, in relation to initial education and training (IET), to:

- establish trainee experiences and levels of satisfaction
- identify suggestions for improvement, and
- inform GPhC discussions on future educational standards.

Overall, the findings are predominantly positive, with a small number of respondents reporting their experiences as poor. In this summary of findings, the relationships between respondents’ experience and a set of demographic variables are investigated to identify possible explanatory factors: country/region trained in, pharmacy sector and organisation type, age, and ethnic group. Statistically significant differences, where found, are stated.

The survey was conducted online between October 2015 and February 2016 using a questionnaire which drew upon previous surveys by the University of Manchester’s Centre for Pharmacy Workforce Studies (pharmacy technician survey) and UoB/IbyD pre-registration trainee pharmacist surveys. Pharmacy technicians in England, Scotland and Wales who had completed their formal training and registered between November 2014 and October 2015 (1,102) were invited to take part in the survey. In total 331 responses were received, a response rate of 30%. Respondents were generally representative of the total population for characteristics recorded by the GPhC: region/country trained in, gender and ethnic group. The mean age of respondents was 33.3, the median was 30, and the age profile was generally similar to that of the total population of trainees.

Fifty-nine percent of respondents worked in a community pharmacy and 37% in a hospital with the remaining 4% in the pharmaceutical industry, a GP practice or ‘Other’. Within the community pharmacy sector 52% worked in national (large chain) organisations, 18% in non-national (medium chain) organisations and 30% in independent organisations (not part of a chain of five or more pharmacies). Forty-three percent of respondents had worked in a pharmacy setting for up to five years, 42% for between six and ten years and 15% for eleven years or more. Community pharmacy trainees had worked in that setting for significantly longer than their hospital counterparts.

Training profile

Four-fifths of respondents had started their formal training to become a pharmacy technician within the last three years. The majority (57%) of respondents had taken up to two years to complete their pre-registration pharmacy technician training requirements. Respondents from hospital pharmacy were twice as likely to have completed it within this time compared to those from community pharmacy. Approximately one in four respondents were on an apprenticeship scheme during their training and this was more than twice as likely in hospital pharmacy.
For 56% of respondents the education provider for both the knowledge and competence qualifications was a distance provider, with almost all working in a community pharmacy. For a further 29% the education provider was a Further Education (FE) college for the knowledge qualification and an NHS hospital or NVQ provider for the competence qualification. Almost all of these respondents were working in hospital pharmacy.

Unplanned changes during the training period were reported by 40% of respondents including 18% who had a permanent change in their workplace supervisor and 16% a permanent change in their S/NVQ assessor. Respondents who had experienced unplanned changes rated their overall training experience, quality of educational supervision, quality of support and quality of their knowledge qualification less highly.

Over half of the respondents reported that there were other individuals training (e.g. pre-registration pharmacist trainee/s) at the same work place during their training period. Respondents in hospital pharmacy were more than twice as likely to report this (74% compared with 36% in community pharmacy).

**Quality markers of the training experience**

The majority of respondents were very satisfied with the overall quality of pre-registration training they had received and said they would recommend it to a future trainee. Similarly, the quality of support given to trainees, and the knowledge qualification and competence qualification training experiences were highly rated. When asked to rate the overall quality of the educational supervision they had received, the majority rated it as good or very good. There were no significant differences by pharmacy sector for these quality ratings with one exception: the knowledge qualification, where those who worked in a community pharmacy were more likely to rate it as good or very good.

Only a small minority of respondents (4%) rated overall training quality as poor or very poor; a higher proportion rated the quality of support given as poor or very poor (8%) and 9% said they would not recommend their training to a future trainee. Quality of educational supervision received was rated as poor or very poor by 6%.

In relation to the knowledge qualification, respondents in community pharmacy were more satisfied with key aspects than were their colleagues in hospital pharmacy. There were few sectoral differences in relation to the competence qualification, but respondents in community pharmacy were more satisfied with some aspects of their competence qualification than those in hospital pharmacy.

**Adequate experience**

The majority of respondents agreed that the training they received gave them with the knowledge they needed for their role and the skills they needed to support their work, and that the training had prepared them adequately for their role as a pharmacy technician. There were no significant differences by pharmacy sector.

Just over half of respondents had received an induction to their pre-registration pharmacy technician training programme; this was significantly more likely for those in the hospital sector. One in five were unsure whether they had received an induction and this was significantly more likely in community pharmacy. Thirty-eight percent of respondents reported that they had received a learning needs assessment as part of their training programme. Just over half of these reported that
the assessment was subsequently adapted to their developmental needs. One in four respondents in both sectors said they were unsure whether or not they had had a learning needs assessment.

**Available support**

Most respondents reported having regular access to their workplace supervisor, and discussion with their workplace supervisor about learning progress was reported at least monthly by 72%. In addition to support from their workplace supervisor, the majority of respondents (62%) reported receiving feedback from another member of staff at their work place. Respondents from hospital pharmacy were significantly more likely to report that their workplace supervisor negotiated and set targets for their development.

Facilities (e.g. books, computers, internet access) were considered appropriate by the majority of respondents with no differences between sectors. One-quarter of respondents reported that they had no protected time each week for self-study or reflection, with a further one-quarter having had less than one hour. Those who worked in hospitals were more likely to report having more than two hours protected time each week and in contrast, those who worked in large organisation community pharmacies were more likely to report having no protected time each week. However, there were no significant differences by sector in the amount of their own time that respondents reported using to study. Nearly one third of respondents reported using 10 or more hours per week with the same proportion using 6-9 hours.

Most respondents felt supported in their workplace during their training, with 71% agreeing or strongly agreeing that they felt well supported by their workplace supervisor and 76% agreeing or strongly agreeing that they were well supported by other colleagues in their workplace. Respondents in independent community pharmacy organisations were significantly more likely to report having felt well supported by other colleagues.

While 58% of respondents strongly disagreed or disagreed that they felt isolated as a pre-registration trainee pharmacy technician in their workplace, 19% strongly agreed or agreed that they did. Those working in the community pharmacy sector were significantly more likely to report feeling isolated.

**Conclusions**

Many of the findings of the 2015 survey confirm those of the 2013 University of Manchester study. The additional questions included in the 2015 survey enabled comparison of pre-registration trainee pharmacy technicians’ experience of training with that of pre-registration trainee pharmacists. This has provided a more detailed picture of induction, learning needs assessment, and discussion of learning progress. The incidence of, and impact of, unplanned changes to training have also been explored and quantified. The survey has generated data that enable further insights of relevance to the GPhC’s review of educational standards.

As in the previous survey, most respondents rated their pre-registration training highly and reported having a good relationship with their assessor. There were very few differences by country for any aspects covered by the survey, in contrast to the experience of pre-registration trainee pharmacists. There were few differences in respondents’ quality ratings of programmes delivered face-to-face or by distance.
learning. As in the University of Manchester survey, respondents from community pharmacy were more satisfied with some aspects of their knowledge qualification.

In comparison to respondents working in hospital, those in community pharmacy were less likely to have had an induction to their pre-registration training, less likely to report that their workplace supervisor negotiated and set targets for their development, were more likely to report feeling isolated during their training, and were given lower amounts of protected time for self-study/reflection.

Respondents from hospital pharmacy were more likely to be younger, to have worked for five years or less in pharmacy, and were more likely to have been on an apprenticeship scheme. In comparison to community pharmacy, respondents from hospital pharmacy were more likely to be working alongside other pre-registration trainees (both pharmacy technicians and pharmacists) and to be given higher amounts of protected time for self-study/reflection.

Overall, these findings indicate some differences between hospital and community pharmacy in both training infrastructure and organisational culture of training for early career pharmacy professionals. Some, but not all, of these differences might be expected as a result of size of organisation.

The training experience of pre-registration trainee pharmacy technicians could be strengthened by the inclusion of a requirement for induction and learning needs assessment within the GPhC’s standard for IET. Ways of ameliorating the negative effects of unplanned changes in training can be discussed by stakeholders, including the handover process when such a change occurs. The GPhC may also wish to consider including a statement on unplanned changes in the IET standard.
1. BACKGROUND AND METHODOLOGY

In 2015 the General Pharmaceutical Council (GPhC) commissioned a national survey of pharmacy technicians, to be undertaken by the University of Bradford (UoB) and Information by Design (IbyD). The research is part of the GPhC’s survey programme (which also includes a survey of pre-registration trainee pharmacist and pre-registration pharmacist tutor experiences). It is one of three complementary studies commissioned by the GPhC to explore current initial education and training (IET)\(^1\).

AIMS AND OBJECTIVES

The aim of the survey is to better understand pre-registration trainee pharmacy technician’s experiences of initial education and training (provider-delivered and support received in the workplace). The objectives are, in relation to initial training, to establish:

- overall levels of satisfaction
- experience of:
  - support given by the supervising pharmacist & the pharmacy’s training profile (other pharmacist pre-registration and/or technician trainees)
  - systems of support (from the training provider and in the workplace)
  - induction to the training
  - outline training plans and adaptation to the trainee’s needs
  - knowledge qualification
  - competence qualification
  - monitoring of learning progress
  - workload and protected study time
  - available resources
  - reflection and feedback
- suggestions for future improvement

The GPhC wishes to establish actionable findings from its suite of surveys and to use these to develop their approaches to the future education and training of pharmacists and pharmacy technicians.

This section of the report sets out the background to the survey and introduces some key issues in pharmacy technician education and training where the survey findings can provide insight.

INITIAL EDUCATION AND TRAINING (IET) FOR PHARMACY TECHNICIANS

Pharmacy technicians work in community pharmacies, hospitals, the pharmaceutical industry and other settings including GP practices in primary care. Traditionally pharmacy technicians have been involved in preparing, supplying and advising on prescribed medicines and their roles have been developing in recent years with a general direction of travel towards more patient-centred activities. These changes are generally acknowledged to have been predominantly introduced in hospitals and having progressed further there than in community pharmacy.

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\(^{1}\) This aims to support (the GPhC’s) ongoing work to ensure high quality training experience and in particular will feed into the review of (the GPhC) pharmacy technician education standards.
Pharmacy technician registration with the General Pharmaceutical Council (GPhC) became compulsory in 2011. The IET for pharmacy technicians is undertaken while the technician is employed in that role and in combination with part-time study. Education provision is accredited by the GPhC based on its ‘Standards for the initial education and training of pharmacy technicians’\(^2\). In order to become a registered pharmacy technician two qualifications are required – one is knowledge based, the other competence-based. The two qualifications can be completed at the same time, overlapping, or one after the other.

The qualifications for pharmacy technicians are the responsibility of Skills for Health, the Sector Skills Council for Health. The required knowledge qualification is a level 3 Diploma in Pharmaceutical Science (and the equivalent in Scotland), and the competence qualification is a level 3 NVQ QCF Diploma in Pharmacy Service Skills (and the equivalent in Scotland). All units of study in the pharmaceutical science knowledge qualification are mandatory, whereas the pharmacy service skills competence qualification includes 14 mandatory core units plus three optional units, which relate to the sector in which the trainee technician is working. Competence is assessed in the trainee’s own area(s) of practice.

During their period of study (typically 2 years, with up to 5 years allowed), pre-registration trainee pharmacy technicians are assessed on a number of occasions by assessors. The marks/grades are verified/quality assured by both internal and external verifiers/quality assurers. Education providers must have an assessment strategy. This sets out roles and responsibilities for assessors, internal verifiers/quality assurers, expert witnesses and approved assessment centres. Sources of evidence of competence that pre-registration trainee pharmacy technicians may gather include observations of practice, witness testimonies, professional discussions and simulated practice. The evidence collected by trainee technicians is generally expected to be gathered in their workplace (analogous to pre-registration pharmacists).

Courses may be delivered face-to-face (mainly in Further Education Colleges and NHS Trusts/Health Boards) or at a distance. Pre-registration trainee pharmacy technicians working in the hospital sector tend to study in face-to-face mode, whereas their colleagues in the community pharmacy sector tend to study with distance education providers. Three Awarding Bodies – Pearson/Edexcel, City and Guilds and the Scottish Qualifications Authority - approve courses delivered by Further Education Colleges and NHS Trusts/Health Boards as well as providing external verification/quality assurance of assessments. These courses and their quality assurance arrangements are ‘recognised’ by the GPhC in contrast to programmes of distance education (e.g. delivered by the National Pharmacy Association and Buttercups Training) which are accredited directly by the GPhC.

\(^2\) General Pharmaceutical Council (2010). Standards for the initial education and training of pharmacy technicians
KEY ISSUES IN IET FOR PHARMACY TECHNICIANS

CHANGING ROLES OF PHARMACY TECHNICIANS

Alongside the changing roles of pharmacists, pharmacy technicians’ roles have been developed and extended in recent years. Role extensions have generally been introduced first in hospital settings and then some have been adopted or adapted in the community pharmacy sector. The spread of the ‘accredited checking pharmacy technician’ role has been an important facilitator to free-up pharmacists’ work to enable them to extend to more patient-focused activities. In hospital settings, clinical pharmacy technicians now undertake medicines reconciliation by taking medication histories from patients upon admission. They also support timely discharge medicines management. Indeed, Carter’s recent report (2016) specifically recommends that acute trusts should ensure that clinical pharmacy technicians (as well as clinical pharmacists) are used predominantly to deliver clinical pharmacy services and not supply chain activities. The 2014 national study of IET for pharmacy technicians conducted for the GPhC by the University of Manchester reported that stakeholders acknowledged the need to ensure that both GPhC standards and qualifying courses reflect up-to-date practice (Jee et al 2015). This is also a finding of more recent GPhC commissioned research with stakeholders (Rosado et al 2015).

OUTCOMES AND ASSESSMENT OF PRE-REGISTRATION PHARMACY TECHNICIAN TRAINING

The contrast between the stated learning outcomes and their assessment in IET for pre-registration pharmacists and pharmacy technicians is highlighted by Rosado and colleagues - outcomes are described and assessed differently. The former explicitly include a competence hierarchy and the requirement to ‘show how’ (a competence has been achieved). Furthermore, for pre-registration pharmacist trainees there is an explicit description of expectations as a pharmacy professional. Neither of these currently apply in the case of pre-registration trainee pharmacy technicians.

Assessors (who must hold an assessor qualification at Level 3) are employed by either the technician’s workplace or the education provider. Trainee technicians may be directly observed completing tasks and activities by assessors employed in the workplace, peripatetic assessors (e.g. employed by Further Education Colleges) or by Expert Witnesses. A peripatetic or remote assessor undertakes a professional discussion with the trainee in order to establish competence. Rosado and colleagues compare the processes of assessment for pre-registration trainee pharmacy technicians in face-to-face and distance learning provision and question the robustness of assessments in which the technician’s practice is not directly observed. The amount and type of contact between assessors and trainee technicians may differ depending on the education provider and the employer.

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5 Rosado H, John C, Puaar D, Bates I. 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. 2015
There is no data available, however, to indicate any differential impact on trainee experience or outcomes.

**EDUCATIONAL SUPERVISOR ROLE**

Both the Rosado study and the University of Manchester research highlighted disparity between the structure and monitoring arrangements within IET for pre-registration trainee pharmacists and pre-registration trainee pharmacy technicians and concluded that requirements for a supervisor of a trainee pharmacy technician should be tightened. Some (perhaps many) organisations have established a support structure for pharmacy technician pre-registration training which includes a designated educational supervisor (or equivalent) who is accountable and/or responsible for the training. The GPhC’s ‘Guidance on tutoring for pharmacists and pharmacy technicians’ recommends a designated educational supervisor during the IET for pre-registration trainee pharmacy technicians whereas the designated tutor is a requirement for preregistration trainee pharmacists.

**ADVANTAGES AND DISADVANTAGES OF DIFFERENT EDUCATIONAL DELIVERY MODES**

The face-to-face and distance delivery modes each have advantages and disadvantages. The box below summarises some potential disadvantages.

<table>
<thead>
<tr>
<th>Potential disadvantages of different course delivery modes (Rosado et al 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distance Learning:</strong></td>
</tr>
<tr>
<td>• Higher variability in peer interaction and networking opportunities</td>
</tr>
<tr>
<td>• Increased burden to the educational supervisor</td>
</tr>
<tr>
<td>• Higher variability in trainee support structure</td>
</tr>
<tr>
<td>• Higher variability in protected learning time</td>
</tr>
<tr>
<td>• Demonstration of the acquisition of some practical competencies and skills may be challenging</td>
</tr>
<tr>
<td><strong>Face to face:</strong></td>
</tr>
<tr>
<td>• Lower geographical spread</td>
</tr>
<tr>
<td>• Higher financial cost</td>
</tr>
<tr>
<td>• Lower flexibility for learners and employers</td>
</tr>
</tbody>
</table>

In order to account for the strengths and limitations of delivery modes Rosado and colleagues suggested that future IET standards for pre-registration pharmacy technicians might consider the balance between face to face and distance delivery in order to “bridge the gap” with more of a blended learning approach to develop the knowledge, skills and understanding required (Rosado et al 2015).
SUPPORT AVAILABLE TO PRE-REGISTRATION TRAINEE PHARMACY TECHNICIANS

Support at the training site is normally available from the pre-registration trainee pharmacy technician’s line manager/workplace supervisor and other members of the pharmacy team. The level of support is likely to vary according to the size of the organisation as well as organisational culture with respect to the development of pharmacy technicians (for example, whether the organisation has a history of active involvement in pre-registration training of its workforce). A training site may have other trainees (e.g. other pre-registration trainee pharmacy technicians, pre-registration trainee pharmacists and others) that can be a source of support. Findings of the Rosado study highlighted that infrastructure support in the community pharmacy sector was more challenging to achieve due to the lower numbers of staff compared with NHS Trusts/Health Boards.

DEVELOPING THE SURVEY

The starting point for the development of the questionnaire for pharmacy technicians was two questionnaires:

i) the questionnaire that we had developed and used previously for the GPhC’s survey of recently qualified pharmacists about their experiences of pre-registration training (Blenkinsopp, Marshall et al 2014)6,

ii) the questionnaire developed and used by the University of Manchester's Centre for Pharmacy Workforce Studies in 2014 as part of a GPhC scoping study of pharmacy technicians 7. The survey included pharmacy technicians who had registered between February 2013 and February 2014).

The GPhC summarised the objectives as:

- To obtain information about how many trainees there were, where they were studying, whether they were studying on a face to face course or a distance learning course and basic demographics such as age and gender
- To hear trainee views on how their courses were run especially what they perceived as strengths and weaknesses
- To be able to describe the quality and delivery of courses, in particular the teaching, learning and assessment methods and student support

We mapped questions from both surveys to the objectives of the current survey, reviewed relevant background documents and held discussions with stakeholders. Some questions were reworded and a small number of new questions were introduced. Questions from the survey of pharmacists’ pre-registration training experience covered: Induction, Learning needs analysis (the discussion to identify the trainee’s current level of knowledge and competence to help identify their learning and development needs), Frequency of discussions about learning progress, and the incidence and nature of unplanned changes during the pre-registration training experience. The draft questionnaire was subject to internal

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review by the GPhC. The survey questions were amended in the light of the comments received.

In common with the GPhC’s suite of surveys the pharmacy technician survey was web based; IbyD designed the online version of the survey, scripting and routing the questions in consultation with the GPhC and the UoB team. The online survey was field tested internally by the GPhC and UoB staff. A pilot of the online survey was then conducted with 15 pharmacy technicians (6 community pharmacy with a mix of independent and multiples, 7 hospital, 1 prison service and 1 small pharmaceutical company) who had recently completed their initial training. Participants were identified and asked to take part by one FE college and one distance education provider. Key stakeholders were identified by the GPhC and invited to complete and comment on the questionnaire. Some further small amendments to the survey were made and the times taken for survey completion was confirmed for inclusion in the email invitation to participants. The electronic survey was then finalised ready for distribution.

**CONDUCTING THE SURVEY**

Pharmacy technicians who had completed their formal training and registered with the GPhC between November 2014 and October 2015 were included in the survey. The survey was launched at the end of October 2015 and closed in early February 2016. A total of 1,102 individuals were asked to take part in the survey and 331 responses were received, an overall response rate of 30%.

The GPhC provided IbyD with the names and e-mail addresses for the survey population, who were subsequently sent an email with a web link to the survey in late October. Participants could complete the survey on desktop or mobile devices and could save and return to their responses. The invitation email stressed that the survey was anonymous and that no individual or training site would be identifiable.

Follow-up emails were sent to non-responders after eight days and then at intervals of between 6 and 26 days; 7 reminders were sent in total. A text reminder was also sent to non-responders whose mobile phone number was held by the GPhC. The survey ran for a period of sixteen weeks in total. The table below shows the cumulative number of completed surveys after each reminder.

<table>
<thead>
<tr>
<th>Reminder Number</th>
<th>Date</th>
<th>Cumulative number of completed surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email reminder 1</td>
<td>29/10/2015</td>
<td>83</td>
</tr>
<tr>
<td>Email reminder 2</td>
<td>18/11/2015</td>
<td>121</td>
</tr>
<tr>
<td>Email reminder 3</td>
<td>25/11/2015</td>
<td>158</td>
</tr>
<tr>
<td>Email reminder 4</td>
<td>04/12/2015</td>
<td>175</td>
</tr>
<tr>
<td>Email reminder 5</td>
<td>10/12/2015</td>
<td>206</td>
</tr>
<tr>
<td>Email reminder 6</td>
<td>17/12/2015</td>
<td>237</td>
</tr>
<tr>
<td>Email reminder 7</td>
<td>12/01/2016</td>
<td>257</td>
</tr>
<tr>
<td>Text reminder</td>
<td>23/01/2016</td>
<td>301</td>
</tr>
<tr>
<td>Survey closed</td>
<td>03/02/2016</td>
<td>331</td>
</tr>
</tbody>
</table>
SURVEY ANALYSIS

Analysis of the survey was undertaken in SPSS, and data cleaned and checked for errors prior to producing frequency tables. Cross-tabulations were produced by:

- geographical area (London/ rest of England/Scotland/Wales)
- pharmacy sector
- employer type
- gender
- ethnicity.

The sample size provided sufficient data for significance tests to be performed in order to examine differences by key variables. The overall sampling error on this survey of 331 respondents is estimated as ±5.4%. Sampling errors occur because of variation in the number of responses or the representativeness of the sample that responds. Strictly speaking, each question will differ, as the sampling error is also dependent on the individual responses to the question. As such, for a ‘statistically significant’ finding, a difference of approximately 5% may be significant when looking at the full sample. For any differences to be statistically significant in the smaller sub-samples (for example, comparisons at geographical area level), larger differences may be required, depending on the number of responses in each cell. Tests were performed on the sub-samples and any significant differences are stated below the relevant chart/table.

To ensure statistical tests were reliable, some scales were ‘collapsed’ to provide larger cell sizes. This is standard practice in the reporting of surveys. The table below shows an example.

| Overall, how would you rate the quality of your pharmacy technician training experience? |
|-----------------------------------------------|-----------------|
| Full Scale | Collapsed Scale |
| Very good | 129 | Very good/Good | 295 |
| Good | 166 | | |
| Neither good nor poor | 23 | Neither good nor poor | 23 |
| Poor | 8 | Poor/poor | 12 |
| Very Poor | 4 | | |
| Not sure | 1 | | |

In line with GPhC analysis in their suite of surveys and in order to enable comparisons by geographical area (region/country), responses from participants in Scotland (n=24) and Wales (n=19) were analysed separately. The number of respondents was sufficiently large to enable statistical testing for data from respondents working in these countries to be undertaken for some of the variables. There were very few significant differences by country, in contrast to the survey of pharmacist pre-registration trainees.

In the GPhC survey of pharmacist registrants, London was included in the analysis as a separate geographical area. The number of recently registered pharmacy technicians in London was also sufficiently large for this purpose in the current survey. Results are, therefore, presented by Region/Country: London / Rest of England / Scotland / Wales. This analysis was also undertaken for the 2012-13 and
2013-14 surveys of pre-registration trainee pharmacists and for the 2013-14 and 2014-15 survey of pre-registration pharmacist tutors.

Assessment of representativeness of pharmacy technician respondents is not straightforward. The GPhC holds data for the total population of recently registered pharmacy technicians from the point of registration. This data was available for pharmacy technicians eligible to complete the survey: country, gender, age, ethnic group, disability and nationality. Information on pharmacy sector of training is not available from the GPhC’s records so there is no definitive source against which to make a comparison. However, the University of Manchester survey (Gee, op cit) found that over 90% of pharmacy technicians had remained in the same pharmacy sector after completing their initial training and registration and this provides a point of reference. For the future the GPhC may wish to collect and record sector of training at the time of registration of pharmacy technicians. The relative proportions of trainees in the hospital and community pharmacy sectors will depend on workforce needs in these sectors and may or may not be in proportion to the percentages of hospital and community pharmacies.
DEMOGRAPHICS OF RESPONDENTS

GENDER AND AGE

Eighty-four percent (277) of respondents were female, 15% (50) were male and 1% (2) were transgender. Two respondents (1%) did not wish to disclose their gender. Males were significantly more likely to work in the hospital sector (22.2% compared with 10.2% in community pharmacy).

The mean age of respondents was 33.2 and the median age was 30. Just over half, 54% (179) of respondents were aged between 19 and 30, 22% (71) were aged between 31 and 40 and a further 19% (63) were aged between 41 and 50. Five per cent (18) of respondents were aged over 50 years. The chart below shows the age profile of respondents by sector.

There is a significant difference in the age of respondents according to sector. Those who work in the community sector were more likely to be older than those who worked in hospitals.

![Age by Sector (%)](image)

Significant difference between age and pharmacy sector (p=0.000)
**ETHNICITY**

Overall, 79% (260) of respondents were White, 12% (41) were Asian or Asian British, 4% (12) were Black or Black British, 2% (5) from mixed or multiple ethnic groups and 1% (3) from other ethnic groups. 3% (10) of respondents did not disclose their ethnic group.

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>79%</td>
</tr>
<tr>
<td>Mixed/Multiple ethnic groups</td>
<td>2%</td>
</tr>
<tr>
<td>Asian/Asian British</td>
<td>12%</td>
</tr>
<tr>
<td>Black/Black British</td>
<td>4%</td>
</tr>
<tr>
<td>Other ethnic group</td>
<td>1%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>3%</td>
</tr>
</tbody>
</table>

**PHARMACY SECTOR**

Fifty-nine percent (59%, 196) of respondents worked in a community pharmacy and 35% (117) worked in a hospital. Four respondents (1%) worked in a GP practice, five (2%) in the pharmaceutical industry and 3% (9) in ‘Other’. Within the community pharmacy sector just over half the respondents (52%, 101) worked in a large (national chain) organisation, 18% (36) worked in a medium (non-national chain) organisation and 30% (59) worked in an independent organisation (not part of a chain of five or more pharmacies). Previous research indicates that the vast majority (90%) would have completed their pre-registration training in the same sector (Gee, *op cit*).

**GEOGRAPHY**

Nearly three-quarters (73%, 241) of respondents worked in a region of England not including London, 14% (47) worked in London, 7% (24) worked in Scotland and 6% (19) worked in Wales.
Seventy-one percent of respondents (71%, 235) worked 35 hours or more each week; 29% (96) worked fewer than 35 hours each week. Those working fewer than 35 hours each week were more likely to be in community pharmacy (44% compared with 3% in hospital pharmacy). The mean number of hours worked was 34.6 and the median hours worked was 37.5.

Forty-three percent of respondents (43%, 142) had worked in a pharmacy setting for up to five years (of whom 11% (35) had worked for up to two years, 11% (38) for three years, 11% (36) for four years and 10% (33) for five years). Forty-two per cent (138) of respondents had worked in a pharmacy setting for between six and ten years and 15% (51) for eleven years or more. The mean number of years worked in a pharmacy setting was 7.0 and the median years worked was 6.0.

Analysis of the relationship between length of time working in the pharmacy setting and age showed that respondents who had worked in the pharmacy setting for less than six years were younger than those who had worked for six or more years. There is a significant difference in the number of years that respondents had worked in the pharmacy setting according to sector. Those who work in the community sector were more likely to have worked in the pharmacy setting longer than those who worked in hospitals.
One-fifth (20%, 66) of respondents had between one and five other individuals working at their pharmacy workplace; 36% (118) have between six and ten other pharmacy team members, 14% (46) between twenty-one and fifty and 18% (60) fifty-one or more. After excluding one outlier of 2000, the mean number of people in the workplace was 33.7 and the median was 9 (range 1 to 600).

<table>
<thead>
<tr>
<th>Number of people at workplace (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
</tr>
<tr>
<td>6-10</td>
</tr>
<tr>
<td>11-20</td>
</tr>
<tr>
<td>12-20</td>
</tr>
<tr>
<td>13-30</td>
</tr>
<tr>
<td>31-50</td>
</tr>
<tr>
<td>41-50</td>
</tr>
<tr>
<td>51-100</td>
</tr>
<tr>
<td>100+</td>
</tr>
</tbody>
</table>

n=331

**START AND LENGTH OF TRAINING**

Four-fifths of respondents (80%) started their formal training to become a pharmacy technician within the last three years (42% in 2013 and 38% in 2012), with the remaining 20% starting between 2009 and 2011.

<table>
<thead>
<tr>
<th>Year in which started formal training to become a pharmacy technician</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
</tr>
<tr>
<td>2012</td>
</tr>
<tr>
<td>2011</td>
</tr>
<tr>
<td>2010</td>
</tr>
<tr>
<td>2009</td>
</tr>
</tbody>
</table>

n=331
When asked how long it had taken to complete their pre-registration pharmacy technician knowledge and competence qualification training requirements, over half (57%, 188) reported that it had taken two years or less. It should be noted that this question refers to the knowledge and competence qualification\(^8\). A further 35% (115) of respondents had taken over two years but less than three years, 7% (24) between three and four years and 1% (4) more than 4 years to complete their training requirements. Hospital pharmacy technicians were twice as likely to have completed their training within two years (86% of hospital trainees compared with 41% in community pharmacy).

![Time taken to complete training requirements (%)](image)

n=331

**APPRENTICESHIP SCHEME**

Twenty-three percent (23%, 77) of respondents were on an apprenticeship scheme during their training. Respondents working in hospitals were more likely to have been on an apprenticeship scheme during their training than those in community pharmacies, with 36% (42) of respondents in a hospital pharmacy and 15% (30) of respondents in a community pharmacy having been on an apprenticeship scheme during their training.

**OTHER TRAINEES AT TRAINING SITE**

Over half of respondents (52%, 172) reported that there were other individuals in their workplace who were training for various qualifications during the same time period. The presence of other trainees was more likely in hospital pharmacy (74% of respondents compared with 36% in community pharmacy). Of these, 80% (138) reported that there was another pre-registration trainee pharmacy technician training at the same site, 60% (103) a pre-registration pharmacist, 51% (88) a dispensing assistant/dispenser and 27% (47) a medicines counter assistant.

---

\(^8\) PTPTs need to undertake 2 years as a minimum of work experience as part of the criteria for registration, but could finish their knowledge and competence qualification sooner than that.
There was a significant difference in the type of other trainees at the same training site according to sector:

- Those who worked in the hospital sector were more likely to have a pre-registration pharmacist training at the site.
- Those who worked in the hospital sector were more likely to have a pre-registration pharmacy technician training at the site.
- Those who worked in the hospital sector were more likely to have a dispensing assistant or dispenser training at the site.
- Those who worked in the community sector were more likely to have a medicines counter assistant training at the site.

**Other individuals training at training site by sector (%)**

<table>
<thead>
<tr>
<th>Training Type</th>
<th>Hospital (n=117)</th>
<th>Community Pharmacy (n=196)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-reg pharmacist</td>
<td>7%</td>
<td>93%</td>
</tr>
<tr>
<td>Pre-reg pharmacy technician</td>
<td>18%</td>
<td>82%</td>
</tr>
<tr>
<td>Dispensing assistant/dispenser</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Medicines counter assistant</td>
<td>22%</td>
<td>78%</td>
</tr>
</tbody>
</table>

Significant difference between pre-registration pharmacist training at training site and pharmacy sector (p=0.000)
Significant difference between pre-registration pharmacy technician training at training site and pharmacy sector (p=0.000)
Significant difference between dispensing assistant/dispenser training at training site and pharmacy sector (p=0.027)
Significant difference between medicines counter assistant training at training site and pharmacy sector (p=0.005)
For 56% (187) of respondents both the knowledge and competence qualifications were provided by an organisation that delivered the learning materials and assessment at a distance. For 29% (97) of respondents the education provider was a Further Education College for the knowledge qualification and a NHS Trust/NVQ provider for the competence qualification. These organisations delivered these elements face-to-face. A Further Education College was the education provider for both the knowledge and competence qualifications for 5% (16) of respondents. For 2% (8) of respondents the education provider was a Further Education College for the knowledge qualification and a distance provider for the competence qualification. Seven per cent (23) of respondents reported different combinations e.g. a distance provider for the knowledge qualification and a NHS hospital or NVQ provider for the competence qualification.

<table>
<thead>
<tr>
<th>Education provider (%)</th>
<th>Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A distance provider for both the knowledge and competence qualifications</td>
<td>187</td>
<td>56%</td>
</tr>
<tr>
<td>A FE College for both the knowledge and competence qualifications</td>
<td>16</td>
<td>5%</td>
</tr>
<tr>
<td>A FE College for my knowledge qualification and a NHS hospital / NVQ provider for my competence qualification</td>
<td>97</td>
<td>29%</td>
</tr>
<tr>
<td>A FE College for my Knowledge qualification and a Distance Provider for my Competence qualification</td>
<td>8</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>23</td>
<td>7%</td>
</tr>
</tbody>
</table>

There were no significant differences between those who had a distance provider and those who had a FE college for their knowledge qualification when asked about the education provider for their knowledge qualification. There was also little difference in the rating of the quality of the knowledge qualification training experience between who had a distance provider and those who had a FE college provider.

There were no significant differences between those who had a distance provider and those who had a FE college, NHS hospital/NVQ provider for their competence qualification when asked about the education provider for their competence qualification. There was also little difference in rating of the quality of the competence qualification training experience between who had a distance provider and those who had a FE college, NHS hospital or NVQ provider.
WHO CHOSE THE KNOWLEDGE QUALIFICATION PROVIDER?

For the knowledge qualification, the education provider was chosen entirely by the respondent’s employer for 79% (261) of respondents. Ten per cent (32) of respondents indicated that they had chosen the education provider themselves, and 9% (31) of respondents chose the education provider jointly with their employer. Seven responded that the education provider had been chosen in other ways, e.g. the Wales Centre for Pharmacy Professional Education.

WHO CHOSE THE COMPETENCE QUALIFICATION PROVIDER?

For the competence qualification the education provider was chosen entirely by their employer for 80% (265) of respondents. Nine per cent (31) chose the education provider themselves, and 9% (29) jointly with their employer. Six responded that the education provider had been chosen in other ways.
WHO FUNDED THE KNOWLEDGE QUALIFICATION TRAINING?

When asked how their knowledge qualification was funded, 82% (272) of respondents indicated that this had been mainly funded (either mostly or entirely) by their employer; 9% (31) mainly funded themselves (either mostly or entirely). 4% (12) responded that this was funded jointly by themselves and their employer. Five per cent (16) of respondents indicated that their knowledge qualification had been funded by someone other than their employer or themselves. Other ways in which knowledge qualifications had been funded included: via an apprenticeship; by the government or Welsh Assembly; by a FE College; and through an age-related fee exemption scheme from a course provider.

![How knowledge qualification was funded](chart)

n=331

WHO FUNDED THE COMPETENCE QUALIFICATION TRAINING?

For the competence qualification, 85% (280) of respondents were funded either mostly or entirely by their employer; 9% (28) funded themselves either mostly or entirely. Three per cent of respondents were funded jointly by themselves and their employer. ‘Someone else’ had funded the remaining 4% (13), including: via an apprenticeship; by the government or Welsh Assembly; by a FE College; through an age-related fee exemption scheme from a course provider.

![How competence qualification was funded](chart)

n=331
PERCEPTIONS OF QUALITY

Respondents were asked to give their opinion of the overall quality of their pharmacy technician training, and their likelihood to recommend it to future trainees.

OVERALL QUALITY

When asked to rate the overall quality of their pharmacy technician training, 89% (295) of respondents agreed it was good or very good with only 4%\(^9\) (12) rating it as poor or very poor.

![Overall quality of pharmacy technician training experience (%)](image)

\(n=331\)

QUALITY OF KNOWLEDGE QUALIFICATION TRAINING

When asked to rate the overall quality of their knowledge qualification training experience, 88% (290) of respondents rated it as good or very good with 5% (14) rating it as poor or very poor.

![Overall quality of knowledge qualification training experience (%)](image)

\(n=331\)

There was a significant difference in rating of the overall quality of the knowledge qualification training experience according to sector. Those who worked in a

\(^9\) Note: Poor and very poor sum to 4% due to rounding. To one decimal place the figures are: poor 2.4%, very poor 1.2%.
community pharmacy were more likely to rate the overall quality of the knowledge qualification experience as very good or good.

QUALITY OF COMPETENCE QUALIFICATION TRAINING

When asked to rate the overall quality of their competence qualification training experience, 86% (285) of respondents rated it as good or very good with just 4% (13) rating it as poor or very poor.

![Overall quality of competence qualification training experience (%)](image)

n=331

QUALITY OF EDUCATIONAL SUPERVISION

When asked to rate the overall quality of the educational supervision they had received during their pharmacy technician training, 83% (276) of respondents rated it as good or very good with 6% (21) rating it as poor or very poor.

![Overall quality of educational supervision (%)](image)

n=331

There was a significant difference in rating of the overall quality of the education supervision according to years worked in a pharmacy setting. Those who had worked in a pharmacy setting for less than six years were more likely to rate the overall quality of the education supervision they received as poor or very poor.
QUALITY OF SUPPORT

When asked to rate the overall quality of the support they had received during their pharmacy technician training, 79% (261) of respondents rated it as good or very good with 8% (27) rating it as poor or very poor.

![Overall quality of support (%)](image)

n=331

OVERALL RECOMMENDATION

Eighty percent (80%, 266) of respondents agreed or strongly agreed with the statement ‘I would recommend the training I have received to future pre-registration trainee pharmacy technicians’. 9% (29) of respondents disagreed or strongly disagreed that they would recommend the training they had received to future pre-registration trainee pharmacy technicians.

![‘I would recommend the training I have received to future trainee pharmacy technicians’ (%)](image)

(n=331)
INDUCTION

Over half (54%, 179) of respondents had received an induction to the pre-registration pharmacy technician training programme; this was more likely to be reported by respondents working in hospital pharmacy. Twenty-four per cent (81) of respondents had not received an induction and 21% (71) were unsure whether they had received an induction.

There is a significant difference between respondents who had received an induction to the pre-registration pharmacy technician training programme according to sector (p=0.000), years worked in a pharmacy setting (p=0.000) and gender (p=0.022). Those working in a hospital (73% compared with 43% in community pharmacy), who had worked in a pharmacy setting for less than six years and men were more likely to have received an induction.

In both the community and the hospital sector, a higher proportion of men had received an induction than women.

Of the pharmacy technician trainees who had received an induction to the pre-registration pharmacy technician training programme, the majority (84%, 150) rated the quality of the induction as very good or good. Ten per cent rated the quality of the induction as ‘neither good nor poor’ and 6% (10) rated the quality of the induction as poor. No respondents rated the quality of the induction as very poor. One respondent was unsure how they would rate the quality of the induction.
Forty per cent of respondents reported that one or more unplanned changes occurred during their pre-registration training period. A number of types of changes were reported: 18% (60) of respondents reported a permanent change in their workplace supervisor; 16% (52) a permanent change in their S/NVQ assessor; this was much more likely to occur in the hospital sector than community (25% compared with 8%); 6% (21) had been moved permanently to a different workplace.

Eighteen per cent (59) had an unplanned change for other reasons which included: changes in the respondent’s personal circumstances that affected their training (for example maternity leave or a period of time off due to ill health); a change of supervisor; and a change in the ownership of the community pharmacy where they were training.

There is a significant difference in reporting of unplanned changes according to sector, size of community pharmacy and years worked in a pharmacy setting. Those who work in the hospital sector or who had worked in any pharmacy sector for less than six years were more likely to report an unplanned permanent change in S/NVQ assessor. Those who work in a medium organisation community pharmacy were more likely to report an unplanned permanent move to a different workplace.
Those who had experienced unplanned changes during their training period were significantly less likely to rate their overall training experience, the quality of their educational supervision, the quality of support, and the quality of their knowledge qualification as good or very good:

- Eighty-five per cent of those who had experienced unplanned changes rated their overall training experience as very good or good, compared to 93% of those who had not.
- Seventy-eight per cent of those who had experienced unplanned changes rated the quality of their educational supervision as good or very good compared to 88% of those who had not.
- Seventy-four per cent of those who had experienced unplanned changes rated the quality of support received as good or very good compared to 83% of those who had not.
- Eighty-two per cent of those who had experienced unplanned changes rated the quality of the knowledge qualification training as good or very good compared to 93% of those who had not experienced unplanned changes.

### ASSESSING LEARNING NEEDS

#### LEARNING NEEDS ASSESSMENT

Thirty-eight percent (38%, 126) of respondents had a learning needs assessment as part of their technician training programme. Thirty-five per cent (116) had not had a learning needs assessment and 27% (89) were not sure.

![Had learning needs assessment (%)](attachment:image.png)
ADAPTING THE LEARNING NEEDS ASSESSMENT

Of the respondents who had a learning needs assessment as part of their training programme, over half (56%, 71) agreed or strongly agreed with the statement ‘the learning needs assessment was adapted to my developmental needs during my training’. Eight per cent (10) of respondents disagreed or strongly disagreed with the statement.

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>17%</td>
<td>40%</td>
<td>34%</td>
<td>7%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

n=331

There is a significant difference in agreement with the statement ‘the learning needs assessment was adapted to my developmental needs during my training’ according to geographical location of the workplace and ethnic group. Those who work in London and those from non-white ethnic groups were more likely to agree with this statement.

DISCUSSING LEARNING PROGRESS AND RECEIVING FEEDBACK

Discussion with their workplace supervisor was reported at least monthly by 72% (239) of respondents, with 5% (15) stating every 2 months, 9% (30) ‘only at progress review’ (i.e. every 3 months), and a further 12% (39) less often than this. There were no significant differences by pharmacy sector.

n=331
When asked about who, apart from their workplace supervisor, they had received feedback from, 93% (307) of respondents reported receiving feedback from their S/NVQ assessor and 62% (204) from another member of staff at their work place. Five per cent (17) of respondents had received feedback from someone else. These included FE College tutors and representatives of Buttercups training.

![Other people feedback was received from (%)](chart)

<table>
<thead>
<tr>
<th>Identity of those providing feedback (%)</th>
<th>Other</th>
<th>Member of staff in my work place</th>
<th>S/NVQ assessor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (n=50)</td>
<td>16%</td>
<td>74%</td>
<td>90%</td>
</tr>
<tr>
<td>Female (n=277)</td>
<td>3%</td>
<td>59%</td>
<td>93%</td>
</tr>
<tr>
<td><strong>Employer Type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent organisation (n=59)</td>
<td>5%</td>
<td>68%</td>
<td>93%</td>
</tr>
<tr>
<td>Medium organisation (n=36)</td>
<td>0%</td>
<td>61%</td>
<td>81%</td>
</tr>
<tr>
<td>Large organisation (n=101)</td>
<td>2%</td>
<td>49%</td>
<td>95%</td>
</tr>
<tr>
<td><strong>Sector</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital (n=117)</td>
<td>9%</td>
<td>68%</td>
<td>97%</td>
</tr>
<tr>
<td>Community Pharmacy (n=196)</td>
<td>3%</td>
<td>57%</td>
<td>92%</td>
</tr>
</tbody>
</table>

n=331

Statistical analysis has shown significant differences according to sector of work, employer type and gender:

- Those who worked in a hospital were more likely to have received feedback from an S/NVQ assessor or ‘other’.
- Those who worked in a medium organisation community pharmacy were less likely to have received feedback from an S/NVQ assessor.
- Those who worked in a large organisation community pharmacy were less likely to have received feedback from a member of staff in their work place.
- Men were more likely to have received feedback from a member of staff in their work place or ‘other’.

<table>
<thead>
<tr>
<th><strong>Identity of those providing feedback (%)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Employer Type</strong></td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Sector</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

n=331

Significant difference between received feedback from S/NVQ assessor and pharmacy sector (p=0.045)
Significant difference between received feedback from other and pharmacy sector (p=0.016)
Significant difference between received feedback from S/NVQ assessor and employer type (p=0.022)
Significant difference between received feedback from member of staff in my work place and employer type (p=0.050)
Significant difference between received feedback from member of staff in my work place and gender (p=0.046)
Significant difference between received feedback from other and gender (p=0.000)
When asked about their workplace supervisor, 80% (266) of respondents agreed or strongly agreed that they received support when they had found situations challenging; 10% (34) disagreed or strongly disagreed. Seventy-seven per cent (256) of respondents agreed or strongly agreed that their workplace supervisor cared about their progress, and 75% (247) agreed or strongly agreed that their workplace supervisor gave constructive feedback. There were lower levels of agreement with the statements ‘Helped me to identify my learning needs’ and ‘Set targets for my development through a process of negotiation with me’.

<table>
<thead>
<tr>
<th>Workplace Supervisor (%)</th>
<th>Strongly agree/agree</th>
<th>Neither agree nor disagree</th>
<th>Strongly disagree/disagree</th>
<th>Not sure/not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported me when I found situations challenging</td>
<td>80%</td>
<td>9%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>Cared about my progress</td>
<td>77%</td>
<td>13%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>* Gave constructive feedback that helped my development</td>
<td>75%</td>
<td>13%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>Fully supported my educational development throughout my training</td>
<td>73%</td>
<td>13%</td>
<td>14%</td>
<td>1%</td>
</tr>
<tr>
<td>* Gave me accurate feedback which reflected my performance</td>
<td>73%</td>
<td>13%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>* Gave me the opportunity to contribute and put forward my views on my development</td>
<td>72%</td>
<td>13%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Helped me to reflect on my performance</td>
<td>72%</td>
<td>15%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Helped me to identify my learning needs</td>
<td>50%</td>
<td>20%</td>
<td>20%</td>
<td>2%</td>
</tr>
<tr>
<td>Set targets for my development through a process of negotiation with me</td>
<td>58%</td>
<td>18%</td>
<td>23%</td>
<td>2%</td>
</tr>
</tbody>
</table>

n=331

* = significant difference by one or more sub-group

Statistical analysis has demonstrated the following significant differences:

- those who worked in the hospital sector were significantly more likely to agree that their workplace supervisor set targets for development through a process of negotiation.
- those who had worked in the pharmacy sector for less than six years were significantly more likely to agree that their workplace supervisor gave constructive feedback that helped development.
- those who had worked in the pharmacy sector for less than six years were significantly more likely to agree that their workplace supervisor gave accurate feedback which reflected their performance.
- those who worked in a hospital, those who had worked in the pharmacy sector for less than six years and men were significantly more likely to agree that their workplace supervisor gave the opportunity to contribute and put forward views on their development.
GIVING FEEDBACK TO THEIR WORKPLACE SUPERVISOR

One-third of respondents (33%, 108) reported that their workplace supervisor had asked for feedback from them as a trainee on the support they had provided. Fifty-seven per cent (189) reported that their workplace supervisor had not asked for feedback and 10% (34) were not sure if they had been asked to provide feedback. Of the 33% of respondents who had been asked for feedback, the majority (95%, 103) agreed or strongly agreed with the statement 'my workplace supervisor responded positively to my feedback on the support they gave me'. Only 3% (3) disagreed or strongly disagreed with the statement.

Statistical analysis has indicated that those who worked in the hospital sector and those from non-white ethnic groups were significantly more likely to report that their workplace supervisor had asked for feedback on the support they had provided.

ASPECTS OF THE KNOWLEDGE QUALIFICATION

When asked about the knowledge qualification, 85% (282) of respondents agreed or strongly agreed that they had received regular written feedback from the education provider about their assessments; 8% (28) disagreed or strongly disagreed. Eighty-four per cent (277) of respondents agreed or strongly agreed that the content was relevant to their practice as a qualified pharmacy technician. There were lower levels of agreement that the number of exams was appropriate and that they had received regular verbal feedback about assessments, with 67% (223) and 66% (220) agreeing respectively.

<table>
<thead>
<tr>
<th>Knowledge Qualifications (%)</th>
<th>Strongly agree/agree</th>
<th>Neither agree nor disagree</th>
<th>Strongly disagree/disagree</th>
<th>Not sure/not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>* I received regular written feedback from the education provider about my assessments</td>
<td>85%</td>
<td>5%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>* The content was relevant to my practice as a qualified pharmacy technician</td>
<td>84%</td>
<td>10%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>* The feedback I received helped me to improve my performance</td>
<td>81%</td>
<td>12%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>* I received feedback in a timely manner</td>
<td>80%</td>
<td>10%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>* The content was presented in an interesting way</td>
<td>75%</td>
<td>15%</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>The number of assignments I was required to complete was appropriate</td>
<td>70%</td>
<td>17%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>* The number of exams I was required to complete was appropriate</td>
<td>67%</td>
<td>14%</td>
<td>6%</td>
<td>13%</td>
</tr>
<tr>
<td>I received regular verbal feedback from the education provider about my assessments</td>
<td>66%</td>
<td>13%</td>
<td>18%</td>
<td>3%</td>
</tr>
</tbody>
</table>

n=331

* = significant difference by one or more sub-group
Statistical analysis has demonstrated the following significant differences:

- Those who worked in a community pharmacy were more likely to agree that the content of the knowledge qualification was relevant to practice as a qualified pharmacy technician.
- Those who worked in a community pharmacy and those who had worked in a pharmacy setting for six years or more were more likely to agree that the content of the knowledge qualification was presented in an interesting way.
- Those from white ethnic groups were more likely to agree that the number of compulsory exams was appropriate.
- Those who worked in a community pharmacy and those who had worked in a pharmacy setting for six years or more were more likely to agree that respondents had received regular written feedback from the education provider about assessments.
- Those who worked in a community pharmacy and those who had worked in a pharmacy setting for six years or more were more likely to agree that they had received feedback in a timely manner.
- Those who worked in a community pharmacy and those who had worked in a pharmacy setting for six years or more were more likely to agree that the feedback they had received had helped to improve their performance.

ACCESSING SUPPORT FOR THE KNOWLEDGE QUALIFICATION

When asked about the education provider for the knowledge qualification, the majority of respondents (93%, 308) agreed or strongly agreed that they knew who to contact if they needed assistance. Eighty-eight per cent (290) indicated that they felt comfortable asking questions when they needed assistance, 79% (260) that they were given clear instructions and 77% (256) that they felt supported by staff.

Respondents from non-white ethnic groups were more likely to agree that they felt supported by staff and were also more likely to agree that they were given clear instructions on the tasks they needed to complete for the knowledge qualification.
When asked about competence qualifications, 93% (308) of respondents agreed or strongly agreed that they had received regular written feedback from the assessor about their assessments to support their learning, and 90% (297) indicated that they could ask their assessor questions when they needed assistance. There were lower levels of agreement that the content of the learning materials was presented in an interesting way, with only 67% (222) agreeing this. Approximately two-thirds (64%, 212) of the respondents agreed that the number of pieces of evidence required to demonstrate competence in each unit/module was about right; 21% (69) disagreed.

Statistical analysis has demonstrated the following significant differences:

- those who worked in a community pharmacy and those in London were more likely to agree that the content was presented in an interesting way.
- those who worked in London were more likely to agree that the number of pieces of evidence they had to collect to demonstrate competence in each unit/module was about right.
- those who worked in a community pharmacy were more likely to agree that they received regular written feedback from their assessor(s) on their assessments.
- those who work in a community pharmacy were more likely to agree that they received feedback from their assessors in a timely manner.
- those from non-white ethnic groups were more likely to agree that the feedback they received helped them to improve their skills.
ACCESSING SUPPORT FOR THE COMPETENCE QUALIFICATION

When asked about the education provider for their competence qualification, 93% (309) of respondents agreed or strongly agreed that they knew who to contact when they need assistance. Eighty-nine per cent (294) felt comfortable asking questions; 82% (273) that they felt supported by staff and 80% (266) that they were given clear instructions on tasks they needed to complete.

There is a significant difference in agreement between respondents according to geographical location with regard to their knowledge about who to contact when they needed assistance. Those who worked in Wales were more likely to disagree that they knew who to contact when they needed assistance.

There is a significant difference in agreement between respondents according to geographical location with regard to how comfortable they felt about asking questions when they needed assistance. Those who worked in London were more likely to agree that they felt comfortable asking questions when they needed assistance.

RELATIONSHIP WITH ASSESSOR

Eight-eight percent (88%, 290) of respondents described their relationship with their assessor as very good or good. Only 3% (10) of respondents described their relationship with their assessor as very poor or poor. Two per cent (8) of respondents described their relationship with their assessor as ‘other’, with the reasons for this including only communicating with their assessor by phone and feeling that they had no relationship, never having directly communicated with their assessor, thinking that they did not have an assessor, having a change in their assessor and their assessor being too busy to help them.
Statistical analysis has shown the following significant differences between respondents:

- those who had worked in a pharmacy setting for less than six years were more likely to rate relationship with their assessor as very good or good.
- those who worked in Wales were more likely to strongly disagree or disagree that they knew who to contact when they needed assistance.
- those who worked in Wales were more likely to strongly disagree or disagree that they felt comfortable asking questions when they needed assistance.

### SUPPORT IN THE WORKPLACE

Seventy-one percent (71%, 236) of respondents agreed or strongly agreed that they felt well supported by their workplace supervisor and over three-quarters (76%, 252) agreed or strongly agreed that they were well supported by other colleagues in their workplace. There were lower levels of agreement on statements about support relating to their line manager and employing organisation, with two-thirds (66%, 220) agreeing that they felt supported by their line manager, and 63% (209) who felt supported by their employing organisation. There were no significant differences by sector. Approximately three-quarters of respondents (73%, 241) also agreed or strongly agreed that their workplace had appropriate facilities to help them complete their competence qualifications; a similar proportion (72%, 239) agreed or strongly agreed that their workplace had appropriate facilities to help them complete the knowledge-based components of their training. Over half of the respondents (58%, 193) strongly disagreed or disagreed that they felt isolated as a trainee pharmacy technician in their workplace, while nearly one-fifth (19%, 62) strongly agreed or agreed that they felt isolated as a trainee pharmacy technician in their workplace. The remainder were neutral or unsure.

#### Support in the Workplace (%)

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly agree/agree</th>
<th>Neither agree nor disagree</th>
<th>Strongly disagree/disagree</th>
<th>Not sure/not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>* I was well supported by other colleagues in the workplace</td>
<td>76%</td>
<td>14%</td>
<td>9%</td>
<td>1%</td>
</tr>
<tr>
<td>My workplace had appropriate facilities (e.g. books, computers, internet access etc) to help me complete my...</td>
<td>73%</td>
<td>12%</td>
<td>15%</td>
<td>1%</td>
</tr>
<tr>
<td>My workplace had appropriate facilities (e.g. books, computers, internet access etc) to help me complete the...</td>
<td>72%</td>
<td>11%</td>
<td>16%</td>
<td>2%</td>
</tr>
<tr>
<td>I felt well supported by my workplace supervisor</td>
<td>71%</td>
<td>14%</td>
<td>14%</td>
<td>1%</td>
</tr>
<tr>
<td>I felt well supported by my line manager</td>
<td>66%</td>
<td>15%</td>
<td>17%</td>
<td>2%</td>
</tr>
<tr>
<td>* My employer cared about my progress</td>
<td>65%</td>
<td>18%</td>
<td>15%</td>
<td>2%</td>
</tr>
<tr>
<td>I felt well supported by my employing organisation</td>
<td>63%</td>
<td>15%</td>
<td>21%</td>
<td>1%</td>
</tr>
<tr>
<td>* I felt isolated as a trainee pharmacy technician in my place of work</td>
<td>19%</td>
<td>20%</td>
<td>58%</td>
<td>3%</td>
</tr>
</tbody>
</table>

(n=331)

* = significant difference by one or more sub-group
Statistical analysis has demonstrated the following significant differences:

- those who worked in independent organisation community pharmacies were more likely to agree that they were well supported by other colleagues in the workplace.
- those who worked in a community pharmacy were more likely to strongly disagree or disagree that their employer cared about their progress.
- those who work in a hospital were more likely to strongly disagree or disagree that they felt isolated as a trainee pharmacy technician in their place of work.

**TIME FOR STUDY**

**PROTECTED TIME**

One-quarter of respondents (25%, 83) reported that they did not have any protected time during their working week for self-study or reflection when trainees. A further one-quarter (25%, 82) reported having had less than one hour per week. Over half (57%) the respondents from community pharmacy reported having one hour or less each week compared with 36% of those from hospital pharmacy. 28% (93) of respondents reported having between 60 and 119 minutes of protected time and 22% (73) reported having two hours or more.

![Protected time for self-study/reflection](chart)

There is a significant difference between respondents according to sector and employer type with regard to the amount of weekly protected time trainees had for self-study or reflection. Those who worked in hospitals were more likely to report having more than 120 minutes protected time each week. Those who worked in large organisation community pharmacies were more likely to report having no protected time during their working week for self-study or reflection. (Chart overleaf)
USE OF OWN STUDY TIME

Nearly one-third of respondents (31%, 106) reported that they used more than 10 hours of their own time each week to study, with the same proportion using between 6 and 9 hours. Twenty-nine per cent used between three and five hours and 10% used less than 2 hours.

There is a significant difference between respondents according to gender with regard to the amount of their own time trainees used each week to study. Female respondents were more likely to report that they used more than 11 hours of their own time each week to study.

Although 23% (45) of respondents who work in the community sector reported using more than eleven hours of their own time each week for self-study compared to 15% (17) of respondents working in the hospital sector, the difference between sectors is not significantly different. (Chart overleaf)
TRAINING OUTCOMES

The majority of respondents, 90% (297) agreed or strongly agreed that the training they underwent as a pre-registration trainee pharmacy technician had provided them with the knowledge they needed to carry out their role. Ninety per cent (298) agreed or strongly agreed that the training had equipped them with the skills they needed and 84% (279) agreed or strongly agreed that the training had prepared them overall for their role as a pharmacy technician’. There were no significant differences by pharmacy sector.

Own time used each week to study by sector (%)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Up to an hour</th>
<th>1-2 hours</th>
<th>3-4 hours</th>
<th>4-5 hours</th>
<th>6-7 hours</th>
<th>8-9 hours</th>
<th>10-11 hours</th>
<th>More than 11 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital (n=117)</td>
<td>3%</td>
<td>10%</td>
<td>15%</td>
<td>19%</td>
<td>18%</td>
<td>6%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Community Pharmacy (n=196)</td>
<td>1%</td>
<td>7%</td>
<td>12%</td>
<td>16%</td>
<td>17%</td>
<td>12%</td>
<td>12%</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The training provided me with the skills I needed to support my work</td>
</tr>
<tr>
<td>The training provided me with the knowledge I needed for my role</td>
</tr>
<tr>
<td>The training prepared me adequately for my role as a pharmacy technician</td>
</tr>
</tbody>
</table>

n=331
HOW THE TRAINING EXPERIENCE COULD BE IMPROVED

Respondents were asked how their training experience could have been improved. A selection of comments which reflect the main areas identified are given below.

Many respondents said that having more protected study time would have improved their training experience. “My training experience would have been much better if my company provided protected training time on a regular basis and also allowing time for my supervisor to check my work and feedback rather than all of it having to be done in our own time”. Some respondents felt that they needed more time to complete particular parts of their training, for example more time to complete assignments. “I felt a bit rushed through each module, a bit more time spent on each one could have made me feel more confident”.

Some respondents felt that more support within their workplace in general would have improved their training experience, with some respondents mentioning more support from their manager in particular. “I would have preferred more support from my line manager”.

Some respondents stated that more or better feedback from their tutors or assessor would have improved their training experience. “In the two years I was working in the dispensary I never once had feedback on my performance, despite asking for it.”

Several respondents commented that they had been happy with their training experience and did not feel that anything needed to be improved. “The training was very good the whole way through, I personally can’t think of anything I would want improved.”
3 DISCUSSION AND ISSUES FOR CONSIDERATION

PRINCIPAL FINDINGS

The survey has evaluated pharmacy technicians’ experiences of their initial education and training (IET). The broad hypotheses that this survey set out to test were that:

• Most PTPTs are satisfied with their training

• Community PTPTs feel less supported than their hospital colleagues

• Perceived relevance of some content in the knowledge qualification is an issue

The vast majority of the recently-registered pharmacy technicians who participated in the survey reported that their training provided them with the skills and knowledge they needed for their work and prepared them adequately for their role as a pharmacy technician. The survey found a very high level of satisfaction with the overall quality of training and support received, with four in five respondents saying they would recommend their placement to a future trainee. Between 5% and 10% of respondents reported being highly dissatisfied with aspects of the quality of support they received and/or said they would not recommend their training to a future trainee. These results indicate that recently-registered pharmacy technicians were more satisfied with their pre-registration training than the pharmacists who participated in similar studies10 (Blenkinsopp et al 2014; 2015). For example, in the 2013-14 pre-registration trainee pharmacist survey, 17% disagreed or strongly disagreed that they would recommend their training they received and 15% rated the quality of the support they received during their training as poor or very poor.

Broadly speaking, most respondents who worked in the community pharmacy sector studied at a distance while most working in hospitals studied on face to face training programmes. Those who studied at a distance appear to be as satisfied with their education and training as those who studied face-to-face, and are more satisfied with some aspects.

There is a small but consistent group who are dissatisfied with their education and training. Dissatisfaction was particularly expressed in relation to unplanned changes that occurred during pre-registration training. Although this was also found to be an area of dissatisfaction in the surveys conducted with pre-registration trainee pharmacists, a higher proportion of the respondents to the technician survey indicated that they had unplanned changes during their training. This is, arguably, inevitable given that the period of training experienced by most of the respondents was at least twice as long compared to that of pre-registration trainee pharmacists. The effects of unplanned changes during this longer period of training to achieve professional registration as a pharmacy technician may have impacted on their overall levels of satisfaction.

In terms of years of experience in the pharmacy sector in which they worked, over two thirds of respondents in community pharmacy had worked there for six years or more. In contrast, respondents from hospital pharmacy were more likely to be younger, to have worked for five years or less in pharmacy, and to have been on an

apprenticeship scheme. There were some significant differences between respondents who had worked fewer or more than six years in their sector of training and further exploration is needed of the extent to which these are associated with age.

Our findings show that respondents who worked in the hospital sector were more likely to have had an induction to their pre-registration training, that their workplace supervisor had set targets for their development through a process of negotiation, and that their workplace supervisor had given them the opportunity to contribute and put forward views on their development. They were also more likely to report that their workplace supervisor had asked for feedback from them on the support they had provided.

There were a few statistically significant differences between respondents who trained in different pharmacy sectors in relation to the support they received in the workplace. Respondents working in hospitals were more likely to have trained alongside pre-registration trainee pharmacists, other pre-registration trainee pharmacy technicians, and dispensing assistants/dispensers. These respondents were significantly less likely to have felt isolated as a trainee in their place of work than those in community pharmacy. However, those respondents who worked in independent community pharmacies were more likely to report being well supported by colleagues in the workplace. Respondents who worked in hospital pharmacy were significantly more likely to agree that their employer cared about their progress.

Respondents who trained in the hospital sector reported having significantly more protected time each week for self-study or reflection than those in the community pharmacy sector. Respondents who worked in national organisation community pharmacies were significantly more likely to report that they did not have any weekly protected time for self-study. There were no significant differences, however, by pharmacy sector with regard to the amount of their own time that respondents reported using for self-study when trainees.
**CONCLUSIONS**

In relation to the three broad hypotheses that the survey set out to test the findings showed that:

- Most PTPTs are satisfied with their training
- The training experience of community PTPTs could be improved by requirements for induction to training and assessment of learning needs. Trainees in community pharmacy were also less likely to receive protected time for their training.
- Most respondents perceived that the content of their knowledge qualification was relevant

Many of the findings of the 2015 survey of experience of pre-registration trainee pharmacy technicians confirm those of the previous 2013 study conducted by the University of Manchester\(^{11}\). The additional questions included in the 2015 survey enabled comparison of pre-registration trainee pharmacy technicians’ experience of training with that of pre-registration trainee pharmacists. This has enabled a more detailed picture of induction, learning needs assessment, and discussion of learning progress. The incidence of, and impact of, unplanned changes to training have also been quantified. The survey has generated data that enable further insights of relevance to the GPhC’s review of educational standards.

The 2015 survey findings confirm that the majority of pharmacy technicians rated their pre-registration training highly and reported having a good relationship with their assessor. There were very few differences by country for any aspects covered by the survey, in contrast to the training experience of pre-registration trainee pharmacists. The continued high level of satisfaction with their pre-registration training experience is positive and encouraging. Overall the survey findings indicate differences between hospital and community pharmacy, not only in training infrastructure but also in organizational culture of the training environment for early career pharmacy professionals. Some, but not all, of these differences might be expected to relate to size of organisation. The findings of the 2015 survey can be utilized by the GPhC in the development process for the revised educational standards for initial education and training of pharmacy technicians.

The training experience of pre-registration trainee pharmacy technicians could be strengthened by the inclusion of a requirement for induction and learning needs assessment within the GPhC’s standards for IET. Ways of ameliorating the negative effects of unplanned changes in training can be discussed by stakeholders, including the handover process when such a change occurs. The GPhC may also wish to consider including a statement on unplanned changes in its IET standards.

\(^{11}\) Jee, *op cit*
References


Respondents were representative of the total population of 1101 with respect to region/country trained in, gender and ethnic group. The age profile of respondents was similar to that of the total population except for respondents in the 19-25 age group who were under-represented (22% vs. 28% in the total population) and those aged 41 and over who were correspondingly over-represented.

### Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Total population</th>
<th>Survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>England (Outside London)</td>
<td>76%</td>
<td>74%</td>
</tr>
<tr>
<td>London</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Wales</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Scotland</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Outside UK</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total population</th>
<th>Survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Female</td>
<td>84%</td>
<td>84%</td>
</tr>
</tbody>
</table>

### Age

<table>
<thead>
<tr>
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</tr>
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<tbody>
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<td>17-18</td>
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<tr>
<td>19-25</td>
<td>28%</td>
<td>22%</td>
</tr>
<tr>
<td>26-30</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>31-40</td>
<td>20%</td>
<td>22%</td>
</tr>
<tr>
<td>41-50</td>
<td>14%</td>
<td>18%</td>
</tr>
<tr>
<td>51+</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

### Ethnic Group

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Total population</th>
<th>Survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>80%</td>
<td>79%</td>
</tr>
<tr>
<td>Mixed</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Asian</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Black</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Unknown</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>White</td>
<td>80%</td>
<td>79%</td>
</tr>
</tbody>
</table>

### Disability

<table>
<thead>
<tr>
<th>Disability</th>
<th>Total population</th>
<th>Survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>No</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td>Unknown</td>
<td>5%</td>
<td>4%</td>
</tr>
</tbody>
</table>

### Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Total population</th>
<th>Survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>British</td>
<td>89%</td>
<td>87%</td>
</tr>
<tr>
<td>Other</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Unknown</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

APPENDIX 1 – REPRESENTATIVENESS OF THE SAMPLE