

An Evaluation of the Multi-Sector Pre-Registration Pharmacy Technician Programme in Wales

Final Report

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Table of Contents

Executive Summary	4
Introduction	8
Aims	9
Method	9
Results	10
Motivations of Trainees	11
Multi-Sector Training Experience	13
Transferability of Skills.....	13
Added Value of General Practice Exposure	15
Training Programme Structure.....	17
Four-Day-Fortnight.....	17
Monthly Blocks.....	18
Single-Sector Vs. Multi-Sector Training	20
Advantages of the Multi-Sector Programme.....	20
Advantages of the Single-Sector Programme.....	21
Meeting the NVQ Requirements	22
Evidence Collection	22
Assessment Requirements	24
Using the E-Portfolio	25
Training Support.....	27
8-Week Reviews	29
The Impact of the Pandemic	32
Looking to the Future	34
Suggested Improvements to the Multi-Sector Programme	34
Preparedness for Practice	35
Career Aspirations.....	38
Conclusion.....	39
Limitations of Evaluation Study	42
Future Points of Consideration	42
References	44
Appendix 1 – Question Schedule for Trainees at Midpoint.....	45
Appendix 2 – Question Schedule for Trainees at Endpoint	46
Appendix 3 – Question Schedule for HEIW Reviewers.....	48
Appendix 4 – Online Survey for Workplace Mentors	50

Executive Summary

Introduction

Pharmacy technicians have a distinct role within the pharmacy team. Under the direction of a pharmacist, pharmacy technicians are expected to dispense prescriptions, address customer questions, place orders and pre-package, assemble and prepare medicines.

In order to become a qualified pharmacy technician who is registered with the General Pharmaceutical Council (GPhC), individuals must acquire two years' experience as a pre-registration trainee pharmacy technician working directly under the supervision of a pharmacist for a minimum of 14 hours a week.

In an endeavour to build a more flexible workforce and to support the career development of pharmacy technicians, Health Education and Improvement Wales (HEIW) has developed and launched a pilot, two-year multi-sector training programme. This programme provides an opportunity for pre-registration pharmacy technicians to train across three pharmacy sectors: hospital, community, and general practice.

At present, three pilots have been implemented: one in Powys, one in Aneurin Bevan and one in Cwm Rhondda. Each pilot follows the same components but varies in how trainees move across different settings: some follow a split-week model, and others follow block rotations.

Aims

The purpose of this study was to explore the extent to which the multi-sector pre-registration pharmacy technician programme prepares trainees for practice. The study explores the three pilot models with the primary aims to:

1. seek the views of the trainees on their sense of how the programme prepared them for practice as pharmacy technicians
2. explore the opinions of trainees' current supervisors (senior pharmacy technicians) and Health Board line-managers on the pharmacy technicians' preparedness for practice.

The specific objectives were to explore:

- whether the training meets the NVQ competency requirements
- views on the e-portfolio and 8-week reviews
- the added value of experience in general practice
- perceptions on whether skills are transferable across sectors
- benefits and challenges of the different models
- how trainees contribute to the workforce and what they struggle with.

Method

The study followed a mixed method design involving multiple participant groups. Data were collected through interviews, focus groups and an online survey and involved trainees, line managers, mentors and HEIW reviewers.

Data were collected across two key phases:

Phase 1: one-to-one telephone interviews with pre-registration multi-sector pharmacy technicians (trainees) approximately midway through the training programme (one year into the programme).

Phase 2: one-to-one telephone interviews with trainees towards the end of the two-year training programme, one-to-one telephone interviews with HEIW reviewers, and an online survey to trainees' supervisors or line managers.

Results and Summary

Data were collected from 12 pre-registration pharmacy technicians (nine in Aneurin Bevan, two in Cwm Rhondda and one in Powys), three HEIW reviewers, one principal pharmacist, one line manager and 15 workplace mentors. In total, 6 hours and 28 minutes of conversation data was collected. Of the 15 mentors who completed the online survey, 12 worked in hospital settings, two worked in community settings and one worked in primary care/GP settings.

The extent to which the training programme meets the NVQ competency requirements

- Trainees had somewhat mixed views around the opportunity to gather evidence to meet the NVQ competency requirements, and experiences appeared to vary across settings.
 - Some challenges in meeting the NVQ competency requirements were largely a consequence of the Covid-19 pandemic.
 - Trainees on the four-day-fortnight model sometimes found the lack of prolonged exposure in one setting created difficulties in their evidence collection.
 - The fast pace of community pharmacy was perceived variably by trainees. Some felt it provided plentiful opportunities for evidence collection, but others felt there was no let-up for trainees to pause and consider their evidence collection.
 - Support staff were able to adapt trainees' rotations to ensure they had adequate exposure and opportunity to meet their competencies.
 - There appeared to be a misalignment between the expectations of trainees and support staff to those of the programme assessors in terms of the quantity of evidence. It had been envisaged that competencies would be split across sectors, but assessors sought evidence of competency in both hospital and community settings. This was seen as creating additional workload for trainees and hindering capacity of training sites.
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Views on the e-portfolio and 8-week reviews

- Trainees initially struggled to get to grips with the e-portfolio and at face-value, did not perceive it to be particularly user-friendly.
- As trainees progressed with their training, they became more familiar with the e-portfolio and did not have any particular issues.
- HEIW reviewers and line managers had extensive experience of using the e-portfolio and felt it was an efficient tool that helped them to support trainees.
- Mentors indicated that they would prefer an online e-portfolio over a paper-based portfolio.
- The 8-week reviews comprised two elements: one generic component set out by the Welsh Government for all apprenticeships, and one that focused on the progress of the trainee.
- The generic component of the reviews was regarded by trainees as less relevant and more of a tick-box exercise.
- Trainees appreciated the opportunity to use the review meetings to check their progress, prioritise workload and identify upcoming training needs.
- The 8-week reviews were thought to provide a helpful structure that helped trainees monitor their progress.
- During the pandemic, the increase of the 8-week reviews to 4-week reviews was helpful to trainees' wellbeing.

The added value of experience in general practice

- Unfortunately, due to the pandemic, not all trainees were able to gain experience in the general practice setting as initially planned.
- General practice pharmacy was perceived by trainees as an elusive area that they were unfamiliar with.
- Some trainees reflected on how they felt general practice was an area of growth for pharmacy and so felt it important to gain this experience.
- Those who did experience general practice pharmacy valued the experience and found it useful to see the different demands and different patients in this setting.
- Those who missed the opportunity to experience general practice pharmacy felt they had missed out on a valuable learning opportunity that would have filled a gap in their training.

Perceptions on whether skills are transferable across sectors

- Trainees, line managers and mentors spoke positively of the transferability of skills that trainees developed during the multi-sector programme and felt they had gained skills and understanding that could not be acquired through single-sector training.
 - Exposure to multiple settings enabled trainees to develop a rounded understanding of the patient journey and transfer of care that was useful in all settings.
 - Mentors reflected that many of the same skills are required across sectors, such as medication knowledge, communication, teamwork, and prioritising.
 - Trainees reported being able to explain to their colleagues about the working practices and procedures in other settings.
 - In community, high patient contact enabled trainees to develop their communication skills which were useful to the wards in hospital settings.
 - In hospital, trainees learnt about labelling standards which they could apply in community and improve patients' understanding of their medication.
 - In community, trainees developed their communication skills with patients; in hospital they developed their communication skills with other healthcare professionals.
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Benefits and challenges of the different models

- The four-day-fortnight model presented challenges and took trainees a while to settle into at the beginning due to their frequent movement across sites.
- The four-day-fortnight model was perceived by some to lack continuity. This created difficulties in evidence collection as trainees were often unable to follow through with patients.
- Nonetheless, trainees valued the opportunity to see different days of the week in different settings.
- Mentors reflected positively of the four-day-fortnight model in terms of the opportunity it provided to gain understanding of multiple sectors simultaneously.
- Trainees on monthly block rotations appreciated the prolonged period in settings to fully get to grips with that particular pharmacy environment.
- Trainees also perceived monthly block rotations to provide greater structure to monitor their progress and gather evidence.
- Mentors felt that block rotations enabled the acquisition of necessary in-depth knowledge.

How trainees contribute to the workforce and what they struggle with

- Trainees reflected on how they might compare to their single-sector trained counterparts and felt that their broader understanding of pharmacy and the transfer of care would give them an edge.
 - The principal pharmacist working in a hospital setting emphasised that they look to recruit individuals with experience in different settings as they have a better understanding of the patient journey.
 - Some trainees were interested in pursuing integrated posts, should the opportunity become available.
 - Trainees recognised that their single-sector trained counterparts would have more specialist knowledge and the multi-sector trainees may have to undergo additional training in their early career, particularly in hospital settings.
 - Mentors felt trainees would enter the workforce as adaptable and flexible pharmacy technicians who were prepared for practice.
 - Mentors felt trainees would be able to offer an understanding of the different pharmacy sectors and would aid communication across sectors and with patients.
 - Mentors felt trainees may struggle with being in the same place every day after their diverse training programme.
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Introduction

Pharmacy technicians have a distinct role within the pharmacy team. Under the direction of a pharmacist, pharmacy technicians are expected to dispense prescriptions, address customer questions, place orders and pre-package, assemble and prepare medicines.

In order to become a qualified pharmacy technician who is registered with the General Pharmaceutical Council (GPhC), individuals must acquire two years' experience as a pre-registration trainee pharmacy technician working directly under the supervision of a pharmacist for a minimum of 14 hours a week. The qualification itself comprises two parts: a competency-based component (e.g. NVQ level 3 diploma in pharmacy service skills) that is assessed by a portfolio of evidence that demonstrates the candidate's application of knowledge to practice; and a knowledge component (e.g. BTEC level 3 diploma in pharmaceutical science) that includes elements of study around pharmacy law, human physiology, disease management, actions and uses of medicines and pharmacy manufacturing. Candidates can book onto relevant courses to complete this component.

Trainees build their portfolio of evidence through workplace training. This can take place in any pharmacy setting, however, most occur in either a community pharmacy (59%) or a hospital (37%) ⁽¹⁾.

In an endeavour to build a more flexible workforce and to support the career development of pharmacy technicians, Health Education and Improvement Wales (HEIW) developed and launched a pilot multi-sector training programme. This programme provides an opportunity for pre-registration pharmacy technicians to train across three pharmacy sectors: hospital, community and primary care ⁽²⁾.

At present, three pilots have been implemented: one in Powys, one in Aneurin Bevan and one in Cwm Rhondda. Each pilot follows the same components but under different models. In Powys, trainees complete 6-month rotations across sectors. The model in Cwm Rhondda also follows a block rotation with an initial 4-month block in the hospital setting, followed by a rotation to community pharmacy. The hospital / community rotations continue during year 2 with the introduction of a rotation to 'Your Medicines at Home' and the 'Medicines Support at Home' teams. In Aneurin Bevan, trainees follow a split-week model with two days in a hospital setting, two days in the community and one day either in general practice or study leave. This format is described as a four-day-fortnight as the days alternate every two weeks. The week starts on Thursdays to give trainees a fuller experience of day-to-day practice in hospital or community. General practice experience or study leave then occurs on Wednesdays.

Across all sites, trainees have a number of individuals to whom they can turn to for support. Trainees at each site have a common line manager who is external to their practice. Trainees are also assigned a workplace mentor in each pharmacy sector who act as trainees' expert witnesses and support them in gathering their evidence. Finally, there is the role of the assessor who conducts 8-week reviews with the trainees to assess their progress and to provide feedback on their submitted evidence.

Aims

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The specific objectives were to explore:

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Method

This study follows a mixed method design involving multiple participant groups. Data were collected from interviews, focus groups and an online survey, and involved trainees, line managers, mentors and HEIW reviewers.

Data were collected across two key phases:

Phase 1: one-to-one telephone interviews with pre-registration multi-sector pharmacy technicians (trainees) approximately midway through the training programme (one year into the programme).

Phase 2: one-to-one telephone interviews with trainees towards the end of the two-year training programme, one-to-one telephone interviews with HEIW reviewers, and an online survey to trainees' supervisors or line managers.

Unfortunately, although we had planned to carry out telephone interviews with the trainees' workplace supervisors, the demands of the Covid-19 pandemic meant that this was not feasible. Instead, we issued an online survey to these individuals towards the end of the training programme in Phase 2.

Although we have summarised data collection into two distinct phases, it is important to note that the timepoints of these phases varied for the different Health Boards cohorts. Each Health Board started the multi-sector programme in different years. The midpoint and endpoint data collection for each Health Board is summarised in Table 1.

Table 1 – Timeline of Multi-Sector Training Programme Cohorts

Health Board	Midpoint	Endpoint
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Powys	March 2019 (prior to evaluation)	March 2020
Aneurin Bevan	March 2020	March 2021
Cwm Rhondda	March 2021	March 2022

Before reporting the results of the evaluation, it is important to consider these different training programmes and evaluation timelines. The global pandemic struck when evaluation and training was already underway and subsequently had a substantial impact on the training and trainees' experiences. A section of the results is dedicated to highlighting the impact of the pandemic on trainees, however it is not isolated to this section and all results should be read with a consideration of the context of the pandemic.

The question schedules and surveys used throughout the evaluation are provided in Appendices 1-4. Ethical approval was granted by the Research Ethics Committee of Cardiff University School of Social Sciences (SREC/3233). We received permission for all interviews to be recorded and transcribed. All transcription data were transferred into NVivo for pattern coding and thematic analysis.

Given the small numbers of trainees on the Powys and Cwm Rhondda programme, when reporting results, we do not distinguish quotes according to training location. This was necessary in order to protect the identity of individuals.

Results

Throughout both phases of data collection, we obtained data from 12 pre-registration pharmacy technicians (trainees). Of these, nine were training in Aneurin Bevan, two were training in Cwm Rhondda and one was training in Powys. We also collected data from three HEIW reviewers, a principal pharmacist involved in the development of the programme, one line manager and 15 workplace mentors.

In total, 6 hours and 28 minutes of conversation data were collected. The total data collection and participants is summarised in Table 2. Of the 15 mentors who completed the online survey, 12 worked in hospital settings, two worked in community settings and one worked in general practice settings.

Table 2 – Total Data Collection

Health Board	Midpoint	Endpoint
Powys		1 trainee 1 line manager
Aneurin Bevan	9 trainees	4 trainees 2 reviewers 14 mentors

Cwm Rhondda	2 trainees	1 trainee 1 reviewer 1 mentor
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The detailed evaluation results are set out according to eight key topics that arose in our dataset:

- Motivations of Trainees
- Multi-Sector Training Experience
- Training Programme Structure
- Single-Sector Vs. Multi-Sector Training
- Meeting the NVQ Requirements
- Training Support
- The Impact of the Pandemic
- Looking to the Future

Our findings are then mapped directly against the evaluation objectives in the Conclusion section of this report.

Motivations of Trainees

The trainees reported a variety of motivations for pursuing the multi-sector training programme. Some, although without prior experience in a pharmacy environment, were seeking a career change and held an interest in pharmacy or healthcare:

I fancied a change in career... I just gradually got interested in pharmacy and started to investigate careers in pharmacy, I saw you could apply for a job as a pharmacy technician and train as a pharmacy technician. (Trainee, Midpoint)

I was just looking for jobs and wanted to continue learning. I've always been passionate about healthcare. Then this job became available, and I thought it pretty much ticked all the boxes of everything I wanted to do. (Trainee, Midpoint)

Some trainees recognised the opportunity to benefit from being able to train and receive an income simultaneously:

The fact that I could train for a skilled role and be paid at the same time, because I knew that for other roles I'd have to go to university, and I've got a mortgage and everything. So, when I saw that I could train on the job and do some courses online that would get me a qualification, that appealed to me. (Trainee, Midpoint)

In terms of why trainees specifically pursued the multi-sector training over single-sector training, the opportunity to gain insight across different sectors of pharmacy was perceived to be an advantage. Some trainees already had some experience of working in a pharmacy setting and were eager to “see what goes on elsewhere” in other settings:

You could train to be a pharmacy tech in hospital and maybe not like it and then potentially that could be the end of your career. So, I suppose by working across both sectors you get a better idea and understand of how they work differently, and which works best for you really. (Trainee, Midpoint)

If you're in community, obviously that's the only side you see, and you don't get to see what goes on elsewhere. So, I wanted to participate in the programme to see the other sides of it and to see how they all link. (Trainee, Midpoint)

I'd been searching to find any opportunities to become a tech for a while and I was in primary care at the time and it's really difficult to get training as a tech in primary care. So, I was fortunate to see the launch of the programme. (Trainee, Midpoint)

Some trainees reflected that the multi-sector programme was the only option that was available to them for training or had applied for others but only been successful with this one. Nonetheless, they often reflected that being a part of this new, innovative training programme was a valuable and exciting opportunity:

It was more a case of what was available to me at the time to be honest. I did originally go for an interview with the pre-reg technician position with [hospital], but my understanding was that they had some internal people wanting to go up as well. So, I also applied then for a position here. Obviously, I did read about the multi-sector role, and I did think that was going to be interesting. So, it was just more like a bonus to be honest. (Trainee, Midpoint)

It was the only programme to be honest that was actually open to me. I was told that I would be carrying out the first multi-sector technician training in the UK. So, I think that was quite appealing as well. It hadn't been done before. So, it's quite exciting to be part of. (Trainee, Endpoint)

Box 1: Summary of Motivations of Trainees

- Trainees had a variety of motives for pursuing the training programme.
- Some trainees were looking for a change in career path; some had experience of working in a pharmacy setting and wanted to expand their skillset.
- Trainees were appreciative of the opportunity to train in a new profession whilst simultaneously receive an income.
- In contrast to single-sector training, the opportunity to see the different sides of pharmacy through multi-sector training was appealing.
- Some trainees applied for multiple programmes and were only accepted onto the multi-sector programme.
- The novelty of the multi-sector was perceived to be an exciting opportunity.

Multi-Sector Training Experience

Trainees generally reported positive experiences of the training programme, reflecting that it was “a very good experience” and they “really enjoyed it”. Nonetheless, trainees also highlighted that they “can’t say it’s been all plain-sailing” and that sometimes “it has been a bit chaotic”. These reflections largely related to the onset of the global pandemic during the training programme and the complications this created.

Trainees reflected more specifically on the different experiences they had gained across the different settings. Exposure to the hospital setting provided an insight to dispensing and pharmacy on the wards:

It was also good to see how pharmacy works on the wards as well, so not just the dispensing in pharmacy, you see the wards and see people’s PODs [patients’ own drugs] and how they work with people bringing their medicines in and what needs to be ordered and how the charts work. (Trainee, Midpoint)

Community settings appeared to run at a faster pace and trainees were “thrown in the deep end straightaway” and being involved in patient-facing scenarios:

There’s a lot of contact with customers. Dealing with queries, problems, you’ve got a lot of face-to-face contact. I suppose you’re seeing more variety of people’s ailments and what drugs are used to treat those. (Trainee, Midpoint)

I think from community things like there’s more patient facing. So being on the desk, answering the phone, that kind of thing. (Trainee, Midpoint)

Transferability of Skills

Trainees spoke positively of the transferability of the skills they developed on the multi-sector training programme and felt they had gained skills and understanding they would not have acquired from working in one sector alone:

I’ve had experiences in both sectors where I found little moments where I was able to contribute input where I wouldn’t necessarily may not have been able to contribute because they wouldn’t know the way that the other sector works. (Trainee, Midpoint)

They definitely help you acquire different types of skills... hospital pharmacy is more detail oriented, whereas in community you’ve got the added pressure of the speed which I think if I had only trained across hospital pharmacy, I definitely would be a much slower dispenser than what I am now. (Trainee, Endpoint)

Mentors also provided positive reflections. Of the mentors who responded to the survey, 80% (n=12) felt that the training programme enabled trainees to develop skills that were transferable across pharmacy sectors, particularly in terms of having an “all-round understanding” of the “transfer of care” and “patient’s journey”:

Thorough understanding of a patient's journey. I would like to think that good practice from each sector was shared. (Hospital Mentor)

Some mentors also reflected that “many of the skills are the same in both sectors” and commented specifically on “medication knowledge”, “effective communication”, “teamwork” and “prioritising”.

Trainees and line managers felt that trainees’ exposure to multiple settings helped them to communicate with colleagues and understand their scope of practice and limitations. They were also able to inform their colleagues of practices and procedures in other pharmacy settings, which in turn, furthered their colleagues’ knowledge:

I think the key thing is about being communicative or working as a team with different health care professionals [...] So it's understanding where their limitations are and knowing that none of us know everything. So, we'd always get asked questions that we don't know the answer to and it's key that they understand that and will know when to refer it on (Line Manager)

I also found that understanding how both sectors worked, I was able to explain to other colleagues in each sector about the working practices and standard operating procedures in the community or hospital setting. (Trainee, Endpoint)

In community settings, trainees reflected on the high level of patient contact which helped them to develop their communication skills and build their “confidence to deal with patient interactions” (Trainee, Midpoint) that were also “really transferable” (Trainee, Endpoint) to the wards in the hospital setting:

[in community] I was able to develop my communication skills and my ability to gather information from a patient who may have a query or problem that needed to be resolved. This boosted my confidence when engaging with patients and helped me when I began to work on the wards in the hospital and speaking to patients admitted to hospital about their medication history (under the supervision of a pharmacist or pharmacy technician), or counselling patients on their discharge medication. (Trainee, Endpoint)

In terms of transferring skills from the hospital setting to the community setting, trainees often reflected specifically on the higher labelling standards in hospitals and how they applied these standards in the community setting in order to “make it easy for the patient to understand the label” (Trainee, Midpoint):

For the dispensing label standards, the bar seems to be a lot higher in the hospital and I've certainly used that when I've been working in the community pharmacy because some of the instructions that had been put onto some of the prescriptions had been appalling. So, working with the pharmacist to try and put better information on the labels for the patient. (Trainee, Midpoint)

I've taken a lot from hospital to community, like labelling standards, trying to make the labels clear for patients which they don't think a lot of in community pharmacy. (Trainee, Midpoint)

One trainee also felt she was better equipped to provide the relevant information to patients, given her experience in the hospital dispensary:

In community someone came in with a discharge notification which I was able then to explain to her, whereas the other members of staff weren't able to go into as much detail because obviously they don't dispense for it. (Trainee, Midpoint)

Where in community settings, trainees developed their communication skills with patients, in hospital settings, trainees were able to develop their communication skills with other healthcare professionals:

When I had to ring up the GP surgeries in community, I found that was really similar to ringing staff on a ward setting in hospital because you're talking to other health care professionals. So it was like the same. (Trainee, Endpoint)

Added Value of General Practice Exposure

Unfortunately, due to the pandemic and subsequent regulations, not all trainees were able to gain experience in the general practice setting for pharmacy. Those who were fortunate, valued this experience and found it useful to see the different demands and different patients, as well as the connection between general practice and other pharmacy settings:

It's just the experience, isn't it? Like coming into contact with many different things: different types of people, different types of patients, that kind of thing. I find that whichever sector you're in sometimes you could be a bit stuck with the same kind of issues. (Trainee, Midpoint)

Even just down to prescribing formularies and stuff and knowing whether they initiate it in hospital or GP surgeries, I think they all link together. (Trainee, Midpoint)

One trainee reflected how the general practice experience was extremely valuable and they felt that all pharmacy technicians should receive some level of general practice pharmacy training:

I was suggesting to my line manager that everyone in hospital and community should at least have a few days in primary care to get the whole picture of how the prescription works. So, from prescribing to dispensing. (Trainee, Midpoint)

Trainees perceived general practice pharmacy as an “elusive” environment that they were unfamiliar with and knew little about:

Even though it's been explained to me it's still difficult to really understand what goes on in primary care [general practice] sometimes, like a kind of elusive area obviously but I still don't really know. (Trainee, Endpoint)

I didn't realise that there was a setting like that in primary care, but then I found out more information and my interest grew more... (Trainee, Midpoint)

Nonetheless, trainees also commented on how they felt this was where pharmacy was expanding, and was an area of growth for pharmacy technicians and pharmacists:

I suppose that's where the growth is probably in pharmacy technicians and pharmacists as well. So going into GP practices and sort of working in cooperation with them and different parts of the health sector. (Trainee, Midpoint)

Definitely. I think that's the way that things are going at the moment, aren't they, and I think we're very forward thinking in Wales anyway because we've already got technicians within primary care, haven't we [...] So yeah, I think that's only going to get bigger and better. (Trainee, Endpoint)

At the point where there was uncertainty of whether the general practice experience would be possible due to the pandemic, trainees were hopeful this rotation would go ahead as they felt it would offer valuable insight into the processes of audits and the financial side of prescribing:

I was hoping to look at the audit side of it and prescribing patterns and things like that. (Trainee, Midpoint)

I think to see the finance side of it will be interesting, because you see some of that in community, but to see how that translated over to the NHS will be interesting as well. So, the impact that all this prescribing and changing and stuff has on the NHS. (Trainee, Midpoint)

When some trainees lost the opportunity to gain this general practice exposure due to the pandemic, they were naturally disheartened and felt they had missed out on valuable learning opportunities to complete their holistic experience of pharmacy:

I did miss out on the primary care sector which I was a bit disappointed because I do think that would have filled, like the gap to give us the whole experience of pharmacy, but obviously the pandemic happened. (Trainee, Endpoint)

Box 2: Summary of Multi-Sector Training Experience

- Trainees had a lot of positive reflections on their training experience, but it was not without challenge.
- Exposure to the hospital setting provided insight into dispensing and ward-based pharmacy.
- Exposure to the community setting provided patient-facing experience and fast-paced pharmacy.
- Trainees, mentors and line managers all felt that trainees developed skills that were readily transferable across sectors.
- Community pharmacy provided patient-facing experiences which trainees could use in hospital settings.
- Hospital pharmacy experience provided more advanced insight into labelling standards which trainees could use in community settings.
- Trainees who were able to gain experience in the general practice setting valued the opportunity to see the different workings and the connection between different pharmacy settings.
- Trainees who were unable to complete a general practice rotation were disheartened by this and felt this exposure would have been valuable to their learning.

Training Programme Structure

Given that different Health Boards followed different models for structuring trainees' rotations across sectors on the multi-sector training programme, it was important to explore these models in practice and the positives and drawbacks of the different approaches.

Four-Day-Fortnight

In terms of the structure of the training and the four-day-fortnight rotations across sectors, trainees appeared to hold mixed views. Trainees, reviewers, line managers and mentors reflected on how this format involved a lot of “coming and going” (Trainee, Endpoint) and so it had taken trainees “a lot of getting used to; trying to figure out where you are” (Trainee, Midpoint):

It was quite difficult getting into it at the beginning. Obviously having no experience in pharmacy at all and then getting used to the standards between the different settings and sectors. (Trainee, Midpoint)

I think it took them a long time to get into it at the start because they were just getting used to one thing and then they were being moved again. (Line Manager)

Although trainees generally settled into the pattern, other “staff were unsure of which students would be in either sector” (Hospital Mentor):

When I was explaining my rota and explaining when I'd be back next, I think that was quite difficult for some people to understand... because I'd have Thursday, Friday in one place, Monday, Tuesday in the same place and then it would swap over for the Thursday. I think that people couldn't quite wrap their heads around that. So, I think maybe if it was just like... Monday, Tuesday, Wednesday, Thursday, Friday one week and then you've got a weekend and then went to a different place, I think people would have understood it a bit more. (Trainee, Endpoint)

The four-day-fortnight was seen as lacking continuity and the regular move between sector meant that often trainees were not able to follow through with patients. This not only impacted their experience, but also their evidence collection:

It does make it hard to follow things through as well. So, if you've started something, you couldn't always see the end of it. [...] So, I might have started really from a care home on a Tuesday but then I wouldn't go back then to the following Thursday, so I miss out on the resolution. It does make it a little bit hard to collect evidence sometimes because you could say you've done so much of it but then you haven't finished it. (Trainee, Endpoint)

[the biggest disadvantage of this model was] Not enough time to fully consolidate skills and unable to follow things through. (Hospital Mentor)

However, once settled in, trainees were generally positive about the structure of their training. Rotations across the sectors allowed trainees to see how different each day of the week was:

I like the way the programme is set up where you get a Thursday and a Friday and a Monday and a Tuesday in the same sector, because the days are completely different, you know, in terms of busy-ness. (Trainee, Midpoint)

The end of the week is completely different. Like a Friday in community pharmacy is completely different to a Monday in community pharmacy. It's good that you're not just seeing the Monday, Tuesday every week and then missing the end of the week. (Trainee, Midpoint)

Mentors reflected positively on how this model permitted trainees to gain a “good understanding of both sectors simultaneously” and meant that they “didn't spend too long away from a sector to forget what they'd learnt”.

Monthly Blocks

Trainees who remained in one sector for prolonged periods of time appeared to be positive about this structure. They reflected on how the extended period in one setting made it easier to “get to grips” with things and get a full grasp of that setting

without trying to grasp two different settings at once, particularly when trainees have no prior experience of a pharmacy environment:

I think you need to have a chunk somewhere to get to grips with that first and I feel if you're coming from a non-pharmacy background and that would really need to start in community, so you've got your basics. You know, like next chunk in hospital or primary care to be honest because I think split weeks would be difficult. (Trainee, Endpoint)

We spent the first period of time in the hospital environment and then went into the community pharmacy, and I think that enabled her to become part of the team at the Health Board before she went into a community pharmacy environment. (Line Manager)

Trainees also felt that this model provided structure that supported them in monitoring their progress and work through their evidence collection:

I definitely prefer the sound of what I'm doing compared to that [found-day-fortnight] because I think, you know where you're at with collecting your evidence. You've got this many months and you're in that environment and you can get your head on to just collect evidence for two or three modules or whatever that is specific to that environment, and I think if you're flip-flopping between two within each week that could be quite difficult to know where you're selecting your evidence. (Trainee, Midpoint)

A mentor also commented on the advantage of block rotations in terms of gaining the necessary in-depth knowledge and evidence:

They need to gain quite in-depth knowledge and understanding during each change including legislation and changes in organisational practices, this means there needs to be time to fit into the team, learn and understand the SOPs [standard operating procedures], gain their competencies and then start collecting evidence. Continuity work in this respect and a block rotation is an advantage. (Hospital Mentor)

Box 4: Summary of Training Programme Structure

- The four-day-fortnight model received mixed reviews: it was seen as lacking continuity and regular movement across sectors meant trainees were not able to follow through with patients. However, it enabled trainees to develop their understanding of multiple settings, simultaneously.
- Trainees who remained in one sector for prolonged periods of time found it helpful to fully grasp each setting and monitor their training progression.

Single-Sector Vs. Multi-Sector Training

Trainees reflected on some of the interactions they had had with trainees on the single-sector training. These occurred either at study days or during their time in the hospital setting. Such interactions appeared to involve discussions of their different training experiences.

Advantages of the Multi-Sector Programme

One trainee reflected on a conversation she had had with a single-sector trainee in hospital who had struggled to collect evidence for some competencies due to a lack of opportunity. However, such exposures had been readily available in the community so was not an issue for the multi-sector trainee:

There is a second-year student in hospital. I was speaking to her, and she said she did find it hard to get some evidence. It was something like dressings, a range that she found that she couldn't get, and I said, 'oh you know, in community pharmacy we have loads of access, you know, people coming in all the time.' So, I think it's definitely an advantage we've got by getting the two sectors. (Trainee, Midpoint)

Another trainee reflected how she felt that the holistic approach of the multi-sector programme that made it easier for them to gather evidence:

People in hospital [single-sector], they just tend to do a three months rotation in stores and then three months rotation in aseptics, but because we're collecting holistic evidence, that means it's easy because if something comes in and I find valuable then I am able to use it. (Trainee, Midpoint)

This holistic approach to pharmacy was also seen as advantageous in that they would have “more rounded” knowledge and an “understanding [of] the whole process of both hospital pharmacy and community pharmacy” than those that come through single-sector training, particularly in terms of the patient journey:

The hospital is completely different to community. In hospital you're caring for the patients for a longer period of time. Whereas in community they're in and out. It is completely different communication as well [...] It's given me a more rounded knowledge of pharmacy. (Trainee, Midpoint)

I think the training programme gave me a more rounded experience of working with different multi-disciplinary teams in both environments; dealing with patients' needs at different stages of their healthcare; different ways of working and experiences; and on certain occasions being able to see some patients as they progressed through the hospital and were discharged into the primary care sector and seeing how their healthcare was managed between both settings. I don't think I would have achieved that just working in one sector. (Trainee, Endpoint)

Advantages of the Single-Sector Programme

Nonetheless, some trainees were conscious of the training elements they were missing out on by pursuing multi-sector training and subsequently, may need additional training in the future. These were typically discussed in relation to single-sector training in the hospital setting:

The only thing that we are missing out on is the aseptic unit. So, we don't do that in this training. Whereas in the hospital you do get a rotation in there. So obviously if you apply for a job in a hospital in the future, we aren't qualified in aseptics, they're going to have to train us I suppose. (Trainee, Midpoint)

However, others recognised that although some units had to be missed, other experiences were gained in community and primary care settings:

I know in that training programme [single-sector hospital] they were doing aseptics and a little bit of procurement as well. Whereas we don't do that element, it's been taken out for us, but then we've got the community element and the primary care. (Trainee, Midpoint)

The difficulties that some trainees raised around getting the initial competencies at the beginning of their training, did not appear to be an issue for the single-sector trainees they had conversed with:

She was doing the single sector so she was just in a hospital and yeah, we've talked about the differences and like how she sees it and what I think the benefits are and everything and she said that it didn't take her as long to get the competencies as it did with me. Definitely, there's that initial bit of getting going that took a lot longer with me. (Trainee, Midpoint)

Others reflected that they felt the single-sector training programme was more structured and established than the multi-sector programme:

Speaking to the trainees in the second year, the ones that were just purely working in one sector in the hospital, I think they had more of a structured programme, they had a certain amount of months in the dispensary to get experience there and go onto pharmacy stores and get their experience there and then they lead to procurement and then moving onto the wards. So, theirs seems to be a bit more structured. (Trainee, Midpoint)

It was hard work but I'm glad to have the qualification and I am about to qualify and look forward to my career, but I think after seeing other people do hospital it just seems a bit more settled and a bit more straightforward. [...] because we were kind of the Guinea pigs. So, if we had any queries it would always have to be escalated and there was always so many people involved in our course it was just a bit more chaotic than normal. (Trainee, Endpoint)

This final point may not be longstanding but is a result of any new programme that faces general piloting issues.

Box 3: Summary of Trainees' Perceptions of Single-Sector vs. Multi-Sector

- Some trainees perceived that their exposure to different pharmacy settings provided additional opportunities for evidence collection.
- The holistic approach of the multi-sector programme was regarded as producing well-rounded pharmacy technicians with greater understanding of the patient journey.
- Trainees were conscious of missing some training elements that were covered in single-sector programmes and anticipated a need for additional training in future, particularly in hospital settings.
- Some trainees felt single-sector programmes provided greater structure.

Meeting the NVQ Requirements

Given that the multi-sector pharmacy technician programme is a new initiative, and prior to this, training has been single-sector, it was important to explore whether the multi-sector programme could sufficiently meet the requirements of the Pharmacy Technician National Vocational Qualification (NVQ).

In the evaluation we explored participants' perceptions of the opportunities that the multi-sector programme provided to trainees in terms of collecting appropriate evidence and achieving the NVQ competencies.

Evidence Collection

There were somewhat mixed views among trainees on the opportunities to gather evidence and meet the NVQ competency requirements. One trainee explicitly highlighted that they felt that they *"have been luckier than others in terms of getting the opportunities"* (Trainee, Midpoint).

Where trainees on the four-day-fortnight model reported some initial difficulties in getting settled in, these regular moves and lack of prolonged exposure in any one setting also appeared to create difficulties in collecting evidence and building competencies. Trainees reported it took *"longer than expected to get some of the competencies"* (Trainee, Midpoint):

They make you do numbers in order to become competent and I found it a struggle to get the numbers as quickly as I wanted to because I was only there four days out of the two weeks. (Trainee, Midpoint)

When asked if they felt they had sufficient opportunity to collect suitable evidence, one trainee responded:

No... I think it was just purely because we weren't there fulltime... because if I was there every day like every day of the week, I think I would have picked it up a lot quicker. (Trainee, Midpoint)

Trainees also reflected on how opportunities to gather evidence varied across the different settings. The fast pace of community pharmacies was perceived variably by trainees. Some felt that the continuous footfall of patients provided lots of opportunities to gather evidence. When asked if they had experienced sufficient opportunity to gather evidence, one trainee commented:

Definitely, yes. I'm quite lucky as well because in my community pharmacy it's really, really busy, so lots of people coming in and out, so yeah, I feel lucky with where I've been placed. (Trainee, Midpoint)¹

Others however felt that although the opportunities were there, the fast pace of community often made it difficult to stop and think about their evidence collection and so some opportunities could not be capitalised on:

I wanted to get my evidence as quickly as possible because I didn't that much in community unfortunately. Opportunities were limited to collect it because of course we were so run off our feet. (Trainee, Endpoint)

I've had enough opportunities but it's different having not been able to use them all because sometimes in community I do have good evidence I can collect, but as I said because it's so busy, I don't want to stop and think about it. (Trainee, Midpoint)

Many trainees reflected positively on how staff had been supportive in their evidence collection and had helped them to identify appropriate exposure:

In the hospital side, I think they've been marvellous and really have helped, pushed to get the competencies done and things that you may have been missing out on. If you're maybe a bit lower in figures in some areas than others, they'll put you in that section for the day to get those figures done and put you in another section the next day if you're low on those figures. You know, they rotated us a little bit. (Trainee, Midpoint)

My NVQ Assessor is very good. She knows it all inside and out. So, she's always assisting me with that and helped me and my Manager as well is very good, and they were able to point me in the right direction. (Trainee, Endpoint)

It was also apparent that there were occasions where the programme reviewers at HEIW had been able to adapt trainees' rotations in order to ensure they had sufficient evidence across the pharmacy settings:

I did arrange to speak with her and suggested that I made a request that we pull her because she still hadn't completed all her evidence in the community pharmacy. And I was conscious we

¹ It should be acknowledged that some trainees' comments were shared prior to the onset of the Covid-19 pandemic.

were getting towards the end of the training programme. She still had work to complete in the hospital and instead of her just being based in the community pharmacy, I asked would she think it would be beneficial for her to perhaps do two days a week in the hospital, three days in the community and split her time between the placements so she was still continuing to progress in both areas so it wouldn't then have an impact on completing the qualification in the time. (HEIW Reviewer, Endpoint)

Mentors who completed the online survey held mixed perceptions of the opportunities for evidence collection. Although 80% (n=12) felt that trainees had adequate opportunities to meet the NVQ competency requirements, and 67% (n=10) felt they had adequate time, some mentors highlighted that “*big adjustments*” had to be made in light of the pandemic which made things “*more difficult*” and “*evidence collection didn't happen as naturally*”:

There had to be more flexibility around evidence collection, and we had to change certain criteria to be able to collect evidence. Flexibility and adaptation was required from each trainee and workplace and this was difficult. (Primary Care/GP Mentor)

Assessment Requirements

There appeared to be some misalignment between the expectations of trainees and support staff to those of the programme assessors in terms of the quantity of evidence that trainees needed. It had been planned that the competencies would be split across sectors, but in reality, assessors were asking for evidence of each competency in both hospital and community settings. This increased the workload for both trainees and support staff and impacted the training capacity of host sites:

Our original plan was to cover the work between the different sectors. So, for example, community pharmacy would take the lead on a setting in procurement and distribution procurement modules and that the hospital would do dispensing, but what we found is that the assessors have asked for evidence from both, [...] I was probably disappointed that the assessors are asking for evidence from both sectors... competencies should be a competency regardless. So that then affected our training capacity (Principal Pharmacist)

The principal pharmacist also reflected on a need to explore this further and felt there were some inefficiencies in the multi-sector programme compared to single-sector programmes:

I'd quite like to look at the number of evidence that people have put in previous hospital-only observations and compare with now [multi-sector programme], because it may be that it feels like they're doing more, but actually it's spread across two sectors, and I think we could be a bit slicker in how we assess... It is from our perspective a training capacity issue. It does seem a lot more inefficient. (Principal Pharmacist)

One of the line managers reflected that communication between the different personnel on the training programme was crucial to managing expectations and in ensuring understanding of the training programme structure and what trainees were being exposed to:

I think the key thing for the success is definitely communication. So, the assessor communicating with the workplaces on rotations... the assessor really needs to understand how long that student is going to be in the workplace and what they need to achieve by the end of it and set the targets because, for example, one of the units receiving prescriptions they can only do community pharmacy. We don't receive any prescriptions from patients in the Health Board. So all that evidence needs to be collected in the community pharmacy [...] So, it's the communication and the keeping up-to-date with what's going on is really important. (Line Manager)

Using the E-Portfolio

In terms of the VQ Manager (the e-portfolio software for the programme) that trainees use to record their evidence, some trainees reflected on how it took them a while to get to grips with the platform, particularly for those who had no prior experience of using an e-portfolio:

Initially you look at it and it's really not user-friendly coming into it as a fresh student. I've kind of got used to it a little bit. I would say it probably is fit for purpose but it does take a long time to log a piece of evidence, like you've written up your piece of evidence and you just want to put it on the portfolio, it probably takes an hour to go through and tick all the criteria boxes and upload all the relevant procedures and things and it just seems like a lot of faff to upload it. (Trainee, Midpoint)

I've never used anything like an e-portfolio before. So, that took some time to get used to on my behalf, but once you've got used to it and you've started uploading a couple of bits, you do start to get into the swing of it. (Trainee, Midpoint)

One trainee also spoke positively of the support and training they had received around the VQ Manager:

I wouldn't say it's user-friendly to start with because it's quite confusing when you first go on it, there's a lot of options. But we've had loads of training and there was loads of HEIW study days we've had that were just on literally using the VQ Manager system, and our Line Manager was also really helpful, she's come in a couple of days and we've just done work just on that. Now that we're used to the system it's fine. (Trainee, Midpoint)

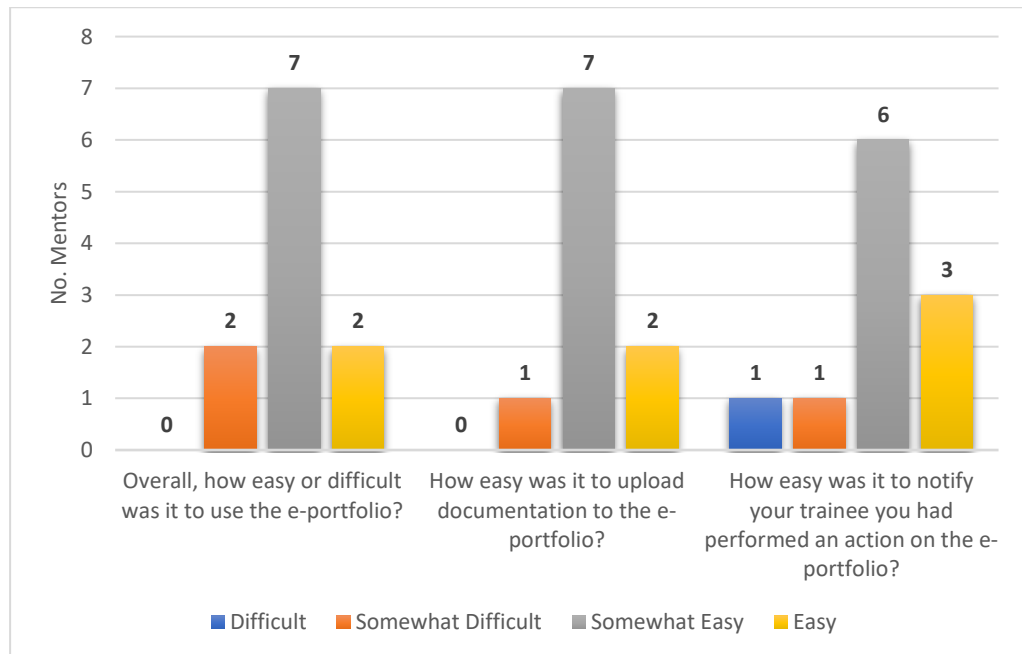
HEIW reviewers and line managers, having had extensive experience of using the platform, spoke positively of the e-portfolio and felt it was an efficient process that assisted them in providing support to trainees:

In terms of the actual e-portfolio we've used it for the best part of a decade. So, there's lots of experience of the use of it with things. So, the Line Manager would also use that. So, she was able to provide a lot of support and fully understood. (HEIW Reviewer, Endpoint)

I love the e-portfolio. I think it's wonderful. [...] When it first came it wasn't an easy system to navigate at the beginning, and I think for new people it's not the easiest thing to navigate, but when everyone gets used to it, it's brilliant. It's much quicker, you get the feedback to the students a lot faster. The audit trail it's just much better. (Line Manager, Endpoint)

Of the mentors who responded to the online survey, 74% (n=11) had used the e-portfolio. Overall, all 11 of these mentors found the e-portfolio to be 'quite useful' or 'very useful' in documenting the progression of their trainee. In terms of the ease of using the e-portfolio, although the majority of these 11 mentors found the e-portfolio 'easy' or 'somewhat' easy to use, there were some mixed views. These are summarised in Figure 1. Nonetheless, 14/15 mentors reported that they would prefer to use an online e-portfolio over a paper-based portfolio.

Figure 1 – Mentors' Perceptions of the Easiness or Difficulty of Using the E-Portfolio



Box 5: Summary of Meeting the NVQ Requirements

- Trainees on the four-day-fortnight model sometimes found the lack of prolonged exposure in one setting created difficulties in their evidence collection.
- Opportunities for evidence collection appeared to vary across settings.
- The fast pace of community pharmacy was perceived by some to provide plentiful opportunities for evidence collection, but by others as not having any let-up to pause and consider their evidence collection.
- Staff were supportive in helping trainees collect their evidence and source helpful opportunities and exposure.
- HEIW staff had been able to adapt trainees' rotations to ensure they had collected sufficient evidence across pharmacy settings.
- There appeared to be a misalignment between the expectations of trainees and support staff to those of the programme assessors in terms of the quantity of evidence. It had been envisaged that competencies would be split across sectors, but assessors sought evidence of competency in both hospital and community settings. This was perceived to create additional workload for trainees and hindered capacity of training sites.
- The e-portfolio took some getting used to, however was regarded as a useful

Training Support

Trainees discussed the interaction they had with others during their training, including their line manager, workplace mentors, assessors, and other pharmacy staff in their workplace. Trainees generally spoke positively of the support they had received and felt that *"everyone has been really, really helpful"*.

Many trainees reflected on the frequent contact they received from their line manager:

The first line of support is my Line Manager. So, I firstly see her or speak to her for anything I'm not sure of. I'm also being offered support regularly from her without asking for support. So, I have been given all the resources or the information that I need from her. (Trainee, Midpoint)

So, our Line Manager is [name], but obviously we don't work day-to-day with her, but she always keeps us updated. Sometimes daily or weekly of just when we're checking in. So, we do have quite a lot of support. (Trainee, Midpoint)

Trainees valued having an *"impartial"* line manager who was *"separate from HEIW"* and from the pharmacies they were training in. Many trainees reflected that although they did not work in the same location as their line manager, they were always available for support:

So, she's [line manager] the one looking out for us as students, and I know that she is separate from HEIW but because she's had a lot

of experience with them she can help us a lot and supports a lot with our side of the work as well. Yes, honestly, she's been amazing. I don't think we would have been able to do it without her [...] just like the hands-on guidance and the availability. So any question that comes up. (Trainee, Midpoint)

[name, line manager] was always really easy to get hold of. You know, and then after [name, line manager] finished then we had [name, new line manager] in charge person. She's also really easy to get hold of, because you can just send her a text then. You know, she's happy to do video calls with us now because of Covid, but before Covid, like [name, original line manager] would always come down and visit us and make sure we're okay. (Trainee, Endpoint)

Trainees also had designated mentors in each pharmacy setting. The frequency that trainees met with their mentors varied. Mentors reported meeting their trainees once a week (36%, n=5), once a fortnight (43%, n=6) and once a month (41%, n=3).

According to the mentors, these meetings were generally used to “check progress”, “prioritise workload” and “identify training needs”:

To review gaps in evidence collection. To check wellbeing of learner. To plan for the next 2 weeks. (Hospital Mentor)

Where necessary, mentors also acted as “an expert witness” to trainees’ evidence and trainees would “accompany me [mentor] to the ward or worked with me [mentor] in the dispensary to complete observations”.

It was evident that mentors had a range of experiences and some trainees voiced concerns that they felt disadvantaged by having a less experienced mentor:

I would say my mentor; because it's her first time as well, so although it's nice that they've been able to say 'oh yeah I want to be a mentor', it is a little bit challenging when you look at someone from the course as well, when their mentor is experienced, you know they've been a mentor before, they know they've been an assessor because then you think, 'oh no, are they getting more support than me?', because their assessor is actively saying 'oh for this unit, we'll do this'. (Trainee, Midpoint)

I've got two mentors. So, the one is community pharmacy and my mentor in hospital pharmacy, they are new to this, so they obviously trained up to be my mentors, but my community mentor has said that she didn't realise how much work and attention would have to be put in with like observations and things [...] She's been in contact with [name, HEIW] to make sure it's okay, but it's just good that she has been able to do that because otherwise, I would be lacking in evidence. Yeah, and the same for hospital pharmacy. (Trainee, Midpoint)

However, this was not a unanimous view, and some spoke only positively of the support they had received from their mentors:

She's my mentor and expert witness in community and she's been fab. This is the first time she's ever been an expert witness and she's been brilliant. She's been saying when things come into the pharmacy that she knows I need for my evidence, she has kept to one side and said, 'no, [name, trainee] needs to do this'. So, she's been good at that. (Trainee, Midpoint)

It was positive to see that wider staff members also appeared to have an awareness of the trainees' roles and their training, often helping the trainees to gain the particular exposure they needed for different competencies:

If there's an opportunity that a member of staff has seen they tend to grab one of us, you know, 'this has come in. do you want to do it for your competencies?'. (Trainee, Midpoint)

The roles of the assessors appeared to be somewhat convoluted, where some trainees reflected on having an "actual assessor" and a "remote assessor" which created some complications:

Ours at the moment is so remote that our assessor is too far away to come in every eight weeks to see us, so another assessor from the company comes in and does the review and that gets floated to our remote assessor. So, I think it would have been a little bit better if you had your actual assessor come in to do your review, you could discuss with your actual assessor the targets and average what you're hitting and any questions you may have. (Trainee, Midpoint)

If we have a query, she can say what she would do, but obviously that might be different from what the other assessor might do... It is quite hard, it would be easier if we could see our own assessor, rather than just speak to one on the phone and see some else who's not even marking our work. (Trainee, Midpoint)

Other staff also appeared to offer help to trainees when their mentors or other support staff were unavailable:

I do feel like I've been supported; maybe not by my mentor but when she's not been there, I have been able to get support elsewhere, which is good. (Trainee, Midpoint)

8-Week Reviews

It was evident from discussions with trainees and reviewers that there were two main elements of the review meetings. One element was very generic and set out by the Welsh Government for all apprenticeships in Wales:

We've got criteria that we have to complete and the criteria is governed by Welsh Government. So, they set out an official

document that I would complete and then they [trainees] complete a section as well about the progress. So it is mandatory that I ask them certain questions at every review. I need to talk with them about health and safety. They get a choice, whether they want to do ESDGC [Education for Sustainable Development and Global Citizenship], learner support, wellbeing, Welsh language and culture. I ask them to have a discussion around the Welsh language at every review with them as well. (HEIW Reviewer, Endpoint)

Trainees perceived these elements to be less relevant to them and more of “a tick-box exercise”:

Personally, I feel like they are just a bit of a tick box exercise for them. They're just ensuring that we are continuing with our course and that they should keep funding us... I feel like they're a little bit pointless discussions about, like, Welsh culture and things. I appreciate though they are like catch-all things for any apprenticeship, so I'd have the same chat with them if I was working at a garage. So, yeah, it's quite generic and it doesn't seem that relevant to be honest. (Trainee, Midpoint)

The second part related more specifically to the training and trainees' progress and evidence collection:

We always look at where they're at with their NVQ evidence... So, I would then go in when I go on to NVQ manager for the NVQ portfolio, I look to see what targets they've been set by their assessor. If they've met the targets, how they'd progressed since their last eight-week review... So, I also then have a discussion with them with regards to their targets and what they need to do within the next eight weeks. (HEIW Reviewer, Endpoint)

I would look at their e-portfolio to see where they were with their NVQ and we'd look at their BTEch qualification to see if their targets are being met there and which module they were on, and we'd document that on their review documentation... I would document the percentage of completion, how many pieces of evidence they've completed since their last review... (HEIW Reviewer, Endpoint)

This component of the review meetings was perceived by trainees to be much more valuable. Several trainees reflected on how they found the 8-week reviews to provide a helpful structure to monitor their progression and what they needed to focus on in the following 8-week period:

I do find her [reviewer] very handy and any problems that we may be having with the course and things like that, we can express to her. Then eight weeks later she'll ask: 'those concerns you had, are they okay now? Are you still having issues?' and things like that.

So, it is good just to have like a round-up of the eight weeks of how we're getting on really. (Trainee, Midpoint)

It can be hard I think, especially when you're working in so many different parts of the pharmacy because we work like the whole thing. So, we're not segregated off. I think it would be quite easy to lose sight of the workload. So having that person there every eight weeks to say, 'this is what you've done, I don't think this is quite enough, you need to focus on this', has been very helpful. (Trainee, Midpoint)

Some reviewers reflected on the value of having also invited trainees' line managers to the review meetings to "maintain that contact" and ensure everyone is up to speed on current training progress and what needs to be done next:

When I do the weekly reviews, I always invite the manager into the review... So, when they were working in the community pharmacy because their manager, was within the Health Board, I would still maintain that contact with their manager. I had a really close working relationship with their manager, which has worked really well because we've known each other previously. We know how each other works, and that's been really beneficial. (HEIW Reviewer, Endpoint)

During the height of the pandemic, HEIW made the decision to increase the frequency of these meetings from every eight weeks to every four weeks. This appeared to have been a helpful move in order to see where some flexibility might be needed in the programme but also in terms of maintaining trainees' wellbeing:

What we did was planning the review sessions every month and it was really about their wellbeing and support and to actually ensure them that we were here, and it was about what could we do, because there was some flexibility brought into the programme as well. Making changes to when deadlines had to be met. So, it was for that reason really to be able just to be there as that support and to ensure that they understood that maybe if these targets hadn't been met at that point, where the targets could be moved to. (HEIW Reviewer, Endpoint)

I think had there not been a pandemic the eight-week frequency would have been fine because that gives you enough time to work on what it is you've decided together you need to work on. Whereas when they were increased four weekly, sometimes I'd go back here and I wouldn't have completed what I needed to complete because I haven't had quite enough time, and obviously with the pressure of the pandemic as well, but in terms of our wellbeing it was definitely better having them four weekly during the pandemic because it was hard work. (Trainee, Endpoint)

Box 6: Summary of Training Support

- Trainees generally reflected positively on the support they had received during their training from their mentors, line managers and HEIW reviewers.
- Trainees' line managers appeared to be their first line of support and with whom they had frequent contact. Trainees also appreciated their impartial position, separate from HEIW and the pharmacy training sites.
- Trainees met with their mentors at variable frequencies. These meetings were used to check progress, prioritise workload and identify upcoming training needs.
- Some trainees felt disadvantaged where their mentor was less experienced.
- Roles of the assessors was somewhat convoluted, and some trainees spoke about having an "actual assessor" and a "remote assessor" which created complications and miscommunications.
- Trainees valued the 8-week reviews as it provided a structure and regular review of their training progress.
- During the pandemic, the increase to 4-week reviews was helpful to trainees' wellbeing.

The Impact of the Pandemic

The impact of the coronavirus pandemic during the training programme was by no means insignificant and some indications of this have already been pointed out.

Midpoint data collection with trainees on the Aneurin Bevan model and endpoint data collection with the Powys trainee took place in March 2020 and thus, these trainees' experiences up until that point were not affected by the pandemic. However, from March 2020 onwards, trainees on both the Aneurin Bevan and Cwm Taf models were significantly impacted by the pandemic and subsequent restrictions and guidelines.

Trainees, mentors and HEIW staff reflected on various components of the programme that were affected, from engaging with support staff, the arrangement of rotations and exposure to particular clinical experiences:

They weren't able to go to primary care, they couldn't go to the wards during certain times in the middle of the pandemic, they helped out at the vaccination centre, they had their study days and NVQ time reduced, they weren't allowed to go between community/hospital when colleagues tested positive for Covid, increased workload in community made training difficult, staff shortages made training difficult, constantly changing circumstances meant no consistency, rotas changing at the last minute. (Hospital Mentor)

Of the 15 mentors who responded to the online survey, 14 reported that their trainee(s) training or progress was affected either 'quite a lot' or 'a lot' by the pandemic. In particular they commented on the challenges trainees faced in collecting evidence due to the substantial changes to service delivery and "restrictions with patient contact" (Hospital Mentor).

In the community setting, some trainees were pulled from this rotation or where HEIW were now working remotely and could not attend pharmacies to run the necessary health and safety and insurance checks, some trainees faced delays in starting their community rotation:

The other thing that Covid has affected is I'm currently meant to be starting my rotation in community. I was meant to start a couple of weeks ago but unfortunately HEIW aren't willing to go and do the health and safety assessments because they're all working from home at the moment... so I have not been able to start my community rotation. (Trainee, Midpoint)

Trainees were removed from the community setting for a period of time during the initial outbreak of Covid Trainees were also informed to remain away from the community setting whilst staff members were undergoing testing for Covid or when they were identified as being in contact with Covid positive patients in secondary care setting. (Community Mentor)

Some trainees were even pulled out of their community training site to help in mass vaccination centres:

I thought I was done before Christmas for my NVQ really and then I still wasn't signed off in March. They were asking me to get stuff from community and I haven't been in community myself for months because they pulled me to help in the mass vaccination centre. (Trainee, Endpoint)

In hospital settings, trainees often had to remain in the dispensary and could not perform ward visits:

I found with the pandemic my trainee was kept in dispensary a lot so we missed training on the ward. (Hospital Mentor)

At the point when a lot of their evidence was needed from ward-based activities, face to face with patients, Covid prevented these activities. (Hospital Mentor)

Some trainees commented on how often their training was no longer a priority and service provision had to take precedent due to the sheer volume of work as well as staff absences:

The training programme in the hospital was obviously affected more by the coronavirus pandemic, but at times felt that I was merely carrying out a dispensing assistant role within the pharmacy team to make up the numbers, rather than training to be a pharmacy technician. (Trainee, Endpoint)

Nonetheless, there seemed to be some positive outcomes from the changes that were faced due to the pandemic. Several trainees commented on their preference of

study days being moved to online as it meant their time was used more efficiently with less travelling:

I actually really like the remote learning days. I think there's absolutely no need for everyone to go and drive to an arena in Cardiff. The training days like that. So, I would love to see the remote training kept up. (Trainee, Midpoint)

I personally like the online study days... I think people have more confidence to contribute to the conversation when it's online and obviously, nobody has to travel (Trainee, Midpoint)

Box 7: Summary of the Impact of the Pandemic

- The pandemic had a substantial impact on the training programme, affecting in particular trainees' opportunity to engage with support staff, the arrangement of rotations, and exposure to particular clinical experiences and patient contact.
- In community settings, trainees faced delays or cancellations in their rotation. Some were even pulled from training to work in mass vaccination centres.
- In hospital settings, trainees often had to remain in the dispensary and could not perform ward visits.
- Some trainees felt their training was no longer a priority during the pandemic and service provision had to take precedent.
- A benefit of the pandemic experience was the shift from in-person study days to online. This eliminated the need to travel to these events.

Looking to the Future

Suggested Improvements to the Multi-Sector Programme

Trainees appeared to have a variety of suggestions for possible improvements to the programme.

A common reflection from trainees on the four-day-fortnight model was around the process of gaining the initial competencies for their training. Many trainees felt that it would be beneficial to spend longer periods in each sector at the beginning of their training so they could find their feet before entering the four-day-fortnight rotations:

Well, I think at the start with the competencies having two locations to try and get competencies when we're still learning, that was difficult. Maybe if we'd have focused on one area at a time to start, that we got our competencies first and then moved to the next one. So, we could concentrate on each one at a time, that might have been more beneficial and then getting into the rota of moving back and forth. (Trainee, Midpoint)

This was perceived as being particularly important in the hospital setting so that trainees could achieve their dispensing figures:

At first when I was doing my dispensing figures in the hospital, I found that really hard. I had to redo the figures three times just because I couldn't get to grips with it because, as you can imagine, I was coming and going, I couldn't get settled in and I couldn't learn it properly [...] I think at the beginning perhaps it would have been better for me to have a longer placement in hospital just so that I could finish the figures and get a bit more settled in so I could learn more. (Trainee, Endpoint)

Some trainees reflected on how they had felt like “the guinea pigs” and things were “wish-washy” at the beginning of the training programme where there appeared to be a lack of organisation and communication among those involved:

I just think that it probably needs a little bit more planning. Obviously, we're the guinea pigs at the moment so it's very touch and go. The communication between all three managers... sometimes some people don't necessarily know what's going on as much as other people. (Trainee, Midpoint)

More structure [is needed] to the training programme, so that all organisations are better able to coordinate the training. Because the multi-sector training programme was a new training programme, I can't count the number of times I would hear the sentence, 'I don't know anything about the programme, and I don't know what you should be doing today'. (Trainee, Endpoint)

Although trainees did recognise that the programme had been “a learning curve” that was new for everyone, and some issues appeared to have been resolved over time:

I think because I've been the first to do it [multi-sector training programme] within the Health Board, I think they weren't quite sure what to do, there wasn't a full structure in place to begin with. Although we got to grips with it as we've gone along. It's been a big learning curve I think for everybody. (Trainee, Endpoint)

Although not mentioned specifically in response to the question around improvements to the training programme, when reflecting on the support they received some trainees felt that “it would have been maybe a little bit better if you had your actual assessor come in to do you review” (Trainee, Midpoint) instead of having the one ‘remote’ assessor and one ‘actual’ assessor. This may also help with providing trainees with clearer guidance on what is expected from trainees.

Preparedness for Practice

It was promising to hear that many trainees felt they would feel prepared to enter either the community or hospital sectors of pharmacy and felt “really well-rounded” (Trainee Midpoint):

I feel comfortable in both. I feel like I could walk into both. Go in as a new trained in either, rather than feeling like I belong more in one. (Trainee, Midpoint)

Yeah, I feel equipped to enter both, to be honest. (Trainee, Midpoint)

Yeah, I think I'd be happy to apply in any sector now. (Trainee, Endpoint)

Mentors who responded to the online survey were positive about the trainees' preparedness for practice. Seven out of 15 mentors felt trainees would be 'somewhat prepared' to enter their pharmacy sector, and eight out of 15 felt they would be 'well prepared'.

Those who had been unable to gain exposure to the general practice setting of pharmacy commented that they would feel less prepared to begin employment here compared to hospital and community settings:

I would have really liked to have seen that [pharmacy in general practice] because even though it's been explained to me it's still difficult to really understand what goes on in primary care [general practice] [...] So, I think if a job came up in primary care I'd be happy to go for it but I think I'd be less prepared going in for that one than community or hospital because I haven't seen anything like that before. (Trainee, Endpoint)

Even one of the trainees who had been fortunate enough to acquire some exposure to a general practice setting felt they still needed some more experience in this setting and that it required a lot of background knowledge:

I think hospital and community yeah, I'd be prepared to go in any of those sectors. Primary care, I've only been three weeks there. I think you need a lot of knowledge, background knowledge and experience to be in primary care to start working in primary care. (Trainee, Midpoint)

However, another trainee felt that despite the short period of time, she had acquired a good insight into the general practice setting:

I think anything sector. Time in primary care is obviously quite a lot shorter, but at the moment we're only spending three to four weeks in primary care now. I do think we've had a good insight in that time. I think I understand the role a lot better. So, I'd be confident to apply for a job in primary care knowing what they do now. (Trainee, Midpoint)

Some trainees reflected on how they might compare to a single-sector trained pharmacists. Although they felt these trainees would have more specific knowledge in one area, the trainee felt that the multi-sector experience had provided them with a broader understanding of pharmacy which gave them "an edge":

I think I'd have a broader knowledge that perhaps somebody who's just worked in one sector, but then also a slight disadvantage because they're going to have a wider knowledge in that specific area, aren't they? They're probably going to be more ready on day

one to go into their sector. So, I think that's an interesting sort of take on it as well... my level of knowledge isn't probably going to be as much as theirs in the one area, but then I'll have a broader knowledge. (Trainee, Endpoint)

One trainee had been successful in securing a role in the hospital sector and reflected on how some jobs had not been accessible as they required particular training, however other employers valued the training programme:

I would say, even though it limited some of the jobs that I could apply for, for example, [some] stated specifically you have to have the medicines counter training. When I went to apply for this job she was really impressed because she had heard about the course [multisector training programme] ... and they were more than happy to put me through the over-the-counter course. (Trainee, Endpoint)

The principal pharmacist we interviewed who works in the hospital setting also reflected on how they like to recruit individuals who have some experience in the community setting, so that they had a better understanding of the patient journey and transfer of care across settings:

I think people work in different ways in community, they've got different pressures. When we've had pre-regs before we've always looked for somebody that has community pharmacy experience in you know holiday/vacation experiences because it just gives you a good grounding really. [...] Techs that have never worked in community don't understand community pharmacy at all, and vice-versa in community and primary care. So, because the boundaries between the transfer of care for patients are coming down all the time, people coming in for shorter times we are moving in and out quicker. We felt it was essential that they understand all elements of pharmacy, from a patient care perspective. (Principal Pharmacist)

Mentors commented on what they anticipated to be the biggest challenge for trainees upon entering employment. Several mentors felt “*being in one place would be hard for them to settle to*” (Primary Care/GP Mentor) after completing a diverse training programme. Alternatively, in terms of strengths, mentors felt trainees would be “*adaptable*” and “*flexible*”. Mentors also felt trainees had “*a great pharmaceutical knowledge base with a good understanding of how community and hospital pharmacy works*” (Hospital Mentor):

Being able to effectively communicate between sectors, due to understanding how each sector operates. (Community Mentor)

All round knowledge of pharmacy and the technician role and the variety of training in different sectors will help them to help the patient and give them more choice in job roles they are competent in. (Hospital Mentor)

Career Aspirations

Trainees expressed a variety of preferences in terms of their career, some were hoping to enter the community setting and others, hospital:

I've probably got a preference for the community pharmacy. I don't really think that's more on the work, I think that's more sort of the working environment. I've pretty much always worked in small teams and in the community pharmacy there's more of a team spirit. You've got your pharmacist with you and the other pharmacy techs and dispensers. You feel more part of something. Whereas in the hospital it's such a big team and sometimes you just feel like you're one of a hundred people. You know, whether you're really making a contribution in community pharmacy.
(Trainee, Midpoint)

I do think I enjoy hospital more at the moment, especially on the ward working as well as dispensary. Yeah, probably I'd look for hospital jobs over anything else. (Trainee, Midpoint)

Others reflected on how the multi-sector programme had helped them to decide on their preferred pharmacy setting:

When I first started, I definitely thought I was meant to be community, but as we've gone through the competencies and the stress of the competencies I definitely feel really comfortable in the hospital now and I really enjoyed working on the wards. (Trainee, Midpoint)

It's told me that I definitely don't want to work in community. I prefer the hospital setting. (Trainee, Endpoint)

Several trainees commented on their enjoyment of the rotations across different sectors and seeing “the whole range” and “full rotation of patients” and would be interested in pursuing integrated posts if they were to become available in the future:

I'm really enjoying multi-sector and the thought of when I qualify I'm going to have to pick between them is really hard. If any multi-sector jobs would become a thing it definitely is something that I would look at doing, because I like the change and seeing the whole range and circle. I enjoy them both in different ways.
(Trainee, Midpoint)

I think the multi-sector element of it is really interesting and I feel like that's something that could move forward in its own, just part of going from each sector because you get to see the full rotation of the patients then. You get to see their full journey. (Trainee, Midpoint)

I would like to be a multi-sector technician and I'd like to work in community, but I'd also like to do primary care as well if I could.

I'm doing that at the moment and I'm really enjoying that. So to have a multi-sector role if I could. (Trainee, Endpoint)

Box 8: Summary of Looking to the Future

- Some trainees felt they would have benefited from having longer periods in each setting when they first started their training when they were still finding their feet.
- There was a desire for more organisation and communication across managers and mentors, however this seemed to have improved over time.
- Trainees generally felt prepared to enter either community or hospital settings upon completing their multi-sector training and felt they held a well-rounded understanding of pharmacy.
- Trainees, even those who did gain some experience, felt less prepared to enter the general practice setting than hospital or community settings.
- Some trainees felt they had an edge over single-sector trained pharmacists and held a broader understanding of pharmacy.
- Mentors felt trainees would enter the workforce as adaptable and flexible pharmacy technicians who were prepared for practice.
- Mentors felt trainees would be able to offer an understanding of the different pharmacy sectors and would aid communication across sectors and with patients.
- Mentors felt trainees may struggle with being in the same place each day after their diverse training programme.
- Trainees expressed a variety of preferences in terms of career trajectory.
- Some trainees reported a desire to pursue an integrated post if they were to become available.

Conclusion

The key findings of this study have been mapped against our research objectives and summarised in Table 3.

Table 3 – Key Findings Mapped against the Evaluation Objectives

The extent to which the training programme meets the NVQ competency requirements
<ul style="list-style-type: none">• Trainees had somewhat mixed views around the opportunity to gather evidence to meet the NVQ competency requirements, and experiences appeared to vary across settings.• Some challenges in meeting the NVQ competency requirements were largely a consequence of the Covid-19 pandemic.• Trainees on the four-day-fortnight model sometimes found the lack of prolonged exposure in one setting created difficulties in their evidence collection.• The fast pace of community pharmacy was perceived variably by trainees. Some felt it provided plentiful opportunities for evidence collection, but others felt there was no let-up for trainees to pause and consider their evidence collection.• Support staff were able to adapt trainees' rotations to ensure they had adequate exposure and opportunity to meet their competencies.• There appeared to be a misalignment between the expectations of trainees and support staff to those of the programme assessors in terms of the quantity of evidence. It had been envisaged that competencies would be split across sectors but assessors sought evidence of competency in both hospital and community settings. This was seen as creating additional workload for trainees and hindering capacity of training sites.
Views on the e-portfolio and 8-week reviews
<ul style="list-style-type: none">• Trainees initially struggled to get to grips with the e-portfolio and at face-value, did not perceive it to be particularly user-friendly.• As trainees progressed with their training, they became more familiar with the e-portfolio and did not have any particular issues.• HEIW reviewers and line managers had extensive experience of using the e-portfolio and felt it was an efficient tool that helped them to support trainees.• Mentors indicated that they would prefer an online e-portfolio over a paper-based portfolio.• The 8-week reviews comprised two elements: one generic component set out by the Welsh Government for all apprenticeships, and one that focused on the progress of the trainee.• The generic component of the reviews was regarded by trainees as less relevant and more of a tick-box exercise.• Trainees appreciated the opportunity to use the review meetings to check their progress, prioritise workload and identify upcoming training needs.• The 8-week reviews were thought to provide a helpful structure that helped trainees monitor their progress.• During the pandemic, the increase of the 8-week reviews to 4-week reviews was helpful to trainees' wellbeing.

The added value of experience in general practice

- Unfortunately, due to the pandemic, not all trainees were able to gain experience in the general practice setting as initially planned.
- General practice pharmacy was perceived by trainees as an elusive area that they were unfamiliar with.
- Some trainees reflected on how they felt general practice was an area of growth for pharmacy and so felt it important to gain this experience.
- Those who did experience general practice pharmacy valued the experience and found it useful to see the different demands and different patients in this setting.
- Those who missed the opportunity to experience general practice pharmacy felt they had missed out on a valuable learning opportunity that would have filled a gap in their training.

Perceptions on whether skills are transferable across sectors

- Trainees, line managers and mentors spoke positively of the transferability of skills that trainees developed during the multi-sector programme and felt they had gained skills and understanding that could not be acquired through single-sector training.
- Exposure to multiple settings enabled trainees to develop a rounded understanding of the patient journey and transfer of care that was useful in all settings.
- Mentors reflected that many of the same skills are required across sectors, such as medication knowledge, communication, teamwork, and prioritising.
- Trainees reported being able to explain to their colleagues about the working practices and procedures in other settings.
- In community, high patient contact enabled trainees to develop their communication skills which were useful to the wards in hospital settings.
- In hospital, trainees learnt about labelling standards which they could apply in community and improve patients' understanding of their medication.
- In community, trainees developed their communication skills with patients; in hospital they developed their communication skills with other healthcare professionals.

Benefits and challenges of the different models

- The four-day-fortnight model presented challenges and took trainees a while to settle into at the beginning due to their frequent movement across sites.
 - The four-day-fortnight model was perceived by some to lack continuity. This created difficulties in evidence collection as trainees were often unable to follow through with patients.
 - Nonetheless, trainees valued the opportunity to see different days of the week in different settings.
 - Mentors reflected positively of the four-day-fortnight model in terms of the opportunity it provided to gain understanding of multiple sectors simultaneously.
 - Trainees on monthly block rotations appreciated the prolonged period in settings to fully get to grips with that particular pharmacy environment.
 - Trainees also perceived monthly block rotations to provide greater structure to monitor their progress and gather evidence.
 - Mentors felt that block rotations enabled the acquisition of necessary in-depth knowledge.
-

How trainees contribute to the workforce and what they struggle with

- Trainees reflected on how they might compare to their single-sector trained counterparts and felt that their broader understanding of pharmacy and the transfer of care would give them an edge.
 - The principal pharmacist working in a hospital setting emphasised that they look to recruit individuals with experience in different settings as they have a better understanding of the patient journey.
 - Some trainees were interested in pursuing integrated posts, should the opportunity become available.
 - Trainees recognised that their single-sector trained counterparts would have more specialist knowledge and the multi-sector trainees may have to undergo additional training in their early career, particularly in hospital settings.
 - Mentors felt trainees would enter the workforce as adaptable and flexible pharmacy technicians who were prepared for practice.
 - Mentors felt trainees would be able to offer an understanding of the different pharmacy sectors and would aid communication across sectors and with patients.
 - Mentors felt trainees may struggle with being in the same place every day after their diverse training programme.
-

Limitations of Evaluation Study

This evaluation study was not without its limitations. Unfortunately, despite multiple reminders, we were unable to engage with as many trainees in Phase 2, towards the end of the training programme as we did in Phase 1. As a result, we had more midpoint data than endpoint data.

The two-year duration of the training programme and the different start dates of three cohorts meant that trainees were affected to variable degrees by the Covid-19 pandemic. This consequently created a challenge in disentangling matters that were specifically programme related and those that were pandemic related. Only a small number of trainees were able to gain the planned general practice exposure and therefore the value of this rotation could not be explored in great detail.

Nonetheless, participants of the evaluation were forthcoming in sharing their experiences of the programme and many lessons have been learnt from the process. When looking to the future of the multi-sector training programme, we provide a number of points of consideration.

Future Points of Consideration

Based on our findings, we provide the following key points of consideration around the future of the multi-sector pre-registration pharmacy technician training programme:

- Trainees would benefit from at least an initial prolonged period of time in one pharmacy setting (e.g., minimum of one month), in order to settle into the environment and the training requirements.
- There is a need for further clarification on the quantity of evidence required to demonstrate competency and whether evidence is required in all pharmacy settings.

- The role of the assessor would benefit from further refinement. It would also be beneficial for assessors to be able to visit the trainees in the workplace instead of working remotely.
- General practice pharmacy is perceived as an area of growth for the pharmacy technician role, yet remains an elusive environment to many trainees due to their loss of this rotation as a result of the Covid-19 pandemic. Ensuring exposure to this setting would be valuable to the development of pharmacy technicians and their contribution to the workforce.
- Although trainees can contribute to service provision, it is important that their training is prioritised, and they have time to record relevant evidence.
- The multi-sector programme is perceived as capable of developing well-rounded pharmacy technicians with a good understanding of the patient journey and transfer of care, though trainees may require some further specialised training upon entering a particular setting.

References

[1] Blenkinsopp A, Marshall K, Roberts G, Wisher S. General Pharmaceutical Council Survey of Pre-registration Pharmacy Technician Training. 2016

[2] NHS Wales. New Career Pathways for Pharmacy Technicians Set to Future-Proof Workforce. 2019.

Appendix 1 – Question Schedule for Trainees at Midpoint

Motives

What **motivated** you to pursue the integrated programme? Did you consider other programmes?

Experiences of training programme

What have been your **general experiences** of the training programme?

What were your experiences of being in **different sectors**?

- Was there any **added value** from the experience in **general practice**?

How did you find the **6-month rotations**? Was this a suitable duration?

- What are your thoughts on a **split week** model? (2 days in hospital, 2 days in community, 1 day in general practice)

What are your experiences of the **e-portfolio**? [probe specifically the 8-wk reviews]

What support have you had from your **supervisor**? (frequency of contact, nature of supervision)

Overall, do you feel that the programme has **met your expectations**?

- Has it enabled you to meet the **NVQ competency requirements**? Anything you've struggled to meet?

Single-sector training comparisons

How would you **compare** your experiences to those trainees pursuing single-sector training?

What do you see to be the **key advantages and disadvantages** to pursuing multi-sector training compared with single-sector training?

Do you feel that skills developed in one sector are **transferable** to other sectors?

Future

Do you feel **confident** entering any sector of pharmacy, following your training?

What do you see as your key **contributions to the workforce**?

- Anything you struggle with?

What are your intended **next steps** following your training?

Do you have any suggestions for how the training programme might be **improved**?

Appendix 2 – Question Schedule for Trainees at Endpoint

Experiences of training programme

What have been your **general experiences** of the training programme?

What were your experiences of being in **different sectors**?

- What was your view on the losing the opportunity for experience in **general practice** from the programme?

Having almost completed your training, how did you find the **split week model** of rotations?

- What were the main **advantages and disadvantages** of this model?
- In your view, what would be an **ideal model** in terms of rotations across sectors?

Do you feel you had sufficient **opportunity and exposure** to evidence the NVQ competency requirements?

- Were there any particular competencies you **struggled to meet** more than others?

What are your experiences of the **e-portfolio**?

Support

What support have you had from your **supervisor**? (frequency of contact, nature of supervision)

How did you find the **review meetings**?

- What was the impact of these changing from every **8-weeks to 4-weeks**?
- **Optimal** frequency?

Single-sector training comparisons

What do you see to be the **key advantages and disadvantages** to pursuing multi-sector training compared with single-sector training?

Do you feel that skills developed in one sector are **transferable** to other sectors? Please elaborate.

How would you **compare** your experiences to those trainees pursuing single-sector training?

Future

Overall, do you feel that the programme has **met your expectations**?

What are your intended **next steps** following your training?

Do you feel **confident** entering any sector of pharmacy, following your training?

- How do you feel this compares to had you pursued **single-sector training**?

What do you see as your key **contributions to the workforce**?

- Do you feel equipped to enter **one more than another**? Anything you struggle with?

Do you have any suggestions for how the training programme might be **improved**?

Appendix 3 – Question Schedule for HEIW Reviewers

Reviewer Role

How would you describe your role as a reviewer on the multi-sector programme?

Can you give a brief overview of what happens in the review meetings with trainees?

If you have experience as a reviewer on a single-sector training model, how do your experiences compare?

What has been the impact of increasing the reviews from every 8 weeks to every 4 weeks?

What do you think is the optimum frequency of review meetings?

What is your view of the e-portfolio? (easily accessed in and out of workplace? User friendly?)

Trainee Development

How would you describe the trainees' development?

Are they meeting the NVQ competency requirements?

From your experience, what do you feel the trainees are struggling with most?

How does this compare across sectors? (are they developing more in one than another?)

What has been the impact of the covid-19 pandemic?

Are trainees able to develop transferable skills in their rotations? Examples?

Do you have an opinion on the different models (6 months rotations vs. split weeks) in terms of whether one model is better than others at enhancing trainees' progress, confidence, wellbeing).

What has been the impact of the loss of the primary care rotation on:

- Trainee development/progression?
- Trainee morale/wellbeing?

Support and communication

What interaction have you had with others on the programme (e.g. supervisors, line managers, assessors)

What is the nature of this interaction? How often?

Have you felt sufficiently supported in your role? Please elaborate.

Improvements and the future

In your opinion, do you feel the trainees will complete their training prepared for practice in any sector of pharmacy?

Do you feel they will be more prepared for one sector over another?

What do you see as the added value of the multi-sector programme?

Overall, in your opinion, what's working well?

Do you have any suggestions of how the multi-sector programme could be improved?

Do you have any other comments?

Appendix 4 – Online Survey for Workplace Mentors

Multi-sector Pharmacy Technician Programme Evaluation

Page 1: Page 1

Commissioned by Health Education and Improvement Wales (HEIW), the purpose of this survey is to explore the views among workplace mentors/supervisors on the multi-sector pharmacy technician pre-registration training programme.

All questions are **optional** (bar the question of consent) and all information you provide is **anonymous**.

For the purposes of this survey Cardiff University is the data controller. All data collected in this survey will be held securely by the survey software provider under contract and then retained by Cardiff University in accordance with Cardiff University and General Data Protection Regulation Guidance.

Cardiff University is committed to respecting and protecting your personal data in accordance with your expectations and Data Protection legislation. The University Data Protection Officer can be contacted at inforequest@cardiff.ac.uk. Further information about Data Protection can be found [here](#).

Data from the survey will only be used by the research team. Cookies, personal data stored by your Web browser, are not used in this survey.

If you have any questions about this survey, please contact Professor Alison Bullock at BullockAD@cardiff.ac.uk

The survey should take approximately **15 minutes** to complete. Thank you for your participation.

By completing this study, I am consenting to take part in this study. I understand that my data will be held securely. I understand that when this information is no longer required, official university procedure will be followed to dispose of my data * *Required*

- I give consent freely
- I do not give consent

Page 2: Your Role

What pharmacy **sector** do you work in?

- Community
- Hospital
- Primary Care / GP
- Mixed-post

What geographical **location** do you work in?

- Aneurin Bevan
- Powys
- Cwm Rhondda

How many trainees did you mentor/supervise?

- 1
- 2
- 3
- More than 3

Did any of your trainees **drop out** of the training programme?

- Yes
- No

Did you have **previous experience** of being in a **mentor/supervisor role**, prior to this programme?

- Yes
- No

Did you have **previous experience** of being an **expert witness**, prior to this programme?

- Yes
- No

Page 3: Trainee Development

In your role as a workplace supervisor, on average, **how often** did you formally meet with your trainee?

- More than once a week
- Once a week
- Once a fortnight
- Once a month
- Less than once a month

Generally speaking, what were these meetings **used for**?

To what extent was your trainee(s)' training or progress **affected by the pandemic**?

- Not at all
- Not a lot
- Quite a lot
- A lot

Please explain how the pandemic affected your trainee(s)' learning or progress

Overall, do you feel there were **adequate opportunities** during the training for trainees to meet the **NVQ competency requirements**?

- Yes - adequate opportunities
- No - inadequate opportunities

Please provide a reason for your answer

Overall, do you feel there was **adequate time** during the training for trainees to meet the **NVQ competency requirements**?

- Yes - adequate time
- No - inadequate time

Please provide a reason for your answer

Were there any particular competencies that trainees **struggled** to demonstrate?

- Yes
- No

Please elaborate

Page 4: Transferable Skills

Do you think the multi-sector programme enabled trainees to develop skills **transferable** to other pharmacy sectors?

- Yes
- Not sure
- No

What skills or knowledge do you think the trainee(s) **gained in your sector** that they were able to take into other settings?

What skills or knowledge do you think the trainee(s) **acquired in other settings** and brought into your sector?

Do you think there is any **added value of a primary care** placement?

- Yes
- No

Please provide a reason for your answer

Page 5: E-portfolio

Did you **use** the e-portfolio?

- Yes
- No

Overall, **how easy or difficult** was it to use the e-portfolio?

- Difficult
- Somewhat Difficult
- Somewhat Easy
- Easy

How easy was it to **upload documentation** to the e-portfolio?

- Difficult
- Somewhat Difficult
- Somewhat Easy
- Easy

How easy was it to **notify your trainee** you had performed an action on the e-portfolio?

- Difficult
- Somewhat Difficult
- Somewhat Easy
- Easy

Overall, how useful did you find the e-portfolio in **documenting trainee progression**?

- Not at all useful
- Not very useful
- Quite useful
- Very useful

Would you prefer an **e-portfolio** or a **paper-based** version?

- Online e-portfolio
- Paper-based portfolio

Do you have any **other comments** about the e-portfolio?