Independent Prescribing Pilot Programme during Foundation Training for Trainee Pharmacists

Evaluation Report

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Abbreviations

Abbreviation	Meaning
CFAP	Competency Framework for All Prescribers
CTP	Cross-Sector Trainee Pharmacists
DPP	Designated Prescribing Practitioner
DS	Designated Supervisor
EPD	Educational Programme Director
e-portfolio	Electronic Portfolio
FT	Foundation Training
FTC	Foundation Training Consortium
GP	General Practice
GPhC	General Pharmaceutical Council
HEE	Health Education England
HTP	Hospital Trainee Pharmacist
ICB	Integrated Care Board
IP	Independent Prescribing / Independent Prescriber
IPS	IP Study session
iRAT	Individual Readiness Assurance Test
MS	Microsoft
NHSE WTE	National Health Service England Workforce Training and Education
RPS	Royal Pharmaceutical Society
SD	Study Days
SLE	Supervised Learning Events
TBL	Team Based Learning
TP	Trainee Pharmacist
tRAT	Team Readiness Assurance Test
TR	Tripartite Review

1 Executive summary

In preparation for July 2025, when independent prescribing (IP) training will be embedded into the foundation training year for trainee pharmacists (TPs), the University of Bradford and the University of Huddersfield were commissioned by the National Health Service England Workforce Training and Education (NHSE WTE) to develop and evaluate training models and an assessment strategy for embedding Independent Prescribing (IP) skills into the foundation training (FT) programme for trainee pharmacists (TPs). A coherent learning and teaching strategy, incorporating IP related training and learning materials, to be delivered alongside the existing supplementary training for hospital-based TPs in the north of England was developed and evaluated. A report on outcome for all the participants at the end of the programme has previously been submitted to NHSE WTE.

The evaluation was designed to explore the success of the pilot programme incorporating independent prescribing into the foundation training year.

Key Findings

The commissioned pilot has been completed in June 2024. The developed IP related material was successfully delivered to participating TPs. Training, and support was offered to participating designated prescribing practitioners (DPPs).

In total, 23 Trainee Pharmacists (TPs) across various sectors were recruited. There was some attrition with 16 TPs completing the pilot, out of which 14 submitted the required portfolio documentation. Exit survey from participants willing to complete one showed that those who left did so due to the time commitment required for the pilot.

Trainees reported an increased confidence in demonstrating competencies in the prescribing consultation and governance domains of the Royal Pharmaceutical Society Competency Framework for all Prescribers (RPS CFAP) by the end of the programme.

Hospital based trainee pharmacists reported that all competencies in the consultation domain of the RPS CFAP were easy to evidence except the fourth competency (Prescribe) while cross-sector trainee pharmacist reported that all competencies in this domain were easy to evidence. Both hospital and cross-sector trainees agreed that all

competencies except the second (Identify evidence-based treatment options available for clinical decision making) and fifth (Provide information) competency were difficult to evidence to varying degrees.

In the prescribing governance domain of the RPS CFAP some hospital and cross-sector trainees agreed that all competencies were easy to evidence while others reported that all competencies were difficult to evidence.

TPs and DPPs agreed that the allocated supervised prescribing hours was adequate for the training. DPPs generally found the knowledge requirement for the role manageable and thought that the that the tasks associated with supervising and assessing TPs were achievable.

TPs and DPPs suggested that some flexibility around TPs ability to prescribe would be beneficial for demonstrating competencies related to independent decision making in prescribing.

The programme and data from this evaluation report has demonstrated that it is possible to successfully embed IP related training into the foundation training year of trainee pharmacist if appropriate modifications are made.

2 Background

From July 2025, Foundation training for trainee pharmacists (TP) will include independent prescribing (IP) and this cohort of trainees will be the first of future registrants to have independent prescriber status at the point of their registration as pharmacists.

In response to this, the University of Bradford and University of Huddersfield (the team) were commissioned by the National Health Service England Workforce Training and Education (NHSE WTE) to develop and evaluate training models and an assessment strategy for embedding Independent Prescribing (IP) skills into the foundation training (FT) programme for trainee pharmacists (TPs).

The training model included development of training materials for TPs and Designated Prescribing Practitioners (DPPs), delivery of teaching sessions by the Foundation Training Consortium (FTC) team (FTC study days) and by the programme lead (IP study days) and provision of additional support to TPs and DPPs, including tripartite reviews and drop-in sessions.

The assessment strategy consisted of TPs completing several assessment activities using assessment tools. Activities and tools were mapped to Royal Pharmaceutical Society (RPS) competency framework for all prescribers (CFAP) competency statements [1], and to the current foundation year models of assessment (NHSE strategy aligned) [2]. Assessment tools utilised were existing ratified NHSE supervised learning events (SLE). These were utilised for consistency with the foundation training year and models of postgraduate prescribing in the region.

The independent prescribing pilot programme (IP pilot) was designed to expose TP volunteers to 90 hours of prescribing related activities within existing TP placements. Independent prescribers at the TPs' placement sites were asked to volunteer as DPPs for the programme.

This report details the evaluation of the independent prescribing pilot during the foundation training for trainee pharmacist. The aim of the study was to evaluate the success of the pilot programme incorporating independent prescribing into the

foundation training year. It aimed to identify barriers to, and enablers of, embedding of independent prescribing in the foundation training year.

The main objectives of this report are:

- To analyse the experience of TPs and DPPs on the pilot.
- To evaluate TPs' confidence in their prescribing skills.
- To evaluate DPPs' confidence in their supervisory skills.
- To identify the barriers and enablers to embedding IP in the foundation training year.
- To explore the impact of supervisory responsibilities and training outcomes on the DPPs.
- To identify appropriate tools for assessing TPs' prescribing skills in the training year.

This report details analysis of qualitative and quantitative data collected throughout the IP pilot, as well as conclusions and recommendations informed by the data analysis.

3 Method

This section describes the methods used for collection and analysis of quantitative and qualitative data throughout the pilot.

Participant Recruitment

To facilitate recruitment, digital flyers were created with information about the pilot, and these were distributed amongst known training provider networks, TP advisory groups, and universities. Twenty-three TPs, across a variety of sectors, registered with the programme (***Table 1***).

Table 1: TPs Registered on the pilot in a variety of training sectors.

FT Training programme type and duration	Registered on pilot
52-week: Hospital	10
52-week: Community Pharmacy	1
52-week Cross-sector: Hospital / GP	3
52-week Cross-sector: Hospital / Social Enterprise-A[*1]	1
52-week Cross-sector: GP / Community Pharmacy	6
26-week Bradford sandwich: Hospital	2
Total	23

Placement sited independent prescribers were found by the TPs who had registered and asked to volunteer as DPPs for the programme. The team waived the existing RPS guidance for a 3-year qualified prescriber to be a DPP. This was intended to provide a risk-free environment for inexperienced prescribing supervisors to explore the DPP role. It also served as an opportunity for the volunteer DPPs to start building their personal portfolio of practice for 2025 onwards.

Ethics approval for this study was obtained from the Biomedical, Natural, Physical and Health Sciences panel of the University of Bradford (Ethics reference: E1178).

Foundation Training Consortium (FTC) Study Days

All TPs taking part on the IP pilot were registered with the FTC programme. The FTC was commissioned by NHSE WTE to provide supplementary training to all hospital TPs in the North of England with a focus on developing consultation skills, clinical assessment skills, information gathering, decision-making, and management of common conditions and minor ailments. The TPs on the pilot whose placements were hospital based, and in the North of England would have already been enrolled the FTC prior to commencing the pilot. This programme was utilised in the pilot to provide some cost-effective IP relevant supplementary training. Five study days (SD)s were organised and delivered **(*Appendix 1*)**.

SD1 covered clinical skills assessment. It was a face-to-face session facilitated by practicing pharmacists and physician associates. The session covered clinical assessment skills including blood pressure (manual), urinalysis, peak flow, heart rate, respiratory rate, hydration, mental state, capillary blood glucose, and vaccination.

SDs 2-5 were delivered online using Team-Based Learning (TBL) methodology [3]. ***Appendix 1*** lists the topics for each day.

Prior to the study day, relevant pre-work materials were disseminated to the TPs for them to prepare for the session. Each study day started with an introductory session, an individual readiness assurance test (iRAT), a team readiness assurance test (tRAT) and a feedback/clarification session. TPs then split into their various teams to work on application exercises designed to encourage utilisation of their clinical skills, critical reasoning skills and decision-making skills in real world scenarios. The sessions were delivered using Zoom and managed using InteDashboard, a platform for management of TBL. Post-study tasks were released after each study to further complement the learning. All learning materials and additional resources were made available to TPs via CANVAS, University of Bradford's learning management system.

Feedback for all study days were collected using MS Forms. The link to the evaluation forms were sent out to TPs after each session. The forms had a consent section incorporated into it and responses were analysed using quantitative descriptive analysis.

Independent Prescribing (IP) Study Days

Four IP focused study sessions (IPS1 - IPS4) were delivered by the IP pilot programme lead. These were aimed at bridging knowledge gaps arising from TPs not having any theoretical/academic IP related training due to them completing their MPharm programme prior to the implementation of the current Initial Education and Training (IET) standards (GPhC 2021).

IPS1 covered portfolio, evidence gathering, and making the most of learning in practice. IPS2 covered law, ethics, and governance, influences on prescribing, prescribing for individuals whilst working in systems, human rights, and diversity. IPS3 covered reducing risk, evidence-based medicine and guidelines, safeguarding and safety netting and health economics and public health. IPS4 covered worked prescribing examples and an opportunity for the TPs to write some prescriptions for primary and secondary care. All sessions were delivered online via MS Teams. A summary of the content and attendance at the sessions is provided in ***Appendix 2***.

Feedback for each session was collected using MS Forms. The link to the evaluation forms were sent out to TPs after each session and responses received were analysed using quantitative descriptive analysis.

Tripartite Review Analysis

Two tripartite review (TR) meetings were organised with each TP, their DPP and the programme lead in attendance, to discuss the TPs' progress and development.

The first review (TR1) was held for a duration of 60 minutes. Discussions were focused on:

- Wellbeing.
- Progress on the programme and evidencing competencies.
- Views on contact hours between TPs and DPPs.
- How well IP and FTC study days translate into practice.
- Area that TPs found challenging on the programme.

The second (TR2) lasted for 20 minutes and discussions were focused on:

- Wellbeing.

- Explanation of how their portfolios were being assessed for the purpose of programme.
- Expected dates for submission of final documents.
- Any questions TPs and their DPPs on anything regarding the pilot.

It also addressed any clarifications they needed as they came to the end of the programme and prepared to submit their final documents.

The meetings were a structured discussion to ascertain progress through the training period and provide ongoing support for both TP and DPP. The tripartite reviews were online via MS Teams, which were recorded with consent and the transcripts were evaluated using qualitative thematic analysis.

Longitudinal Analysis

Longitudinal analyses were also carried out as the pilot progressed. These analyses were aimed at evaluating the TPs' confidence in their prescribing competence as the pilot progressed as well as the DPPs perception of their supervisory abilities as the pilot progressed.

The longitudinal analysis of TPs on the pilot was done using self-assessment questionnaires which were bespoke questionnaires designed using MS Forms (***Appendix 3*** *and* ***Appendix 4***). The questionnaires consisted of a mix of Likert scale, choice, and free text questions. These were administered at the start of the pilot, mid-way through, and at the end of the pilot. The questionnaires were designed to assess the TPs' perception of their competencies as their training progressed.

Additional analysis carried out from the end point evaluation survey (***Appendix 5***) included evidencing competencies and IP focused time commitment.

Links to these were sent to TPs and DPPs and specific points throughout the pilot. Responses received were analysed using quantitative descriptive methods.

Interviews and Focus Groups

Qualitative interviews (semi-structured) and focus group sessions were conducted to get the views of DPPs and TPs on facilitators or barriers that could affect the successful embedding of IP into the foundation training year in 2025.

TPs and DPPs on the pilot were invited to register their interest in taking part in the interview and/or focus group. Participants that indicated interest were sent a participant information leaflet and an electronic consent form **(Appendix *6*)** to complete and return before the sessions. Contact details of the researcher were supplied for any questions that the participants had about the interview and focus group, or the consent form.

The semi structured interviews were approximately 30 minutes long and were undertaken using an ethics approved interview guide. Focus groups were for a duration of 45 minutes. Both interview and focus group sessions were online via MS Teams and covered, amongst other things, DPPs' and TPs' initial thoughts about the pilot, their overall experience, and their perspectives on a number of aspects of the programme. Transcripts of interviews and focus groups were evaluated using qualitative thematic analysis.

4 Results

Seven of the twenty-three TPs that registered withdrew before completion of the pilot. Sixteen TPs completed the pilot along with their DPPs. A distribution of TPs and DPPs according to training programme, and numbers of completion are summarised in ***Table 2.***

Table 2: Participant data, including training sector and stage of completion at the end of the programme.

FT Training programme type and duration	Number of TPs			
	Registered on pilot	Withdrew from pilot	Completed pilot	Data in report
52-week: Hospital	10	3	7	6
52-week: Community Pharmacy	1	1	0	0
52-week Cross-sector: Hospital / GP	3	0	3	3
52-week Cross-sector: Hospital / Social Enterprise-A	1	0	1	1
52-week Cross-sector: GP / Community Pharmacy	6	2	4	3
26-week Bradford sandwich: Hospital	2	1	1	1
Total	23	7	16	14

Only two of the seven TPs that withdrew consented to complete an exit survey. Three declined to complete the survey and two were uncontactable. Trainees who withdrew were hospital-based trainees (n=3), community pharmacy-based trainee (n=1), GP/community pharmacy cross-sector-based trainees (n=2) and Bradford sandwich trainee (n=1).

FTC Study Days

Responses from the FTC online study days were analysed from SD3, SD4 and SD5. Data from SD1 and SD2 were not analysed as the pilot commenced after these study days had been completed.

The number of TPs that attended each study day, as well as the number completed the survey for each study day are given in **Table *3***.

Table 3: TP attendance and survey response data for each study day.

SD	Number of TPs that attended	Number of TPs that completed the survey	Response Rate (%)
3	13	11	85
4	14	12	86
5	13	12	92

From SD3, 55% (n=6) of TPs who responded to the survey fully completed the pre-work, whilst 36% (n=4) partially completed the pre-work material and 9% (n=1) did not complete the pre-work material. In the free text answers to the question about reasons TPs only partially completed pre-work material for SD3, two of the four TPs that gave this response indicated time constraints due to work and other commitments as the reason for non-completion. One TP stated that they did not go through the link but did not give any reason why. The fourth TP that responded as partially completing the pre-work, did not provide any response to the free-text question. The TP who did not complete the pre-work material stated that they had problems finding the pre-work material and stated that they were expecting an email with the pre-work material attached to have been sent to them.

For SD4, 75% (n=9) of TPs who responded to the survey fully completed the pre-work, whilst 25% (n=3) partially completed the pre-work material. One of the TP gave time constraint as the reason for only partially completing the pre-work material. Another TP stated that they went through the pre-work material but did not click on the links for the required further reading. The third TP stated that a 'busy workload' due to just starting a new sector, as well as other work commitments was the reason for not completing the pre-work material.

For SD5, 50% (n=6) of TPs who responded to the survey fully completed the pre-work, whilst 25% (n=3) partially completed the pre-work material and 25% (n=3) did not complete the pre-work material. Only one TP that partially completed the pre-work provided a free text answer stating that they did not see the pre-work material.

Comparison of pre-work material completion across study days is presented in ***Figure 1***.

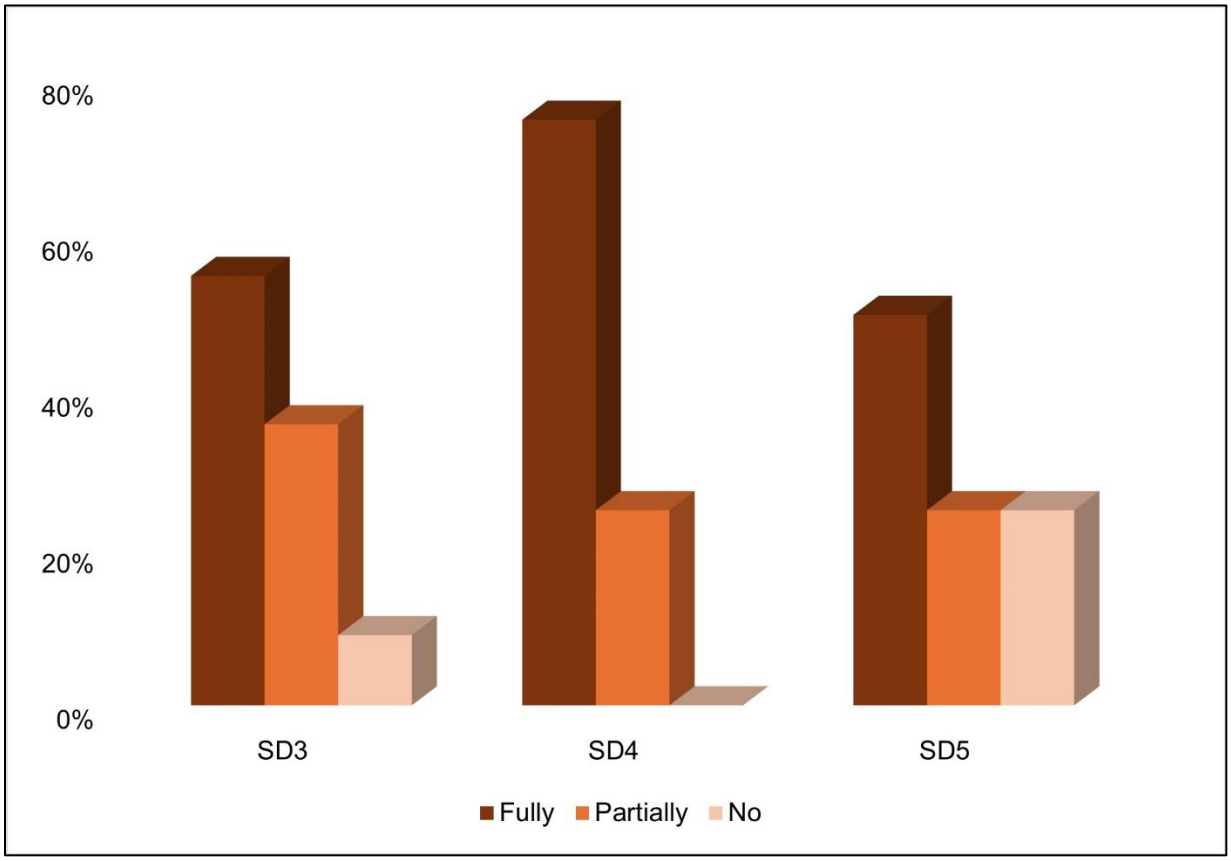


Figure 1: Proportion of TPs that completed pre-work material in each FTC study day.

Overall, TPs found the pre-work materials useful as seen in their ratings of the materials across study days (**Figure *2***) . TPs agreed that the pre-work materials were useful for the study day as observed by the responses falling predominantly between excellent and good.

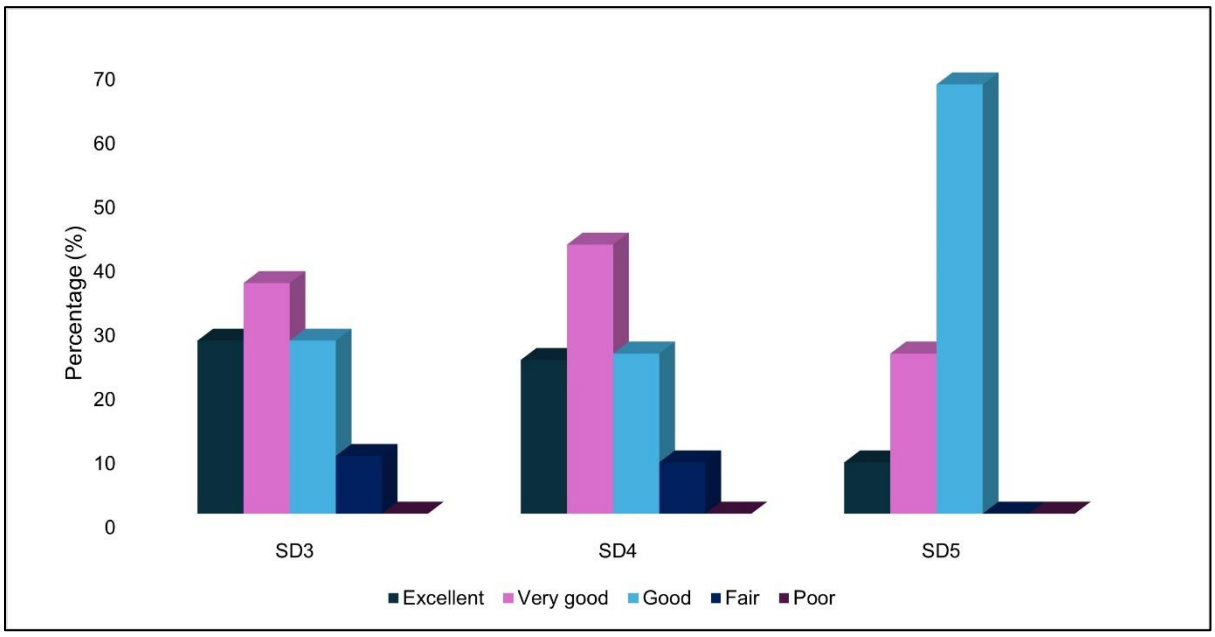


Figure 2: TPs' views on usefulness of Pre-work material across study days

TPs were also asked about their overall experience with TBL. Their responses are seen in **Figure *3***.

Figure 3: TP's views on overall TBL experience across study days.

The responses showed that TPs had a positive experience with TBL with a higher rating in SD4 compared to the other study days. This may have been due to the team being at the 'performance' stage of the team development and functioning optimally as a team.

TPs' opinions on how strongly they agreed or disagreed with various aspects of the study days were sought. A summary of their responses is shown in **Figure *4*** and **Figure *5***.

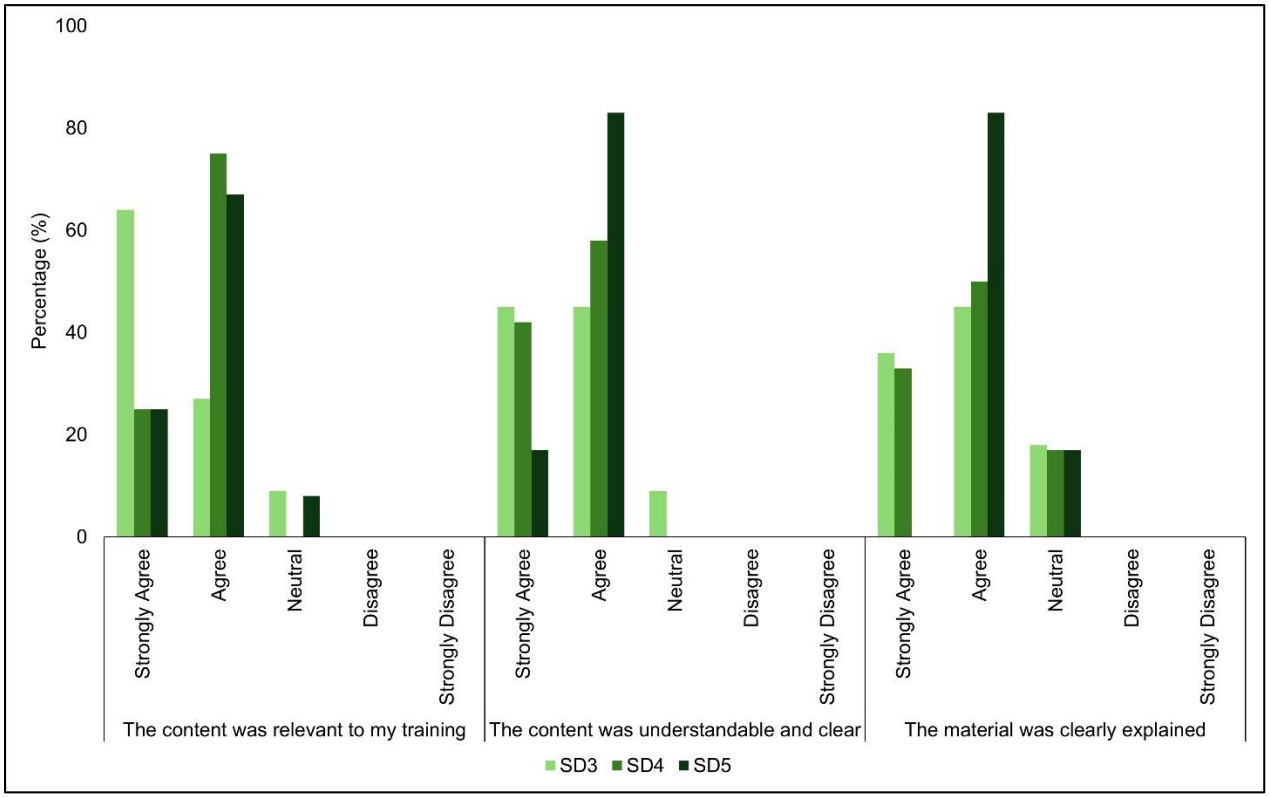


Figure 4: Summary of responses regarding FTC study days.

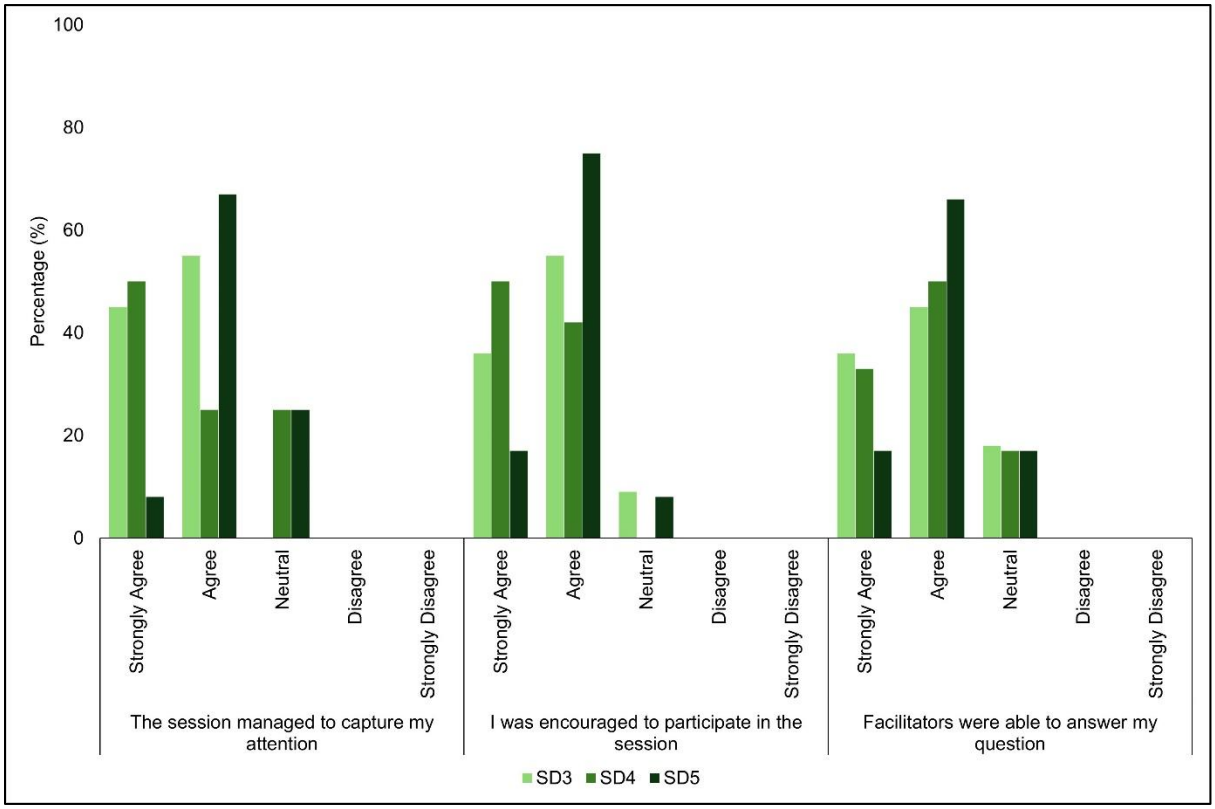


Figure 5: Summary of responses regarding FTC study days.

IP Study Days

For the four IP study sessions, the number of TPs that attended each day, as well as the number completed the survey for each day are given in **Table *4***.

Table 4: TP attendance and survey response data for each IP study session.

IPS1	Number of TPs that attended	Number of TPs that completed the Survey	Response Rate (%)
1	20	9	45
2	19	10	53
3	15	10	67
4	13	9	69

Respondents from IPS1 were made up of 5 (56%) hospital trainee pharmacists (HTPs) and 4 (44%) cross sector trainee pharmacist (CTPs). HTPs made up 60% (n=6), 70% (n=7) and 66% (n=6) of respondents from IPS2, IPS3 and IPS4, respectively, while CTPs made up, 40% (n=4), 30% (n=3), and 33% (n=3) of IPS2, IPS3 and IPS4,

respectively. It was noted that no response was received from the community pharmacy-based TP even though they attended IPS1 and IPS2 after which they withdrew from the pilot.

Regarding the learning materials, all TPs were generally in agreement that the online learning materials and links were easy to find and access and were relevant to the sessions (***Figure 6***).

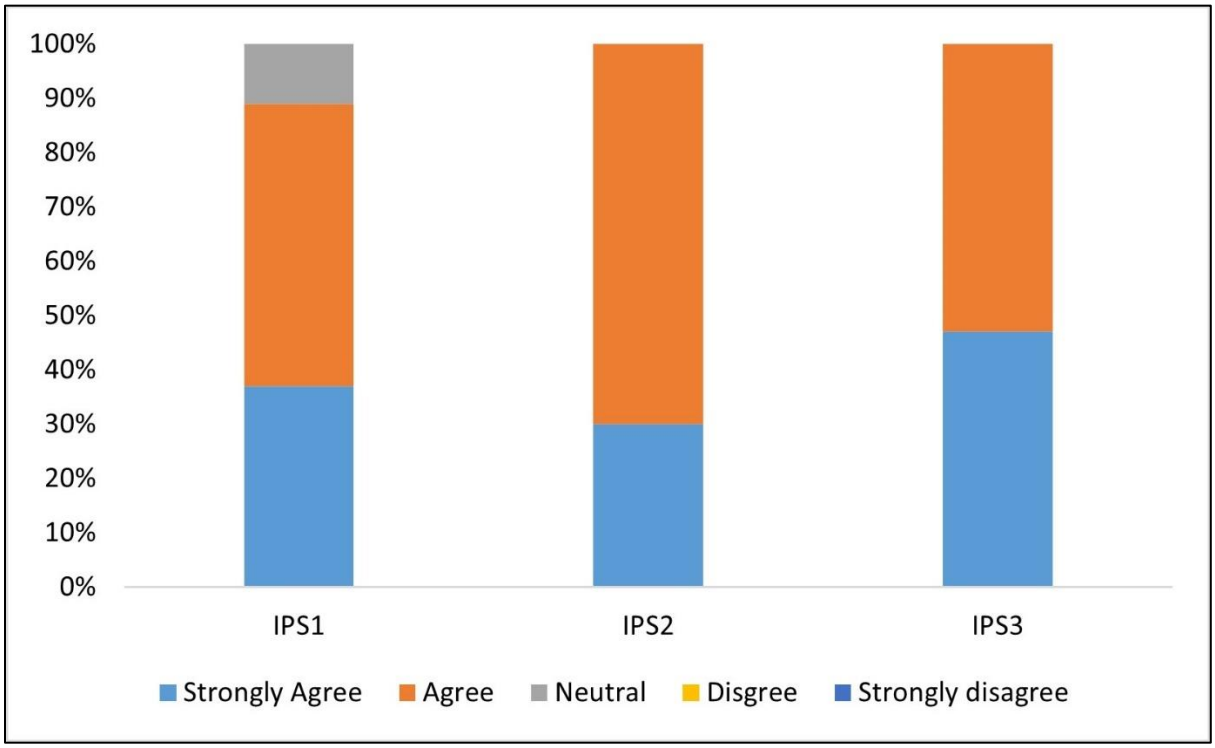


***Figure 6*: TP's responses to how much they agreed that learning materials and links were easy to find and access and were relevant to the sessions.**

Free text analysis of reasons given by TPs for being neutral regarding the learning materials revealed themes related to IT challenges as one TP stated:

"Initially it was difficult to load online learning materials due to lack of knowledge on where to find things - however once that was corrected, they were easy to access". (TP 1)

A second quote relating to IT challenges was:

"Canvas is a bit tricky for me." (TP 2)

TPs views of the learning content of each IP study day was also evaluated. For IPS1, 56% (n=5) of TPs strongly agreed that the learning content was engaging, relevant and understandable. The proportion of TPs that strongly agreed with this for IPS2,

IPS3, and IPS4 were 40% (n=4), 40% (n=4) and 89% (n=8). A few TPs were neutral about the learning contents in IPS1 (11%, n=1) and IPS 2 (10%, n=1). A summary of TPs views on the learning contents for each study day is given in **Figure *7***.

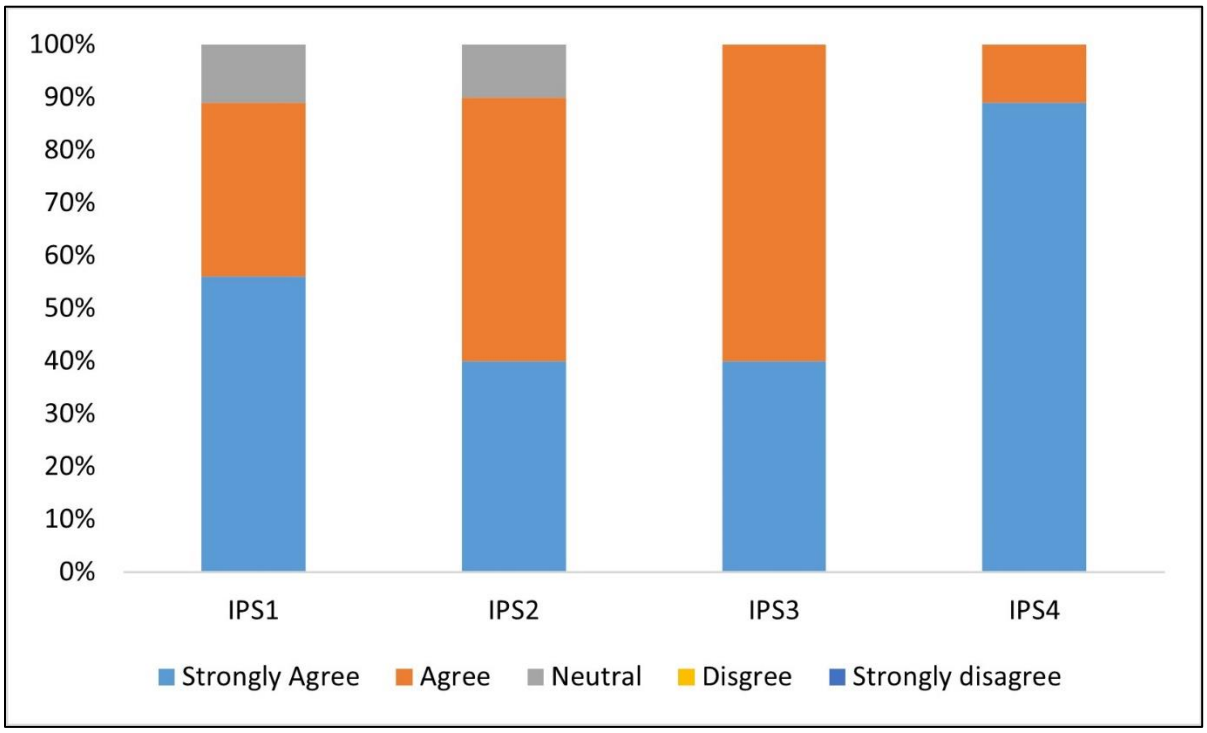


Figure 7: TPs responses to how much they agreed that the learning contents for each IP session was relevant engaging and understandable.

With respect to the learning sessions, 89% (n=8) of TPs strongly agreed that IPS4 learning session (worked prescribing examples and prescription writing practice) was effective compared to 33% (n=3), 30% (n=3), and 30% (n=3) reported for IPS1(Portfolio building and making the most of learning in practice), IPS2 (Prescribing for individuals whilst working in systems; Law, ethics, and governance; Influences on prescribing; human rights and diversity), and IPS3 (Evidence, errors, and public health; Evidence based medicine, guidelines; Safeguarding and safety netting; Error models and reducing risk; Health economics). In similar trends, more TPs were observed to strongly agree with various aspects of IPS4 having positive outcomes compared to the other sessions as illustrated in **Figure *8***. This could have been due to IPS4 being a more practical session requiring application of knowledge acquired over the study session and in practice.

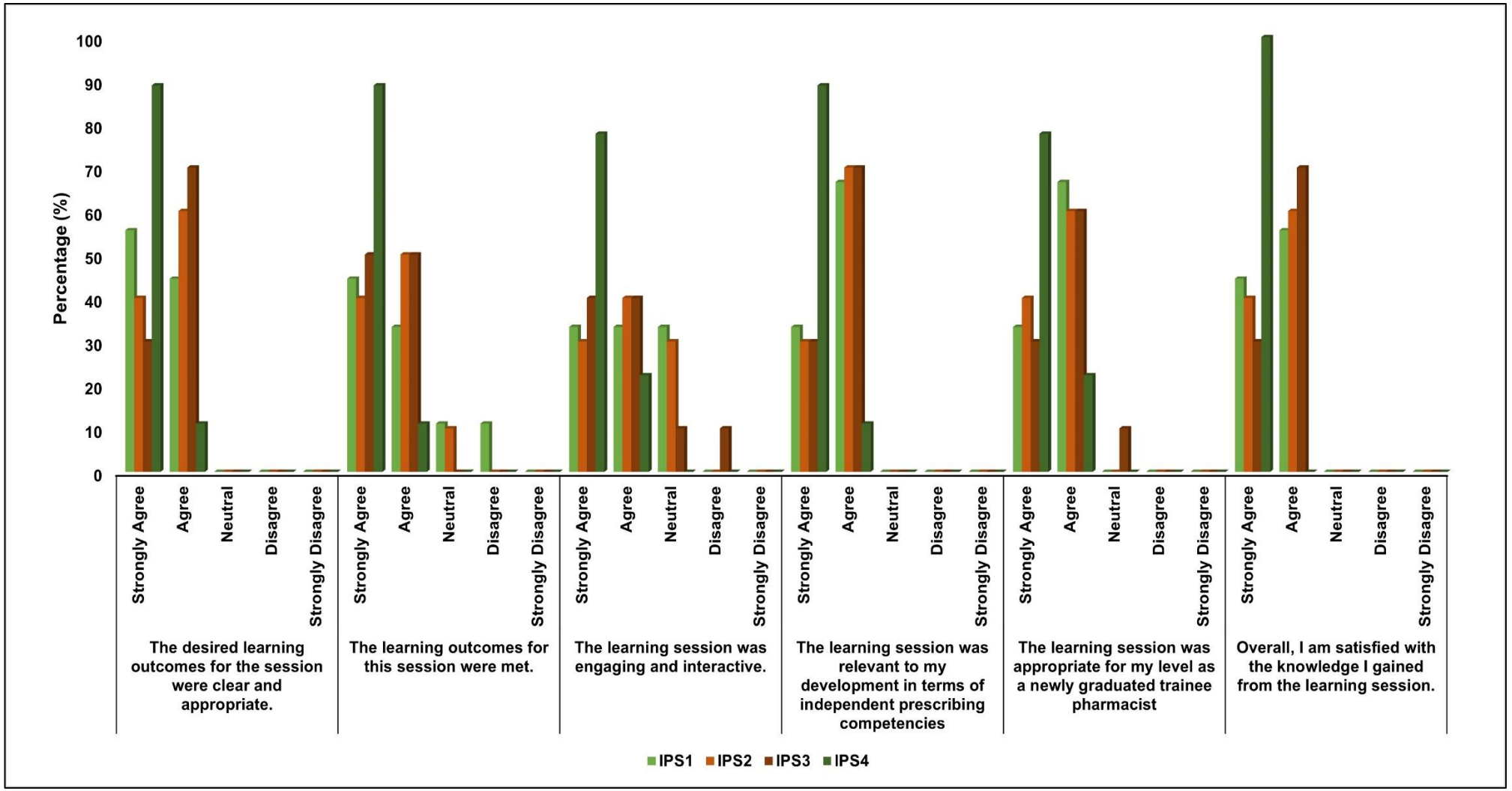


Figure 8: TPs views on the IP learning sessions.

Free text responses received regarding parts of the learning sessions the TPs found useful did not reveal specific themes for IPS1. Five TPs provided responses to this question for IPS1, with two TPs stating that they found all parts of the session useful. Other TPs stated that prescribing principles and explanation about uploading evidence were the most useful parts of the session for them, while one TP stated that they found the ability to ask questions throughout the session very useful.

Three TPs provided free text responses regarding parts of the learning sessions the TPs found useful for IPS2. Like IPS1, no specific themes emerged as responses included statements such as '*I found it useful to consider factors that influence prescribing decisions/ethics*' (TP1) and '*I found the information very useful, and the session was engaging prompting application of the information learned. This has allowed me to apply this knowledge in practice*' (TP2). A third response received indicated that the TP found every aspect of the session useful.

For IPS3, three TPs provided responses which include statements such as '*I found the information provided engaging and useful - especially regarding safety-netting as this was something I hadn't previously considered in depth re prescribing*' (TP2). A third response received indicated that they found every aspect of the session useful.

Responses received regarding parts of the learning sessions the TPs found useful for IPS4 indicated that the TPs found the prescribing scenarios particularly useful, including the example prescriptions sent as these were useful for clarifying any questions from the session.

Overall, the most positive responses came from IPS4 which covered worked prescribing examples and an opportunity for the TPs to write some prescriptions for primary and secondary care.

Generally, the TPs agreed that these learning sessions were useful and effective for filling knowledge gaps relating to their IP training.

Tripartite Review

Attendance at TR1 was 100% of those TPs who had not withdrawn from the programme. Six TPs withdrew before TR1, one TP became uncontactable and 'withdrew' between TR1 and TR2. Three TPs still on the programme did not book TR2 (**Table *5***).

Table 5: Attendance for the tripartite reviews.

TP / DPP Sector	TR1	TR2
Hospital	7	6
Cross-sector	8	6
Bradford 6-months placement	2	1
Total	17/17 (100%)	13/16 (81%)

Sixteen TPs attended TR1. In terms of wellbeing, majority of the trainees who attended the review said they were coping well with the pilot and were not stressed by the programme. Two trainees admitted to being slightly overwhelmed with one being due to the general extra burden of combining the pilot and the foundation training, and the second being due to joining the programme slightly late. One trainee felt like they were juggling a lot but found it manageable and another trainee said they were a little frustrated with trying to complete the portfolio with their evidence but did not necessarily feel it was stressful.

With regards to progress with the programme and evidencing prescribing standards, 81% (n=13) of the TPs, felt they were progressing well and getting a reasonable number of prescribing activities done and therefore have been able to evidence a lot of the RPS competences. This was echoed by their DPPs who agreed that they were making satisfactory progress especially with the availability of the cross-mapping documents (see final IP report), which links the 78 RPS prescribing competencies to the 54 GPhC foundation interim learning outcomes. Two trainees felt like they were not progressing as well due to difficulty in evidencing competencies due to the nature of their current rotations (Integrated Care Board (ICB) and intermediate care), while their DPPs felt they are progressing fine based on the requirements of the pilot but

recognised that they may not immediately recognise activities in their rotation which evidenced some RPS competencies. One trainee was finding it challenging due to the nature and duration of his placement but stated that they were managing to get some evidencing done.

In terms of contact hours between TP and DPP, 94% (n=15) of TPs reported to have had multiple IP related meetings with their DPPs and only one trainee had had just one meeting with their DPP. This was due to the trainee just moving to the same team as their DPP one week before the review. TPs and DPPs that attended the reviews felt that no additional mechanism was needed to make the training easier at that point. However, a recurring suggestion was having a better structure from the outset, and DPPs and TPs were reassured that this was the purpose of the pilot i.e., to see what works, what does not, and what needs modifying.

All TPs, except one, agreed that the IP learning sessions and the FTC study days translated well into practice because these sessions served not only as a means of revision for the TPs to consolidate theoretical knowledge, they have gained new knowledge, but it also helped them develop the confidence in applying this knowledge in practice. One TP could not comment on the translation of study days and learning sessions into practice as they had not had the chance to attend any session yet.

When asked about the area they found most challenging, a significant proportion of TPs and DPPs stated a lack of clear plan at the start of the programme, as they tried to determine how to incorporate the programme into the TPs ongoing foundation training, was what they found most challenging. Other areas highlighted as challenging included organising their time to account for the programme, communication difficulties in instances where the DPP and DS were separate, deciding what activities count as evidencing IP competencies, and a few IT complications.

Thirteen TPs attended TR2. All TPs had no wellbeing concerns and were happy with their progress in the programme. They also had no concerns about the dates given by the programme lead for submission of all documents related to the programme.

Enquiries made by TPs in TR2 included whether they could carry on uploading IP related evidences to the portfolios after the programme deadline, to which the

programme lead responded that they could. Other questions asked included those about certificates, competencies TPs did not have the opportunity to evidence, and clarifications about portfolio documents being requested.

Longitudinal Analysis

An assessment of the TP's perception of their development of the ten competencies within the two domains (the consultation and prescribing governance) of the RPS CFAP was carried out.

Trainee Pharmacists Competencies in the Consultation Domain

At the start of the pilot, 18 TPs completed the questionnaire with 12 of the participants being hospital trainees and the remaining six being cross-sector trainees. Questions regarding different competencies in the consultation domain of the RPS CFAP were Likert scale in nature, with responses ranging from 'not confident at all' to 'completely confident'. At the mid-point of the pilot, 17 TPs completed the questionnaire, made up of 11 HTPs and 6 CTPs. At the endpoint, 10 TPs completed the questionnaires with four of these being HTPs and six being CTPs.

Hospital Trainee Pharmacists' Competencies.

An increased in HTPs' confidence in their ability to demonstrate competencies in the consultation domain of the RPS CFAP was observed as the pilot progressed.

For the first competence in the RPS CFAP (C1), which is, 'assess the patient', all the trainees were confident in their ability to demonstrate this competency at the end of the pilot. This is an increase in confidence when compared to the start of the pilot where almost half (42%) of the HTPs were not confident at all in their ability to demonstrate this competence.

A similar trend was observed across the remaining four competencies in the consultation domain, with the greatest increase in confidence being noted for the fifth (C5) and sixth (C6) competencies, which are 'provide information' and monitor and review', respectively (***Figure 9***).

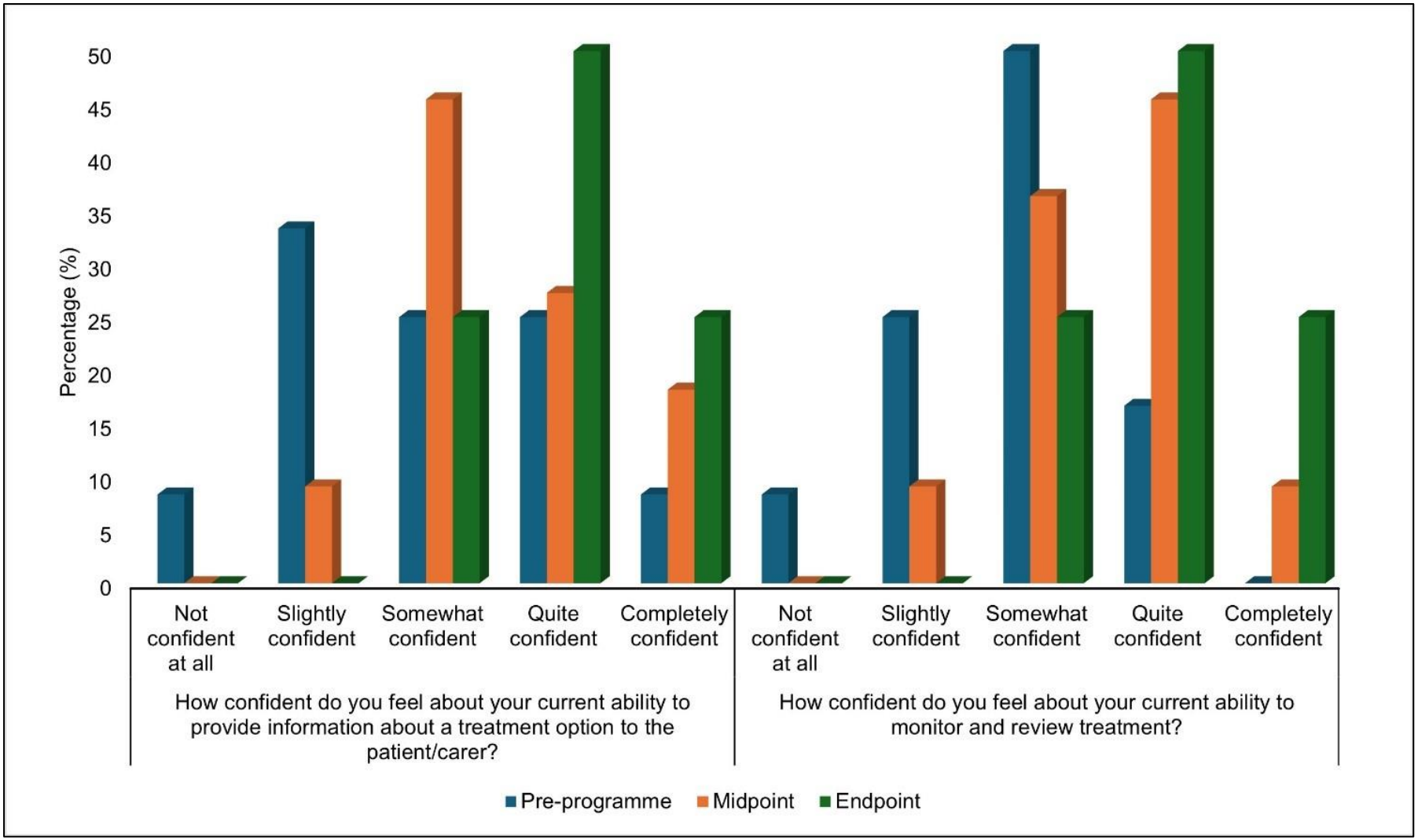


Figure 9: Summary of HTPs' perceived change in confidence in their ability to demonstrate competencies (C5 and C6) in the consultation domain of the RPS CFAP from pre-programme period to the end point of the programme.

A summary of perceived changed in HTPs confidence as it relates to their ability to demonstrate competencies (C1-C4) in the consultation domain of the RPS CFAP is illustrated in **Appendix *7***.

Cross-sector Trainee Pharmacists' Competencies.

Like HTPs, CTPs perceived confidence in their ability to demonstrate competencies in the consultation domain of the RPS CFAP was observed to have increased by the end of the pilot. The greatest increase in perceived confidence was noted for the second (C2) competency in the RPS CFAP (Identify evidence-based treatment options available for clinical decision making) where 84% of trainees were confident in their ability to demonstrate this competence, with 17% of these being completely confident. This improved confidence is evident when compared to the start of the programme where no CTP was completely confident in the ability to demonstrate this competence (***Figure 10***).

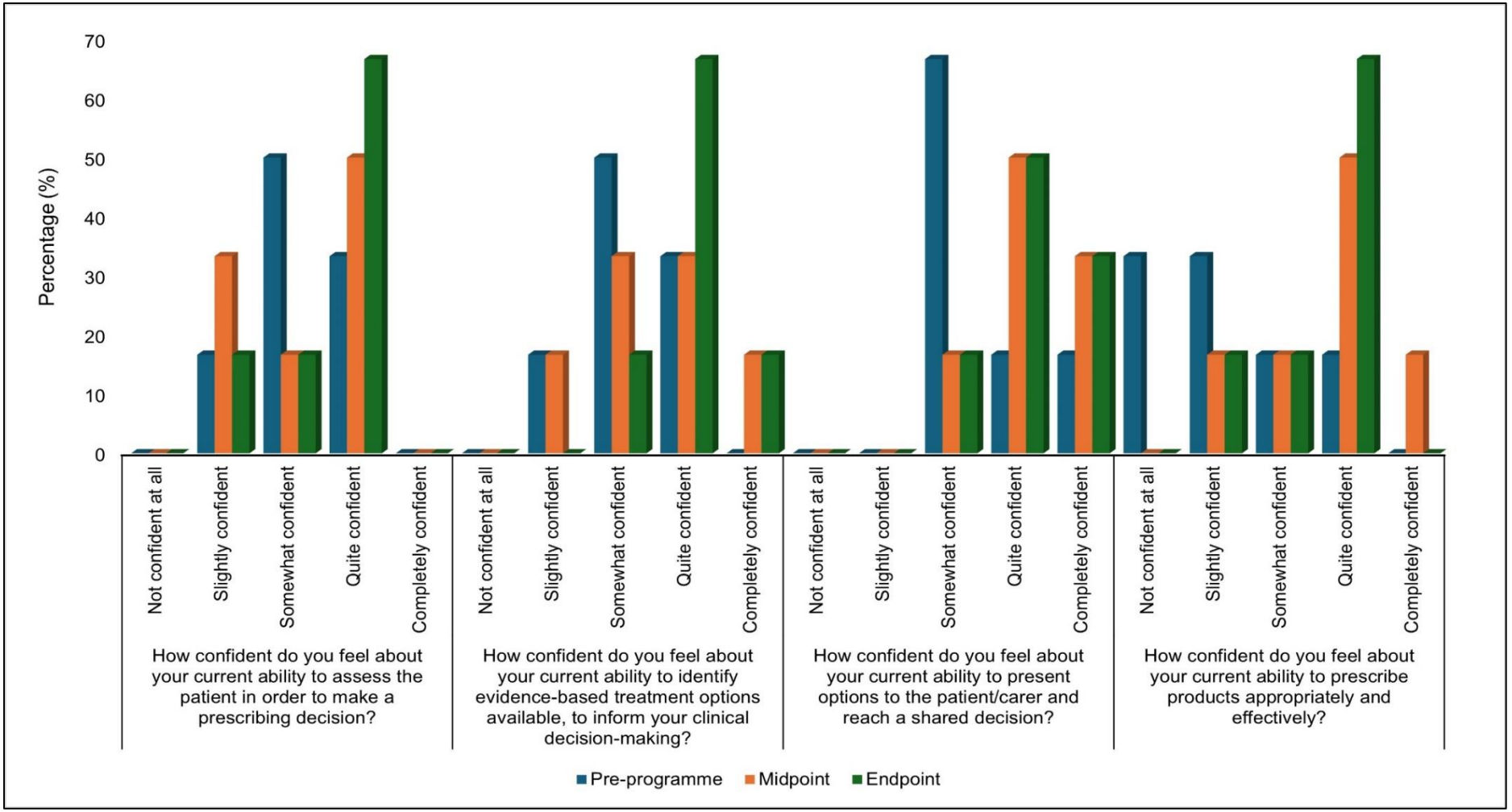


Figure 10: Summary of CTPs' perceived change in confidence in their ability to demonstrate competencies (C1 to C4) in the consultation domain of the RPS CFAP from pre-programme period to the end point of the programme.

A summary of perceived changed in CTPs confidence as it relates to their ability to demonstrate competencies (C5 and C6) in the consultation domain of the RPS CFAP is illustrated in **Appendix *8***.

Trainee Pharmacists' Prescribing Governance Competence

Similar to the questions regarding different competencies in the consultation domain, questions regarding different competencies in the prescribing governance domain were Likert scale questions with responses ranging from 'not confident at all' to 'completely confident'.

Hospital Trainee Pharmacists' Governance Competencies.

An increase in HTPs' perceived confidence in their ability to demonstrate competencies in the prescribing governance domain was also observed by the end of the pilot. In all the competencies, a varying proportion of TPs reported being not confident at all in their ability to demonstrate the competencies at the start of the programme. At the end of the programme, no HTP reported being not confident at all in any of the competencies in the prescribing governance domain. HTPs were mostly quite confident in their ability to demonstrate competencies in this domain of the RPS CFAP. The greatest increase in perceived confidence for HTPs was seen with the eight competency (C8 – ability to prescribe professionally), where all HTPs were confident in their ability to demonstrate this competence, with 25% of these being completely confident (**Figure *11***).

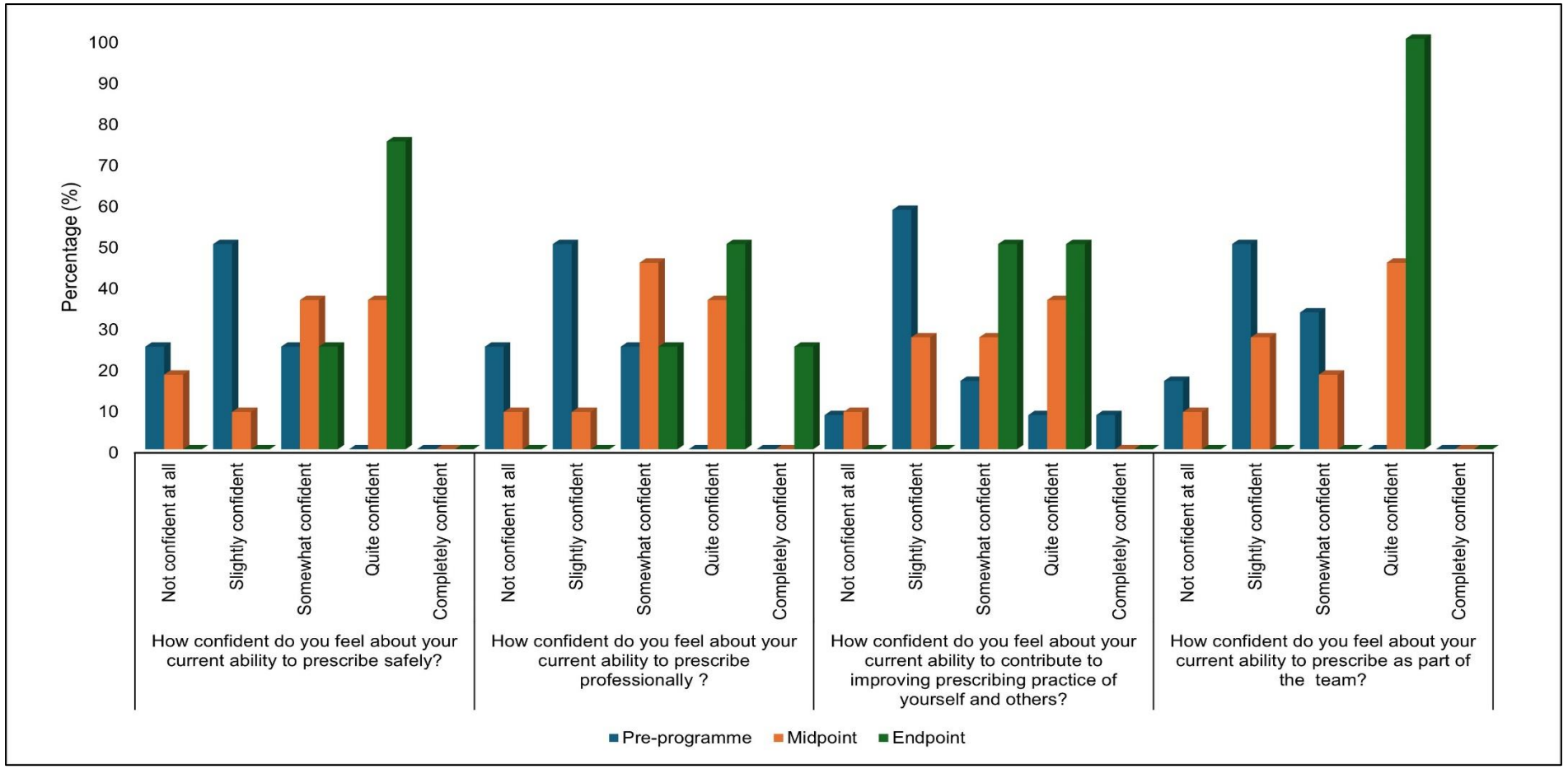


Figure 11: Summary of HTPs' perceived change in confidence in their ability to demonstrate competencies (C7 to C10) in the governance domain of the RPS CFAP from pre-programme period to the end point of the programme.

Cross-sector Trainee Pharmacists' Competencies.

For CTPs, at the start of the pilot, some trainees reported being not confident at all in their ability to demonstrate the ninth (C9 - Improve prescribing practice) and tenth (C10 - Prescribe as part of a team) competency. An improvement in perceived confidence across all competencies was noted by the end of the programme with no CTP reporting being not confident at all in an of the competencies. Similar to HTPs, most CTPs reported being confident in all competencies in the prescribing governance framework. The greatest increase in perceived confidence was noted to be in CTPs' ability to demonstrate the tenth competency (C10), with 66% being confident in this ability, out of which, 335 were completely confident (**Figure *12***).

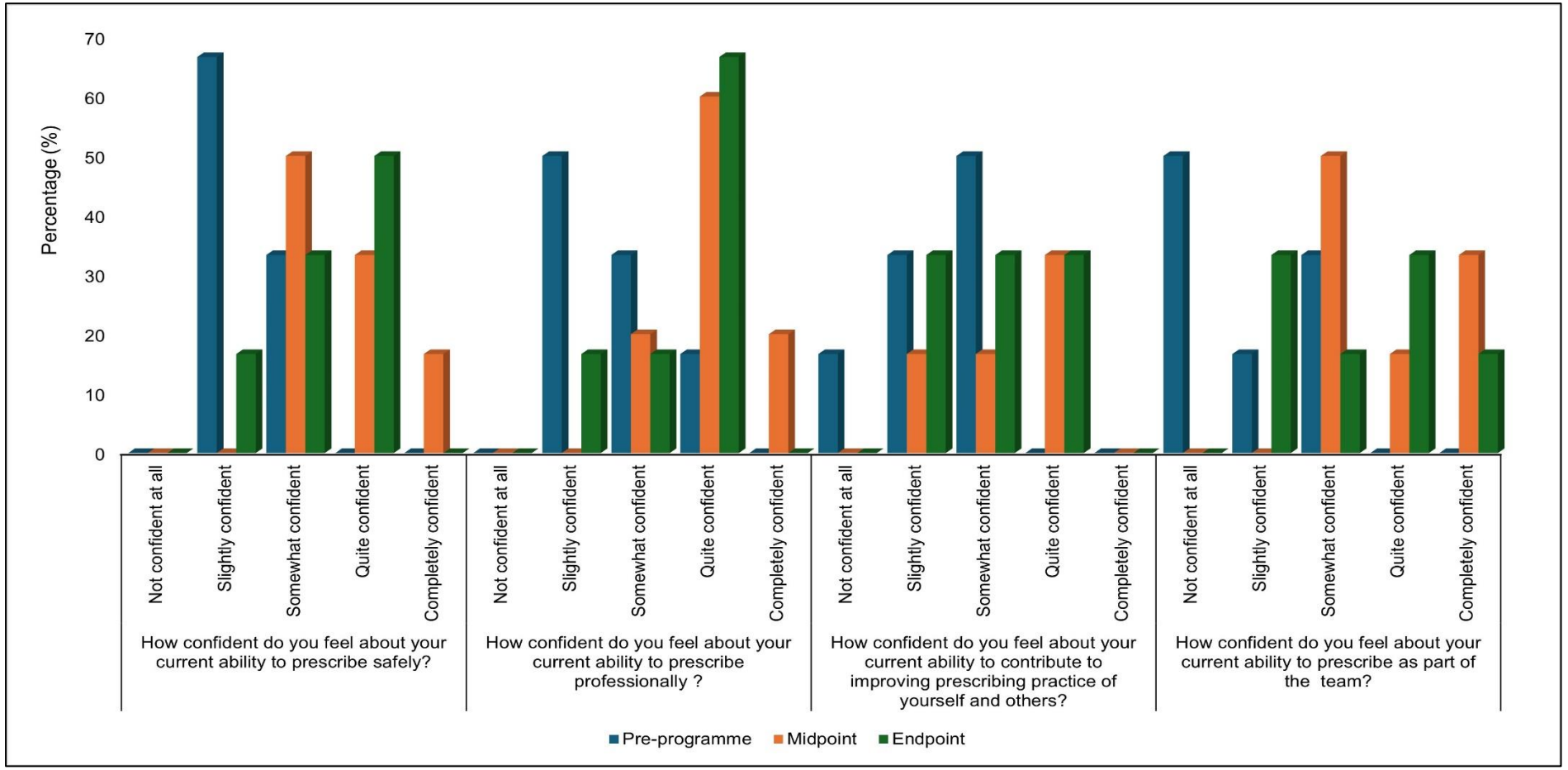


Figure 12: Summary of CTPs' perceived change in confidence in their ability to demonstrate competencies (C7 to C10) in the governance domain of the RPS CFAP from pre-programme period to the end point of the programme.

Evidencing Competences

At the end of the pilot, TPs and their DPPs were invited to complete a survey to assess the presence or absence of any challenges associated with evidencing competences. The survey was incorporated into the endpoint questionnaire and consisted of eight questions which were a mixture of choice and free-text questions.

Trainee Pharmacists' Viewpoint.

As earlier stated, 10 TPs responded to the endpoint survey into which this survey was incorporated.

In the consultation domain, generally, all competencies, except C4 – 'prescribe', was reported by at least one HTP, as easy to evidence, with C2 – 'Identify evidence-based treatment options available for clinical decision making', being reported by all HTPs as easy to evidence (**Figure *13***). Analysis of free-text answers relating to reasons why mentioned competencies were easy to evidence was carried out. This revealed that HTPs that indicated C2 as easy to evidence, highlighted the structure of the hospital setting, including access to guidelines and guidance from specialists, as the reason they found this competency easy to evidence.

In terms of competencies HTPs found difficult to evidence in the consultation domain, C4 – 'prescribe', was reported by 100% of HTPs as difficult to evidence. Other competency reported by HTPs as difficult to evidence include C1 - Assess the patient, C3 - 'Present options and reach a shared decision', and C6 - Monitor and review (***Figure 13***). Free-text responses revealed absence of opportunities and legal limitations were the main reasons these competencies were cited as difficult to evidence.

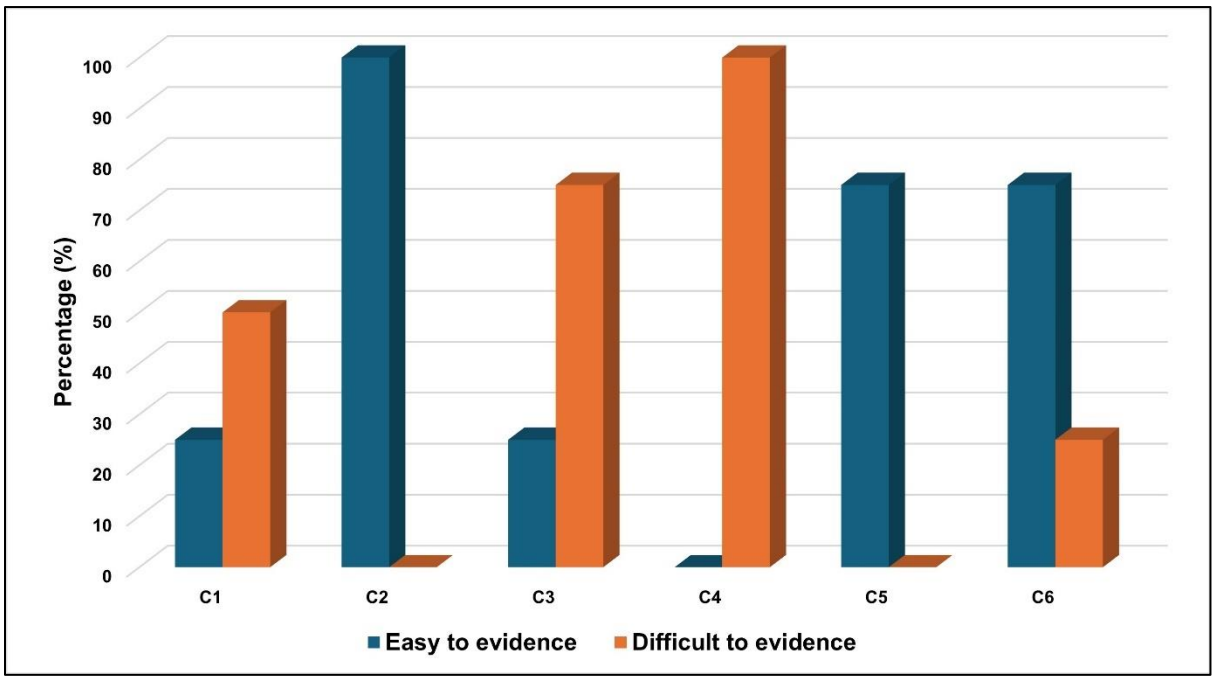


Figure 13: Summary of competencies HTPs reported as easy and difficult to evidence in the consultation domain of the RPS CFAP.

For CTPs, all competencies in the consultation domain were reported by at least one CTP as easy to evidence, with all CTPS reporting C2, and C5 – 'Provide information', as easy to evidence (**Figure *14***). Analysis of free text responses showed that support from DPPs and other prescribers, familiarity with this skill and therefore ease of application and availability of relevant resources, were themes that were observed relating to why C2 was easy to evidence.

In the case of C5, free-text answers to why this competency was regarded as easy to evidence revealed that availability of relevant resources and adequate support was stated as the reason why CTPs found this competency easy to evidence.

For competencies difficult to evidence by CTPs, C4 - 'Prescribe' was noted to be reported as difficult to evidence by majority of CTPs (67%) (**Figure *14***).

Based on analysis of free-text answers, reasons why CTPs found this competency difficult to evidence was mainly legal limitations since they are not prescribers.

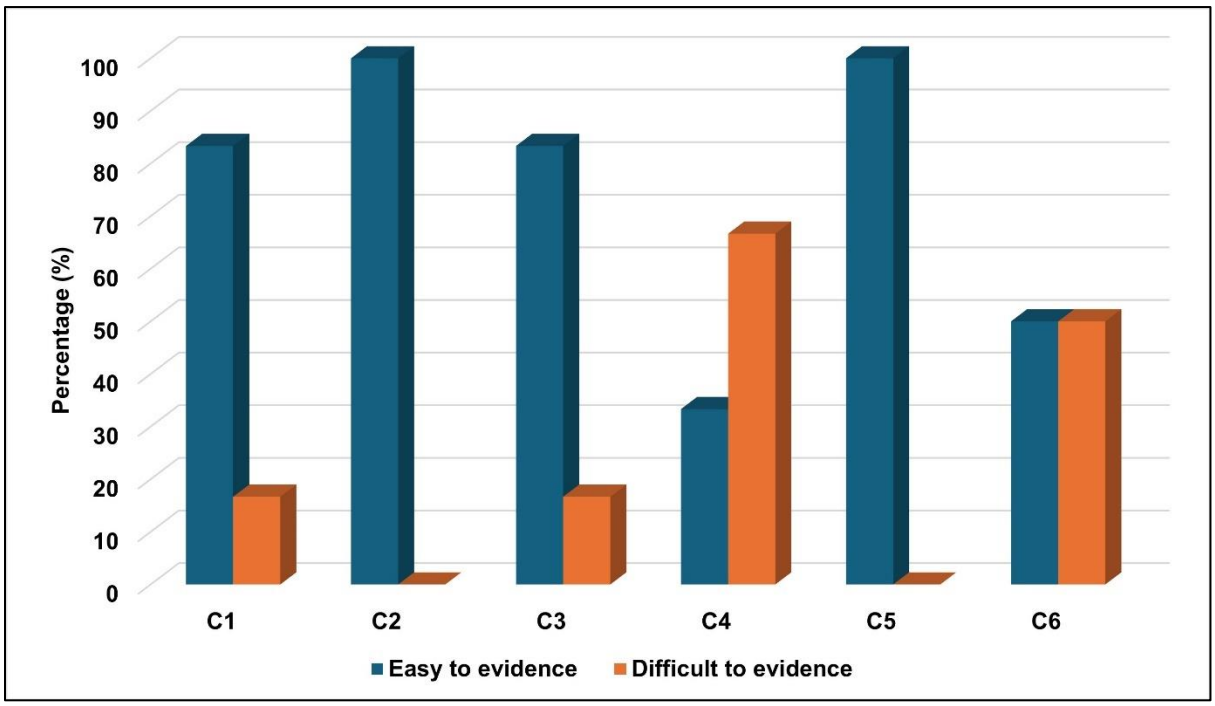


Figure 14: Summary of competencies CTPs reported as easy and difficult to evidence in the consultation domain of the RPS CFAP.

In the prescribing governance domain, all competencies were reported by at least one HTP as easy to evidence, with the majority (75%) reporting C10- 'Prescribe as part of a team', as easy to evidence. It was deduced from the analysis of free-text answers that the abundance of opportunities to make clinical decisions as a team due to the multidisciplinary nature of training centres made this competency easy to evidence.

For competencies in the prescribing governance domain HTPs reported as difficult to evidence, half of the HTPs (50%) reported C7 – 'Prescribe safely', C8 – 'Prescribe professionally', and C9 – 'Improve prescribing practice', as difficult to evidence while 25% reported C10 - 'Prescribe as part of a team', as difficult to evidence (**Figure *15***). Lack of opportunity to prescribe was cited as the main reason why C7, C8, and C9 were difficult to evidence.

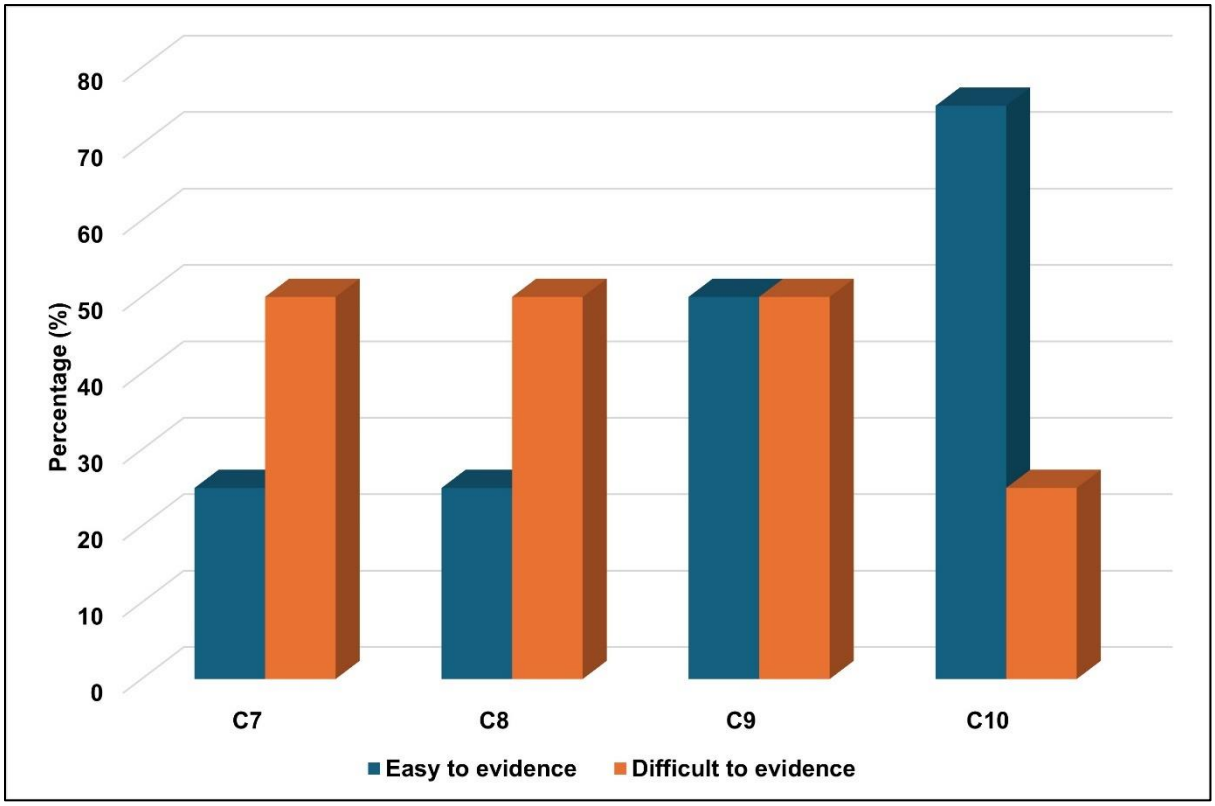


Figure 15: Summary of competencies HTPs reported as easy and difficult to evidence in the prescribing governance domain of the RPS CFAP.

For CTPs, most (67%) found C9 and C10 easy to evidence, the availability of opportunities to clinical decisions as a team was stated as the reason CTPs reported these competencies as easy to evidence.

In terms of competencies difficult to evidence in the prescribing governance domain, 17% of CTPs reported C7 as being difficult to evidence, while 33% of CTPs cited C8, C9 and C10 as difficult to evidence (**Figure *16***).

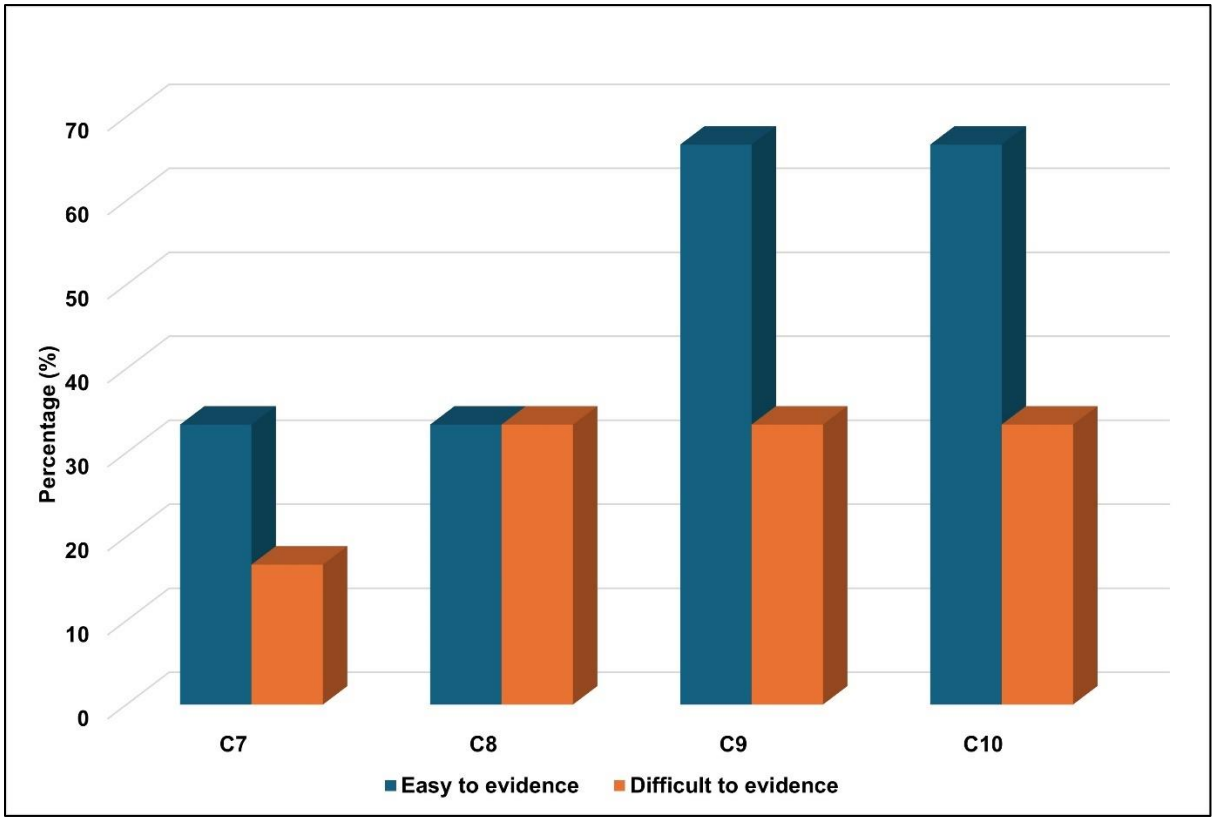


Figure 16: Summary of competencies CTPs reported as easy and difficult to evidence in the prescribing governance domain of the RPS CFAP.

Designated Prescribing Practitioners' viewpoint

At the end of the pilot, 10 DPPs responded to the survey and from a consultation domain point of view a large proportion (90%) of the DPPs identified 'providing information' as the competency they felt their TPs found easy to evidence. This was followed by 'identify evidence-based treatment options available for clinical decision-making' by 80% of the DPPs. Analysis of free-text answers revealed the reason for these responses as being because these competencies where already somewhat embedded in pharmacy practice and not necessarily exclusive to prescribing.

On the other hand, more than half of the DPPs (60%) identified the competency 'prescribe' as the most difficult to evidence and the common theme on analysis of the reasons for this response was the inability of the TPs to prescribe. Some DPPs did allow for proxy prescribing while they observed and made the final decision regarding the process and felt it was sufficient in evidencing this competency. Other competencies in the consultation domain that were difficult to evidence included

‘assess the patient’ (40%) and ‘present options and reach a shared decision’ (40%). The DPPs reported the TPs lack of experience and possession of only basic clinical knowledge and understanding of their speciality as barriers.

In the prescribing governance domain, most (80%) of the DPPs felt that their TPs found prescribing as part of a team (C10) easy to evidence as working with the MDT was frequently available during their training. ‘Prescribing professionally’ (C7) and ‘prescribing safely’ (C8) competencies were harder to meet as 50% and 60% of DPPs felt their TPs found easy to evidence, respectively. Barriers suggested included engagement with practising practitioners and access to medical records. Most of DPPs (70%) felt that that ‘improving prescribing practice’ was the competency that their TPs struggled to evidence. Lack of experience and lack of confidence on the part of the TPs was the common reason given by DPPs. It was followed by ‘prescribing safely’ competency (60% of DPPs) due to lack of experience by TPs.

IP Focused time commitments

TPs were asked how many supervised prescribing hours they spend directly with their DPP. Their thoughts were sought on whether this was adequate for the purpose of the training. Their responses are summarised in **Figure *17***.

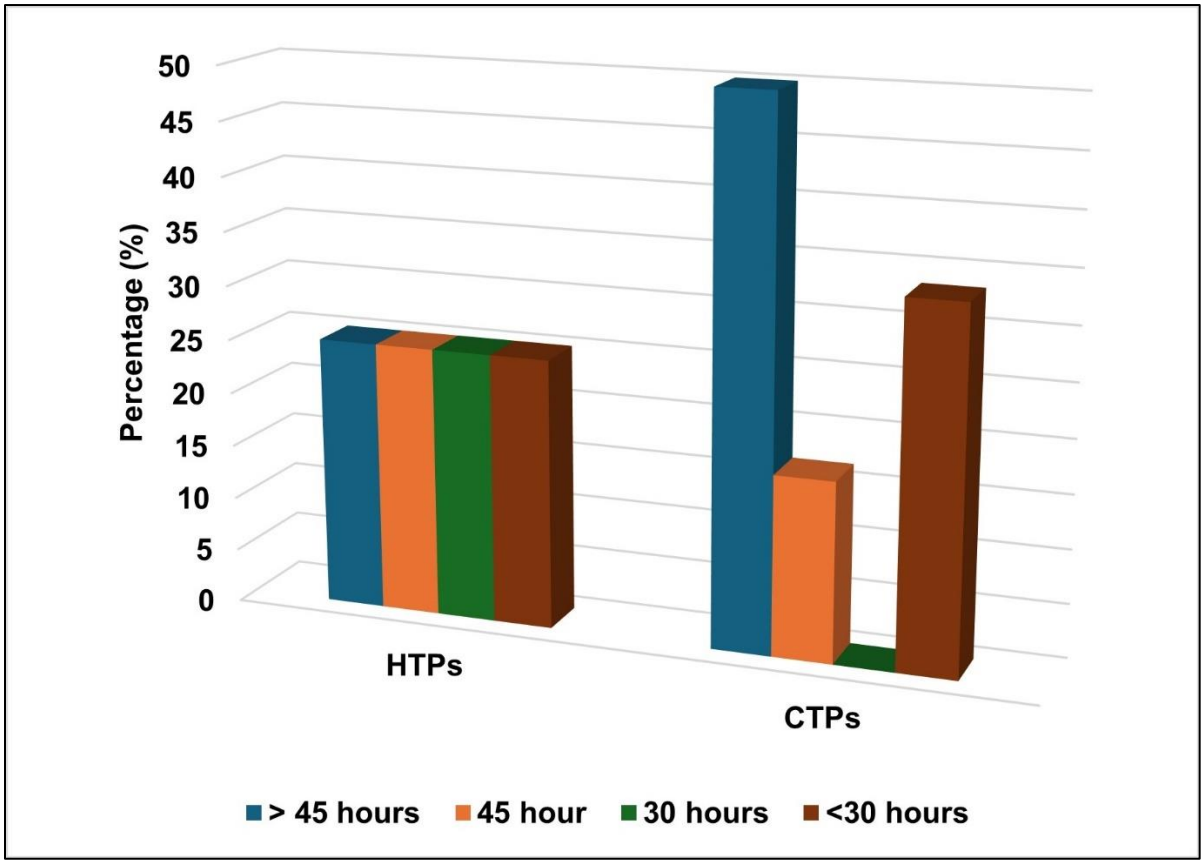


Figure 17: Number of supervised prescribing hours TPs reported spending with their DPPs.

The majority of HTPs (75%) and CTPs (83%), agreed that the number of hours under direct supervision by DPPs was adequate for the purpose of the training. Free text comments indicated that TPs also had support from other prescribers, which provided them with adequate exposure as far as prescribing skills and experience were concerned.

From the DPPs' perspective, their responses are summarised in **Figure *18***.

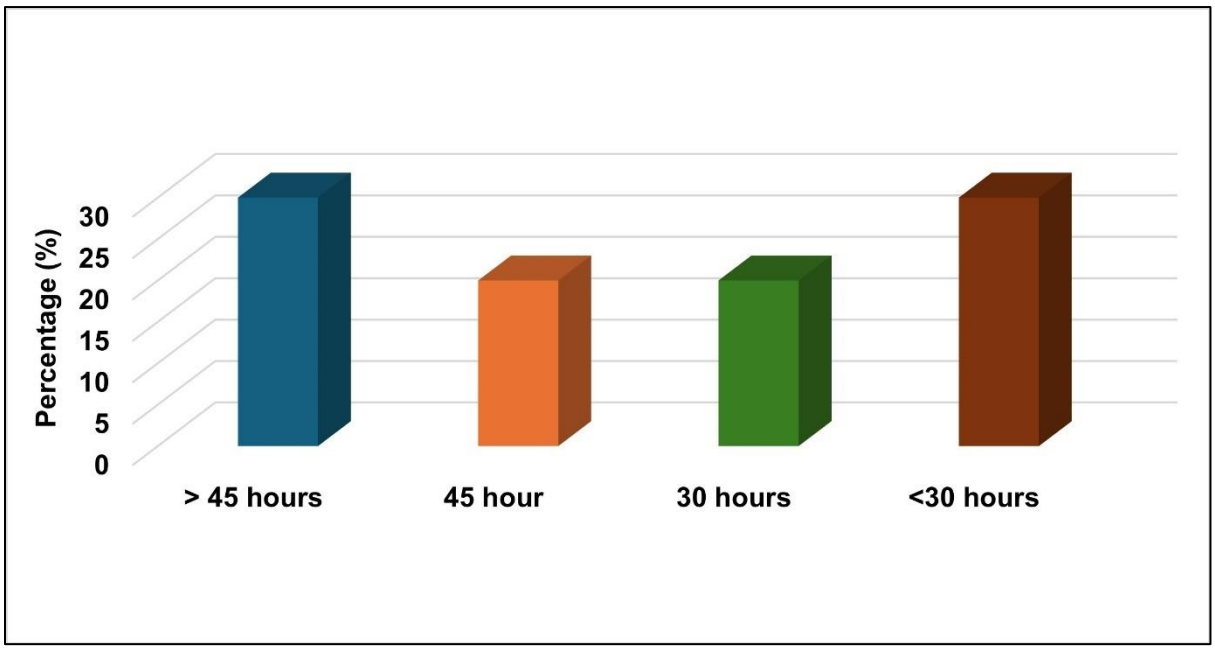


Figure 18: Number of supervised prescribing hours DPPs reported spending with their TPs.

The majority (80%) of the DPPs agreed that it was adequate time. Some DPPs also stated that it was beneficial to the TP to gain some experience from a wide range of prescribing practitioners, and they had oversight of who their TPs were spending prescribing hours with. The DPP who disagreed with the hours being sufficient stated that because the trainee had limited clinical knowledge, it was more difficult to get them to a stage of independent decision making as the TP had a lot of clinical basics that they needed to be educated.

DPP Role Burden

DPPs' views were also sought regarding the burden associated with their role. Most DPPs (70%) agreed that they found the knowledge requirements manageable and strongly agreed that they had the skills required to successfully interact with TPs. Overall, 1 (10%) and 7 (70%) of the DPPs' that responded strongly agreed, and agreed, respectively, that the tasks associated with supervising and assessing TPs were achievable.

Analysis of Interviews and Focus Group

DPPs' Views

Eight DPPs took part in three separate focus group sessions. DPPs expressed various thoughts regarding how they felt at the start of the pilot. Themes that emerged included intrigue, scepticism, discomfort, unpreparedness, and lack of information. DPPs reported having a sense of curiosity and interest as to what the pilot would reveal but also unease about the feasibility of TPs managing the prescribing training alongside their foundation year training. Some statements made by the DPPs included: '*I was intrigued, I think probably to see what it was going to be like and how it might fit into the current training year'* (DPP1), ' *I was kind of intrigued and just a bit concerned that, you know, the students would be quite intimidated*' (DPP2).The DPPs' concerns were mainly regarding the workload and the potential challenge the combined effort would present for the TPs, which was reflected in statements such as, '*I felt sorry for the students as both things are quite an undertaking so to be undertaking both at the same time is obviously quite a challenge'* (DPP3). DPPs that reported feeling unprepared admitted that this was due to missing the initial induction session, which led to a lack of clear understanding of expectations. Some DPPs felt they did not receive adequate information at the start of the pilot, and this led to a lack of clear direction and some confusion at the start of the pilot.

The main limitation of the pilot echoed by the DPPs was that the TPs that participated in the pilot did not accurately represent the typical foundation year cohort, as it consisted predominantly of exceptionally motivated students which may not reflect the broader population of FT students. This was deduced from the fact that that the TPs volunteered for what was potentially extra workload to gain additional experience.

TPs' Views

Initial Thoughts

Eight TPs took part in semi-structured interview sessions to get their views on various aspects of the pilot. Some TPs expressed that at the start of the pilot they had feelings of excitement viewing their participation as a sensible step given the direction the

profession was headed, with TPs being licensed as Independent Prescribers at the point of registration soon. Other TPs viewed the pilot seen as a valuable opportunity for career advancement since they intended to undertake the training in the future, stating '*I thought it was a good opportunity to try to do something extra as part of my training. I thought it was a good opportunity that might benefit my career going forward'* (TP4). Other TPs were motivated by the incentive of gaining new skills and experiences they would not have been exposed to otherwise, with statements like '*I feel like for me, I got a lot of opportunities that other the other trainees didn't get'* (TP3). There was a positive outlook on contributing to the development of future pharmacists. Some participants felt nervous due to the novelty of the pilot and the uncertainty of being pioneers. There were feelings of concerns about the additional workload and being the only trainee undertaking the pilot in their centres, as one TP state, '*I was a bit I was a bit nervous, mainly more about like taking on more work during my pre-Reg year because it is already quite a busy year'* (TP3). There was also a perceived lack of organisation and structure at the start of the pilot. Some TPs pointed out that documentation required for detailing evidence at the start was seen as excessive, as one TP stated, '*I thought that maybe just the amount of admin and paperwork was a bit excessive. I think we would have been able to achieve the same results without that much admin. Obviously I understand it was difficult to put things on the portfolio*. *But maybe there would have been a would have been a better way to keep all the records and get all the data that you need without that much admin and that much paperwork*' (TP4). All TPs agreed that they had good experiences overall and that their decision to participate was the right one.

Competence and Confidence

TPs believed that one or more prescribing-related assessments to test their actual prescribing skills would have alleviated concerns about their competence. However, TPs reported a general increase in prescribing confidence and decision-making skills to the start of the pilot. Despite this perceived increase in confidence and skills, none of the trainees felt completely confident in their prescribing competence.

An ICB/community pharmacy TP reported significant improvement in their consultation skills due to opportunities gained through the pilot, which provided valuable

experiences that they would not have had the opportunity to gain in their training year without the IP training portion.

Some TPs struggled with support, because their DPP was not a pharmacist and was unclear about the objectives that needed to be achieved.

A TP whose supervisor specialised in lipids felt confident only in this area. Experiences were sometimes restricted by the training site settings, such as GP settings where only telephone consultations were conducted, making some competencies difficult to evidence. Some TPs reported that they had limited opportunities to make independent decisions necessary to meet certain competencies and that some competencies were vague and required significant interpretation to determine what activity would count as suitable evidence. Adjustments were suggested to account for the fact that trainees are still in their training year which means there would be some legal limitation that would hinder them for meeting certain competencies. TPs suggested that guidance on where each competency sits on Miller's Triangle would be beneficial for clarity and transparency's sake as well as for the sake of benchmarking.

Study Days and Training Integration

IP study days were viewed by the TPs as helpful for understanding theories and concepts, addressing questions, and filling knowledge gaps. Clinical scenarios to practice prescription writing were particularly useful. They felt that FTC study days were beneficial for general foundation training skills development but stated that integrating IP study days into FTC study days would have been more advantageous. Some TPs felt that the teaching style (Team-Based Learning, TBL) used in the FTC study days would have made IP study days more interactive and engaging.

TPs' views on when they would have preferred to have started their IP-focused training during the foundation year were sought. Some TPs preferred starting their IP-focused training 4-8 weeks after starting the training year. This would give them enough time to settle into their training centres and familiarise themselves with the system before commencing the training. It would also allow for enough time for completion of most of the training before the year became busier. One TP stated that they would prefer to

start at the middle of their training year so they would have more time to build their confidence before commencing the training.

5 Discussion

Positive Indicators

1. Training and Assessment strategies

DPPs agreed that the training strategies used on the pilot were effective and gave the TPs some base knowledge, which they could apply when carrying out prescribing activities. They also reported that the assessment tools and activities were adoptable for the training year with IP incorporated. DPPs were reserved about the possibility of a lack of academic support come 2025 and stated that they would be more comfortable with some supplementary training for the TPs with some prescribing specific OSCE assessments as part of this supplementary training. They also acknowledged that the usefulness of the training would ultimately depend on the level of engagement of the TPs.

2. Prescribing-Related Activities and GPhC Learning Outcomes

DPPs stated that the integration of prescribing-related activities significantly contributed to achieving the GPhC learning outcomes especially since there was some crossover between the RPS prescribing competences and the GPhC learning outcomes. The assessment strategy currently used in the foundation training year could be adopted with some modifications in 2025.

3. Exposure through DPPs' Professional Networks

DPPs also agreed that incorporation of IP in the foundation training year would expose TPs with DPPs who possess extensive professional networks to a broader range of experiences. This exposure would extend beyond what they would typically encounter without the independent prescribing (IP) component. However, to ensure equitable facilitation and support across different centres, it would be crucial to implement benchmarking. This would serve as safety netting for students who may not receive the same level of support or whose DPPs might not have network as wide as those of their peers in other locations.

Barriers

1. E-Portfolio

DPPs reported that there were some duplications in evidencing competences and learning outcomes at the start of the pilot. This was later addressed by the production of a cross-mapping document developed by the IP Pilot team. The DPPs stated that for smooth implementation of IP into FT year, integrating the RPS competencies and their associated documentations into the E-portfolio in such a way that GPHC learning outcomes and RPS competences could automatically be cross-referenced, would be immensely beneficial.

2. Supervisory Capacity

DPPs pointed out that there would be a challenge in ensuring there were enough DSs who can act as DPPs and vice versa. There was also the challenge associated of lack of supervisory experience in more junior DPPs and DSs. This means that some resource would need to go into training more DPPs and providing professional support for inexperienced DPPs or DPPs with little or no supervisory experience.

3. Profession of the DPP

It was also pointed out that the profession of the DPP (pharmacist vs. doctor vs. nurse) could be a source of challenge in the implementation of IP. In a situation where the DPP is a pharmacist with a good understanding of the changes in pharmacists' education and incorporation of prescribing in the FT year, this may not be a problem. However, other clinicians may require proper education about the structure, purpose, and requirements of the TPs' IP training. This along with a willingness to adapt their supervision accordingly would be beneficial for a successful training delivery.

4. Opportunity for Independent Decision-Making

One of the flaws in the training strategy pointed out by the DPPs was the concern that trainees might not have enough opportunities to make independent decisions, as they are not yet qualified or experienced. Some DPPs stated that this was one of the skills/competences they struggled to find opportunities for the TP to gain experience in and suggested that a generic guidance on this would be useful for training centres to build up on.

Feedback and Suggestion Regarding DPP Training Resources

DPPs who accessed the training resources provided by the pilot team, especially DPPs without supervisory experience, said they found the resources useful. DPPs that did not access the DPP training resources cited reasons such as lack of time, the perception that they may be a duplication of already available resources, and the belief that it was unnecessary for them because they had previous DPP experience.

A lot of the DPPs agreed that the reactive documents sent by the pilot team were very immensely beneficial. For example, the cross-mapping document (***Appendix 9***) was regarded as a very valuable tool that cut-down the time spent reviewing IP related activities on their TP's E-Portfolio.

It was recognised by a lot of the DPPs with prior experience that these training resources were extremely important for DPPs without prior supervisory experience in general or without prior DPP specific supervisory experience. They suggested that the resources could be adopted for training of those new to supervision but recommended refresher training resources for those with supervisory experience. They recommended bite-sized resources which were more interactive and less module heavy. They recommended bite-sized resources which were more interactive and less module heavy. They also suggested that the following should be included in these resources:

- Guide for giving feedback, reviewing evidence, and understanding the extent of independent decisions trainees can make.
- Support in finding opportunities for TPs to meet competencies.
- Accessing and using the e-portfolio, including reviewing and leaving feedback.
- Structured guidance on hours required and activities needed, especially when dealing with a multidisciplinary team (MDT).
- Clear guidelines on the volume of evidence required.
- Examples of how to complete the portfolio and the RPS standards table.

They also recommended integrating these training earlier in the pharmacists training and development journey, possibly in both undergraduate and postgraduate teaching.

Key Findings

- The duration and timing of the pilot was such that TPs might not have had enough time to demonstrate some of the competencies to the extent to which they would have been able to over a longer period. This meant that some DPPs were not comfortable signing TPs off as competent to prescribe even though they had evidenced the required number of competencies. While this acted as a barrier to the pilot regarding the assessment of the TPs' prescribing competency, it could imply that TPs would be able to demonstrate prescribing competence over the duration of their foundation training to an extent that will make DPPs less apprehensive in signing them off as competent prescribers.
- It was reiterated that the trainees in the pilot were highly motivated and capable, which may not represent the actual foundation training cohort so implementing findings from the pilot should be done with reasonable contingencies for this.
- There were re-iterations of the need to amend the E-portfolio to integrate RPS competencies and associated documentation, with an automatic cross-reference to GPhC learning outcomes, to prevent work duplication and make the portfolio completion and reviewing process.
- There was a recurrent call for academic support that would incorporate prescribing specific OSCEs at specific points, and it would be useful to include sessions on how to complete the E-portfolio from a GPhC learning outcomes and RPS prescribing point of view.
- Benchmarking would be necessary in the form of a clear guidance on what volume and types of prescribing evidence were required or acceptable.

TPs felt that:

- A structured plan for prescribing activities should be provided at the start of the training and the mapping document can be used as a guide for doing this. The plan should be clear and serve as a guide for the prescribing activities required to meet competencies.
- Adequate support from DPPs, DSs, and Educational Programme Directors (EPDs) is crucial for a successful outcome, and this should be reiterated and continuously encouraged.

- There should be opportunities for assessing prescribing competence. Mock prescribing sessions at the training centres or a variation of this would be beneficial to TPs.
- Integration of IP study days into the FTC study days would be highly advantageous for the TPs if supplementary learning will be provided.
- DPPs should be encouraged to proactively seek opportunities for their TPs to gain a variety of IP experience.
- Some flexibility around TPs' ability to prescribe would be beneficial for demonstrating competencies related to independent decision making in prescribing.

Training on how to complete the E-portfolio and provision of all necessary documents at the start of training would be of great benefit to TPs.

Challenges

Some challenges the TPs had to contend with and felt should be addressed before the first cohort of trainees with IP integrated training commence their training year included:

- Communication difficulties and challenges in completing documents and reflections arose for some TPs who had separate DPPs and DSs.
- Some DPPs struggled to provide relevant support and did not adequately communicate with DSs.
- Managing time effectively was a challenge for some TPs.
- Achieving the required 90 hours within the allocated period required significant flexibility on the part of the TP and sometimes the DPPs which was sometimes not possible due to other commitments.
- Community/PCN TPs had limitations in meeting competencies related to prescribing unlicensed medicines and had no opportunity to meet competencies relating to brand prescribing.

6 Reflections, Conclusion and Recommendations

The pilot has shown that it is possible to deliver IP related training using a modification of a currently existing training model used to deliver supplementary training to the TPs. The modification included incorporated IP-focused training making to make it fit for purpose. The qualitative and quantitative evaluation indicated that the training model can be adapted for the provision of any required supplementary training, after incorporation of IP into the foundation training year come 2025.

The pilot has also shown that it is possible to incorporate IP into the foundation training year and obtain the desired outcome of producing registered pharmacists who are competent and confident prescriber. This is indicated by the increase in trainee pharmacists perceived confidence in demonstrating different competencies as the pilot progressed. The pilot was also useful in identifying areas that training centres need to improve or modify before the 2025 intake.

However, a major limitation of the pilot needs to be taking into consideration in actioning outcomes from the pilot. This is the fact that TPs who participated in the pilot are most likely very highly motivated and proactive TPs and do not necessarily reflect most of the TP population.

Recommendations

- It would be beneficial to integrate the RPS competencies and their associated documentations into the E-portfolio in such a way that GPhC learning outcomes and RPS competences could automatically be cross-referenced.
- There should be benchmarking in the form of a clear guidance on what volume and types of prescribing evidence are required or acceptable.
- Pharmacists' prescribers should continue to be encouraged to train to become DPPs as one of the major barriers to noted was a shortage of DPPs.
- Professional support should be provided for inexperienced DPPs or DPPs with little or/no supervisory experience.

- Additional resources should be provided for DPPs that are not pharmacist to ensure they understand what is required of them with regards to the TPs' IP training.
- Some flexibility around TPs' ability to prescribe would be beneficial for demonstrating competencies related to independent decision making in prescribing.
- A supplementary training will be beneficial for a successful incorporation of IP into the foundation training year.

Recommendations for training sites are:

- The importance of regular meetings between TPs and their DPPs should be reiterated as this will be useful in identifying and finding a solution to any prescribing related challenge.
- A site-specific clear training plan should be developed and DPPs can use this to set goals and target for their TPs. This will also be helpful for TPs to plan and manage their time effectively.
- Opportunities should be provided for assessing prescribing competence such as mock prescribing sessions or a variation of this.
- DPPs should be encouraged to proactively seek opportunities for their TPs to gain a variety of IP experience.

7 References

1. RPS. *A competency Framework for all Prescribers.* 2021 [cited 2024 05/06/2024].
2. NHSE, *Foundation Trainee Pharmacist Assessment Strategy*. 2021, NHS England.
3. Michaelsen, L.K. and M. Sweet, *Team-based learning.* New Directions for Teaching and Learning, 2011. **2011**(128): p. 41-51.

8 Appendix

Appendix 1: FTC Study days and content of each study day.

	Liverpool	Manchester	Newcastle	Leeds
Day 1	31.08.23	29.08.23	21.08.23	04.09.23
Day 2	05.10.23	05.10.23	12.10.23	12.10.23
Day 3	02.11.23	02.11.23	09.11.23	09.11.23
Day 4	25.01.24	25.01.24	01.02.24	01.02.24
Day 5	29.02.24	29.02.24	07.03.24	07.03.24
First Aid	TBC (February/March)			
OSCEs	24.04.24	25.04.24	01.05.24	02.05.24
OSCE Venue	Holiday Inn Liverpool City Centre UK Lime Street Liverpool L1 1NQ	King's House Conference Centre, King's Church, Sidney Street, Manchester. M1 7HB	Leonardo Hotel Newcastle, Scotswood Road Newcastle Upon Tyne, NE1 4AD, GB	The Met Hotel King Street Leeds, LS1 2HQ

Day 1	**Clinical Assessment Skills** • Practical teaching and assessment of key clinical skills • Includes assessment of pain, cardiovascular and respiratory systems • Infection control, urinalysis, mental health, height/weight/BMI, hydration, blood glucose, temperature
Day 2	**Clinical Decision Making & Cases of Infection Management in Community Pharmacy**
Day 3	**Management of Common Conditions and Minor Ailments & Cases of Nervous System Management in Community Pharmacy**
Day 4	**Advanced Consultation Skills & Cases of Endocrine Conditions Management in Community Pharmacy**
Day 5	**Information Gathering and Critical Evaluation & Cases of Cardiovascular Conditions Management in Community Pharmacy**
First Aid	**First aid training**- practical teaching assessment and certification to meet GPhC learning outcomes
OSCEs	**Objective Structured Clinical Examinations** • 4 x 15-minute Clinical Stations • Formative Assessment and Feedback • Clinicians and Medical Actors
MOCK	Full online mock exam mapped to GPhC registration assessment framework

Appendix 2: IP Study sessions and contents of each session.

	Date and time
IP Session 1	12.09.23 9:30-11:30am
IP Session 2	17.10.23 2-4pm
IP Session 3	28.11.23 2-4pm
IP Session 4	30.01.24 2-4pm
IP session 1	**Focus:** Portfolio building and making the most of learning in practice
IP session 2	**Focus:** Prescribing for individuals whilst working in systems; Law, ethics, and governance; Influences on prescribing; human rights and diversity
IP session 3	**Focus:** Evidence, errors, and public health; Evidence based medicine, guidelines; Safeguarding and safety netting; Error models and reducing risk; Health economics
IP session 4	**Focus:** Workshop for consolidation of learning into a single interaction model that replicates the scenarios the TP prescriber could encounter

Appendix 3: DPPs and DS Pre-programme Questionnaires

DPP/DS IP Pilot Pre-programme Self-assessment Evaluation Questionnaire

Required

Information and consent

About the programme:

University of Bradford and University of Huddersfield have been commissioned by the NHS England (NHSE) to pilot an independent prescribing (IP) training programme for foundation trainee pharmacists (TPs) in their training year. The aim of this work is to test and evaluate a model for the training, as well as to develop training resources for both TPs and their designated prescribing practitioners (DPPs). This is in preparation for 2025-26 year, when all TPs will register as prescribers upon registration.

Purpose of the survey:

This survey is part of the evaluation of the pilot IP training programme. The aim of the evaluation is to develop understanding how independent prescribing can be incorporated into the foundation training programme.

The aim of this survey is to evaluate DPPs' confidence relating to assessment of trainee pharmacists as independent prescribers at the midpoint of the pilot.

What would you need to do?

- Give consent to allow us to use your responses.
- Complete an electronic survey, which will take 10 to 15 minutes.

Confidentiality

We ask for your name which will be used for the sole purpose of longitudinal analysis (i.e. investigating how your answers change over the course of the programme), and will not be used to identify you personally at any time. Only the pilot IP programme team will be able to see all the information. No identifying information will be used in any reports of our findings.

How we process your data?

The University of Bradford and University of Huddersfield comply with their obligations under GDPR. The information that you supply will be collected electronically via MS Forms. It will be stored safely in accordance with all the relevant governance standards and University of Bradford procedures. It will be kept for no longer than ten years and will be securely deleted in accordance with our governance procedures.

Sponsoring Institution

University of Bradford

Any questions, please contact Patricia Achi jpkachi3@bradford.ac.uk

1. Please select all statements to confirm your agreement to participate in this questionnaire. *

Please select 7 options.

- [ ] I voluntarily agree to participate in this evaluation.
- [ ] I understand that all information I provide for this evaluation will be treated confidentially.
- [ ] I understand that in any report on the results of this evaluation, my identity will remain anonymous.
- [ ] I understand that disguised extracts from my answers may be quoted in evaluation reports, published articles, and other written reports.
- [ ] I understand that the anonymised written records of the information I share will be stored on the University of Bradford's secure network at the end of the project for 10 years, after which they will be deleted.
- [ ] I understand that under Freedom of Information legislation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- [ ] I understand that I am free to contact any of the people involved in the evaluation to seek further clarification and information.

2. Full name *

Introductory questions

3. How confident do you feel, overall, in your ability to supervise Trainee Pharmacists (TPs) undertaking Independent Prescriber (IP) training? *

not confident at all	slightly confident	somewhat confident	quite confident	completely confident
○	○	○	○	○

4. Please explain why you answered as you did above, and tell us about any concerns or worries you have related to assessment. *

Consultation competencies

The following questions relate to the RPS Competency Framework for all Prescribers.

5. The following questions relate to the consultation aspect of prescribing. *

	not confident at all	slightly confident	somewhat confident	quite confident	completely confident
How confident do you feel about your current ability to assess the patient in order to make a prescribing decision?	○	○	○	○	○
How confident do you feel about your current ability to identify evidence-based treatment options available, to inform your clinical decision-making?	○	○	○	○	○
How confident do you feel about your current ability to present options to the patient/carer and reach a shared decision?	○	○	○	○	○
How confident do you feel about your current ability to prescribe products appropriately and effectively?	○	○	○	○	○
How confident do you feel about your current ability to provide information to the patient/carer?	○	○	○	○	○
How confident do you feel about your current ability to monitor and review treatment?	○	○	○	○	○

Governance competencies

The following questions relate to the RPS Competency Framework for all Prescribers.

6. The following questions relate to the governance aspect of prescribing. *

	not confident at all	slightly confident	somewhat confident	quite confident	completely confident
How confident do you feel about your current ability to prescribe safely?	○	○	○	○	○
How confident do you feel about your current ability to prescribe professionally (i.e. within governance frameworks and recognising potential influences on prescribing)?	○	○	○	○	○
How confident do you feel about your current ability to contribute to improving prescribing practice of yourself and others?	○	○	○	○	○
How confident do you feel about your current ability to prescribe as part of a team?	○	○	○	○	○

Supervisory relationship(s)

7. So far, how satisfied do you feel with your relationship and interactions with the TP(s) you are supervising on this IP training programme? *

very dissatisfied	somewhat dissatisfied	neither satisfied nor dissatisfied	somewhat satisfied	very satisfied	I have not met my TP(s) yet
○	○	○	○	○	○

8. Please explain why you answered as you did above, and tell us about any concerns you have. (These will remain confidential unless you specifically ask us to take an action, in which case we will contact you to discuss.) *

9. Please select which roles you are acting as below: *

- ○ Designated Prescribing Practitioner (DPP) only
- ○ Designated Supervisor (DS) only
- ○ Both DPP and DS

10. So far, how satisfied do you feel with your relationship and interactions with the Designated Supervisor(s) (DS) co-supervising TP(s) with you on this IP training programme? *

very dissatisfied	somewhat dissatisfied	neither satisfied nor dissatisfied	somewhat satisfied	very satisfied	not applicable - I am the DS
○	○	○	○	○	○

11. Please explain why you answered as you did above, and tell us about any concerns you have. (These will remain confidential unless you specifically ask us to take an action, in which case we will contact you to discuss.) *

12. So far, how satisfied do you feel with your relationship and interactions with the Designated Prescribing Practitioner(s) (DPP) co-supervising TP(s) with you on this IP training programme? *

very dissatisfied	somewhat dissatisfied	neither satisfied nor dissatisfied	somewhat satisfied	very satisfied	not applicable - I am the DPP
○	○	○	○	○	○

13. Please explain why you answered as you did above, and tell us about any concerns you have. (These will remain confidential unless you specifically ask us to take an action, in which case we will contact you to discuss.) *

Appendix 4: TPs Pre-programme questionnaire.

Trainee Pharmacist Pre-programme self-assessment evaluation questionnaire

* Required

Information and consent

About the programme:

University of Bradford and University of Huddersfield have been commissioned by the NHS England (NHSE) to pilot an independent prescribing (IP) training programme for foundation trainee pharmacists (TPs) in their training year. The aim of this work is to test and evaluate a model for the training, as well as to develop training resources for both TPs and their designated prescribing practitioners (DPPs). This is in preparation for 2025-26 year, when all TPs will register as prescribers upon registration.

Purpose of the survey:

This survey is part of the evaluation of the pilot IP training programme. The aim of the evaluation is to develop understanding how independent prescribing can be incorporated into the foundation training programme.

The aim of this survey is to evaluate the level of confidence related to prescribing activities of trainee pharmacists at the mid-point of the pilot IP programme .

What would you need to do?

- Give consent to allow us to use your responses.
- Complete an electronic survey, which will take 10 to 15 minutes.

Confidentiality

We ask for your name which will be used for the sole purpose of longitudinal analysis (i.e. investigating how your answers change over the course of the programme). Only the pilot IP programme team will be able to see all the information. No identifying information will be used in any reports of our findings.

How we process your data?

The University of Bradford and University of Huddersfield comply with their obligations under GDPR. The information that you supply will be collected electronically via MS Forms. It will be stored safely in accordance with all the relevant governance standards and University of Bradford procedures. It will be kept for no longer than ten years and will be securely deleted in accordance with our governance procedures.

Sponsoring Institution

University of Bradford

Any questions, please contact Patricia Achi at ipkachi3@bradford.ac.uk

1. Please select all statements to confirm your agreement to participate in this questionnaire. *

Please select 7 options.

- [ ] I voluntarily agree to participate in this evaluation
- [ ] I understand that all information I provide for this evaluation will be treated confidentially.
- [ ] I understand that in any report on the results of this evaluation, my identity will remain anonymous.
- [ ] I understand that disguised extracts from my answers may be quoted in evaluation reports, published articles, and other written reports.
- [ ] I understand that the anonymised written records of the information I share will be stored on the University of Bradford's secure network at the end of the project for 10 years, after which they will be deleted.
- [ ] I understand that under Freedom of Information legislation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- [ ] I understand that I am free to contact any of the people involved in the evaluation to seek further clarification and information.

2. Full name *

Introductory questions

3. In what sector are you completing you foundation training?

- ◯ Hospital
- ◯ Community pharmacy
- ◯ Cross-sector

4. How confident do you feel, overall, in your ability to complete the learning portions of the IP training programme? *

not confident at all	slightly confident	somewhat confident	quite confident	completely confident
◯	◯	◯	◯	◯

5. Please explain why you answered as you did above, and tell us about any concerns or worries you have related to completing this learning. *

Consultation competencies

The following questions relate to the RPS Competency Framework for all Prescribers.

6. The following questions relate to the consultation aspect of prescribing. *

	not confident at all	slightly confident	somewhat confident	quite confident	completely confident
How confident do you feel about your current ability to assess the patient in order to make a prescribing decision?	○	○	○	○	○
How confident do you feel about your current ability to identify evidence-based treatment options available, to inform your clinical decision-making?	○	○	○	○	○
How confident do you feel about your current ability to present options to the patient/carer and reach a shared decision?	○	○	○	○	○
How confident do you feel about your current ability to prescribe products appropriately and effectively?	○	○	○	○	○
How confident do you feel about your current ability to provide information about a treatment option to the patient/carer?	○	○	○	○	○
How confident do you feel about your current ability to monitor and review treatment?	○	○	○	○	○

Governance competencies

The following questions relate to the RPS Competency Framework for all Prescribers.

7. The following questions relate to the governance aspect of prescribing. *

	not confident at all	slightly confident	somewhat confident	quite confident	completely confident
How confident do you feel about your current ability to prescribe safely?	○	○	○	○	○
How confident do you feel about your current ability to prescribe professionally (i.e. within governance frameworks and recognising potential influences on prescribing)?	○	○	○	○	○
How confident do you feel about your current ability to contribute to improving prescribing practice of yourself and others?	○	○	○	○	○
How confident do you feel about your current ability to prescribe as part of the team?	○	○	○	○	○

Supervisory relationship(s)

8. So far, how satisfied do you feel with your relationship and interactions with your DPP? *

very dissatisfied	somewhat dissatisfied	neither satisfied nor dissatisfied	somewhat satisfied	very satisfied	I've not met my DPP yet
○	○	○	○	○	○

9. Please explain why you answered as you did above, and tell us about any concerns you have. (These will remain confidential unless you specifically ask us to take an action, in which case we will contact you to discuss.) *

10. So far, how satisfied do you feel with your relationship and interactions with your DS? *

very dissatisfied	somewhat dissatisfied	neither satisfied nor dissatisfied	somewhat satisfied	very satisfied	My DPP is my DS
○	○	○	○	○	○

11. Please explain why you answered as you did above, and tell us about any concerns (if any) you have. (These will remain confidential unless you specifically ask us to take an action, in which case we will contact you to discuss.) *

Additional General Question(s).

12. Do you feel you require additional support to successfully complete this programme

- ◯ Yes
- ◯ No

13. Please explain why you answered as you did above and, if applicable, tell us about any additional support you require.

Appendix 5: DPP Endpoint Questionnaire

Independent Prescribing Pilot End Point Evaluation Questionnaire - DPPs

Thanks for taking the time to fill out this quick evaluation questionnaire! It should take you about 5 minutes to complete.

* Required

Information and consent

Purpose of the survey:
The aim of this survey is to evaluate the IP pilot at the endpoint using views from the DPPs, DSs and EPDs about the burden of the IP assessment, the strengths and areas of improvement which will facilitate implementation of IP in the foundation training year.

What would you need to do?

- Give consent to allow us to use your responses.
- Complete an electronic survey, which will take 7-10 minutes.

Confidentiality

No identifying information is requested for this survey.

How we process your data?

The University of Bradford and University of Huddersfield comply with their obligations under GDPR. The information that you supply will be collected electronically via MS Forms. It will be stored safely in accordance with all the relevant governance standards and University of Bradford procedures. It will be kept for no longer than ten years and will be securely deleted in accordance with our governance procedures.

Sponsoring Institution

University of Bradford

Any questions, please contact Patricia Achi at ipkachi3@bradford.ac.uk

1. Please select all statements to confirm your agreement to participate in this questionnaire. *

- [ ] I voluntarily agree to participate in this evaluation
- [ ] I understand that all information I provide for this evaluation will be treated confidentially.
- [ ] I understand that in any report on the results of this evaluation, my identity will remain anonymous.
- [ ] I understand that disguised extracts from my answers may be quoted in evaluation reports, published articles, and other written reports.
- [ ] I understand that the anonymised written records of the information I share will be stored on the University of Bradford's secure network at the end of the project for 10 years, after which they will be deleted.
- [ ] I understand that under Freedom of Information legislation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- [ ] I understand that I am free to contact any of the people involved in the evaluation to seek further clarification and information.

2. Full name *

3. How much of your TP's supervised hours was spent with you throughout the pilot? *

- ◯ > 45 hours
- ◯ 45 hours
- ◯ 30 hours
- ◯ < 30 hours

4. In your opinion, was this adequate contact time from an IP training point of view? *

- ◯ Yes
- ◯ No
- ◯ Maybe

5. Please explain why you gave the response above. *

6. Which competencies in the **consultation domain** do you feel your TP found **easy** to evidence / meet ? *

- ☐ 1. Assess the patient
- ☐ 2. Identify evidence-based treatment options available for clinical decision making
- ☐ 3. Present options and reach a shared decision.
- ☐ 4. Prescribe.
- ☐ 5. Provide information
- ☐ 6. Monitor and review.

7. Please tell us what factors you feel made it easy to evidence / meet these competencies? *

8. Which competencies in the **consultation domain** do you feel your TP found **difficult** to evidence / meet ? *

- [ ] 1. Assess the patient
- [ ] 2. Identify evidence-based treatment options available for clinical decision making
- [ ] 3. Present options and reach a shared decision.
- [ ] 4. Prescribe.
- [ ] 5. Provide information
- [ ] 6. Monitor and review.

9. Please tell us what factors you feel made it difficult to evidence / meet these competencies. *

10. Which competencies in the **prescribing governance** domain do you feel your TP found **easy** to evidence / meet ? *

- [ ] 7. Prescribe safely
- [ ] 8. Prescribe professionally
- [ ] 9. Improve prescribing practice
- [ ] 10. Prescribe as part of a team

11. Please tell us what factors you feel made it easy to evidence / meet these competencies. *

12. Which competencies in the **prescribing governance** domain do you feel your TP found **difficult** to evidence / meet ? *

- [ ] 7. Prescribe safely
- [ ] 8. Prescribe professionally
- [ ] 9. Improve prescribing practice
- [ ] 10. Prescribe as part of a team

13. Please tell us what factors you feel made it difficult to evidence these competencies. *

14. After completing the pilot, how confident do you feel in your ability to supervise and assess Trainee Pharmacists undertaking the Independent Prescriber training?

Not confident at all	Slightly confident	Somewhat confident	Quite confident	Completely Confident
○	○	○	○	○

15. Please explain why you gave the response above including any concerns or suggestions for improving DPP experience.

16. Thinking about your role as DPP on the IP pilot programme, please indicate how much you agree or disagree with each of the statements below.

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Overall, the tasks associated with supervising and assessing trainee IPs during this programme were achievable.	○	○	○	○	○
I found the time commitment realistic and manageable.	○	○	○	○	○
I found the knowledge requirements manageable.	○	○	○	○	○
I felt I had the skills required to successfully interact with trainees.	○	○	○	○	○
I found the communication channels easy to use.	○	○	○	○	○
I had access to all the resources I needed to perform this role.	○	○	○	○	○

17. Please indicate how much you agree or disagree with the following statements regarding the DPP training resources provided by the IP Pilot team.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Not applicable
The Training resources were relevant to my role as DPP.	○	○	○	○	○	○
I found the training resources useful	○	○	○	○	○	○
The training resources were beneficial to both experienced and inexperienced DPPs.	○	○	○	○	○	○
The training resources were clear and understandable	○	○	○	○	○	○

18. Please share any comments or suggestions you have about the training resources and/or any additional resources or support that you think would be helpful to DPPs in this role.

19. Which of the following statements applies to you?

- ◯ I am my TP's DPP only.
- ◯ I am my TP's DPP and DS.

20. The IP trainees will benefit more from the DPP being separate from the DS.

- ◯ Agree
- ◯ Disagree

21. Please add any additional comments you have about DPP and DS role sharing including the reason(s) for your response to question 18 above.

Appendix 6: Interview and focus group consent form.

Ethics Ref: E1178

Name of Researcher: Patricia Achi

UNIVERSITY of BRADFORD
School of Pharmacy & Medical Sciences

Do you consent to take part in the study?

Independent Prescribing Pilot for Foundation Training Pilot for Foundation Trainee Pharmacists

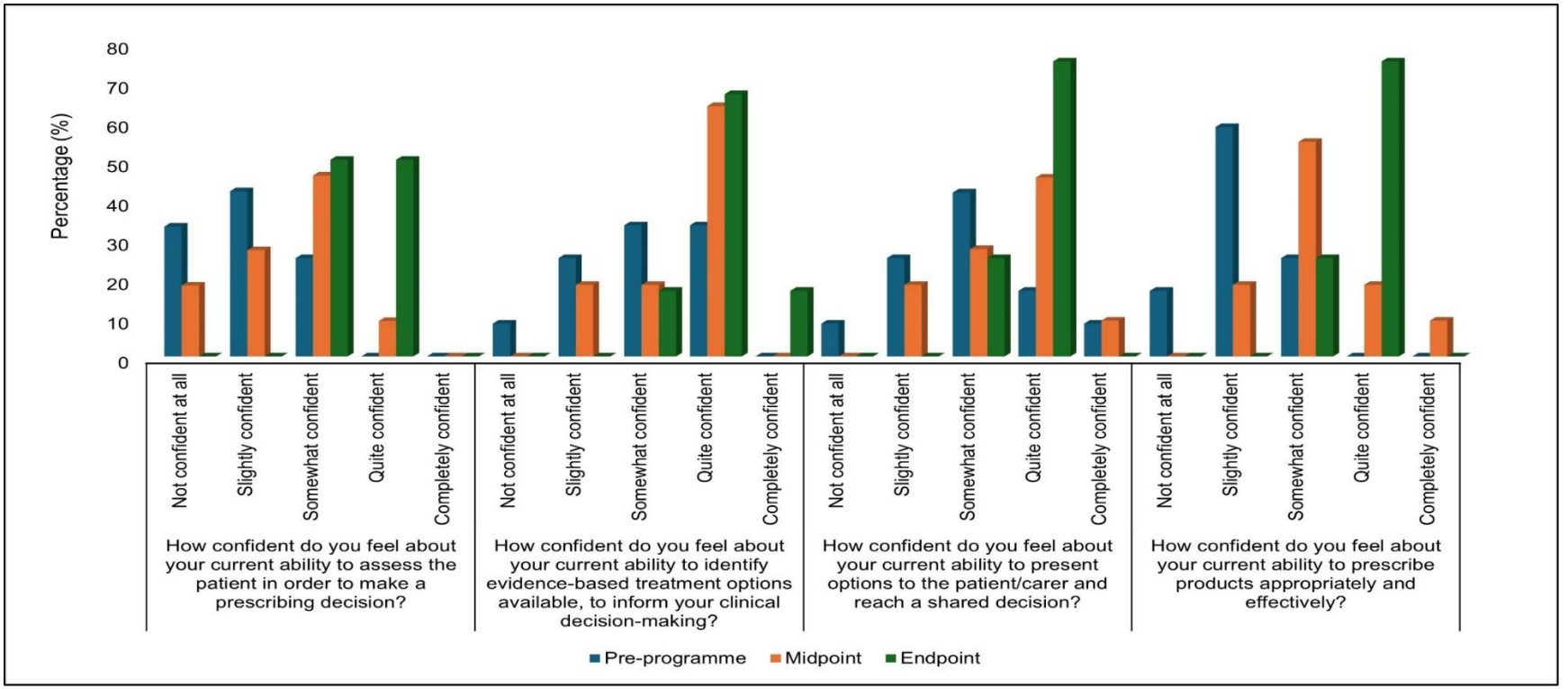
Please read each of the following points, initial each box and provide 'YES' or 'NO' answer in each box. Please email ipkachi3@bradford.ac.uk if there is anything you don't understand or you are unsure about.

Please initial and provide 'YES' or 'NO' answer in each box

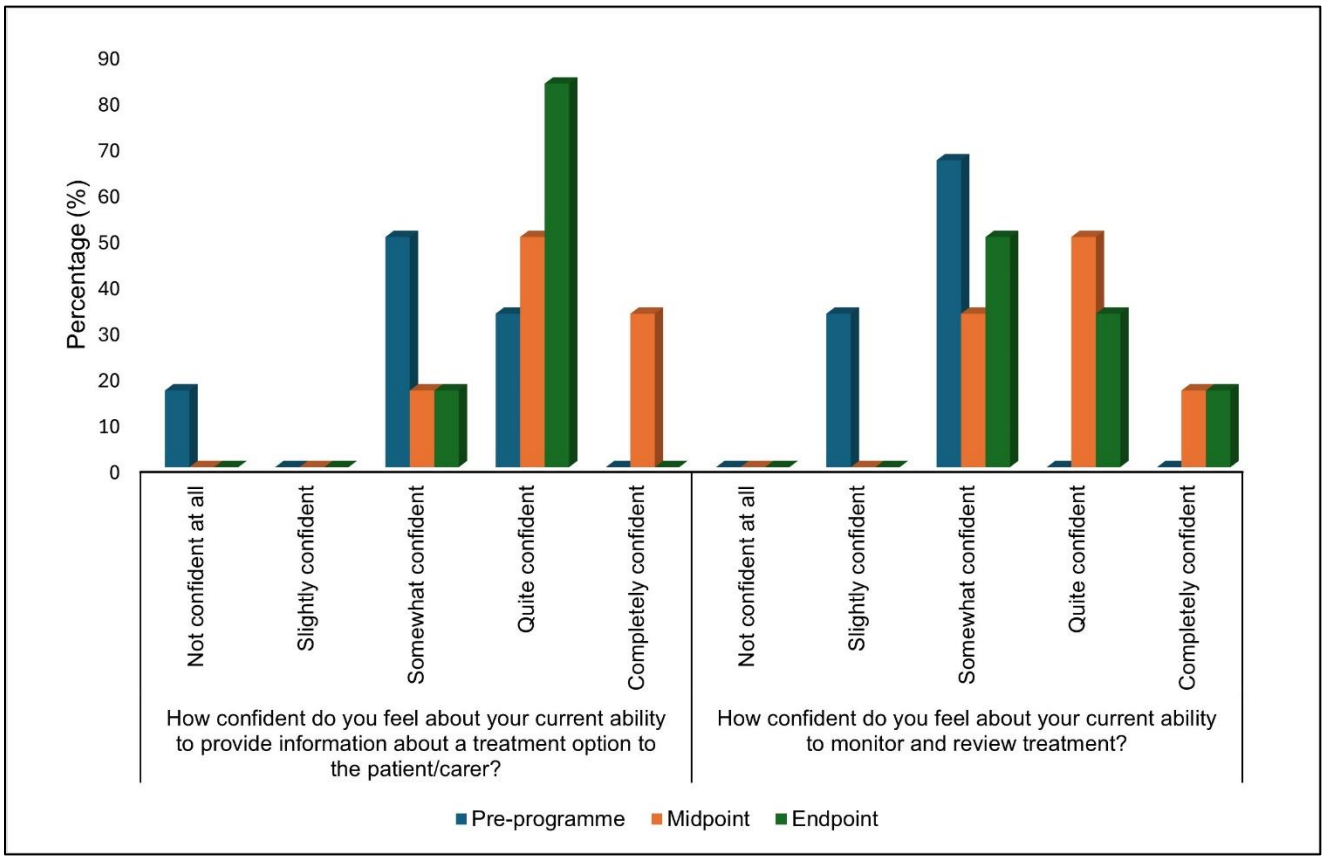
1. I have read and understand the information sheet version dated 09/01/2024 (Version 1). ☐
2. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
3. I understand that my participation is voluntary. I am free to withdraw up to two weeks after the interview without giving any reason, and without my foundation training being affected. ☐
4. I understand that should I not wish to answer any particular question or questions, I am free to decline. ☐
5. I understand that my interview will be audio-recorded and that anonymous quotes may be used in reports and publications about the research. ☐
6. I understand that all data collected about me will be kept confidentially and securely. ☐
7. I agree to take part in this interview. ☐

Name of participant (PRINT)	Date	Signature
Researcher (PRINT)	Date	Signature

Please turn over



Appendix 7: Summary of HTPs' perceived change in confidence in their ability to demonstrate competencies (C1-C4) in the consultation domain of the RPS CFAP from pre-programme period to the end point of the programme.



Appendix 8: Summary of CTPs' perceived change in confidence in their ability to demonstrate competencies (C5 and C6) in the consultation domain of the RPS CFAP from pre-programme period to the end point of the programme.

Appendix 9: Document cross mapping the RPS CFAP and the GPhC interim learning outcomes for the foundation training year.

RPS Prescribing competencies for independent prescribing	**GPhC interim learning outcomes for the foundation training year** https://www.pharmacyregulation.org/sites/default/files/document/gphc-foundation-training-manual-2023-24.pdf
Assess the patient	**Most are directly aligned (those in brackets will depend on the activity performed)**
1.1. Undertakes the consultation in an appropriate setting	4
1.2. Considers patient dignity, capacity, consent and confidentiality	1, 2, 6, 7, 15, (39)
1.3. Introduces self and prescribing role to the patient/carer and confirms patient/carer identity	3
1.4. Assesses the communication needs of the patient/carer and adapts consultation appropriately	3, 4
1.5. Demonstrates good consultation skills and builds rapport with the patient/carer	1, 3, 4, 6, 7, (8,) (9,) 10, (11,) (12,) 15
1.6. Takes and documents an appropriate medical, psychosocial and medication history including allergies and intolerances	1, 3, (6,) 10, (11,) 39, (43,) (49)
1.7. Undertakes and documents an appropriate clinical assessment	6, 7, 8, 10, (12,) 15, 17, 18, 19, (21,) 28, 39, (43)
1.8. Identifies and addresses potential vulnerabilities that may be causing the patient/carer to seek treatment	3, 6, 8, 9, (10,) 11, 40, (43)
1.9. Accesses and interprets all available and relevant patient records to ensure knowledge of the patient's management to date	12, 16, 30, 34, 39, (43)

1.10. Requests and interprets relevant investigations necessary to inform treatment options.	12, 17, (18,) 21, 30, 34
1.11. Makes, confirms or understands, and documents the working or final diagnosis by systematically considering the various possibilities (differential diagnosis)	(13,) (14,) (28,) 30
1.12. Understands the condition(s) being treated, their natural progression, and how to assess their severity, deterioration and anticipated response to treatment	12, 13, (14,) 21, 29, (34,) (35,) 48
1.13. Reviews adherence (and non-adherence) to, and effectiveness of, current medicines	5, 10, 13, 14, (17,) (29,) 30, 34, (35,) (43)
1.14. Refers to or seeks guidance from another member of the team, a specialist or appropriate information source when necessary	3, 12, 14, 15, 16, 17, (38,) (40,) (45,) 46, (52)
Identify evidence-based treatment options available for clinical decision making	
2.1. Considers both non-pharmacological and pharmacological treatment approaches	(1,) (2,) (5,) (9,) (10,) 12, 13, (14,) (17,) 21, 26, 29, 30
2.2. Considers all pharmacological treatment options including optimising doses as well as stopping treatment (appropriate polypharmacy and deprescribing)	(17,) 30, 21, 26, 29, 30, 31, (34,) 48
2.3. Assesses the risks and benefits to the patient of taking or not taking a medicine or treatment	1, 2, 5, 8, 9, (17,) 29, 30, 31 (34,) (35,) 48
2.4. Applies understanding of the pharmacokinetics and pharmacodynamics of medicines, and how these may be altered by individual patient factors	8, 13, (17,) 21, 26, 29
2.5. Assesses how co-morbidities, existing medicines, allergies, intolerances, contraindications and quality of life impact on management options	1, 2, 3, 5, 8, 10, 11, 12, 13, 21, 26, 29, 30, (43)
2.6. Considers any relevant patient factors and their potential impact on the choice and formulation of medicines, and the route of administration	1, 2, 3, 5, 6, 8, 9, 10, 12, 13, 21, 26, 29, 30
2.7. Accesses, critically evaluates, and uses reliable and validated sources of information	21, 30

2.8. Stays up to date in own area of practice and applies the principles of evidence-based practiced	21, 30, 53
2.9. Considers the wider perspective including the public health issues related to medicines and their use, and promoting health	41, 42
2.10. Understands antimicrobial resistance and the roles of infection prevention, control and antimicrobial stewardship measures	21, 26, 31, 45, 47, 48
Present options and reach a shared decision	
3.1. Actively involves and works with the patient/carer to make informed choices and agree a plan that respects the patient's/carer's preferences	1, 2, 3, 7, 9, 10, 12, 15
3.2. Considers and respects patient diversity, background, personal values and beliefs about their health, treatment and medicines, supporting the values of equality and inclusivity, and developing cultural competence	1, 2, 6, 8, 9, 10, 11, 12, 15
3.3. Explains the material risks and benefits, and rationale behind management options in a way the patient/carer understands, so that they can make an informed choice	1, 2, 3, 6, 10, 12, 13, 18, 48
3.4. Assesses adherence in a non-judgemental way; understands the reasons for non-adherence and how best to support the patient/carer	5, 6, 8, 9, 11, 12, 13, 15
3.5. Builds a relationship which encourages appropriate prescribing and not the expectation that a prescription will be supplied	1, 2, 3, 6, 10, 12, 13, 15
3.6. Explores the patient's/carer's understanding of a consultation and aims for a satisfactory outcome for the patient/carer and prescriber	1, 2, 3, 6, 10, 11, 12, 15
Prescribe	
4.1 Prescribes a medicine or device with up-to-date awareness of its actions, indications, dose, contraindications, interactions, cautions and adverse effects.	7, 12, 13, 15, 21, 29, 30
4.2. Understands the potential for adverse effects and takes steps to recognise, and manage them, whilst minimising risk	8, 13, 21, 29, 30, 48

4.3. Understands and uses relevant national, regional and local frameworks for the use of medicines	12, 13, 31, 36, (41,) 49
4.4. Prescribes generic medicines where practical and safe for the patient, and knows when medicines should be prescribed by branded product	12, 13, 29, 30
4.5. Accurately completes and routinely checks calculations relevant to prescribing and practical dosing	15, 32, 49
. 4.6. Prescribes appropriate quantities and at appropriate intervals necessary to reduce the risk of unnecessary waste.	32, (31,) (43)
4.7. Recognises potential misuse of medicines; minimises risk and manages using appropriate processes	9, 13, 43, 48
4.8. Uses up-to-date information about the availability, pack sizes, storage conditions, excipients and costs of prescribed medicines	31,
4.9. Electronically generates and/or writes legible, unambiguous and complete prescriptions which meet legal requirements	(39,), 49
4.10. Effectively uses the systems necessary to prescribe medicines	31, (39,), 49
4.11. Prescribes unlicensed and off-label medicines where legally permitted, and unlicensed medicines only if satisfied that an alternative licensed medicine would not meet the patient's clinical needs	12, 13, 30, 48, 49
4.12. Follows appropriate safeguards if prescribing medicines that are unlicensed, off-label, or outside standard practice	30, 48, 49
4.13. Documents accurate, legible and contemporaneous clinical records	39
4.14. Effectively and securely communicates information to other healthcare professionals involved in the patient's care, when sharing or transferring care and prescribing responsibilities, within and across all care settings	12, 14, 15, (17,) 39, 45
Provide Information	

5.1Assesses health literacy of the patient/carer and adapts appropriately to provide clear, understandable, and accessible information	1, 3, 5, 6, 8, 9, 10, 48
5.2. Checks the patient's/carer's understanding of the discussions had, actions needed and their commitment to the management plan	1, 2, 3, 5, 6, 8, 9, 10, 13, 48
5.3. Guides the patient/carer on how to identify reliable sources of information about their condition, medicines, and treatment	1, 2, 3, 5, 6, 8, 9, 10, 11
5.4. Ensures the patient/carer knows what to do if there are any concerns about the management of their condition, if the condition deteriorates or if there is no improvement in a specific timeframe	1, 2, 3, 5, 6, 8, 9, 10, 11, 13, 48
5.5. Encourages and supports the patient/carer to take responsibility for their medicines and self-manage their condition	1, 2, 5, 6, 8, 9, 10, 11, (33)
Monitor and review	
6.1Establishes and maintains a plan for reviewing the patient's treatment	13, 34, (43,) 48
6.2. Establishes and maintains a plan to monitor the effectiveness of treatment and potential unwanted effects	13, 34, 48
6.3. Adapts the management plan in response to on-going monitoring and review of the patient's condition and preferences	(17,) 34
6.4. Recognises and reports suspected adverse events to medicines and medical devices using appropriate reporting systems	13, 20, 34, 35, (50)
Prescribe safely	
7.1. Prescribes within own scope of practice, and recognises the limits of own knowledge and skill	7, 17, 48, 49, 51
7.2. Knows about common types and causes of medication and prescribing errors, and knows how to minimise their risk	13, 34, 38, 48, 49
7.3. Identifies and minimises potential risks associated with prescribing via remote methods	38, 48, 49
7.4. Recognises when safe prescribing processes are not in place and acts to minimise risks	17, 38, (47,) 48, 49, 50, 51
7.5. Keeps up to date with emerging safety concerns related to prescribing	15, 38, (41,) 48, 49

7.6. Reports near misses and critical incidents, as well as medication and prescribing errors using appropriate reporting systems, whilst regularly reviewing practice to prevent recurrence	12, 13, 15, 20, 38, 45, 50, 51
Prescribe Professionally	
8.1 Ensures confidence and competence to prescribe are maintained	3, 6, 7, 10, 15, 17, (46,) 53, 54, 55
8.2. Accepts personal responsibility and accountability for prescribing and clinical decisions, and understands the legal and ethical implications	12, 13, (14,) 15, 36, 38, (43,) (48,) 50, 51
8.3. Knows and works within legal and regulatory frameworks affecting prescribing practice.	15, 36, 38, (40)
8.4. Makes prescribing decisions based on the needs of patients and not the prescriber's personal views	1, 2, 6, 8, 9, 10, 30, (40,) (43)
8.5. Recognises and responds to factors that might influence prescribing	1, 6, 8, 12, 36, (40,) (43,) 55
8.6. Works within the NHS, organisational, regulatory and other codes of conduct when interacting with the pharmaceutical industry	36
Improve prescribing practice	
9.1Improves by reflecting on own and others' prescribing practice, and by acting upon feedback and discussion	14, 15, (17,) 38, (45,), 48, 50, 51, 53
9.2. Acts upon inappropriate or unsafe prescribing practice using appropriate processes	36, 38, 47, 48, 50, 51, (53)
9.3. Understands and uses available tools to improve prescribing practice.	14, 38, 46, 48, 49, 50, 53, 54, 55
9.4. Takes responsibility for own learning and continuing professional development relevant to the prescribing role	14, 15, 17, 24, 36, 38, 48, (51,) 53, 55
9.5. Makes use of networks for support and learning	14, (17,) 46, (51,) 54
9.6. Encourages and supports others with their prescribing practice and continuing professional development	14, 45, 54
9.7. Considers the impact of prescribing on sustainability, as well as methods of reducing the	31

carbon footprint and environmental impact of any medicine	
Prescribe as part of a team	
10.1. Works collaboratively as part of a multidisciplinary team to ensure that the transfer and continuity of care (within and across all care settings) is developed and not compromised	14, 15, 17, 45, 46, 48
10.2. Establishes relationships with other professionals based on understanding, trust, and respect for each other's roles in relation to the patient's care	6, 14, 15, 17, 45, 46
10.3. Agrees the appropriate level of support and supervision for their role as a prescriber	14, 15, 17, 45, 48, 49, 51, 53
10.4. Provides support and advice to other prescribers or those involved in administration of medicines where appropriate	14, 15, 38, 45, 48, 54, 55