Evaluation of the Pharmacy Integration Fund Learning Pathways

Final Report – summary of findings and recommendations

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A report submitted by ICF Consulting Services Limited
in association with

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Executive Summary: Evaluation of the Pharmacy Integration Fund Learning Pathways (Final Report)

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Background

- This mixed-methods evaluation was commissioned by NHS England in March 2019 from ICF and the Centre for Pharmacy Workforce Studies (CPWS) at the University of Manchester.
- Four of the learning pathways funded by the Pharmacy Integration Fund (PhIF) were in scope: Medicines Optimisation in Care Homes (MOCH) for pharmacists and pharmacy technicians; Integrated Urgent Care (IUC) for pharmacists; post-registration programmes (PRP) mainly aimed at community pharmacists; and Accuracy Checking for Pharmacy Technicians (ACPT).
- These learning pathways aimed to support pharmacy professionals to develop enhanced skills, and expand their scope of practice, thus contributing to developing the primary care pharmacy workforce. They were flexible, free to the learner, and combined learning delivered by providers commissioned by Health Education England (HEE) and experiential learning; for the MOCH and IUC pathways, new roles and access to independent prescribing (IP) were also funded.
- By examining learners' experiences and outcomes (and those of supervisors and employers), the findings aim to inform funding decisions and plans for workforce development after registration.
- The delivery of the learning pathways and learners' experiences were further shaped by the COVID-19 pandemic in 2020-21, about which the evaluation provides additional insights.

Methodology

- This was a mixed methods evaluation, with four principal work packages: A) analysis of learner data shared by HEE; B) a cross-sectional survey of learners (385 respondents) with longitudinal follow-up; C) in-depth telephone interviews with learners, supervisors and stakeholders (81 interviews across all four pathways, including 51 learners); and D) stakeholder engagement including a workshop at the start of the evaluation, and key informant interviews.
- The Theoretical Domains Framework (TDF) model of behaviour change was used as the basis for integrating the findings and understanding how learning and policy interventions have led to changes in practice, informing the evaluation framework and approach to analysis and synthesis.

Key findings

- Analysis of learner data to March 2021 showed that 2,923 pharmacy professionals had engaged with the in-scope pathways; post-registration learners in community pharmacy accounted for more than half of the learners. Pathways were largely taken up by early and mid-career professionals, with 79% of learners aged between 25 and 44. Their gender and ethnicity profile was broadly reflective of the wider pharmacy workforce and take-up was spread across England.
- Learners' main motivations for taking part were to enhance their practice in their current job, working in a new sector of practice, and improving career prospects. Gaining a transferable, recognised qualification was also valued, and for pharmacists, so was the potential to gain an IP qualification and the opportunity to practise clinically in more patient-facing roles.
- Learners valued the approach to online and remote learning that was a key part of pathways even before the pandemic, although face-to-face contact and peer support networks were also

considered important. During the COVID-19 pandemic, learners reported several challenges including less time for learning due to exhaustion, increased workload, and fewer opportunities to apply skills; learning providers responded by reducing assessment load and by extending deadlines.

- Both educational and clinical supervision supporting experiential learning were a key resource for learners.
- A majority of pharmacists and pharmacy technician respondents on all pathways reported feeling either fairly or extremely confident in many of the target behaviours related to enhanced clinical practice as a result of their learning. Most learners also agreed that they had sufficient knowledge to apply learning in practice, although not all learners felt supported or able to do so in their workplace, particularly community pharmacists.
- The in-depth interviews revealed the importance of applying skills in practice for gaining confidence and self-awareness, and becoming a more reflective and holistic practitioner.
- The development of leadership, clinical reasoning, and communication through practice made a significant contribution to changes in learners' own behaviour, and the practice of other health professionals. Learners and employers also highlighted organisational benefits and improvements to patient care.
- Overall, PhIF funding and learning pathways appear to have acted as a catalyst for the advancement of roles and opportunities available to the pharmacy workforce (both pharmacists and pharmacy technicians), pushing the boundaries of what the workforce can and is expected to do.

Key policy implications and recommendations

- Learning enhanced skills such as communication, clinical decision making, using evidence in practice, and interprofessional collaboration enabled practitioners to be more reflective, lifelong learners and were closely linked to better patient care and being an effective, more autonomous practitioner. The combination of clinical skills relevant to primary care and community pharmacy with wider applied skills (including leadership skills among pharmacy technicians as well as pharmacists) should therefore continue to be a focus of future learning pathways for the pharmacy workforce.
- There is strong demand from many pharmacy professionals to develop enhanced skills and prepare for more clinical roles in primary care. Opportunities for learners to apply new skills in their roles, supported by high quality educational and clinical supervision, should be the focus of a proactive and strategic national approach to the development of pharmacy professionals in the future.
- By developing a framework for learning a consistent set of skills at each level from foundation, through to enhanced, advanced and consultant levels, policy makers will be able to support a progressive post-registration pathway for recent registrants as well as the existing pharmacy workforce.
- Future learning pathways should take account of widespread portfolio working in primary care and prioritise the acquisition of the transferable skills that are relevant across multiple settings. Ensuring that the different supervisory roles can provide a consistent offer of high quality support, based on the learning from this evaluation, coupled with consideration of how credentialing can be used to support transferability, will also be important for enabling joined-up career pathways in primary care and community pharmacy.

1 Introduction and background

The purpose of this 'mid length' report is to focus on a summary of findings, their discussion and recommendations. A full report which presents detailed findings is also available.

The aim of this wide-ranging, mixed methods evaluation was to understand the views of learners, employers and supervisors taking part in four of the Pharmacy Integration Fund (PhIF) funded learning pathways. The PhIF learning pathways can be described as a set of interventions that aimed to incentivise pharmacy professionals (and their employers) to extend or enhance their scope of practice – developing their clinical skills across primary care (including community pharmacy), in both new and existing roles.

Commissioned by NHS England from ICF and the Centre for Pharmacy Workforce Studies (CPWS) in March 2019, the purpose of this study was to inform future funding decisions and plans for primary care pharmacy education and training after registration. In addition, the evaluation findings reveal wider insights about the development of the future pharmacy workforce in primary care, the barriers to transformation and how they might be overcome, as well the likely impact on learners, employers and patients. Due to the importance of applied, work-based learning, the evaluation findings and recommendations are also likely to be relevant in the context of the imminent changes to the initial education and training of pharmacists and the introduction of a pharmacist foundation year (in place of the current pre-registration training year).

The delivery of the learning pathways and learners' experiences were further shaped by the COVID-19 pandemic in 2020-21. The evaluation therefore also yields valuable insights into how the workforce and education providers responded to this uniquely challenging time, and what might be learned from changes in education and pharmacy professionals' roles and learning during this period.

1.1 Scope of the evaluation

The programmes in scope of the evaluation were all commissioned via Health Education England (HEE) from a range of higher education institutions and learning delivery partners.

Throughout this report, we use the term '**learning pathways**' (rather than 'course' or 'programme') as this allows us to better capture the full range of activity, including experiential learning and training that takes place in varied ways across a range of providers and employers over a range of timeframes.

The four in-scope pathways for this evaluation (shown in Table 1.1) were:

- **Post-registration programmes** (1,953 learners). The largest pathway in terms of learner numbers, with a diverse range of providers catering to pharmacists working in community pharmacy or health and justice.
- **Medicines Optimisation in Care Homes (MOCH) for pharmacists and pharmacy technicians** (459 learners). A learning pathway undertaken by pharmacy professionals taking up roles working in and with care homes. The pathway merged with the separately evaluated Clinical Pharmacists in General Practice Pathway into the Primary Care Pharmacy Education Pathway (PCPEP)

in 2020/21. Both included access to a funded independent prescribing (IP) qualification.

- **Integrated Urgent Care (IUC) pathway for pharmacists** (167 learners). This pathway was open to any pharmacist working a required number of hours in NHS 111 or similar settings. It also included access to a funded IP programme.
- **Accuracy Checking Pharmacy Technician (ACPT) programme for pharmacy technicians** (382 learners). This distinct learning pathway focused on developing skills as final accuracy checking pharmacy technicians, as well as leadership skills for teams and support for the delivery of patient-facing services.

Table 1.1 The four in-scope PhIF learning pathways

Name of pathway	Main audience	Number of learners*	Training provider
Post-registration programmes	Community pharmacists (and pharmacists in health in justice settings)	1,953	Multiple providers
Medicines Optimisation in Care Homes (MOCH)**	Pharmacists and pharmacy technicians	459	Single provider
Integrated Urgent Care (IUC)**	Pharmacists	167	Single provider
Accuracy Checking Pharmacy Training (ACPT)	Pharmacy technicians	382	Single provider

** Source: Professional Education Training and Development database (PETD), March 2020.*

*** The MOCH and IUC pathways merged with the separately evaluated Primary Care Pharmacy Education Pathway (PCPEP) during 2020/21. In this report, MOCH / PCPEP and IUC pathways are referred to as primary care pathways (PCPs); both include access to PhIF funded IP.*

Note that where we refer collectively to the MOCH / PCPEP and IUC pathways in this report (and summary), we have termed them the 'primary care pathways' or PCPs.

Other programmes funded under the PhIF, such as the Clinical Pharmacists in General Practice Programme or the Mary Seacole leadership programme, were evaluated separately. Independent prescribing, insofar as it was part of the MOCH and IUC learning pathways, is relevant to the evaluation.

1.2 Research questions and methodology

The evaluation was commissioned with the following key questions (summarised from the statement of requirements):

- Describing those taking part in the learning pathways, including their characteristics relative to the wider workforce; and
- Describing the experience of those undertaking and providing the learning pathways, including learners, clinical supervisors, education supervisors, and employers and (to which, as a result of our scoping work, we added non-participating pharmacy professionals and employers who may have known about the learning pathways but did not take up the opportunities).

In response, ICF and CPWS developed a mixed-methods evaluation structured into four work packages with two principal elements of fieldwork, the methodologies for

which are described in detail in chapter 2 of **Error! Reference source not found.**the main report:

- A cross-sectional survey of learners on the in-scope pathways, distributed on two occasions (February and October 2020) and longitudinal follow-up of a small subset of learners. The detailed findings of this work are shown in chapter 4 of the main report.
- Qualitative research consisting of in-depth interviews with learners, employers, education and clinical supervisors, and wider stakeholders. Some were interviewed prior to the COVID-19 pandemic, while others were interviewed during it. The detailed findings of this work are shown in chapter 5 of the main report.

These tasks were supplemented by a separate analysis of the data on learners held by HEE in its Professional Education Training and Development (PETD) database (see chapter 3 of the main report).

The Theoretical Domains Framework (TDF) was used to frame evaluation design and research tools (questionnaires and interview topic guides) that provided a systematic and theoretical basis to our methodological approach. Within the TDF a wide range of factors are considered as influencing behaviour and behaviour change – factors that can be considered more broadly as interacting to predict behaviour in terms of capabilities, opportunities, and motivation (the COM-B model of behaviour change in practice) (Atkins et al. 2017). The factors relevant to the evaluation are presented in the intervention logic (see chapter 2 of the main report). Below, the most relevant TDF domains to the learning pathways are used to structure the integrated findings, as they demonstrate the relevance of particular determinants of behaviour change to outcomes for learners and wider stakeholders.

Also it should be noted that during the scoping phase, the funder requested that the evaluation scope be expanded to further incorporate the cross-sector Pre-registration Pharmacists in General Practice project. This project focused on a different target group of learners to the others in scope of the evaluation (i.e. pre-registration pharmacists as opposed to already qualified and registered pharmacy professionals). The findings from this work are published separately. The study provides additional valuable insight into how to develop pharmacy roles and practice across primary care.

2 Integrated summary of findings

The original TDF (Atkins et al. 2017) contains 12 domains to explain behaviour change: (1) knowledge, (2) skills, (3) social / professional role and identity, (4) beliefs about capabilities, (5) beliefs about consequences, (6) motivation [intentions] and goals, (7) memory, attention and decision processes, (8) environmental context and resources, (9) social influences, (10) emotion regulation, (11) behavioural regulation, and (12) nature of the behaviours. The following summary focuses on TDF domains 6), 8), 1), 2), 3), 4) and 5). Note that 1), 2) and 3) map across to 'capabilities' in COM-B, while 8) relates to 'opportunity' and 6) 4) and 5) map across to 'motivation'. They are presented in this order as this maps closest to a journey from learner engagement, through to (perceived) impact on patients.

2.1.1 Learners' motivations and goals

This domain of the TDF relates to how learners' different goals and priorities affect their behaviour.

There were **clear differences between the motivations of learners** on the post-registration pathway (mainly community pharmacists) and the motivations of learners undertaking the other pathways.

Learner survey responses showed that **their main motivations for taking part were to enhance their practice in their current job, working in a new sector of practice, and improving career prospects**. Post-registration and ACPT pathway learners were significantly more likely to be motivated to improve their career prospects than those on the MOCH and IUC pathways whose motivations were more varied, with one of their main motivations being that the pathway was a requirement of their current job.

Qualitative interview findings help explain the different motivations. The majority of **community pharmacists** on the post-registration pathway were interested in **improving their knowledge and skills**, with the intention of either developing and updating their practice or **moving to a new role** because they were **disillusioned with their current roles**. Nevertheless, there were also some examples of community pharmacists who **wanted to use new skills in their current role**.

Some community pharmacists were particularly interested in **developing their clinical competencies in areas relating to the specific health needs of their local population,** others as a way of building up confidence and developing clinical skills **prior to undertaking an independent prescribing (IP) qualification in the longer term**. Many PCP pharmacists already held an IP qualification before they started; if not, they were gaining it as part of their learning pathway.

Many **PCP learners** were motivated by the **opportunity to adopt a more patient-facing role** whilst also extending their knowledge and skills. Their respective pathways supported learners to familiarise themselves with the practice settings where needed (e.g. care home environments), whilst developing new professional roles and skills.

Survey and interview findings provided evidence that **ACPTs**, who were largely working in smaller multiples and independents, were mainly motivated by **continued career progression**, wanting to grow and learn in their current job.

More broadly, interviews showed that learners from across pathways valued the opportunity for **gaining a transferable and recognised qualification**.

2.1.2 Environmental context and resources

This domain of the TDF looks at the various circumstances of the learner's environment, and how they discourage or facilitate the development of skills and adaptive behaviours. There are three principal themes relating to this domain: the learning delivery model, alignment of practice role with learning, and education and clinical supervision.

Learner views on delivery models

Online learning and remote or asynchronous delivery were part of the learning pathways, even prior to the COVID-19 pandemic. The qualitative interviews showed that **providers offered a range of online and workplace-based learning opportunities**, allowing learners to work through assignments at their own pace – with most learners speaking positively of the flexibility given by asynchronous delivery and distance learning.

Online learning included **webinars and online learning events, and various online forums and discussion boards**, **all of** which were felt to provide a space for learning and interaction between pharmacists and education supervisors. **Residentials** tended to be described less favourably, particularly with regards to the challenges they created for learners with caring responsibilities, and the time commitment needed.

However, learners did consider **face-to-face contact** as important, in particular the opportunities provided by learning sets to connect with peers: most learners said that they wanted, looked for, and valued the existence of **peer-group networks**. In the workplace, learners also valued support from pharmacy colleagues and members of wider multi-disciplinary teams. **Where peer support was lacking, some learners described feeling isolated**. This was especially the case in **community pharmacy** where pharmacists tend to work as sole pharmacists. It was also more relevant across all programmes during the **COVID-19** pandemic.

The survey and interviews conducted after March 2020 gave insights into **COVID-19 related changes in learning and practice**. Learners reported being supported through extended deadlines and reduced assessment load; face-to-face learning was reduced, cancelled, or moved online. The challenges learners faced included having less time for learning due to exhaustion, increased workload, low staffing levels, and fewer opportunities to apply skills and meet competency requirements for those whose face-to-face contact with patients decreased. Nevertheless, the survey found that overall, **a majority of respondents agreed they had received sufficient support from their learning provider and clinical supervisor** (where relevant), that they had had sufficient time to undertake their learning, and that they had been supported by their colleagues in their learning.

Alignment of learning with role

In the survey, most learners reported that their **learning was very or fairly relevant to their current role**, with ACPTs most likely to hold this view. Learners also thought their **learning would be even more relevant to a future role**, with post-registration and ACPT learners more likely to hold this view.

Many learners on all pathways indicated that **there was a reasonably good fit between the content of the pathway and their role**. This highlights the broad transferability of learning to different settings and its use in gaining skills and confidence, and making incremental improvements in the workplace. In the

interviews, both learners and employers noted that **the opportunity to apply the learning was an integral component in the process of learning and skill acquisition**.

Many of the learners across all pathways described **balancing the workload associated with the learning pathway with employment or portfolio working and other responsibilities as challenging**. The survey and interviews showed that several learners, particularly on the post-registration pathway which did not include protected study time, described having reduced their working hours or taken annual or unpaid leave for learning. Even on the PCP pathways, which did have some protected study time, learners had mixed views as to whether the time given was sufficient. This became more challenging during the pandemic.

In the survey, **pharmacy professionals on the post-registration pathway were less likely** than those on the PCP or ACPT pathways **to agree that their colleagues and employer had supported them** to apply their learning in practice. A large proportion of **community pharmacists described pursuing the post-registration learning without support from their employer** and therefore within their own time and in addition to their professional responsibilities.

During interviews, a small number of **community pharmacy employers** described having **proactively encouraged and supported their employees to participate in PhIF learning,** whilst the majority described having **facilitated a small number of learner-led requests for support to engage in the pathway.** However, several responding organisations indicated that they had **felt unable to support the participation of their employees**.

Among the employers that had supported access to **ACPT**, this was mainly by **independents and small multiples**, who were **generally positive about PhIF funding enabling their pharmacy technicians to access training** that may otherwise have been financially inaccessible. **Large multiples** on the other hand **tended not to engage with the ACPT learning pathway** and instead continued with their existing arrangements for training provision for accuracy checking, with existing providers that provide training for pharmacy technicians, dispensers and others.

Some community pharmacy employers **expressed concerns that new clinical services might not be commissioned**, or not to a sufficient extent, yet were concerned that their **employees may request salary increases.** Community pharmacy employers were also concerned about **post-registration pharmacists and ACPTs leaving for other roles** in other settings / sectors. On the whole, larger employers were more likely to recognise benefits from supporting post-registration learners, such as aiding recruitment and retention.

Supervision

Supervision was identified as a key environmental resource for **facilitating learning and its application in the workplace**. There was variation across pathways in terms of the type of supervision learners received on their pathways, with education supervisors (usually linked to the training providers) and clinical supervisors (who were practice based but not always in the same setting as the learner). Overall, learners were **positive about the supervision support offered by their pathway**, in both the survey responses and in the interviews.

In the qualitative interviews, **the education and clinical supervisory roles were consistently described as complementary**, with education supervisors or module

leaders focusing on supporting learners to navigate the academic requirements of the pathways, and clinical supervisors aiming to support learners to apply their learning in practice. There did not appear to be any perceived tension or overlap between these two roles, and both were seen as beneficial.

Learner interviews described the **education supervision** and support that was available as largely learner-led and initiated, typically provided via email or phone conversations, or sometimes via face-to-face workshops or learning sets. Education supervisors themselves characterised their role as acting as an ongoing source of support and using learning needs analysis to set realistic goals with learners. In general, the education supervisor support provided to ACPT and MOCH pharmacy technician learners appeared to be more regular, structured and readily available.

Clinical supervision was available to PCP learners and focused on supporting learners to translate their learning into practice within the workplace. Surveyed learners voiced **mixed opinions** regarding their experiences of clinical supervision. Those who portrayed supervision as a **beneficial** source of support typically described clinical supervision as an opportunity to be observed and receive feedback from an experienced clinician – with a focus on facilitating critical reflection, supporting learners to make connections with others, and opening up practice opportunities. This corresponded with interviewed clinical supervisors' understanding of their role.

On the other hand, where clinical supervisors were not based at the learner's workplace or lacked familiarity with the learner's workplace, **relationships were sometimes less fruitful**, an issue particularly with geographically dispersed services and learning pathways. It was also sometimes difficult to identify appropriate clinical supervisors for learners, with shift working patterns of IUC learners coupled with high levels of bank and part-time portfolio working contributing to these difficulties, even before COVID-19. Some learners were given, or sought out, clinical supervisors from other professions such as GPs which offered additional opportunity for mutual learning about each other's roles.

2.1.3 Acquisition of knowledge

This domain of the TDF looks at clinical and procedural knowledge acquired during learning.

The main areas of clinical knowledge that learners acquired during their formal learning (and most often discussed during interviews) were ones expected in pharmacists taking on enhanced roles: for example, knowledge of long-term conditions, knowledge underpinning how to undertake physical examinations, history taking, interpretation of test results, managing polypharmacy and reducing medicines waste, managing common or acute ailments, and accuracy checking (in case of ACPT).

The surveys confirmed that overall, **a majority of pharmacists and pharmacy technician respondents reported feeling either fairly or extremely confident in many of the target behaviours**. Although pharmacists, in the main, were confident in their various forms of clinical knowledge detailed in the survey, it was in the broader skills where PCP and post-registration pharmacists reported the highest levels of confidence – such as 'collaborating with other primary care professionals', 'speaking to patients about their health and medicines', and 'working autonomously'. Pharmacy technicians on the PCP pathways similarly reported feeling fairly or extremely confident in behaviours such as collaboration. As expected, ACPT

learners reported feeling more confident in 'accuracy checking' and 'managing dispensing'.

Survey responses suggested **pharmacists with an IP qualification prior to starting a learning pathway, and pharmacists who had completed their learning pathway, had developed greater levels of confidence in target behaviours**. Additional subgroup analysis suggests having an IP qualification was associated with significantly higher levels of confidence in important target behaviours that underpin IP.

The qualitative interviews confirmed that **learners' clinical knowledge and skills had improved as a result of their participation in the learning pathways**. For example, **several learners on the post-registration pathway felt that their understanding and ability to proactively manage many of the long-term conditions commonly encountered in community pharmacy had improved**, thus benefiting their day-to-day practice and patient care. However, the degree to which learners reported applying these skills in practice varied (see below).

Interestingly, **learners on all pathways also discussed their understanding of evidence-based practice**; they frequently indicated that the learning pathways had enabled them to gain a much greater appreciation of not only where to locate relevant clinical evidence and resources, but also how to critically appraise this for use in their practice. They therefore considered themselves more able to apply their expanded clinical knowledge to improve day-to-day decision-making, and also to disseminate their knowledge within their immediate team.

2.1.4 Acquisition of skills through practice

This domain of the TDF looks at skills – proficiencies acquired through practice – including the application and development of clinical and interpersonal skills, and how this process shapes the target behaviours.

Both the interviews and the survey provided evidence that learners were acquiring transferable skills through the application of their knowledge in practice.

Most learners on all pathways agreed that they had sufficient knowledge to apply their learning in practice, and that they were capable of applying their learning in practice as a result of their learning. The proportion of learners who thought they had enough time to apply their learning in practice was similar on the post-registration and PCP pathways. The vast majority of learners surveyed also agreed that **their learning had made a difference to their practice and to patients**.

ACPT learners were somewhat more likely to say that they could apply their skills fully, suggesting this programme is meeting its distinct focus.

The qualitative interviews largely concur with the survey, in that while some learners faced challenges in being supported to apply their learning, there were **many positive examples of learners from all pathways undertaking new activities or developing enhanced skills through improving their day-to-day practice**. Even where skills were not fully used as they were taught, the **greater understanding of patients' needs and conditions allowed learners to make better decisions, improve communication skills and empathy with patients, and look at patient care more holistically**.

The **expanded range of clinical activities** that learners undertook since starting their learning pathway was also reflected in the survey, such as medication reviews

with patients with complex needs or other patient-facing activities. MOCH / PCPEP pharmacists were more likely to conduct such medication reviews during their pathway than post-registration learners (note that this was not an expectation of IUC learners, who were excluded from this analysis).

2.1.5 Social / professional roles and identity

The TDF domain of social / professional role and identities covers the underlying capabilities or drivers of behaviour in a work setting, including constructs such as professional identity, group identity, leadership and confidence.

Evidence from both the survey and the interviews points to learners' growth as clinicians who are able to apply clinical knowledge through more holistic consultations with patients and improved interactions with primary care colleagues.

The interviews provided **numerous examples of learners from all pathways having grown in confidence** through not only applying their skills but using these proactively in patient care and interactions with other healthcare professionals. Learners had grown their professional networks and developed a greater feeling of belonging to a wider primary care team. Taking a more holistic and patient-centred approach to consultations opened opportunities for patients to be more involved in their own care.

Pharmacists and pharmacy professionals described applying **leadership skills** by becoming more proactive in communication with colleagues, introducing or improving systems or services, or sharing knowledge and contributing to team training. ACPT learners also reported improved confidence in their leadership and independent decision-making skills, particularly with regards to overall management of the dispensary and delegation.

The survey confirmed that around half of all respondents were leading more clinical services since starting their learning pathway.

Lastly, interviews and qualitative survey comments showed that learners from all pathways believed that the learning had contributed to a **change in the way their role was perceived by others**. Many learners described feeling that their contribution was being increasingly recognised, valued, and sought by other healthcare professionals. This might be particularly important as both learners and wider stakeholders described a lack of understanding amongst the public and other healthcare professions regarding the role, skills, and expertise of the pharmacy workforce, which was thought to undermine the potential contribution of pharmacists and pharmacy technicians to patient care.

2.1.6 Beliefs about own capabilities

This TDF domain looks at how behaviour is shaped by the development of beliefs about how learning and capabilities can be put to use.

In the survey, **pharmacists and pharmacy technicians on all in-scope pathways reported feeling very / fairly confident in demonstrating the broader skills** which underpin clinical practice: critical analysis, clinical reasoning, and confidence to work autonomously. These findings are also clearly demonstrated in the outcomes identified in the qualitative research.

Where significant differences emerged in survey responses from different pathways**, learners' confidence tended to be lower where opportunities to practise the target skills would be expected to be lower in a given setting**. This was

confirmed by the qualitative interviews. Community pharmacists reported feeling less confident overall than PCP learners in collaborating with primary or secondary care professionals, investigating diagnostic tests, interpreting diagnostic findings and working across care settings. Conversely, pharmacists on the post-registration pathway were significantly more likely than PCP learners to report feeling fairly or extremely confident in demonstrating leadership and speaking to patients about their health.

Many **ACPT learners also reported feeling confident across a wide range of skills.** This is reinforced in the small number of interviews conducted with ACPT learners who frequently described having developed greater confidence not only in their accuracy checking skills but also their wider dispensing skills and general attention to detail, seen as resulting in a reduction in dispensing errors within their pharmacy. They further gained leadership skills which they used to make changes to systems and processes within their pharmacy.

The qualitative interviews provided more evidence about the **links between confidence in using enhanced skills in practice, and wider beneficial effects on learners' workplaces, teams and patient outcomes**. For example:

- **Improved communication was seen as key result of increased confidence in clinical practice** by both pharmacists and pharmacy technicians. Learners described entering relationships and exchanges on a more equal footing than they might have done previously. Improved relationships with other professionals were believed to be mutually beneficial in enabling the sharing of expertise.
- Many learners from across different learning pathways felt that **the improvements in their clinical knowledge and reasoning skills had enabled them to move towards adopting a more holistic and comprehensive approach to patient care**. Learners described feeling more confident in their ability to undertake patient-centred consultations and they felt more able to proactively explore treatment options and respond to patients' queries. Consultation frameworks and models were key in enabling a shift towards a more patient-centred approach. Learners also described feeling more confident and able to actively raise issues with prescribers and action medicines optimisation – taking responsibility for better outcomes.
- **Improved self-confidence and self-awareness was a frequently cited outcome for learners** across all pathways.

While some of the pathways are about developing a particular workforce (with ACPT being a particular example of this), it is important to note that the pathways (on the whole) appear to have **impacted on the pharmacy workforce in a way which goes beyond** the learning and application of **knowledge and skills**. The pathways have changed how the pharmacy workforce thinks about learning and development. Learners have become **more reflective practitioners**, who not only have the knowledge and skills to work in a particular job or role, but have established an attitude to learning and development as being something ongoing and developed in response to reflection on action.

2.1.7 Perceived outcomes and beliefs about the consequences of developing enhanced skills

This TDF domain looks at how behaviour is shaped by beliefs about outcomes and expectations.

Evidence from the interviews, supported by open comments in the survey, shows that **many learners from across the pathways believed that the enhanced skills they had gained had enabled them to impact positively on patient care**, and bring about greater efficiency in their workplace. This was particularly evident for MOCH learners.

Learners and clinical supervisors spoke frequently about **improvements in patient safety and care**. MOCH learners described generating safer practices in care homes, through improved medication management systems (reduction in polypharmacy, reducing inappropriate prescribing, reducing medicines waste, carrying out quality improvement audits). Post-registration learners described setting up new clinics or services in community pharmacy, and taking a generally more holistic approach to patient care, taking increasing responsibility for outcomes. ACPT learners reported that they had made improvements to managing the dispensary staff, reduced errors, and freed up staff time for more patient care. Some learners across all pathways mentioned that more appropriate and safe prescribing / medicines use, reduced admissions, reduced patient harm and better quality of life for people with conditions requiring medicines could result in cost savings to the NHS.

3 Discussion

3.1.1 Learning outcomes: knowledge, skills, confidence

This evaluation has found that learners on all in-scope pathways acquired a range of clinical and non-clinical knowledge and skills, which led to increased confidence to apply learning in practice – suggesting that the pathways met their key objectives. **The PhIF funding and learning pathways thus appeared to have acted as a catalyst for the advancement of roles and opportunities available to the pharmacy workforce** (including pharmacy technicians), pushing the boundaries of what pharmacists and pharmacy technicians can and are expected to do, by both other health professionals and patients and their families – as anticipated in the 'Now or Never' report (RPS 2013).

As well as advancing their understanding of medicines, clinical topics and therapeutics, and developing clinical and physical examination skills and a more holistic and patient-centred approach to patient care and consultations, the findings suggest that, by encouraging a reflective approach to developing and applying clinical skills, the development of wider skills that underpin reflective practice appeared to be equally valued. These included self-reflection, the ability to critically appraise evidence to inform clinical reasoning and decision-making, using communication frameworks to improve patient and family involvement in care, and applied leadership skills. Importantly, the pathways appeared to impact on pharmacy professionals becoming more reflective practitioners, who did not only have the knowledge and skills to work in a particular job or role, but established an attitude to learning and development as being something ongoing and developed in response to reflection on action. The **skills which are integral to being a reflective, lifelong learner were closely linked to better patient care, and should therefore continue to be central to future learning pathways** aimed at developing a specialised primary care pharmacy workforce. The importance of these skills, sometimes called 'non-technical skills' (Ashour et al. 2021) to advanced practice is recognised in the recent review on advancing pharmacy education (HEE 2019).

Learners' ability to apply higher level skills reflectively in the workplace with patients, contributed to pharmacy professionals becoming much more confident and willing to act as autonomous professionals, taking responsibility for their contribution to patient pathways, care and outcomes. More broadly still, the enhanced skills gained through the pathways afforded learners the opportunity to develop inter-professional relationships and offer their clinical expertise on a more equal footing when interacting with multidisciplinary teams. The evaluation findings suggest that the **development of leadership skills through practice made a significant contribution to changes in learners' own behaviour, and the practice of other health professionals around them.** The development of leadership skills in pharmacy professionals has long been recognised in policy (e.g. RPS 2011) and in the relevant literature (Boyd et al. 2018) – therefore, it will be important that this is retained and built upon in future learning pathways.

The findings suggest that **an independent prescribing qualification is likely to further build on these skills**, as pharmacists will be able to see their diagnostic and clinical decisions through to a treatment decision (Hindi et al. 2019). However, the PhIF only funded IP as part of the primary care learning pathways. It is expected that more pharmacists will undertake an IP qualification at an early stage in their careers, and indeed that pharmacists will qualify as independent prescribers at the

point of initial registration, under the 2021 GPhC Standards for initial education and training (GPhC 2021a). The findings from this evaluation thus offer much insight into the learning needs of pharmacy professionals at different stages, and how enhanced skills can be learnt and supported in practice. These will likely be relevant to changes to the pharmacist foundation year (Magola et al. 2021), which will replace the current pre-registration training year (GPhC 2021b).

There are some specifics worthy of note in relation to accuracy checking pharmacy technicians (ACPTs) whose learning went beyond the simple task of accuracy checking. The findings suggest that **pharmacy technicians embracing leadership skills and confidence to manage systems and processes in the dispensary and beyond had both the potential to reduce errors and contribute to effective use of skill mix to enable pharmacists to pursue more clinical roles and services.** Therefore, it may be important to ensure that these higher level skills form part of accuracy or broader leadership training for pharmacy technicians in the future. A differentiated training offer for pharmacy technicians will likely support an enhanced role for pharmacy technicians which goes beyond that of other pharmacy support staff and enables them to manage systems and services so as to free pharmacists for clinical services (Bradley et al. 2013 & 2016).

3.1.2 Transferable skills and accessibility

This study has highlighted the demand from many pharmacy professionals to develop enhanced skills and prepare themselves for more clinical roles in primary care; they were aware of the emerging roles in primary care, and the need for community pharmacy to continue adapting to offer more clinical services. The findings also show that if there are opportunities for learners to apply new skills in their roles, supported by high quality education and clinical supervision in the workplace, then there are potential benefits for learners, patients, their employers and the primary care system as a whole. Therefore, there is a need for an **overarching, national, proactive, and strategic approach to maximising the benefits associated with the PhIF funded roles and learning pathways**, to help ensure that the upcoming changes to pharmacists' initial education and training will achieve their intended goals (GPhC 2021a).

The evaluation reflected existing knowledge that portfolio working is increasingly commonplace, with pharmacists often working in a range of primary care roles (including community pharmacy), building their experience of working with patients in different settings. The IUC role in particular appeared commonly staffed by portfolio workers, which made it harder for many learners in those settings to get support and balance learning with the demands of their work. It is therefore important that future learning pathways take account of this and **prioritise the acquisition of the transferable skills that are relevant across multiple settings** and which were valued the most by PhIF-funded learners. Such skills include applied leadership, communication, and clinical decision-making – in addition to more specific clinical skills that are aligned with particular roles. As the findings suggest, there is a risk that funding streams for learning that are tied to specific primary care settings may reinforce silo learning and working, and reinforce existing barriers to greater integration across primary care. By developing a 'menu' of transferable skills and by prioritising greater accessibility, learning pathways are more likely to **support the formation of a career-long learning culture**, and career progression within and across primary care roles, such as general practice, care homes and urgent care, and indeed including community pharmacy. There were many examples of how the pathways had changed attitudes towards learning

in the evaluation, which fits well with the aim of creating clinicians that learn from reflection on their actions throughout their career. This is very much in keeping with the aim of current policy (HEE 2019) and indeed the new GPhC standards for pharmacist and pharmacy technician initial education and training (GPhC 2021a, GPhC 2017).

Learners on the post-registration pathway appreciated gaining a recognised award, such as a postgraduate certificate or diploma, whereas some learners on the primary care pathways regretted that their learning did not lead to a formal qualification. It was viewed as important to gain a qualification which would formally recognise the enhanced / advanced knowledge and skills they had gained, and that this was particularly important for other healthcare professionals where role understanding of what pharmacy professionals could do was still limited (Nelson et al. 2019). To further support transferability of learning and indeed formal recognition of learning, **some form of credentialing may be advisable** in the future. This will provide formal recognition of learning and ensure that competence and clinical expertise can be evidenced, which may be particularly relevant for inter-professional confidence.

PhIF learners entered learning pathways from a broad range of experience and expertise. Some had relatively recently qualified, others had not undertaken any academic or further study for a long time, and still others had many years' experience and were already working in advanced and specialist roles. It will be important that **learning reflects all levels of expertise from foundation through to enhanced, advanced and consultant level practice**, and allows some flexibility within a pathway. Such an approach will ensure that the framework on offer in support of learning through career progression and into advanced roles remains relevant in years to come, when newly qualified pharmacists will emerge with much more advanced clinical and patient consultation skills, and indeed as independent prescribers at the point of registration (GPhC 2021a).

To overcome some of the barriers to access to, and relevance of, learning, it will be important for **NHS England and HEE to work closely with community pharmacy and primary care employers**, to design learning pathways that meet both the current and future needs of the workforce. Ensuring pharmacy professionals' involvement in primary care networks and integrated care systems may help to overcome the difficulties of disseminating information and reaching consensus across a fragmented sector where different stakeholders perceive their interests to be divergent, as well as ensuring that learning is aligned with local health needs.

3.1.3 Learning and application in practice

The study found that opportunities to **apply learning in practice and more broadly, build / adopt new skills within a supported environment were critical**. Good alignment of role and learning was needed to enable opportunities to apply that learning and, consequently, to influence services and outcomes. This alignment appeared closer on the primary care pathways than the post-registration pathway.

Workload and time commitment needed for learning was a concern for many learners, although differences between learning pathways were apparent. Primary care pathway learners had to give up some non-work time for their learning, but as they had new roles in care homes and urgent care funded by PhIF, they also had protected in-work time, with their learning pathways and funding aligned closely to their role in the workplace. In contrast, post-registration learners did not have in-work learning time funded, and did not generally get protected study time. Many

community pharmacists reduced their working hours or took annual or unpaid leave, to attend residentials and to create time for learning more broadly.

Therefore, it will be important to consider how these barriers can be addressed for community pharmacists in particular in the design of future programmes and funding arrangements. This will also be an important consideration for a move to the foundation training year, where evidence from pharmacists' pre-registration training and work-based learning of pharmacy technician trainees has shown that community pharmacy offers less opportunity and time for learning in the workplace (Jee et al. 2016a, 2016b & 2019; Schafheutle et al. 2017 & 2018; Magola et al. 2018).

Besides access to protected learning time, there were other factors that affected learners' experiences and ability to learn from applying their skills. Because learning took place alongside work, to enable learners to consolidate their learning in practice and gradually enhance their clinical and non-clinical skills, all the learning pathways relied on online distance learning to varying degrees, more so following COVID-19. The **flexible, distance learning model was largely considered positively, and to fit well with the demands on pharmacy professionals, suggesting that it should be retained in future.**

Learners also highlighted the importance of interactive learning (even if online) and peer networks – whether more formal, facilitated activity such as action learning sets in person or online, or informal such as WhatsApp groups, which were particularly important for community pharmacists whose contact with peers is constrained by the settings in which they work (Cooper et al. 2009). Considering how best to intentionally build in these support opportunities, while balancing time for learning vs. employment / service, will be important for taking account of learner and employer needs in future.

3.1.4 Employer engagement

Key to many of the above issues is likely to be the degree of employer engagement in the PhIF programme in relation to the different learning pathways. Whilst learners on the primary care pathways were able to benefit from some funded learning time, comparable funding was not available on the post-registration pathway.

Furthermore, community pharmacy employers expressed concern about supporting employees' learning, only to see them leave for new jobs or demanding higher pay. They highlighted the lack of funding for in-work learning time or backfill, and uncertainty about availability and longevity of funding for (clinical) services to justify investing in learning. The findings suggest that **better stakeholder involvement with NHS England and HEE** may be beneficial when planning the best way to release funding and support learning.

Part of an employer engagement strategy and making the case for employers to invest in learning might include highlighting the relevant evaluation findings about learners' motivations and the benefits for employers. While some post-registration learners were motivated by career changes, the evaluation showed that many of them (and also ACPT learners) wanted to expand the scope of their current roles. Moreover, the evaluation suggests that community pharmacists with enhanced skills can, and do, improve their day-to-day practice and bring benefits to patient care from the beginning, and that the skills and confidence gained would be sustained. These findings can help **build a case for learning (and protected learning time)**

to be viewed as an investment in employee development and retention which leads to service benefits and employee satisfaction.

However, the evaluation findings also suggest that a more supportive learning culture cannot develop without more **integrated, long-term planning and funding both locally and nationally**, that would better incentivise community pharmacists and other primary care employers to develop more (funded) clinical services for which additional skills would be required. The short-term nature of commissioning has previously been identified as creating challenges for service planning and investment in community pharmacy (Jacobs et al. 2018), and this affects planning and investment in learning also. **Longer term commissioning of pharmaceutical care services**, through the vehicle of primary care networks, for example – might give greater certainty over the medium / long-term to community pharmacy, and also help make the case that investing in employees' learning will result in reliable income streams (Smith et al. 2021, Checkland et al. 2020).

In relation to the ACPT pathway, independent and small chains appeared most likely to support their pharmacy technicians to undertake the ACPT training pathway. Larger pharmacy organisations had established links with providers of accuracy checking training, which they tended to continue. A key difference between many existing training providers and the ACPT pathway is that the latter is only available to registered pharmacy technicians, whereas others are also open to other level 2 qualified pharmacy support staff, such as dispensers. Pharmacy technicians generally, and ACPTs specifically, may be best placed – because of their particular skills – to take on additional roles and responsibilities, which in turn would free pharmacists' time away from their traditional supply function towards a more service orientated role (Bradley et al. 2016).

3.1.5 Supervision

The evaluation findings suggest that **high quality supervision was important to facilitate learning, and particularly application**. Stronger education and clinical supervision generally resulted in a better learner experience and progression through the pathway (Kilminster et al. 2009); conversely learners reported that they were more likely to struggle when supervision was lacking, due to workloads, or misalignment of expertise or working patterns, for example.

Education supervisors made positive contributions by coaching the learner through module choices and their approach to learning. Learners benefited from a mixture of supervisor and learner-initiated contact throughout the learning, where learning plans could be adapted and tailored to the individual, and any potential challenges and possible solutions discussed. Education supervisor support appeared particularly valuable for learners who had not undertaken any academic / higher level study for some time.

Clinical supervisors tended to be supervisors who had the relevant clinical expertise and were mostly (but not always) based in the learner's place of work. **Physical proximity appeared to be important, alongside a good understanding of the learner's workplace and an appreciation of how the skills apply to that workplace**. This enabled clinical supervisors to create opportunities for learners to apply what they had learnt as part of their learning pathway whilst encouraging critical reflection and being non-judgmental. When clinical supervisors were remote, contact and support was much more difficult.

Learners on the post-registration pathway did not have clinical supervisors and relied on the support of colleagues in the workplace. However, as community pharmacists commonly work in relative isolation, as the only pharmacist, **a formalised approach to clinical and education supervision will likely be beneficial when supporting the existing workforce** to help support transitions into more patient-centred clinical roles. Particularly those who have not studied formally for some time may benefit from such support, in the form of education supervisors and / or peer mentoring (Desselle et al. 2021; Mantzourani et al. 2021). The importance of clinical supervision and supported learning as community pharmacists transition into practice is also emphasised in the literature (Magola et al. 2018 & 2021).

The evaluation findings therefore suggest that in order to build on our knowledge of when supervision works well, and give learners a more consistent experience, **supervisors (particularly clinical) may also benefit from support** in the form of shared expectations, resources, training, and dedicated time to carry out their important roles.

Finally, the evaluation established the importance of good supervision for applied, in-practice learning for enhanced practice, with clinical and education supervisors playing complementary roles. However, it also identified a wide range of supervisory set-ups and learner experiences. When planning future learning to support enhanced clinical skills amongst the pharmacy workforce, it may be helpful to consider a more **consistent use of terminology**, defining different types of supervisors. **Clinical (work-based) supervisors** will hold relevant clinical expertise and experience, and a good understanding of the relevant work setting. It may be valuable to further differentiate between those who work alongside the learner in the same workplace setting and those who offer their expertise from a distance (the latter could, for example, be called clinical mentors). In learning pathways which involve rotations or different settings, a learner would have more than one clinical supervisor, one linked to each setting. **Education supervisors**, whilst commonly holding some level of pharmacy and / or clinical expertise, would then have a broader role and accompany the student through their learning journey / pathway. They would undertake a learning needs assessment, develop a learning plan and then revisit this with the learner at set points.

3.1.6 Impact and outcomes

As time on the pathways progressed, there were **numerous examples of pharmacy professionals positively impacting on service delivery, patient care and outcomes**. Feedback from learners and employers revealed some areas where learners perceived they were making a difference – such as freeing up GP time, reducing medicines waste and errors through deprescribing, identifying improvements through quality audits, providing expert advice to others. The value gained from the investment in learning is an important part of making the case for continued investment in developing enhanced skills across primary care pharmacy.

The enhanced clinical skills gained through the pathways offered learners the opportunity to demonstrate their worth within multi-professional teams and environments. Furthermore, **stronger and proactive leadership in the pharmacy workforce can also help to achieve more clarity as to what pharmacy can contribute**. It all supports better integration across primary care, and the role pharmacy can play within this to improve patient care.

There was an overall sense of optimism amongst learners, service leads, and supervisors regarding the potential for the outcomes generated by the training pathways to be sustained. This positivity was typically based upon a belief that the holistic nature of the learnt knowledge and skills would remain relevant and valuable regardless of changing services and future circumstances. Several learners and supervisors also felt that the learning had the potential to act as a foundation on which learners could continue to build and expand their skills. This feedback suggests that **continuing to invest in enhanced skills and the pharmacy workforce in primary care is likely to lead to positive change**, not least by furthering the development of a culture of learning throughout pharmacy professionals' careers, allowing them to adapt more easily to challenges and fulfil their potential to bring about greater integration in primary care.

4 Recommendations

Grounded in our evaluation findings and summarised in the preceding sections reporting and discussing our integrated findings, we list below a number of overarching recommendations. These are aimed particularly at NHS England and HEE, but also at other stakeholders, including employers and education providers.

Recommendation	Relevant audience
National, strategic, approach to learning	
1. Ensure that learning from the evaluation is **carried forward when implementing the new GPhC initial education and training standards and foundation year, as well as post-registration learning** and progression to advanced practice. This includes fostering a **culture of continuing and supported learning in all workplaces**, learning that builds both knowledge and higher-level skills, supported by education and clinical supervision.	NHSE / HEE
2. Develop pharmacy post-registration learning pathways, which **target transferable skills across primary care settings**, including community pharmacy, to facilitate further integration and working (and learning) across settings (portfolio working). Learning programmes need to be sufficiently **flexible to accommodate tailoring for early career learners alongside already advanced / specialist pharmacy professionals**.	NHSE / HEE
3. Recognise that **pharmacists and pharmacy technicians want to expand their scope of practice to bring benefits** to their current role and patient care, irrespective of sector. The pharmacy workforce has recognised the direction of travel, with real enthusiasm for more clinical roles and services.	NHSE / HEE
4. Meaningful **engagement with community pharmacy employers** is important, recognising the needs for longer term business planning to include commitment to clinical services and the underpinning learning, which support a more integrated delivery model.	NHSE / HEE
Design of future learning pathways	
5. Future learning pathways need to support learning **consistently at different levels from foundation → enhanced → advanced → consultant.** This can build on the new initial education and training standards and support a progressive post-registration pathway for recent registrants as well as the existing pharmacy workforce.	NHSE / HEE
6. Future pathway(s) should focus on **professional skills relevant across primary care including community pharmacy, in a joined-up approach** which facilitates learner ability to move between primary care settings (GP, care	NHSE / HEE / education providers

homes, urgent care, community pharmacy, etc.). Some specific knowledge and skills can be available as options with specific relevance to certain settings only.	
7. Future pathways should **combine clinical knowledge with broader, higher level skills** (e.g. critical appraisal, clinical decision-making) which underpin reflective, patient-centred practice. This will facilitate the move to **pharmacy professionals as confident, autonomous practitioners who approach their practice holistically and take responsibility for patient outcomes**.	HEE / education providers
8. Consider **credentialing for (pathway) learning**, so that it is formally acknowledged for career progression, and as a recognition of advanced competence and skills, both within and particularly outside of pharmacy.	NHSE / HEE
9. Build on **pharmacy technicians**' learning of broader skills beyond accuracy checking, to develop **confident leadership, proactive management and delegation**. This will bring benefit to the wider workforce and policy agenda of community pharmacies as venues delivering clinical services to NHS patients.	HEE, education providers and pharmacy employers
Supervision	
10. Establish **consistency in understanding of roles and terminology for supervisors**. - Clinical (work-based) supervisors work alongside learners in the same setting, so a learner might have a different clinical supervisor in each rotation / setting. - Where a work-based clinical supervisor is not available, a clinical mentor would offer their clinical expertise from a distance. - Education supervisors, whilst holding some pharmacy and / or clinical expertise, will hold a broader role and oversee a learner's learning journey / pathway. They would undertake a learning needs assessment, develop a learning plan and then revisit this with the learner at set points.	HEE / education providers
For future evaluation	
11. To **ensure engagement in any evaluation** of learning pathways or broader policy implementation: a **firm expectation should be placed on all those who access and benefit from funding** (learning providers, learners, employers) **to participate in evaluation activities** (on the understanding that such involvement will not be overly onerous or impact learning / service delivery). **Arrangements for the flow of relevant data with a future evaluation must be in place at the outset.**	HEE / education providers

Annex: Glossary of abbreviations used

ACPT	Accuracy Checking Pharmacy Technicians programme, provided by CPPE
COM-B	Capabilities, Opportunities, Motivation model of behaviour change
CP	Community pharmacy
CPGPE	Clinical Pharmacists in General Practice pathway
CPPE	Centre for Pharmacy Postgraduate Education at the University of Manchester, one of the providers of the learning pathways
CPWS	Centre for Pharmacy Workforce Studies at the University of Manchester, part of the evaluation team
HEE	Health Education England
ICF	Inner City Fund (now known as 'ICF'), a policy research organisation, part of the evaluation team
IP	Independent Prescribing
IUC CAS	Integrated Urgent Care Clinical Assessment Service – primary care role / learning pathway for pharmacists and pharmacy technicians, provided by the University of Derby
MOCH	Medicines Optimisation in Care Homes Pathway
PCPEP	Primary Care Pharmacy Education Pathway (developed from the former MOCH and CPGPE pathways)
PETD	Professional Education, Training and Development database, HEE management information tool
PhIF	Pharmacy Integration Fund
Post-reg	Post-registration learning pathways for community pharmacists, delivered by various providers
PCP	Primary care pathways – the term used in this report for MOCH and IUC / in-scope learners of the PCPEP successor programme
PRP	Post-registration pathways (see above)
TDF	Theoretical Domains Framework