Healthcare Improvement Scotland

Primary Care Phased Investment Programme

Final report

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Acknowledgements

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Executive summary

This report presents the findings of the Primary Care Phased Investment Programme (PCPIP), commissioned by the Scottish Government to test whether additional investment, delivered alongside structured quality improvement (QI) support, could support fuller or improved implementation of multidisciplinary team (MDT) services, build a culture of continual improvement in primary care, and generate evidence to inform future policy and investment decisions. The support for the implementation of the MDT element of the General Medical Services (GMS) contract (2018) had a particular focus on Community Treatment and Care (CTAC) and Pharmacotherapy services. The findings cover programme activity from inception in April 2024 through to March 2026.

The programme was delivered through four demonstrator sites, a national improvement collaborative, a national learning system and a mixed methods of evaluation drawing on qualitative and quantitative evidence. The selected four demonstrator sites were NHS Ayrshire & Arran, NHS Borders, a locality in Edinburgh City Health and Social Care Partnership (HSCP) and NHS Shetland.

Analysis of the evidence concentrated on six areas of focus agreed with Scottish Government, including conditions and enablers for implementation, learning from the QI approach, prioritisation of MDT services, attributes of sustainable MDTs, monitoring and evaluation requirements and health inequalities.

Key findings

Across the four demonstrator sites, PCPIP showed that strengthening of CTAC and pharmacotherapy services is possible when additional funding is combined with QI approaches. Teams were able to improve access, strengthen role clarity and appropriately redistribute workload from General Practitioners (GPs) and practice nurses to other members of the MDT.

However, the evidence from this programme indicates that even with additional investment it has not been possible to fully implement the MDT component of the GMS contract. It is unclear what scale of further investment would be needed to deliver this given the workforce challenges across all the MDT. Across all demonstrator sites, programme progress was constrained by persistent challenges, including workforce availability, recruitment delays, limitations in digital and physical infrastructure, variability in local readiness for change, and ambiguity around what fuller or improved implementation of pharmacotherapy and CTAC services should look like.

Findings from the national improvement collaborative and learning system alongside targeted QI support for the demonstrator sites show that PCPIP contributed to the development of QI capability and confidence. Participating teams reported improved understanding of their systems, increased confidence in using QI tools, and greater opportunities for peer learning. However, short programme timescales, varying levels of engagement and limited access to reliable data made it more challenging to demonstrate impact. The key learning from the QI support provided has been highlighted in the report.

Based on evidence, a set of conditions and enablers required for effective MDT working were identified. These include clear and trusted governance arrangements, sustainable and transparent funding, robust digital and

physical infrastructure, clearly defined roles, effective interdisciplinary communication, strong leadership and equitable access to training and development.

MDT working brings together professionals from diverse backgrounds to collaborate on shared goals, such as delivering more joined-up patient care or tackling complex tasks. Each role within the MDT offers unique and essential strengths, and the biggest benefits are achieved when these roles are well integrated, clearly defined, properly supported, and aligned with the needs of the local population. Overall, the findings indicate that priorities within the MDT should not be about elevating one profession above another, but about creating the right conditions for every role to contribute effectively to patient care.

Evidence showed that key attributes of sustainable MDT working were the requirement for a stable, well-supported and fully integrated primary care workforce, clear shared goals, flexible delivery models based on population need, agreed recruitment and line management processes, quality assurance and monitoring and sustainable funding. Having clear career pathways and roles, a satisfied workforce and well-informed service users are also essential for MDT working to deliver holistic, high-quality care.

Findings related to monitoring, evaluation, and impact on health inequalities demonstrate the limitations of current data systems. National data was insufficient to attribute short-term changes directly to PCPIP activity. However, some of the data may provide a baseline to inform a potential creation of a standard set of national measures for ongoing monitoring and evaluation in the future. High-level system data, such as the national datasets analysed, have the potential to be useful for assessing trends over a longer timescale, however inconsistent coding, variable local data quality and lack of patient-level outcome data constrained evaluation, particularly in relation to continuity of care and health inequalities. Despite this, qualitative and service user evidence suggests that MDT working can support improved access and experience when services are designed with equity and continuity in mind. From an economic perspective, the data currently available is not sufficiently robust to support detailed analysis.

Conclusion

These findings from PCPIP highlight the following overarching conclusions.

- The absence of a national definition of 'full implementation' of the GMS contract continues to present challenges. While improvements in MDT working were achieved where funding was aligned with structured QI support, leadership and learning, delivery remains constrained. Even with additional PCPIP investment, structural, workforce and infrastructure pressures limited progress. A more flexible, needs-based approach is therefore required.
- Local context is critical: MDT models must reflect local population needs, geography, workforce availability and practice maturity rather than follow a single national template.
- Quality improvement is a key enabler, not a substitute for infrastructure: QI supports safer and more sustainable change but depends on stable leadership, protected time, governance and reliable data.
- Workforce sustainability must be central: While MDT roles add value, uneven workload pressures, role ambiguity and burnout risk undermine sustainability if not addressed across the whole workforce.
- Continuity of care requires active protection: Task-based models risk fragmentation unless explicitly designed to support relational, informational and management continuity.
- Current data systems limit MDT working: Inconsistent system wide coding nationally and locally, poor information technology (IT) system interconnectivity constrained workforce integration, and limited

outcome data restrict the design and delivery of services, and evaluation, particularly in relation to impact on continuity of care and health inequalities.

- Future reform should prioritise realism and learning: Sustainable progress depends on long-term investment, embedded improvement capability and expectations aligned with what can be delivered in practice.

Overall, PCPIP findings suggest that additional investment alone is insufficient to deliver the ambitions of the GMS contract. Improvement would be more likely where investment is accompanied by clear expectations, strong leadership, QI capability, reliable infrastructure and genuine engagement with primary care teams. The findings indicate that a flexible, needs-based approach to MDT development, rather than a rigid interpretation of 'one size fits all full implementation', would be more realistic, sustainable and aligned with local population needs.

Recommendations

The report sets out 13 recommendations to inform future policy, investment and programme design.

Recommendation 1	**Reset national expectations to align MDT development with improving outcomes and making best use of resources.**
Recommendation 2	**Embed improvement principles and realistic timelines.**
Recommendation 3	**Apply hub/hybrid models selectively.**
Recommendation 4	**Invest in integrated IT systems and outcome-focused monitoring.**
Recommendation 5	**Establish clear governance and engage with all relevant stakeholders at the programme design stage.**
Recommendation 6	**Ensure enabling conditions for MDT effectiveness.**
Recommendation 7	**Co-design MDT configuration based on local needs.**
Recommendation 8	**Expand evaluation of MDT impacts over time.**
Recommendation 9	**Protect continuity of care.**
Recommendation 10	**Ensure workforce stability and wellbeing.**
Recommendation 11	**Adopt a Quality Management System (QMS) approach and tailor improvement support.**
Recommendation 12	**Develop a national health equity framework.**
Recommendation 13	**Strengthen public communication on MDT roles.**

Section 1: Introduction

Introduction to this report

This final report for PCPIP synthesises findings from the programme's inception through March 2026 and makes recommendations for future policy and investment.

The report builds on two earlier interim publications. The first interim report, published in February 2025, established the evaluation framework, summarised the existing evidence base, and outlined the early development of the workstreams. It also set the baseline against which subsequent progress was assessed. The second interim report, published in June 2025, presented progress against programme aims using data collected up to May 2025, outlining early system changes, initial insights from QI activity, emerging themes from qualitative fieldwork and progress across workstreams. Both interim reports highlighted progress, early achievements, and constraints.

Six areas of focus were developed collaboratively through weekly meetings with the Scottish Government to ensure the evidence gathered addressed specific areas that could inform future policy. The six areas of focus were initially presented to Scottish Government colleagues in October 2024, and the wording was refined over the next 6 months subsequently through regular established dialogue. Following this development phase, the areas of focus were submitted to the PCPIP Programme Board, whose members provided feedback during a structured consultation process. This consultation period extended through April/May 2025, culminating in the finalisation of the areas of focus in June 2025.

The six areas of focus are listed below:

Area of focus	**1**	Key conditions for change and enablers required to support MDT working
Area of focus	**2**	Learning from the QI approach embedded in PCPIP to support future implementation of the MDT and policy development
Area of focus	**3**	MDT services that should be prioritised for further development
Area of focus	**4**	Key attributes of a sustainable and effective model of MDT support
Area of focus	**5**	Support requirements for monitoring and evaluation of the impact of MDT working
Area of focus	**6**	Requirements to ensure MDT working supports the reduction of health inequalities

Introduction to PCPIP

PCPIP aims

The programme was commissioned by Scottish Government in September 2023 and led by the Primary Care Improvement Portfolio in the Nursing and Integrated Care Directorate in Healthcare Improvement Scotland.

PCPIP aimed to:

- improve implementation of services subject to amended regulations outlined in the GMS contract (CTAC and pharmacotherapy services)
- develop a culture of continual improvement across primary care settings, and
- build evidence to understand the national context for GMS contract implementation including long-term Scottish Government investment.

Why PCPIP was commissioned

Scottish Government commissioned PCPIP to inform:

- the continual development of the primary care MDT as outlined in the GMS contract
- how nationwide implementation of the MDT component of the GMS contract could be improved, and
- the creation of a standard set of national measures for ongoing monitoring and future evaluation of the impact of the MDT component of the GMS contract.

PCPIP was commissioned to strengthen general practice by expanding MDTs, addressing gaps in implementation of the GMS contract, and supporting sustainable models of care. The GMS contract's purpose was to ensure people receive timely, appropriate care across Scotland. A key feature of the extended MDT in the contract was that professionals would be employed by the health board and embedded or aligned to practices rather than employed by practices. While there has been progress in expanding and embedding MDTs since the introduction of the GMS contract, significant implementation gaps remained across Scotland. These gaps were thought to be due to uncertainties around the scale of change required, ongoing challenges with workforce availability, and variation in how MDTs had been implemented across different areas. Understanding and addressing these implementation gaps was considered essential to realising the GMS contract's vision of improved access to care and more effective MDT working in general practice. See *Appendix 2* for more information about the GMS contract's aims and principles.

At the beginning of PCPIP, the existing evidence was reviewed. While it indicated that changes to primary care services have been made in line with the GMS contract and expansion of MDT working, the data available from primary care settings in Scotland was derived from small-scale studies. No studies were identified that focused on the development and/or testing of national indicators. Further, the review found little direct evidence of the impact of CTAC, and pharmacotherapy services regulated under the GMS contract. This review identified gaps in the evidence such as primary care staff and service users' experiences of these changes to primary care. It highlighted that representation from certain staff groups such as practice administration staff, healthcare support workers (HCSWs) and mental health workers was limited. The review also pointed to a need for more information about the implementation of CTAC and pharmacotherapy services in Scotland.

See the first interim report, published in February 2025, for more information on the studies identified in the evidence review and their key findings.

How PCPIP was delivered

The programme consisted of four **key components**.

1. **Demonstrator sites**
   In December 2023, an application process took place to select four demonstrator sites to be part of the programme. The aim of having demonstrator sites was to show whether using QI and additional investment could lead to fuller implementation of CTAC and pharmacotherapy services at a system level.

   A panel of representatives from SG, HIS and the wider healthcare system was brought together to ensure a robust application and interview process to select the demonstrator sites. A key factor in the selection of the demonstrator sites was their different local contexts (for example city vs remote and rural context) and their different stages of implementation in relation to CTAC and pharmacotherapy. NHS Ayrshire & Arran, NHS Borders, a locality in Edinburgh City HSCP and NHS Shetland were the successful applicants.

2. **A national improvement collaborative**
   General practices, CTAC and pharmacotherapy services from non-demonstrator site areas were invited to take part in a national improvement collaborative which provided QI support to implement local changes aimed at improving access to care and fuller implementation of CTAC and pharmacotherapy services.

3. **A national 'learning system'**
   A range of activities took place to facilitate peer-to-peer learning during the programme, for example webinars, workshops, resource development and the first in-person national primary care events held since the Covid-19 pandemic.

4. **An evaluation**
   The PCPIP evaluation proposal was agreed with Scottish Government in October 2024 and provides an overview of the planned evaluation approach that includes the collection and analysis of qualitative, quantitative and health economic data.

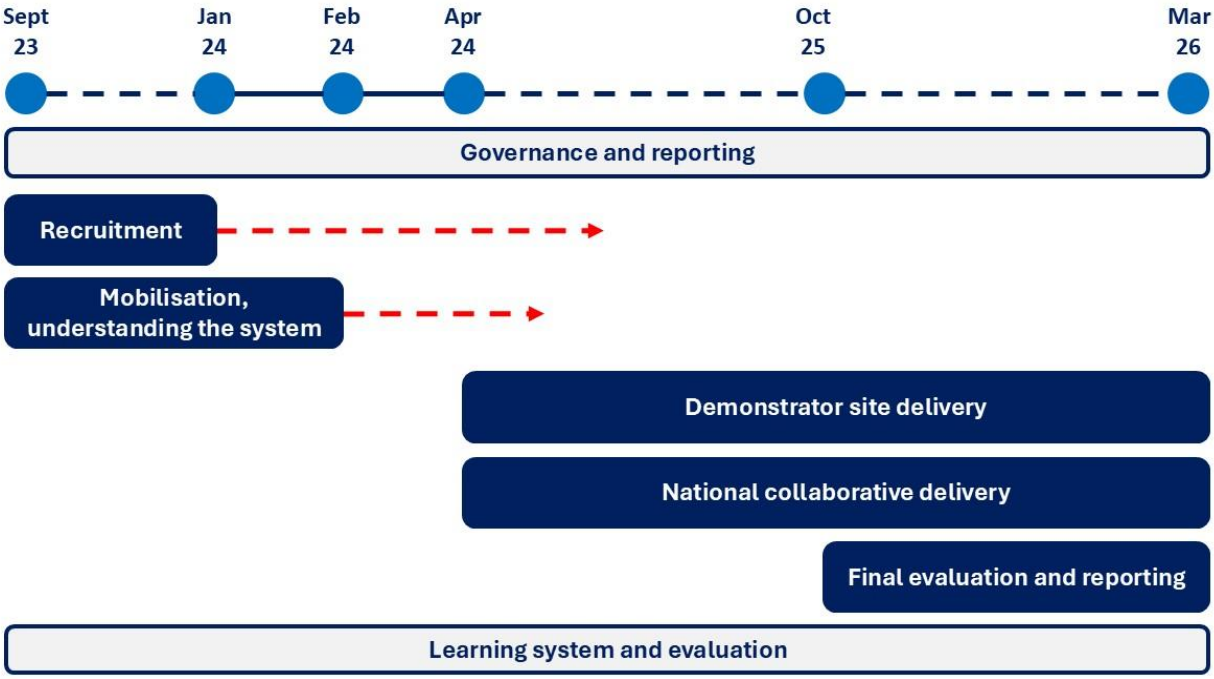
PCPIP also established an expert group including clinical and non-clinical experts with a strong background in primary care to meet three times during October 2025 to review the reported data against the areas of focus, discuss contextualisation and interpretation within a primary care context, and provide expert opinion. See *Appendix 3* for more information on the discussions generated during these meetings.

The demonstrator site teams also provided useful insights throughout the programme, and specifically at a 'world café' event regarding the areas of focus. See *Appendix 4* for more information on the discussion generated during this meeting.

Full details of each component are provided in subsequent sections.

The following timeline outlines the activities that took place during the programme.

Figure 1: PCPIP timeline



The dark blue boxes indicate the planned timeline for the activity. The dashed red lines indicate the extended timeline to complete the activity.

Programme governance

A multiagency, multidisciplinary Programme Board co-chaired by Scottish Government and Healthcare Improvement Scotland was formed to provide advice, guidance and support to the programme. A Clinical and Care Governance Advisory Group was also formed to advise the programme on matters specific to clinical practice.

A range of stakeholders were engaged throughout the design and evaluation of the programme. An engagement map can be found at *Appendix 1.*

Section 2: Findings

This section includes the findings around the three aims of PCPIP:

1. improve implementation of services subject to amended regulations outlined in the GMS contract (CTAC and pharmacotherapy services)
2. develop a culture of continual improvement across primary care settings, and
3. build evidence to understand the national context for GMS contract implementation including long-term Scottish Government investment.

As discussed in the introduction to the report, six areas of focus were developed collaboratively to ensure the evidence gathered addressed specific areas that could inform future policy.

The following data workstreams were used to assess the aims of PCPIP:

1. QI data
2. week of care audit (WoCA)
3. economic analysis
4. qualitative data
5. service user views
6. local system and record sampling, and
7. national data.

See *Appendix 6* for more information on the data workstreams. This Appendix explains the aims of the different data workstreams, the methodologies used for data collection and analysis, and their limitations.

2.1 Findings from improving implementation of services subject to amended regulations outlined in the GMS contract (CTAC and Pharmacotherapy services)

Throughout PCPIP, Healthcare Improvement Scotland worked closely with each demonstrator site using a QI approach (*Figure 2*) to inform the development and delivery of local improvement plans. This support was accompanied by additional funding from Scottish Government for demonstrator sites to enable change.

Figure 2: The steps of the QI journey adopted in PCPIP

In the following sections, details about the individual journeys of each demonstrator site are outlined.

NHS Ayrshire & Arran journey

Context

NHS Ayrshire & Arran took a health board wide approach to PCPIP, working across three HSCPs. The board area serves a population of approximately 386,000 people. There are 53 GP practices, all managed by independent contractors.

East Ayrshire and South Ayrshire are classified as mainly rural, while North Ayrshire is classified as urban and substantially rural using the Scottish Government's Rural and Environment Science and Analytical Services (RESAS)[1] classification. The rural practices in East Ayrshire and South Ayrshire face challenges with transport, recruitment and access to services.

According to the Scottish Index of Multiple Deprivation (SIMD), NHS Ayrshire & Arran contains some significant areas of deprivation, particularly in North Ayrshire that has the highest percentage of data zones classed as deprived.

Situation

When the GMS contract was introduced, NHS Ayrshire & Arran developed a delivery framework to implement the contract with a single primary care improvement plan (PCIP) for all three HSCPs. Clear governance arrangements were put in place to ensure delivery of the PCIP and clarify the decision-making process.

There had been progress in each of the contract areas and a range of PCIP roles were embedded across general practices including pharmacotherapy, CTAC, mental health practitioners, community link workers (CLWs) and advanced physiotherapy practitioners. All vaccination work had been transferred from general practice to the health board.

Pharmacotherapy services were provided by pharmacists, pharmacy technicians and pharmacy support workers (PSWs) in practices and via hubs in each HSCP. The pharmacotherapy hubs provided medicines reconciliation support during periods of absence or high demand to selected clusters. Not all practices benefited from the hub service.

A local pharmacotherapy service evaluation (2023) highlighted the pharmacy team completed 100% of immediate discharge letters (IDLs) in 46 out of 51 practices. Seventeen practices were receiving the local target of the pharmacotherapy team actioning one acute prescription request per 100 treated patients per day (±10%). Although there were some practices considered by the health board to be close to full delivery, challenges with the implementation of the agreed service specification remained.

Access to CTAC was delivered through a practice-based model. Dedicated space was also allocated within North Ayr Health Centre, allowing appointments to be offered on a sessional basis to three practices in South Ayrshire that were unable to accommodate their full allocation. In these cases, remote access was used to access patient

[1] The RESAS classification classifies local authorities according to their level of rurality and establishes four different groups, which are labelled as 'Islands and Remote', 'Mainly Rural', 'Urban with Substantial Rural' and 'Larger Cities'.

records, and practice administrative teams booked patients directly into their allocated CTAC sessions. Band 5 registered nurses and band 3 HCSWs provided a range of interventions including venepuncture, long-term condition (LTC) monitoring, wound care and ear care.

An audit completed in December 2022, identified that CTAC staff had carried out 72% of eligible interventions. The remaining activity was completed in general practice. *Table 1* highlights the percentage completed by CTAC for the three most frequent CTAC interventions.

Table 1: Percentage of the three most frequent interventions completed by CTAC

CTAC intervention	Completed by CTAC
LTC monitoring	61%
Venepuncture	74%
Blood pressure monitoring	75%

Approach

The focus of NHS Ayrshire & Arran's PCPIP proposal is outlined below.

Enhancing and progressing pharmacotherapy provision by:

- expanding the pharmacy hubs in each locality
- streamlining prescribing processes
- testing a preceptorship model to increase pharmacists' prescribing confidence
- introducing the advanced pharmacist practitioner role
- recruiting additional PSWs to support the expansion of the PSW and technician roles, and
- spreading the learning from polypharmacy reviews for care home patients across all clusters.

Improving the CTAC service by:

- developing a CTAC resilience model to ensure appropriate cover during periods of absence and maintain an effective skill mix
- strengthening resilience by refining the induction process for staff
- establishing practice profiles for every practice to facilitate resilience agility, and
- developing the practice educator role to provide a robust education and supervision model.

NHS Ayrshire & Arran proposed that these plans would enable them to demonstrate what fuller implementation of the GMS contract could look like at a health board level.

NHS Ayrshire & Arran worked with Healthcare Improvement Scotland and their local QI team to further understand their current system by collecting and reviewing data, engaging stakeholders and using QI tools.

Key insights from this work are detailed below.

- Pharmacy staff survey feedback highlighted concerns around workload, capacity and role clarity. It also indicated staff were interested in exploring training and development opportunities and increasing patient engagement. The pharmacy leadership team used this feedback to plan improvement opportunities.

- Data on acute, repeat and serial prescriptions from Scottish Therapeutics Utility (STU) highlighted variation in acute prescribing workload across practices. The team agreed to prioritise improving prescribing processes.
- The CTAC team took part in a practical demand, capacity, activity, queue (DCAQ) simulation to explore how additional resilience staffing and a more effective skill mix could improve capacity and reduce pressure on the service. A key insight was that understanding true demand remains challenging without consistent data collection, and that regular recording of CTAC related tasks by general practice nurses (GPNs) would be essential.

Resourcing

Investment

NHS Ayrshire & Arran were allocated investment of £4.62m. This was originally for an 18-month period from April 2024. The forecast spending changed over time for each site as a result of adapting plans and responding to changed circumstances. There was an agreement in 2025 to reprofile the 2025/2026 spending to cover the whole financial year, allowing programme spending to continue until the end of March 2026.

Table 2: NHS Ayrshire & Arran investment and spending

	2024/25 actual	2025/26 actual (Q3)	2025/26 forecast (Q4)	Total
Pharmacotherapy				
Staffing costs	£231,000	£849,356	£0	£1,080,356
Non-staffing costs	£4,000	£9,767	£0	£13,767
Subtotal	£235,000	£859,123	£0	**£1,094,123**
CTAC				
Staffing costs	£531,000	£915,678	£70,772	£1,517,450
Non-staffing costs	£4,000	£10,388	£1,589	£15,977
Subtotal	£535,000	£926,066	£72,361	**£1,533,427**
MDT working				
Staffing costs	£72,000	£61,171	£28,756	£161,927
Non-staffing costs	£1,000	£32,239	£3,600	£36,839
Subtotal	£73,000	£93,410	£32,356	**£198,766**
			Grand total	**£2,826,316**

Staffing

Table 3: NHS Ayrshire & Arran staffing allocation

	PCIP 7 (March 2024)				PCIP 8 (March 2025)				Q3 delivery plan (December 2025)			
	PCIF	Other	PCPIP	**Total WTE**	PCIF	Other	PCPIP	**Total WTE**	PCIF	Other	PCPIP	**Total WTE**
Pharmacotherapy												
Pharmacist	37.3	17.6	0	**54.9**	37.9	16.7	7	**61.6**	40.4	16.7	7	**64.1**
Pharmacy technician	39	6	0	**45**	42.4	6.8	4	**53.2**	35.6	6.8	4.6	**47**
PSW	10.6	2	0	**12.6**	15	2	15	**32**	13.7	2	12	**27.7**
CTAC												
Nursing	72.8	0	0	**72.8**	63.5	0	12	**75.5**	54.9	0	11.4	**66.3**
HCSW	34.1	0	0	**34.1**	28.9	0	18	**46.9**	27.8	0	16.6	**44.4**
Other	2	0	0	**2**	0	0	3	**3**	0	0	2.8	**2.8**
PCPIP project												
QI facilitator	0	0	0	**0**	0	0	1	**1**	0	0	1	**1**
Project data coordinator	0	0	0	**0**	0	0	0	**0**	0	0	1	**1**

PCIF- Primary Care Improvement Fund

Impact

Pharmacotherapy

Table 4: NHS Ayrshire & Arran pharmacotherapy impact

Planned improvement	Activity	Outcome
Developing the pharmacy technician role to lead medicine reconciliation and high-risk medicines monitoring (HRMM)	• A chief pharmacy technician was recruited to provide operational leadership and support the development of the pharmacy technician role. • The pharmacotherapy team conducted testing in nine GP practices. Data from the tests indicated 96% of IDLs could be actioned by a pharmacy technician. • The team trained 27 pharmacy technicians to complete medicines reconciliation. To ensure technicians were fully competent, they: - gathered feedback on technicians' confidence and learning needs	• As of December 2025, there were eight technicians signed off as competent to follow the new technician led medicine reconciliation SOP. These technicians have presented at huddles about their experience to aid roll out. • There are 10 pharmacy technicians signed off as competent to monitor DOACs. *Figure 3* shows the number of DOAC monitoring reviews completed by technicians increased. This is expected to release pharmacist capacity to

Planned improvement	Activity	Outcome
	- delivered a series of bite sized training sessions - created a structured competency framework, and - produced a standard operating procedure (SOP). • To upskill pharmacy technicians in completing direct oral anticoagulants (DOAC) monitoring, the team: - identified senior pharmacy technicians suitable for training - developed a dedicated SOP outlining technician led DOAC monitoring - prioritised GP practices where pharmacists were actively engaged in DOAC reviews, and - accelerated the training by adopting a train the trainer model. Through this work, the team found that the most efficient method was technicians completing multiple DOAC reviews in a single focused session, rather than undertaking ad hoc reviews.	focus on other elements of pharmacotherapy.
Expanding pharmacy hubs and testing a resilience model	• The North Ayrshire hub tested adding a pharmacist to provide additional resilience. • In South Ayrshire, the team tested directing all IDLs and clinic letters from two practices to the hub. Process mapping was completed and helped the team identify areas for improvement including introducing a morning huddle and standardising processes. The test of change was spread to the whole cluster.	• Recruitment delays meant the pharmacist was not in post long enough to understand the impact of the pharmacist role in the hub. • Between May and August 2025, the South Ayrshire team collected weekly data on the percentage of IDLs, and clinic letters completed by the hub, which was 100% for one practice throughout the period. • Feedback indicates that the hub has released some time for practice pharmacy teams to focus on other activities.

Planned improvement	Activity	Outcome
Improving prescribing processes by introducing an acute prescribing decision tree	• An NHS Forth Valley acute prescribing decision tree tool was tested in one practice initially. • The team collected data on the rate of acute prescription requests per 100 treated patients per day. • Following successful testing, the decision tree tool was implemented and spread to a further six practices.	• The median rate of acute prescriptions requests per 100 treated patients per day in the pilot practice reduced by 21.6% since the tool was introduced in August 2024 (see *Figure 4*).
Increasing the proportion of serial prescriptions by: • Training PSWs to identify suitable patients. • Testing support from a pharmacy technician and a PSW in one GP practice and one care home.	• The team identified one practice to test increasing the proportion of patients with a serial prescription. • They developed a serial prescriptions process map and worked with the local community pharmacy to agree processes. • PSWs were trained to identify patients who could be transferred to serial prescriptions. When a suitable patient was identified, a letter was sent to inform them of the switch. • The lead pharmacy technician spent time in the practice to provide support. • PSWs conducted Care Experience Improvement Model (CEIM) discovery conversations to collect patient feedback on the serial prescription process. • The team reviewed patients in one care home and found only a small number were eligible for serial prescriptions. Serials were set up for all eligible patients. • The team collected GP feedback on the process via Microsoft (MS) forms. • A serial prescription animation was produced and shared across the health board's social media platforms and with practices and community pharmacies.	• The number of patients with an active serial prescription mandate in the pilot practice increased by 32% from July 2024 to January 2026. • The practice reported benefits including fewer acute/repeat prescription requests. GP feedback was also positive. • Generally, patient feedback was positive, with patients noting that obtaining their prescription is now 'easier'. One patient commented, 'I don't have to phone in and wait in a queue to ask for my prescription'. • Challenges included considering the financial implications, as sending letters incurred a cost. Additionally, one patient declined switching to a serial prescription, preferring more regular contact with their practice.
Developing a supervision and preceptorship programme	• In collaboration with NHS Greater Glasgow and Clyde (NHSGGC), the team undertook a pilot study to	• A total of six preceptee pharmacists completed the programme, with support

Planned improvement	Activity	Outcome
	develop a preceptorship model allowing pharmacists to be developed and supported by an experienced mentor. • Six pharmacists were selected and matched with a more experienced pharmacist or GP preceptor for 12 to 16 weeks. • Objectives were agreed depending on the experience and learning needs of the preceptee and learning opportunities identified to meet these. • Evaluation surveys were sent to preceptees and preceptors.	provided by three preceptor pharmacists and three preceptor GPs. • In a survey, preceptees highlighted that the programme increased their confidence, improved decision-making and strengthened their relationships with the GP. Of the preceptors, 100% reported they have helped to build confidence in risk management. • The team are working with NHSGGC to further evaluate the preceptorship model.
Testing an advanced pharmacist practitioner role to free up capacity for GPs	• Three advanced pharmacist practitioners were recruited and assigned to three GP practices for testing the role. • Advanced pharmacist practitioners were given caseloads including the management of patients with acute and chronic conditions and optimisation of medications for complex polypharmacy patients. • The team collected data about types of patients who were effectively managed by an advanced pharmacist practitioner.	• In a feedback survey, 100% of advanced pharmacist practitioners reported they were satisfied with their role and felt their caseload was appropriate. • The team gained a better understanding of the types of conditions that can be reviewed by an advanced pharmacist practitioner (see *Figure 5*). Medication reviews, respiratory and ear, nose and throat (ENT) were the most common appointment types managed by advanced pharmacist practitioners. This information can support the pharmacy team with workforce planning and training requirements. • Between June 2025 and January 2026, 14% of complex patients in three practices had a polypharmacy review with an advanced pharmacist practitioner.
Spreading pre-PCPIP work in one cluster on polypharmacy reviews for	• East Ayrshire HSCP's senior primary care pharmacy team worked with Healthcare Improvement Scotland	• The monthly number of polypharmacy reviews completed for people living in

Planned improvement	Activity	Outcome
people living in care homes across all clusters	prior to PCPIP. They focused on polypharmacy reviews for care home patients in one cluster. This work had increased the number of care home residents with a polypharmacy review conducted in the past 12 months and helped to avoid harms and costs. • The team shared learning from this work and introduced the same review process across all practices. • An MS form was sent to all practice teams to collect data on medication review process in each practice for newly registered care home patients.	care homes increased (see *Figure 6*). However, progress slowed during the later stages of PCPIP because of a shift in strategic priorities across the health board, which chose to broaden its polypharmacy focus beyond care homes alone.
Undertaking courageous conversation sessions	• The team identified that courageous conversations training could support pharmacists with patient consultations. • Human resources delivered a series of courageous conversation sessions for the pharmacy leadership team. The sessions focused on providing practical guidance for managing challenging or sensitive conversations.	• Evaluation showed that 68% of participants had not applied the learning since attending the session and 64% indicated they would not be interested in further training in this area. • Given these findings, the team decided not to progress with wider rollout of the courageous conversations. Instead, the team leads have been made aware that the training remains available as a targeted resource for supporting individual staff members who may benefit from it.

Figure 3: Weekly count of DOAC monitoring reviews completed in one practice from January 2025 to October 2025

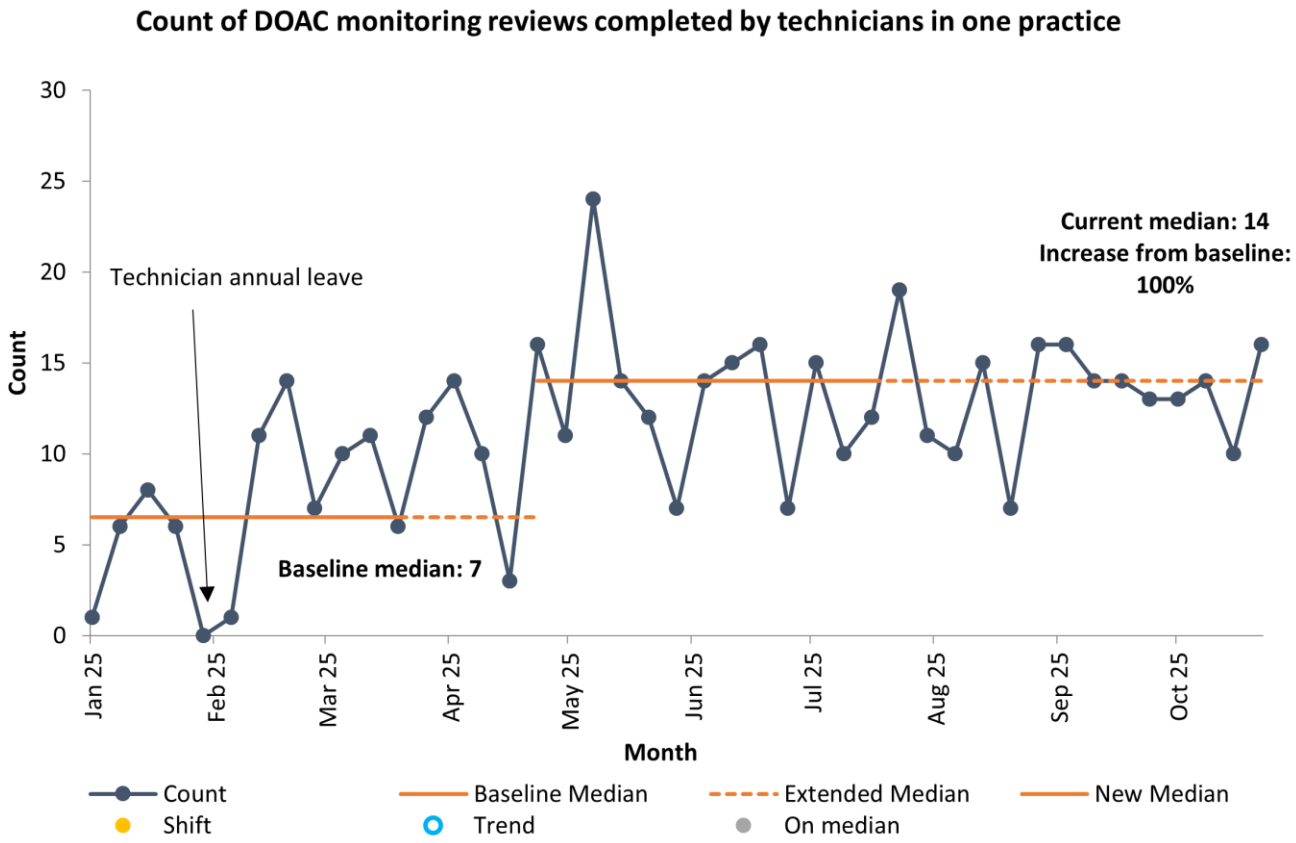
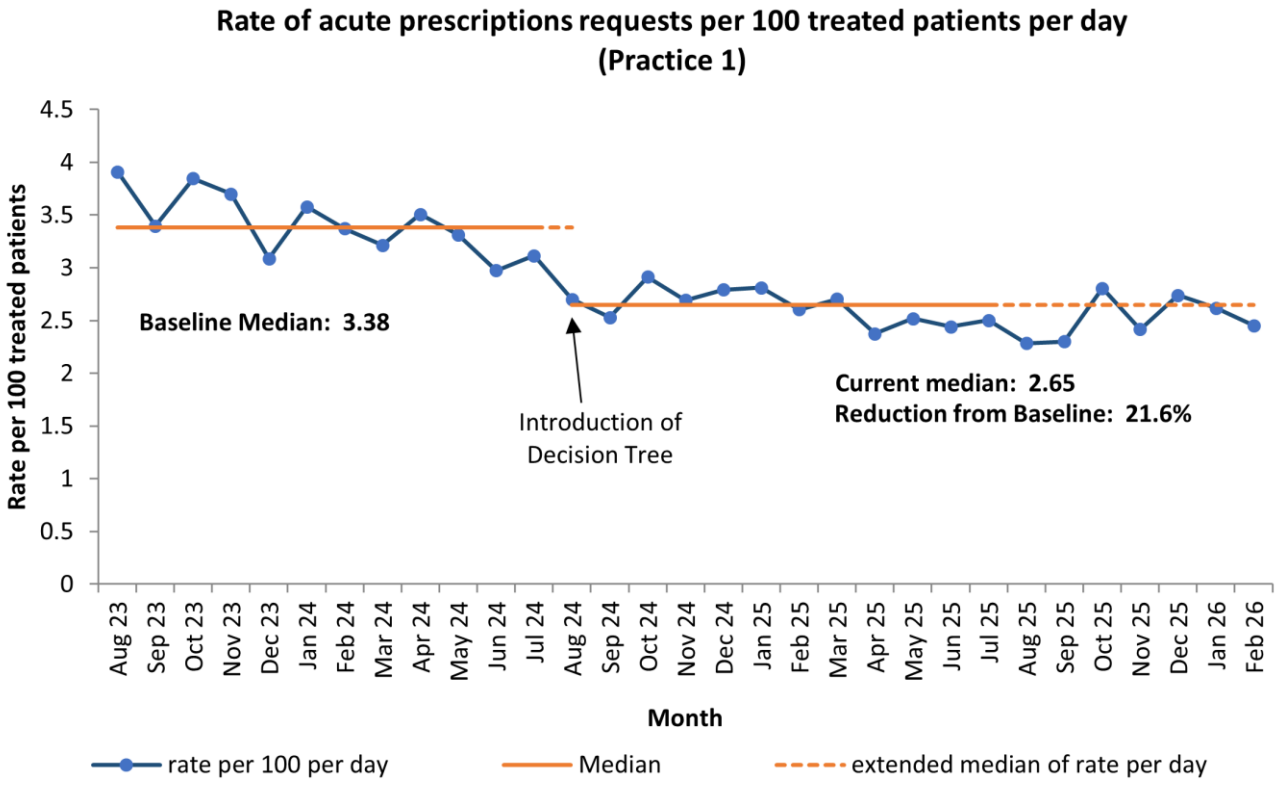


Figure 3 shows the weekly number of DOAC monitoring reviews completed by the technician in one practice increased. This is expected to release pharmacist capacity to focus on other clinical responsibilities.

Figure 4: Rate of acute prescription requests per 100 treated patients per day (Practice 1) August 2023 to February 2026



NHS Ayrshire & Arran tested an acute prescription decision tree tool in one practice before spreading it in other practices. *Figure 4* shows that since the introduction of the tool in Practice 1, the median rate of acute prescription requests per 100 patients per day reduced 21.6%.

Figure 5: Types of appointments and number of patients seen by advanced pharmacist practitioners

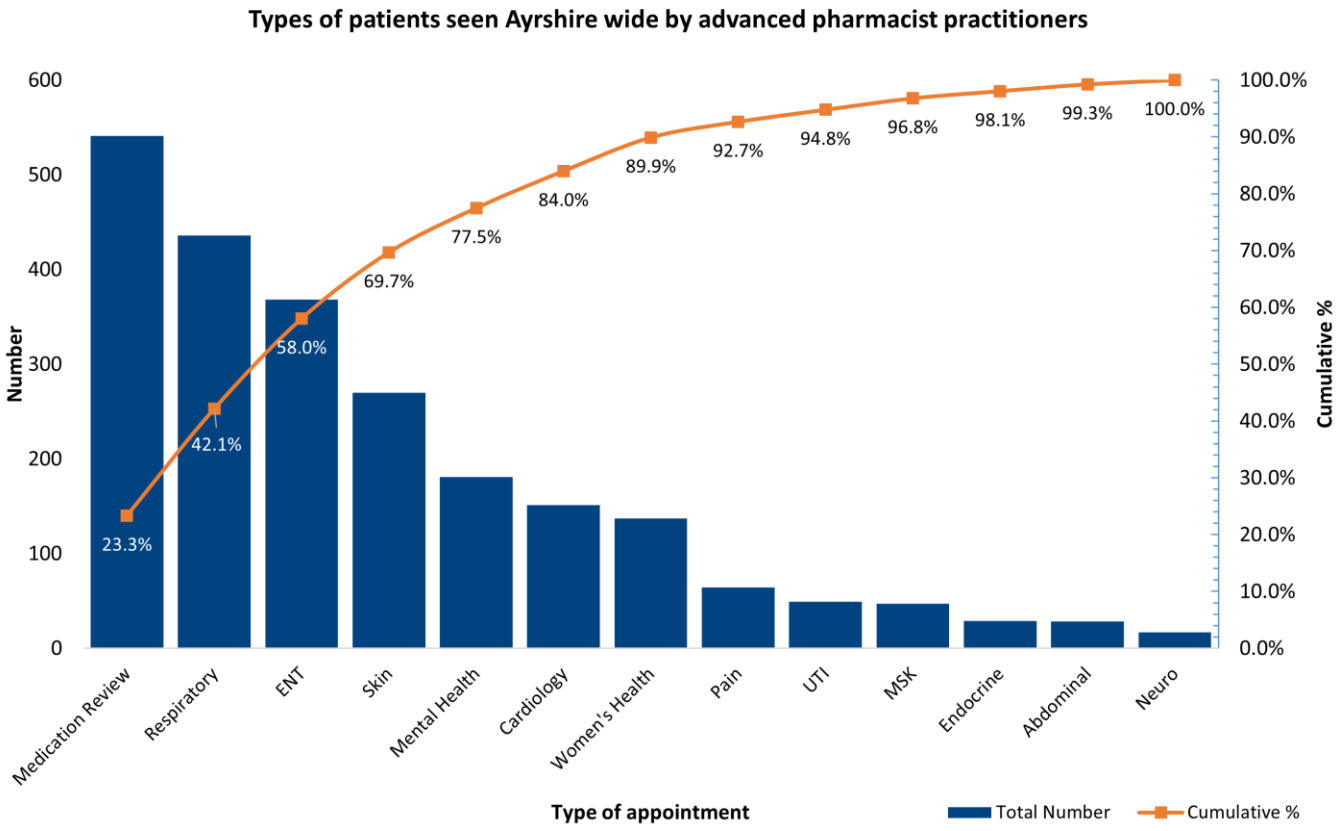


Figure 5 is a Pareto chart which highlights the types of appointments and number of patients seen by advanced pharmacist practitioners across NHS Ayrshire.

Figure 6: Count of polypharmacy reviews completed for people living in care homes from October 2022 to November 2025

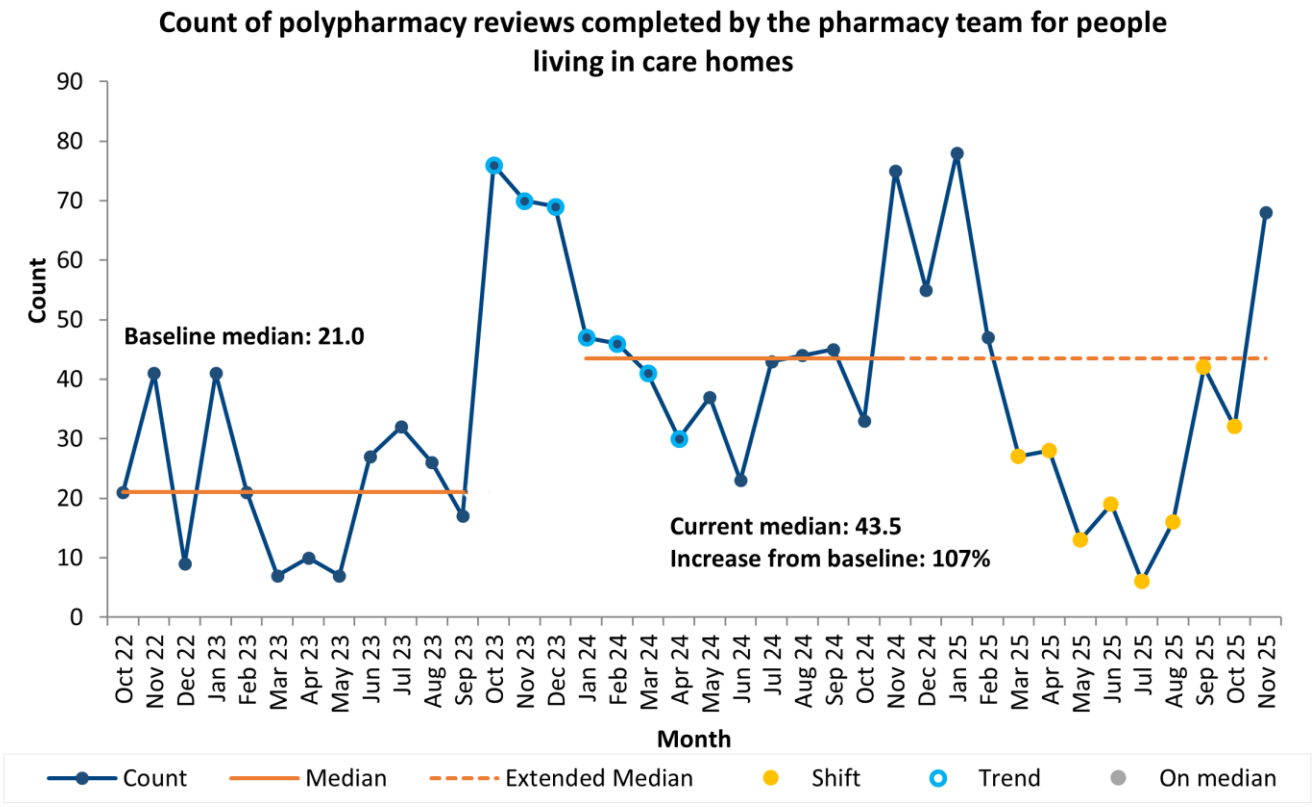


Figure 6 shows the monthly number of polypharmacy reviews completed for people living in care homes. The median increased by 107%, from a baseline of 21 to 43.5, although limited progress was made during the later stages of PCPIP because of a shift in strategic priorities across the health board, which chose to broaden its polypharmacy focus beyond care homes alone.

CTAC

Table 5: NHS Ayrshire & Arran CTAC impact

Planned improvement	Activity	Outcome
Developing an enhanced CTAC resilience model including testing an adapted skill mix	• Additional CTAC nurses and HCSWs were recruited for the resilience service to provide cover during periods of absence. • An adapted skill mix was implemented for the resilience model with a 2:1 HCSW to nurse ratio. • A standardised workforce register was developed and implemented to provide intelligence on staff competencies. • A CTAC prioritisation matrix was introduced to support staff allocation and provide data on reasons for resilience. • Practice profiles were created to support resilience staff to understand the context of different GP practices.	• Expanding the resilience model enabled the team to cover a higher proportion of the required appointments (see *Figure 7*). • The number of appointments covered by resilience staff was variable because of a combination of vacancies, staff sickness and annual leave. • The reasons that resilience cover was required were: - 37% maternity leave - 30% CTAC vacancies - 18% long-term absences - 10% short-term absences - 5% education • In September 2024, 30% of practices had completed a profile, and by August 2025, 100% of practices had a profile in place.
Developing a standardised induction process	• A new induction process was designed in collaboration with existing and newly recruited staff, practice educators and the project manager. • The new induction process was tested with newly recruited resilience staff. • Following testing, it was signed off by the CTAC working group.	• In a CTAC staff survey, 94% of respondents agreed they had sufficient training to undertake their role.
Improving access to and utilisation of CTAC south hub	• Scoping was undertaken but this was not considered viable. • This was because of limited availability of rooms and challenges with remote access.	• The team were unable to progress with the planned improvement.
Evaluating the practice educator role	• Practice educators worked closely with the senior nurse for primary care to develop the role. • Practice educators developed the workforce register, prioritisation matrix and practice profiles and	• In a staff survey all respondents agreed to some extent that practice educators provided support and mentoring. • One respondent commented:

Planned improvement	Activity	Outcome
	were responsible for the induction and training of new staff. • Feedback was collected from practices and staff.	'If any issues arise, I know I can contact my educators and they help resolve things.'
Adopting a cluster approach to wound care when no resilience cover was available	• A cluster-based approach to wound care was initially tested within one cluster. • Practices within the cluster provided cover for complex wound and compression appointments when sessions were at risk of cancellation, to help ensure timely patient care. • Staff developed a standardised template to ensure essential clinical information could be shared efficiently with the receiving practice.	• Patient feedback gathered through CEIM discovery conversations was positive. • This approach will be spread to other clusters.
Introducing an EMIS (Egton medical information systems) CTAC template to ensure reliable data collection	• The template was tested with six practices; however, data was not reliable because of IT issues.	• The team were unable to progress with the planned improvement.

Figure 7: Weekly percentage of required appointments covered by CTAC resilience staff from September 2024 to December 2025

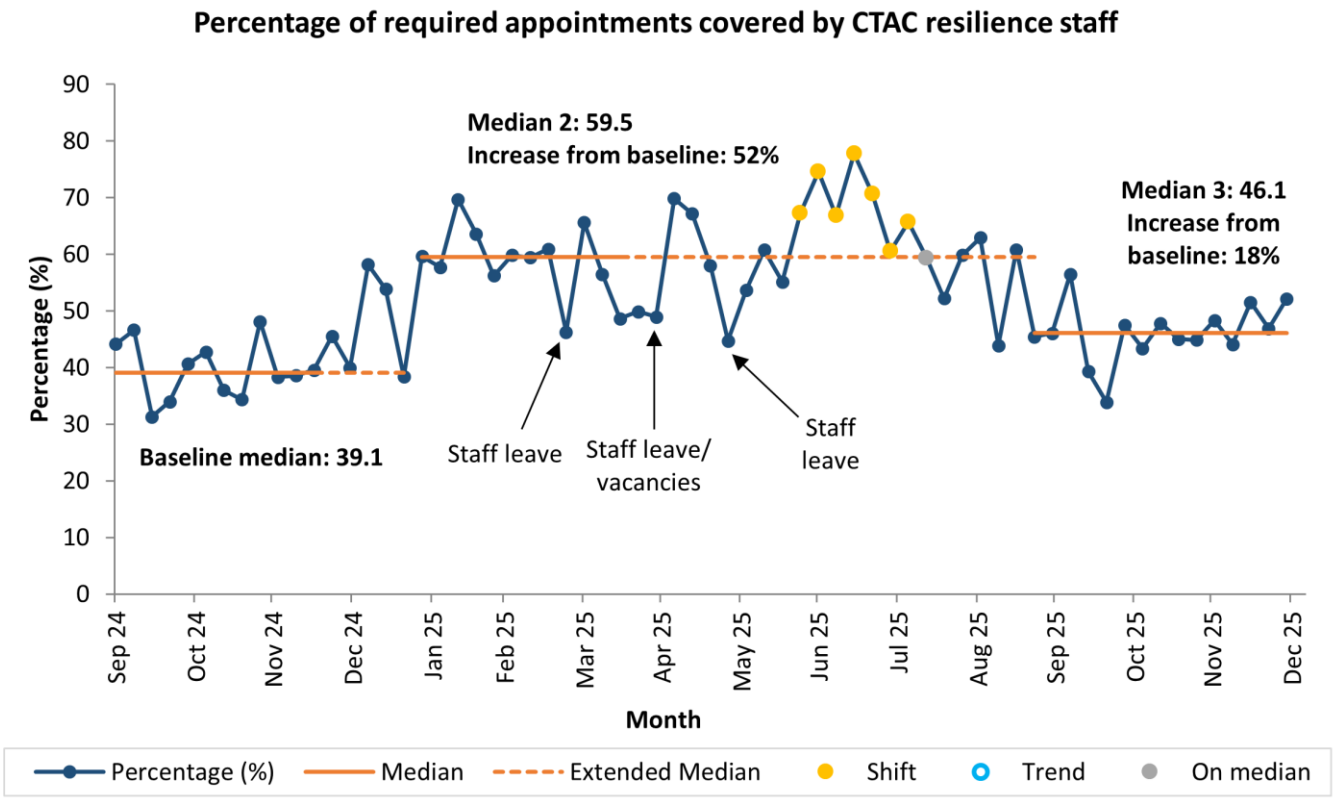


Figure 7 shows the percentage of required appointments which were covered by CTAC resilience staff. Covering a higher proportion of appointments provides a more consistent service and reduces the risk of appointment cancellations or work defaulting back to practices in the event of staff shortages.

Learning

Workforce

- Recruiting on fixed term contracts was challenging, as several staff secured permanent posts during the programme, resulting in additional vacancies.
- Staff turnover and long recruitment timelines made it difficult to provide an increased level of CTAC resilience cover throughout the duration of PCPIP.
- There is now a better understanding of the types of patients that can be seen by the advanced pharmacy practitioner role. As the role involved the management of patients with acute and chronic conditions and optimisation of medications for complex polypharmacy patients, it has potential to release GP capacity.
- Feedback from pharmacotherapy hub staff indicated that the hub model was valuable for training and development.
- The practice educator role supported CTAC workforce training and development. There is also potential for practice educators to promote closer working relationships with GPNs, advanced nurse practitioner (ANPs) and the wider MDT.

Data and information

- The team found WoCA data for CTAC particularly valuable and agreed to undertake a monthly WoCA to capture CTAC activity across all GP practices.
- CTAC practice educators developed practice profiles to help their teams understand the context of different GP practices. Staff feedback has been positive, with many reporting that the profiles give them the information they need and help them feel prepared to work with different practice teams.
- Advanced pharmacist practitioners collected data on the types of patient appointments they completed. This data helped the team to understand how the role fits into their existing structure and the potential for transferring appointments from GPs to advanced pharmacist practitioners.

Infrastructure

- NHS Ayrshire & Arran benefited from dedicated local QI support. The local QI team supported a range of activities including developing driver diagrams and measurement plans, data collection and reporting.
- The demonstrator site already had a CTAC practice-based model and pharmacotherapy hubs established which meant they did not need to wait for premises to be secured before progressing with changes.

Ways of working

- As the demonstrator site comprised of three HSCPs, robust governance processes were needed.
- There were challenges of scaling the pharmacotherapy hub expansion including variability in resilience, concerns from GP practices about resources being redirected to the hub, and a lack of standardisation across practices.
- The pharmacotherapy team used a QI approach of small-scale testing with the introduction of the decision tree and expansion of the south pharmacy hub. This ensured the team were confident that the changes had resulted in improvement prior to spreading to other practices.

Stakeholder engagement

- Patient engagement using discovery conversations was undertaken and primarily resulted in positive feedback. This was not effective in generating improvement ideas.
- Staff surveys helped the team understand the impact of changes on staff in practices and the pharmacotherapy and CTAC teams.

NHS Borders journey

Context

The NHS Borders demonstrator site covers the whole health board area. The population is approximately 116,000 and there are 22 GP practices. One practice had 2C[2] status during the programme.

NHS Borders is classed as mainly rural using the RESAS classification. A large proportion of services users live in rural areas and there are some remote areas resulting in longer travel times to access services, or in some cases significant challenges in access to care.

According to the SIMD, NHS Borders is one of the least deprived health boards in Scotland overall but there are notable pockets of deprivation, particularly in smaller towns where deprivation can exist next to more affluent areas, making it difficult to identify.

Situation

Following the introduction of the GMS contract, NHS Borders established a PCIP executive committee to ensure that GPs were involved in shaping and leading change. The executive committee consulted with practices to identify priorities and initially prioritised PCIF investment in vaccinations, mental health, urgent care (ANPs), CLWs and musculoskeletal (MSK) physiotherapy.

Pharmacotherapy and CTAC services had received less focus and investment than other MDT services in NHS Borders. The pharmacotherapy service focused on delivering level 1 activity as this was identified as a priority for GP practices. Pharmacists and pharmacy technicians were embedded in practices providing medicines reconciliation, processing IDLs and managing acute and repeat prescriptions.

There was an established treatment room service operating in some practices; however, the provision was variable and not all practices had access to a treatment room. Treatment room staff were a mix of practice and health board employed.

NHS Borders were developing a GP sustainability strategy and had recognised the potential for fuller implementation of MDT working to improve recruitment and retention rates for GPs and the wider primary care workforce.

Approach

The focus of NHS Borders' PCPIP proposal is outlined below.
Enhancing and progressing pharmacotherapy provision by:

- moving non-patient facing staff to a central hub to reduce inefficiencies of travel time
- establishing a high-risk medication monitoring service, and
- recruiting sustainable pharmacists to increase the proportion of serial prescriptions, undertake polypharmacy reviews and increase the resilience of the in-practice pharmacist model.

[2] **2C GP practice** - A GP practice that is run by the NHS board.

Implementing a full CTAC service in three phases aimed at strengthening and expanding existing treatment room provision by:

1. assigning all phlebotomy management to CTAC. This included the transfer and recruitment of nursing staff
2. establishing a central booking hub, and
3. developing a service specification to standardise CTAC treatments across all practices including those that did not previously have access to treatment rooms.

NHS Borders worked with Healthcare Improvement Scotland to further understand their system by collecting and reviewing data, engaging stakeholders through a series of workshops, and using QI tools. This included designing a local WoCA to understand demand for services in nine practices varying in list size, rurality, service maturity and deprivation.

Key insights from this work are detailed below.

- Some data was owned by GP practices and data sharing agreements were needed to ensure oversight of the programme.
- Treatment rooms in different practices offered different interventions and appointment durations and had different ways of working. It was important to consider these and produce a clear rationale for ways of working in the standardised service to support engagement with practices.
- Local WoCA data showed that 19.7% of GP time spent on non-patient facing activities was on tasks which could be completed by the pharmacotherapy team. This reinforced the need for the planned recruitment of additional pharmacists.
- There was work that could be done in practices to reduce the volume of level 1 pharmacotherapy work required, for example, moving acute and repeat prescriptions to serial prescriptions and undertaking regular medication reviews.

Resourcing

Investment

NHS Borders were allocated investment of £4.34m. This was originally for an 18-month period from April 2024. The forecast spending changed over time for each site because of adaptation of plans and responding to changed circumstances, and there was an agreement in 2025 to reprofile the 2025/26 spending to cover the whole financial year, allowing programme spending to continue until the end of March 2026.

Table 6: NHS Borders investment and spending

	2024/25 actual	2025/26 actual (Q2)	2025/26 forecast (Q3 and 4)	Total
Pharmacotherapy				
Staffing costs	0	£182,094	£175,745	£357,839
Non-staffing costs	£15,000	£9,756	£1875	£26,631
Subtotal	£15,000	£191,850	£177,620	**£384,470**
CTAC				
Staffing costs	£728,000	£1,457,702	£956,445	£3,142,147
Non-staffing costs	£145,000	£154,689	£31,928	£331,617
Subtotal	£873,000	£1,612,391	£988,373	**£3,473,764**
MDT working				
Staffing costs	£20,000	£44,235	£114,938	£179,173
Non-staffing costs	£6,000	£4,708	£920	£11,628
Subtotal	£26,000	£48,943	£115,858	**£190,801**
			Grand total	**£4,049,035**

Staffing

Table 7: NHS Borders staffing allocation

	PCIP 7 (March 2024)				PCIP 8 (March 2025)				Q3 delivery plan (December 2025)			
	PCIF	Other	PCPIP	**Total WTE**	PCIF	Other	PCPIP	**Total WTE**	PCIF	Other	PCPIP	**Total WTE**
Pharmacotherapy												
Pharmacist	4.9	0	0	**4.9**	6.3	0	2.4	**8.7**	6.3	0	2.4	**8.7**
Pharmacy technician	9	0	0	**9**	10	0	0	**10**	10	0	0	**10**
PSW	0	6	0	**6**	2.2	0	2	**4**	2.2	0	2	**4.2**
CTAC												
Nursing	0	11.7	0	**11.7**	0	9.2	13.5	**22.7**	0	9.2	13.5	**22.7**
HCSW	0	5.2	0	**5.2**	0	6	23.2	**29.2**	0	6	23.2	**29.2**
Other	0	0	0	**0**	0	0	14.6	**14.6**	0	0	14.6	**14.6**
PCPIP project												
Senior project manager	0	0	1	**1**	0	0	1	**1**	0	0	0	**0**
Project manager	0	0	0	**0**	0	0	1	**1**	0	0	0	**0**
Analyst	1	0	0	**1**	1	0	0	**1**	1	0	0	**1**

Impact

Pharmacotherapy

Table 8: NHS Borders pharmacotherapy impact

Planned improvement	Activity	Outcome
Establishing a technician led pharmacotherapy hub	• A mini hub was established to test the IDL process in a small number of practices while suitable hub premises were identified. • A standardised process was agreed for the hub based on learning from the mini hub test. • Pharmacy technicians were relocated from practices to the hub. • Quarterly surveys were introduced to monitor staff wellbeing and workload and understand the experience of GP practices and community pharmacy. • Following feedback, staff were assigned to specific clusters to manage workload. • Regular meetings with hub and practice staff were set up to improve relationships and communication.	• A target of completing IDLs within 48 hours was set. Initially, 94.7% were able to be completed within the target time. However, a significant increase in demand led to a reduction in turnaround times. Data collection for this measure is no longer feasible. • The percentage of IDLs workflowed to the hub that required further information reduced by 83% (see *Figure 8*). This was attributed to hub staff having easier access to peer and senior support to address queries. • The total number of IDLs completed by the hub increased (see *Figure 9*) from a baseline median of 138 per week to 250 per week. • Engagement with practices initially helped reduce inappropriate work being sent to the hub. The substantial increase in demand meant that this reduction was not sustained. • 86% of GP practices reported that the volume of work completed by the pharmacotherapy team had stayed the same or increased. However, some practices (52%) reported a negative impact on MDT working because of no longer having technicians on site.
Launching a HRMM service coordinated by the hub	• PSWs were recruited and trained. • A recruitment campaign was launched for a full-time lead HRMM pharmacist. It was not possible to find a suitable full-time candidate, so plans had to be adapted. • The pharmacy team focused on managing one medication (mesalazine). This enabled a 6-month test to start in all practices	• As a result of recruitment challenges the service could not be delivered at the scale originally planned. • Currently, 75% of patients prescribed mesalazine are monitored by CMMT/HRMM across NHS Borders.

Planned improvement	Activity	Outcome
	with part time pharmacist support. The name of HRMM was also changed to Community Medicines Monitoring Team (CMMT). • IT functionality was updated to allow patient identification and prescription generation from the hub.	
Recruitment of sustainability pharmacists to focus on: • prescribing • transferring patients to serial prescriptions, and • undertaking polypharmacy reviews.	• Remote working for pharmacists was tested to expand the pool of applicants. • Remote pharmacists were allocated to practices and focused on tasks prioritised by the practices. This ranged from actioning acute and repeat prescription requests through to QI work focused on specific LTCs or polypharmacy. • Pharmacists primarily worked remotely but had regular opportunities to spend time in practices to develop relationships and deliver patient care.	• The testing of the remote pharmacist role worked well. The combination of remote working and practice experience offered variety to the role and the opportunity to further develop skills. • The flexibility to prioritise tasks identified by practices allowed both the needs of the practice and the pharmacists to be met.

Figure 8: Percentage of IDLs workflowed to the hub requiring further information between September 2024 and October 2025

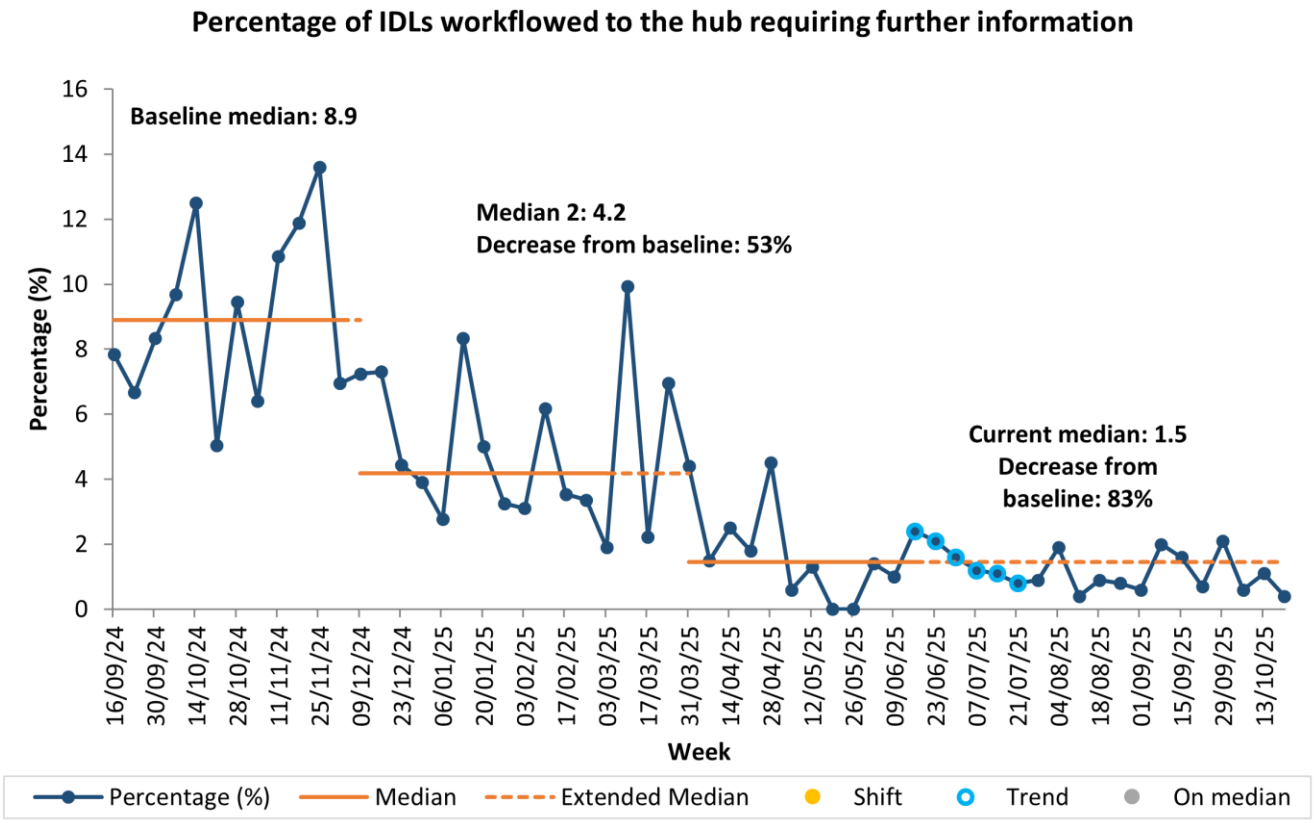


Figure 8 shows the percentage IDLs which required additional information in NHS Borders. This reduced from a median value of 8.9 per week to 1.5 per week – a reduction of 83% overall.

Figure 9: Count of IDLs completed by the pharmacotherapy hub between September 2024 and October 2025

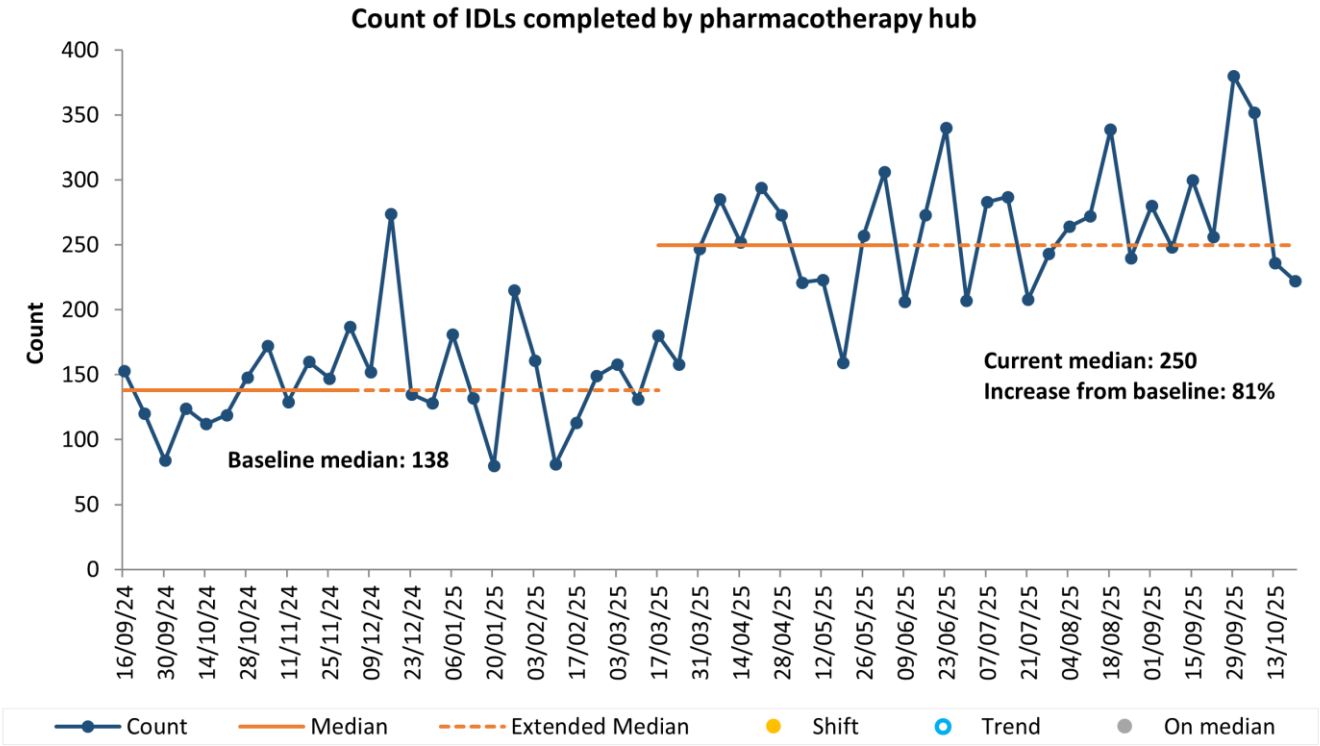


Figure 9 shows the count of IDLs completed by the pharmacotherapy hub in NHS Borders. This increased from a median value of 138 per week to 250 per week – an increase of 81% following the completion of the move to the hub, the transition to cluster-based work allocations and stable processes in place.

CTAC

Table 9: NHS Borders CTAC impact

Planned improvement	Activity	Outcome
Transfer of existing phlebotomy staff to health board employment to provide a phlebotomy service	• Practice employed phlebotomists were transferred to health board employment using the transfer of undertakings (TUPE) process. • Additional HCSWs were recruited providing a 50:50 skill mix with experienced phlebotomists from practices.	• In total 11 WTE HCSWS were transferred and 12.16 WTE HCSWs were recruited. • The transfer of practice employed staff led to a reduction in national insurance payments for practices. • Many transferred staff remained in their original practices which supported integration of the new service with practices. This stage was crucial in preparing for the roll out of CTAC services across the board.

Planned improvement	Activity	Outcome
Establishing a centralised admin hub	• Administrative staff were recruited and trained. • Standardised processes for booking appointments were developed. • Meetings were held with stakeholder groups to understand the potential impact of the hub on health equity. Red-Amber-Green (RAG)[3] status was used to determine protected characteristics which were more likely to be impacted (see *Appendix 6, Table 11*). • Testing the new booking system was delayed by an external IT provider not completing a required update in the agreed timeframe. • During the delay hub staff gave support to health board reception by phone. • A phased rollout began with practices joining the hub in small groups. Meetings with practices to prepare were held 4 weeks in advance. • Discovery conversations were introduced to understand patient experience of using the admin hub (*see Appendix 6, Table 12*).	• 96% of registered patients can now book through the admin hub. The median number of appointments being booked weekly via the hub is 673 per week (see *Figure 10*). • The number of appointments booked by the health board reception has started to reduce since all practices have access to the booking hub (see *Figure 11*). This indicates that work is starting to move away from health board receptions and practice admin teams who would previously have managed bookings.
Standardising the CTAC service	• A 'last 10 patients' tool was used and supported development of clear definitions of referral urgency for non-routine bloods to be agreed. • A service specification was agreed. • A review and training programme was developed for paediatric competency across all CTAC treatments.	• The standardised CTAC service was implemented. • Within the programme timescale it was not possible to test drop-in clinics, evening/weekend services, and flexible appointment locations.

[3] Red, amber, green status – traffic light system used as a visual prioritisation tool.

Figure 10: Weekly count of CTAC appointments booked by admin hub between July 2025 and January 2026

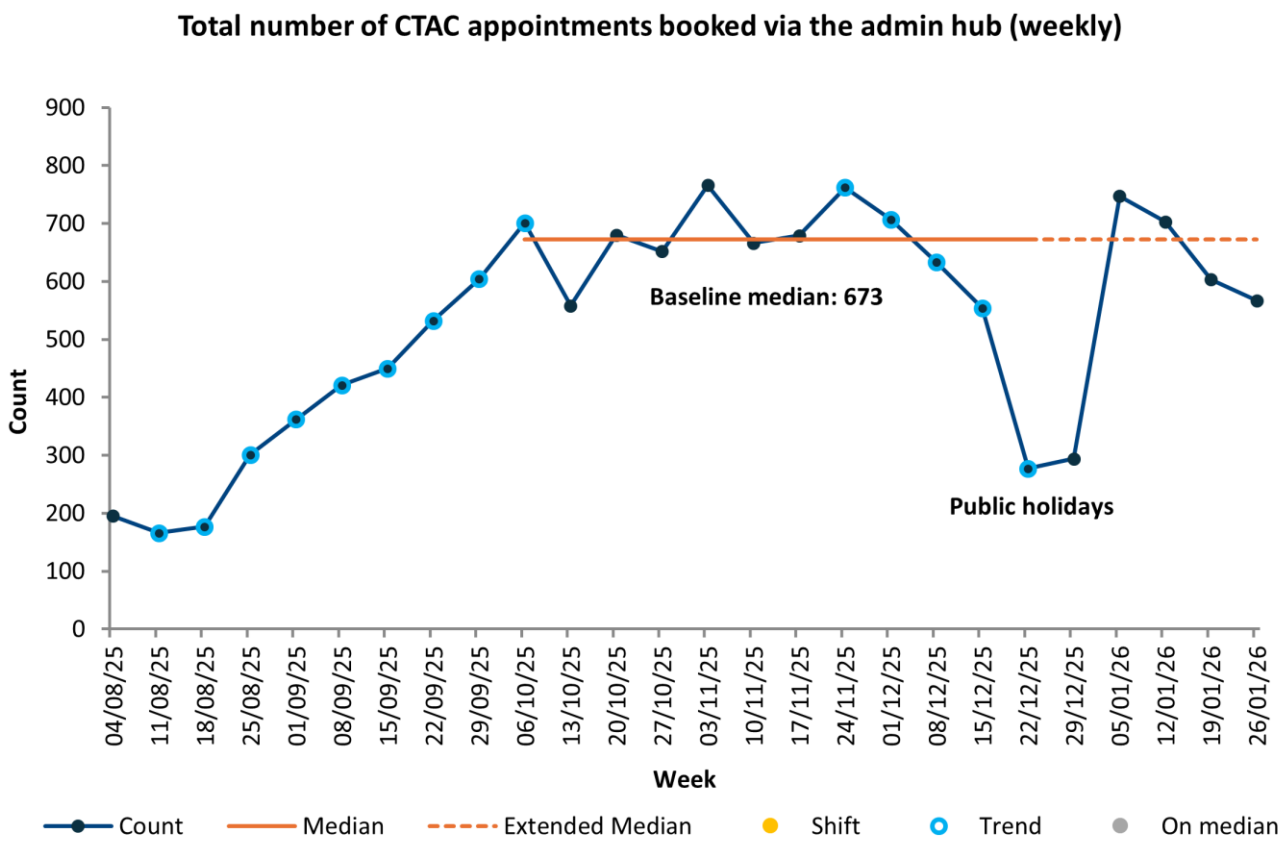


Figure 10 shows the weekly count of CTAC appointments booked via the admin hub in NHS Borders. The rollout of the admin hub is represented by the trend in the data from 4 August 2025.

Figure 11: Weekly count of CTAC appointments booked by health board reception between July 2025 and January 2026

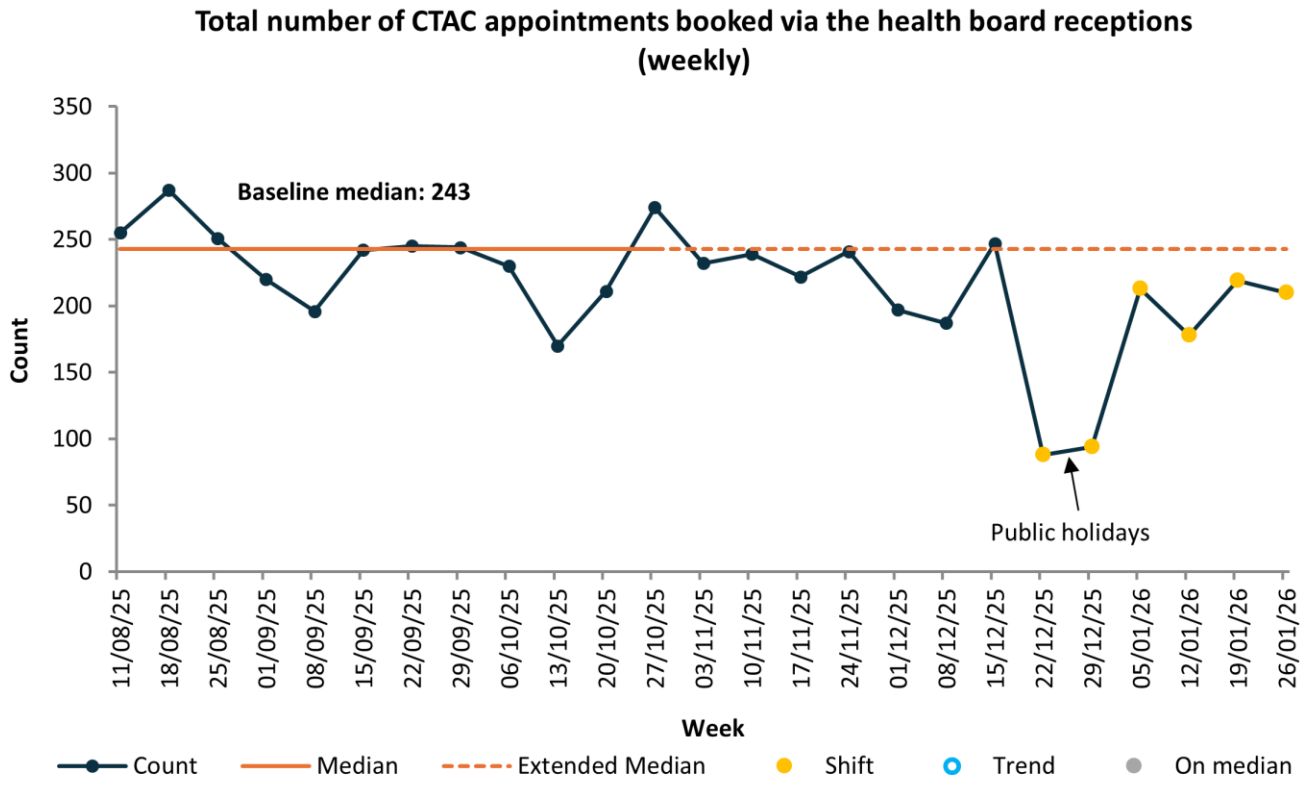


Figure 11 shows the weekly count of CTAC appointments booked via health board receptions in NHS Borders. There is an initial reduction in the number of appointments booked by the health board receptions as shown by the shift between week commencing 22 December 2025 and 29 January 2026.

Learning

Workforce

- Recruitment was challenging throughout the programme, particularly for pharmacist posts. This slowed the progress of some tests, but the team responded flexibly and tested new ways of working, including remote pharmacist posts.
- Keeping some flexibility around the standardised CTAC specification helped staff maintain a wide range of skills.
- The sequencing of recruitment required careful attention to minimise the impact of onboarding and training on existing staff.

Data and information

- A lot of data is collected via dashboards, but manual data collection was still required for some measures. Collecting data manually was time-consuming and difficult to sustain over time.
- Lack of engagement from a software provider meant that alternative workarounds for measurement were needed. Some measures had to be stepped down where workarounds could not be found within the timescales.

- A data sharing agreement with GP practices ensured GP engagement and access to data for which they are data asset owners.

Infrastructure

- Early IT planning was critical, particularly when delivery involved external providers.
- The lack of integrated IT created significant delays and increased workload. Workarounds created the potential to make clinical communication less effective.
- Accommodation challenges including limited physical space in practices impacted the timescales for CTAC services and the pharmacotherapy hub. It also meant that plans to integrate and co-locate the vaccination team, CTAC hub and HRMM team had to be scaled back.
- Funding instability affected the implementation and spread of changes tested throughout the programme.
- Rurality impacted service design and workforce planning and increased the cost of implementation. Solutions had to account for infrastructure gaps and digital exclusion.

Ways of working

- Each practice had their own pharmacotherapy process. This made it challenging to implement a single workflow process in the hub and meant pharmacotherapy staff had to learn different processes.
- Practice feedback about the pharmacotherapy hub highlighted some positive points including improved consistency of cover, improved medicines reconciliation and improved IDL processing time. However, practices were not satisfied with things like the number of prescriptions they still needed to print that were generated via the hub and the number of items being rerouted back to them.
- Regular check-ins, delivery team and programme meetings improved communication and helped staff feel that they were part of a team. These were important in ensuring that there was no scope creep, expectations were realistic and there was flexibility in the system.
- Fostering open communication to identify and address risks and concerns early was crucial.
- It was important that CTAC was an integrated service with admin, clinical and health board reception staff. There was some initial siloing of these services because of the challenges and delays described.

Stakeholder engagement

- Engagement with GPs was crucial to the success of improvement work affecting practices.
- The additional project manager resource allowed the team to focus on engagement and communication to refine the CTAC admin hub design making it more accessible and inclusive.
- Patient engagement using the CEIM methodology produced helpful insights, however because of capacity, these conversations were not continued.
- Co-design is crucial. Engagement with patients and patient groups resulted in more robust and inclusive service design. It also allowed potential issues to be addressed sooner in the design phase.

Edinburgh City HSCP journey

Context

The Edinburgh City HSCP demonstrator site is a subcluster area in the south-east of the city. It has a population of approximately 73,000 people and there are nine GP practices. At the start of PCPIP there were two 2C practices; one practice transferred to 17J[4] status in November 2024.

According to the Scottish Government RESAS classification, Edinburgh City HSCP is described as a larger city. All nine practices are either urban or semiurban and generally benefit from good transport links. There can be challenges accessing care for people in semiurban areas with weaker transport connections or in communities experiencing deprivation.

The demonstrator site area contains areas of significant deprivation according to SIMD. Five of the 9 practices are classified locally as serving populations with 'high deprivation' or 'mid-deprivation' compared to the Edinburgh average.

The population of South-East Edinburgh increased by approximately 30% between 2013 and 2023 because of significant housebuilding. This rapid growth put strain on primary care services, and, prior to PCPIP, several practices had closed their lists to new patients. PCIP funding increased capacity but impact was diluted by population growth.

Situation

Since the introduction of the GMS contract Edinburgh City HSCP worked closely with GP practices to identify local priorities for investment. A high proportion of PCIP funding was invested into practice-embedded staff in a range of roles including pharmacists, mental health nurses, advanced physiotherapy practitioners, ANPs and physician associates. Initially CTAC was not a priority for GP practices, with only 5 out of 70 practices requesting CTAC as a part of their PCIP 'wishlist' in 2019, compared to 68 practices requesting pharmacy and 53 practices requesting mental health nurses.

The Vaccination Transformation Programme (VTP) transferred almost all vaccine related work away from GP practices, with only a small workload of unscheduled vaccinations (approximately 300 appointments per year for the demonstrator site area) remaining.

Pharmacotherapy was delivered by a qualified pharmacist embedded in each practice to deliver approximately one session per 1,000 patients. The south-east pharmacotherapy hub provided medicines reconciliation support to five practices (two demonstrator site practices and three non-demonstrator site practices). The other seven practices in the demonstrator site had pharmacy technician support embedded in practice for approximately one day per week. Some level 2 and 3 work, including clinics, was being delivered. However, a local pharmacotherapy evaluation (2021) identified that this could be increased by delivering some level 1 work such as medicines reconciliation remotely.

[4] 17J GP practice - A GP practice that has a standard, nationally negotiated contract and are normally run by GP partners.

CTAC focused on five key tasks: wound care, ear irrigation, doppler tests, stitch and staple removal and unscheduled vaccinations. Edinburgh City HSCP delivered CTAC through a hub-based model. In the demonstrator site there was one CTAC hub with two treatment rooms. However, demand for CTAC services exceeded capacity, resulting in patients often having to travel outside the locality to access appointments. Feedback from the Edinburgh CTAC evaluation (2022) highlighted the issue, with practice staff reporting limited appointment availability, long waiting lists and the travel burden for patients.

Approach

The focus of Edinburgh City HSCP's PCPIP proposal is outlined below.

Enhancing and progressing pharmacotherapy provision by:

- expanding the dedicated south-east pharmacotherapy hub to support all demonstrator site practices with medicines reconciliation
- introducing the PSW role
- increasing the number of pharmacist-led clinics
- streamlining prescribing systems
- establishing high-risk medicines registers, and
- increasing the number of polypharmacy reviews completed.

Increasing capacity and consistency of the CTAC service in South-East Edinburgh by:

- establishing two new CTAC treatment rooms and recruiting more CTAC nurses
- ensuring trained and confident staff to deliver the full range of services
- understanding CTAC demand and capacity, and
- delivering 90% of the five key CTAC tasks.

Establishing three enhanced practices by:

- working with practices to understand local need and identify roles required, and
- increasing PCIP staffing in each practice by an additional 2.0 WTE.

Edinburgh City HSCP proposed that these plans represented achievable enhanced delivery of the GMS contract within the programme timescales. The enhanced practice element aimed to improve understanding of the optimal model of PCIP provision for patient care and cost-effectiveness. This would be tested by supporting practices to identify and address gaps in their MDT and then evaluating the combined impact of these additional roles and the expanded pharmacotherapy and CTAC services provided to all practices.

The enhanced delivery of pharmacotherapy and CTAC services was based on existing local models. Although phlebotomy formed part of the CTAC specification in the GMS contract, Edinburgh City HSCP's CTAC model did not include delivery of phlebotomy services primarily because of the cost and logistics of providing physical space for this. Payment was made to practices for ongoing provision of phlebotomy and there were no plans to change this during PCPIP. In pharmacotherapy there were targets set for prescribing, but this did not include increasing the proportion of acute prescriptions or repeat prescription reauthorisation requests actioned by the pharmacy team. This was not considered to be cost-effective or the best use of pharmacy team time and there were concerns around the feasibility of fully transferring this work away from GP practices.

The Edinburgh City team worked with Healthcare Improvement Scotland to further understand their system by collecting and reviewing data, engaging stakeholders and using QI tools.

Key insights from this work are detailed below.

- Engagement with staff and practices was challenging and needed ongoing attention. Additional operational leadership resource was added for pharmacotherapy and CTAC to support this.
- Increased understanding of DCAQ meant the team realised their stated CTAC aim could not be measured against as some demand was unknown and would have required manual data collection by nursing staff outside of the PCIP team. The challenges with engagement made this impossible to complete at the time.
- Inconsistent coding was a barrier to measurement. For example, the proportion of people aged 65+ who were coded as frail was very low and made it difficult to identify the target group for polypharmacy reviews.
- Local WoCA data showed that ANPs were the MDT members likely to release most capacity for GPs. All three enhanced practices identified the need for additional ANP capacity, and the team knew these would be challenging to recruit to as there were already unfilled vacancies in other localities.

Resourcing

Investment

Edinburgh City HSCP were allocated investment of £1.89m. This was originally for an 18-month period from April 2024. The forecast spending changed over time for each site because of adaptation of plans and responding to changed circumstances, and there was an agreement in 2025 to reprofile the 2025/26 spending to cover the whole financial year, allowing programme spending to continue until the end of March 2026.

Table 10: Edinburgh City HSCP investment

	2024/25 actual	2025/26 actual (Q3)	2025/26 forecast (Q4)	Total
Pharmacotherapy				
Staffing costs	£117,000	£377,585	£116,854	£611,439
Non-staffing costs	£3,000	£45,701	0	£48,701
Subtotal	£120,000	£423,286	£116,854	**£660,140**
CTAC				
Staffing costs	£192,000	£173,267	£55,291	£420,558
Non-staffing costs	0	£43,323	£29,867	£73,190
Subtotal	£192,000	£216,590	£85,158	**£493,748**
MDT working				
Staffing costs	£189,000	£299,091	£106,851	£594,942
Non-staffing costs	£5,000	£23,055	£10,000	£29,055
Subtotal	£194,000	£322,146	£116,851	**£623,997**
			Grand total	**£1,777,885**

Staffing

Staffing figures are reported for the whole of Edinburgh HSCP as this data cannot be provided for the demonstrator site area only. All PCPIP funded staffing was allocated to the demonstrator site area.

Table 11: Edinburgh City HSCP staffing allocation

	PCIP 7 (March 2024)				PCIP 8 (March 2025)				Q3 delivery plan (December 2025)			
	PCIF	Other	PCPIP	**Total WTE**	PCIF	Other	PCPIP	**Total WTE**	PCIF	Other	PCPIP	**Total WTE**
Pharmacotherapy												
Pharmacist	71.2	2.0	0	**73.2**	78.0	5.4	1.0	**84.4**	79.8	5.4	1.0	**86.2**
Pharmacy technician	41.0	0	0	**41.0**	44.6	0	5.0	**49.6**	44.2	0	5.0	**49.2**
PSW	0	0	0	**0**	0	2.0	4.5	**6.5**	2.0	2.0	1.0	**5.0**
CTAC												
Nursing	26.5	0	0	**26.5**	31.5	0	5.2	**36.7**	33.5	0	4.6	**38.1**
HCSW	3.6	0.6	0	**4.2**	1.6	0.6	0	**2.2**	1.1	0.6	0	**1.7**
Other	5.8	0	0	**5.8**	5.8	0	0	**5.8**	5.8	0	0	**5.8**
PCPIP project												
Admin	0	0	3.9	**3.9**	0	0	3.9	**3.9**	0	0	3.9	**3.9**
Project manager	0	0	0.4	**0.4**	0	0	0.4	**0.4**	0	0	0	**0**
Enhanced practices	0	0	0	**0**	0	0	2.0	**2.0**	0	0	3.1	**3.1**

Impact

Pharmacotherapy

Table 12: Edinburgh City HSCP pharmacotherapy

Planned improvement	Activity	Outcome
Introducing the PSW role (a new role in NHS Lothian)	• Training plans were developed for PSWs. • PSWs initially focused on non-clinical medication reviews, which helped them become familiar with GP IT systems. • Other PSW tasks included: data collection, medicines optimisation projects and efficiency work.	• The PSW role helped release pharmacy technician capacity, allowing them to focus on other key responsibilities such as HRMM and acute prescribing. • Three PSWs have left their posts and have enrolled in a preregistration pharmacy technician course demonstrating the role can act as a pipeline to develop pharmacy technicians and retain staff within the team.

Planned improvement	Activity	Outcome
Expanding the south-east pharmacotherapy hub	• Recruitment was undertaken for additional technicians and hub lead pharmacists. • A dashboard was developed with Public Health Scotland (PHS) to monitor hub and practice medicines reconciliation activity (number of IDLs and Outpatient letter (OPLs)). • New training plans were developed, and quarterly hub staff surveys were introduced. • Process mapping was completed for the medicines reconciliation pathway. The process map identified improvement opportunities and helped the team establish new ways of working. • Lead pharmacists and the GP clinical lead attended cluster and practice meetings to support engagement. • Practices were gradually onboarded to the hub over a 7-month period. • Eight of the 9 practices had dedicated hub support. The remaining practice had surgeries in two localities and could not be added to the south-east hub.	• Technicians reported growing confidence in undertaking medicines reconciliation. In an August 2025 survey, 100% of hub staff agreed or strongly agreed that they felt confident, compared with 86% of staff in February 2025. • The number of IDLs and OPLs (medicines reconciliation) actioned by the hub increased by 163% and 256% respectively (see *Figure 12* and *Figure 13*). The proportion of IDLs and OPLs actioned by the hub increased despite the number of practices served and volume of work increasing. The hub completed approximately 65% of IDLs and 37% of OPLs that were sent to pharmacy (see *Figure 14* and *Figure 15*). The remaining medicines reconciliations were completed by practice pharmacy teams. • In a June 2025 survey of practice pharmacy staff, 71% of respondents agreed that the hub improved their ability to dedicate more time to level 2 tasks. Furthermore, 60% of respondents reported an increased ability to focus on level 3 tasks. Respondents who selected 'not applicable' were based in practices that had only recently begun receiving hub support or did not complete tasks taken over by the hub.
Technicians supporting HRMM	• An HRMM register was established to capture monitoring requirements and ensure safe prescribing. • The introduction of the PSW role and expansion of the hub released some technician capacity to focus on HRMM.	• The percentage of HRMM completed by pharmacy technicians increased by 283% from October 2023 to July 2025. This work would otherwise be completed by pharmacists or GPs. There were challenges in collating this data because the read codes were recorded for the entire pharmacy team, making it difficult to separate activity by staff group.

Planned improvement	Activity	Outcome
		Consequently, data was only collected up to July 2025. • Disease modifying anti-rheumatic drugs (DMARDs) monitoring by the pharmacy team was established at two additional demonstrator site practices.
Streamlining prescribing processes by introducing technician led acute prescribing and increasing the proportion of serial prescriptions	• Protocols were introduced to guide pharmacy technicians in processing acute requests and identifying items suitable for repeat prescriptions, helping to streamline the process. • One practice focused on increasing serial prescriptions as part of a local QI project. • The introduction of the PSW role and expansion of the hub released some technician capacity in practice to focus on improving prescribing processes.	• The number of acute prescriptions processed by technicians increased by 253% across the three practices where the pharmacy team completed acutes. There were challenges in collating this data because the read codes were recorded for the entire pharmacy team, which made it difficult to separate activity by staff group. Consequently, data was only collected up to July 2025. • Two demonstrator site practices increased the number of serial prescriptions issued.
Establishing further level 3 pharmacy clinics	• Expansion of the hub and introduction of the PSW role, released capacity for practice pharmacy staff to undertake more level 3 work. • Pharmacists worked collaboratively with practices to determine which clinics would be established.	• All practices introduced pharmacist specialist clinics, with five new clinics established including: - polypharmacy review clinics - pharmacy led mental health clinic (with mental health nurse collaboration) - technician led inhaler technique clinic. • The number of consultations completed by pharmacists increased since the completion of the hub expansion.
Increasing the number of polypharmacy reviews completed for patients over 65 years of age and coded as frail	• Frailty coding was inconsistent and so the initial focus was on improving coding for this patient group. • A frailty dashboard was established to monitor activity. • An incentivised polypharmacy scheme ran from February to March 2025 which supported	• The proportion of people aged 65+ and coded as frail increased. This helped the team target polypharmacy reviews appropriately. • The number of people aged 65+ and coded as frail with a polypharmacy review completed in the past 15 months increased from 24 to 986 during PCPIP with the sharpest increase during the

Planned improvement	Activity	Outcome
	practices to prioritise polypharmacy reviews. • The scheme encouraged GPs and pharmacists to proactively undertake polypharmacy reviews.	polypharmacy incentive scheme. Improvement occurred city wide but following the incentivised scheme, polypharmacy review completion rates were maintained much better in South-East Edinburgh (see *Figure 16*). This was attributed to hub expansion as models of hub support in other localities were not comparable to the south-east approach and covered only 33% of practices.

Figure 12: Percentage of IDLs workflowed to pharmacy that are actioned by the hub (all practices) from August 2024 to January 2026

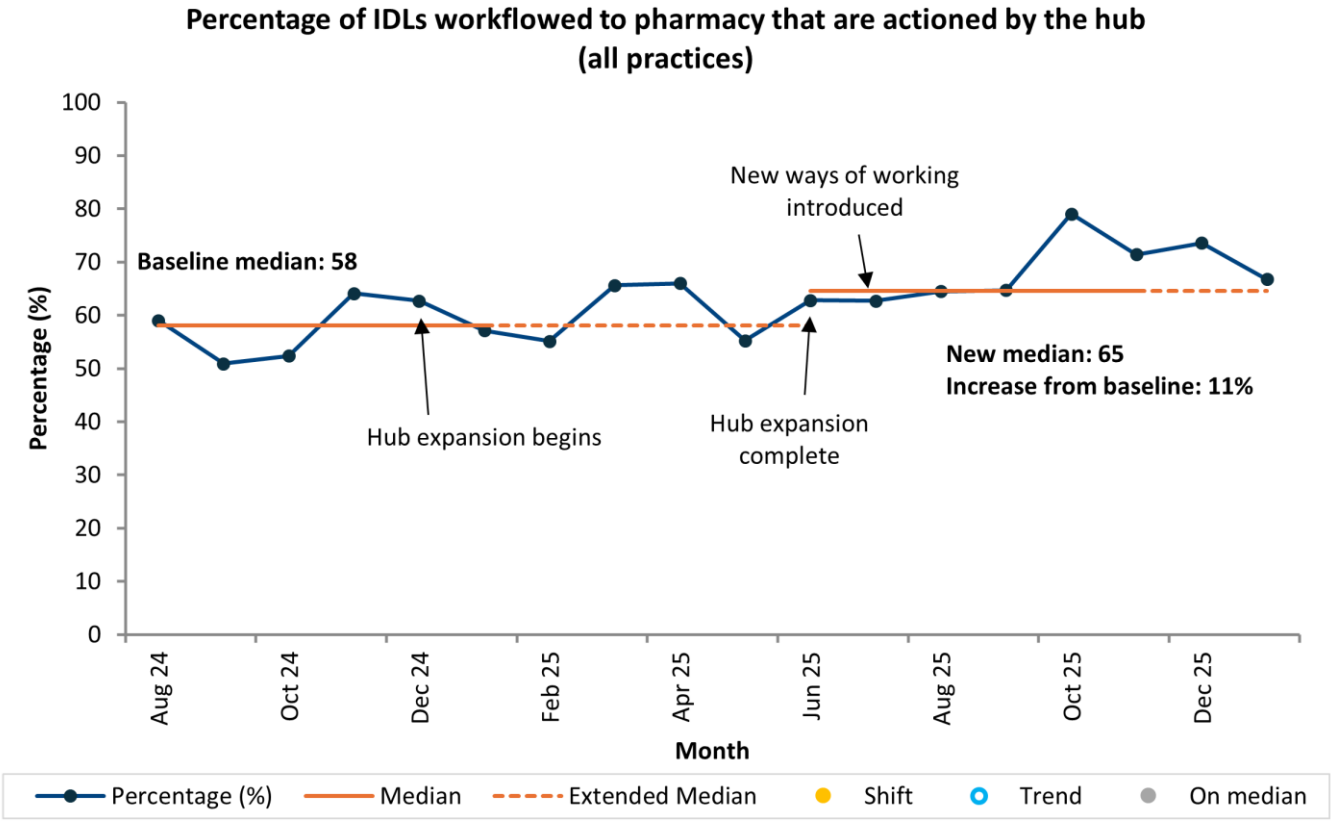


Figure 13: Percentage of OPLs workflowed to pharmacy that are actioned by the hub (all practices) from August 2024 to January 2026

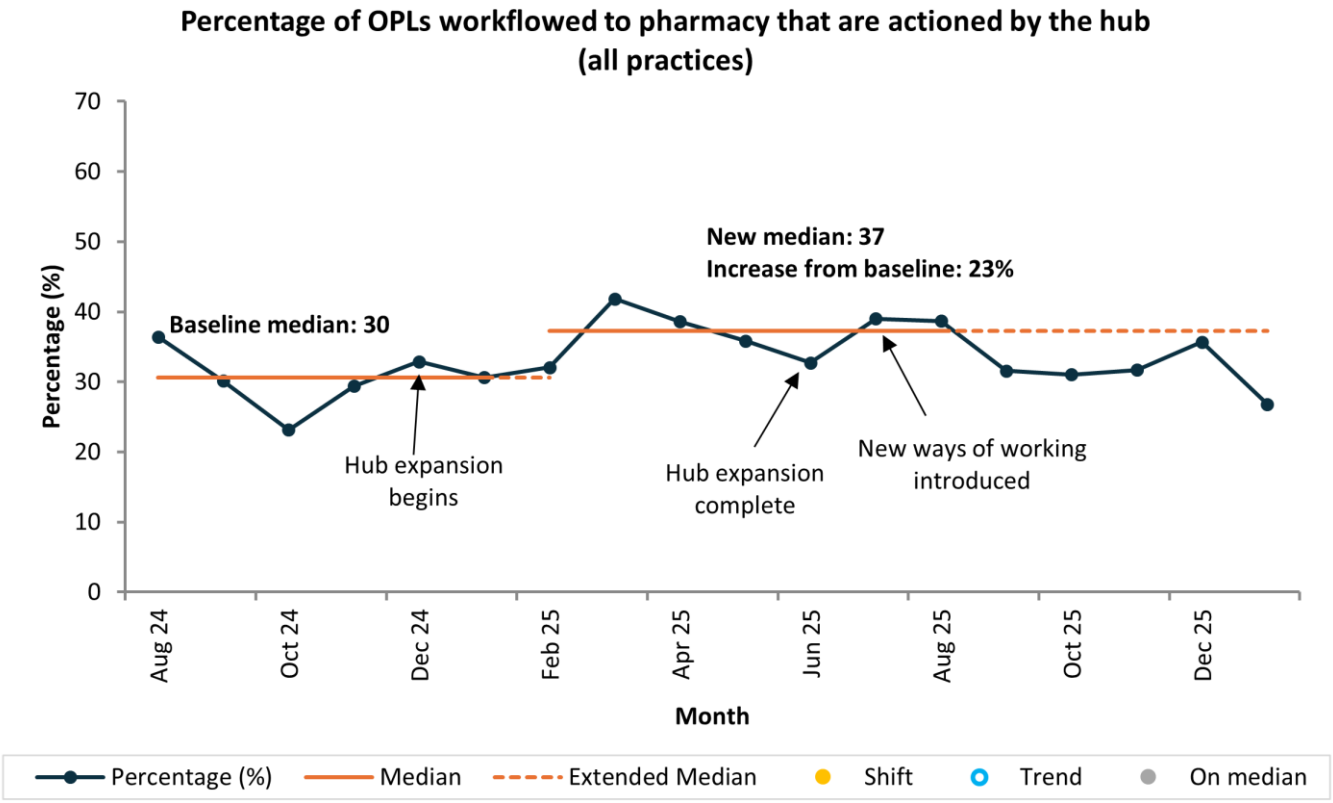


Figure 12 and *Figure 13* illustrate the percentage of IDLs and OPLs actioned by the hub respectively. It was expected that the percentage of IDLs and OPLs actioned by the hub would remain consistent during PCPIP as the hub expanded to additional practices. However, these increased from 58% to 65% for IDLs and 30% to 37% for OPLs. The increase was attributed to operational leadership in the hub, development of training plans and introducing a new way of working following a process map exercise. The remaining IDLs and OPLs were either actioned by staff working in practice or did not require action.

Figure 14: Count of IDLs actioned by the pharmacotherapy hub for PCPIP practices from January 2024 to August 2025

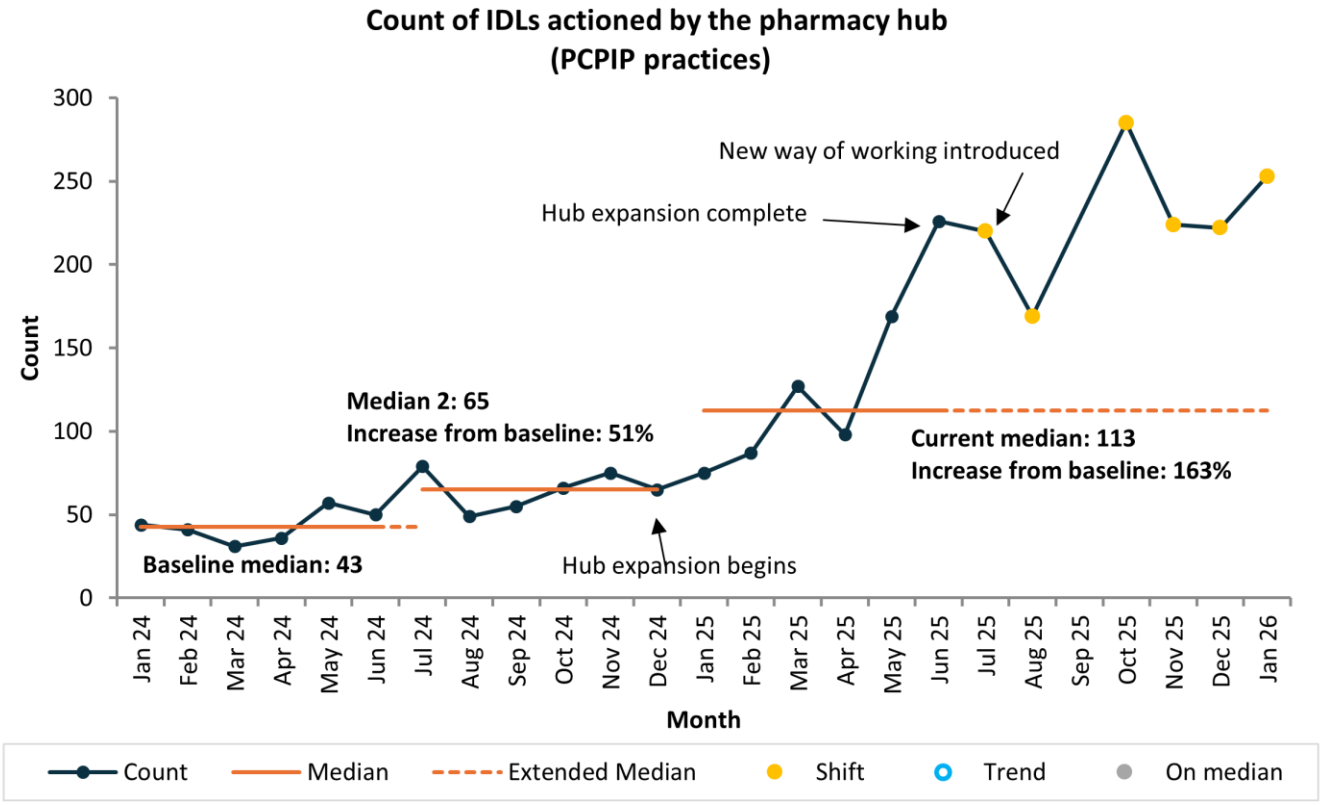


Figure 15: Count of OPLs actioned by the pharmacotherapy hub for PCPIP practices from January 2024 to January 2026

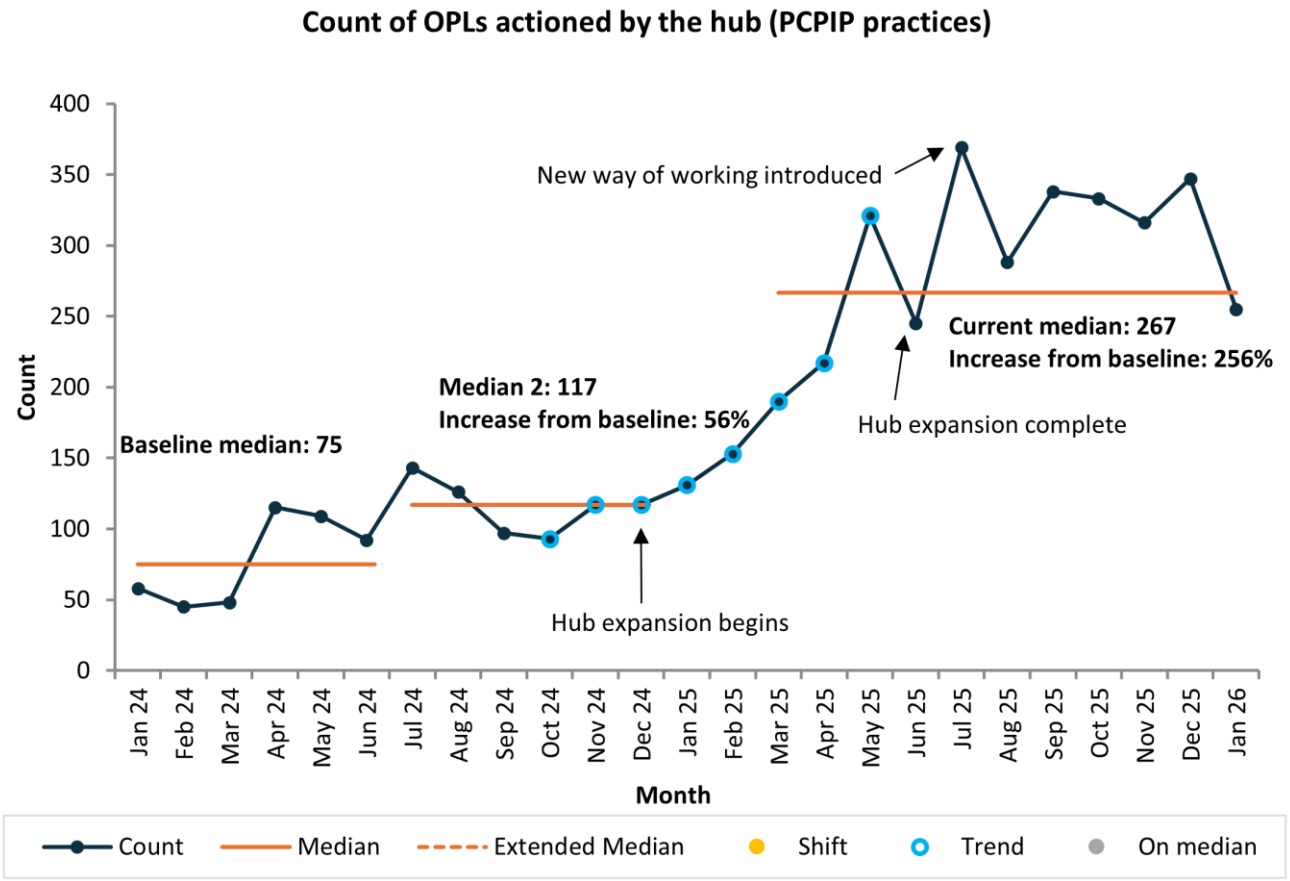


Figure 14 and *Figure 15* show the number of IDLs and OPLs actioned by the hub. Between December 2024 and June 2025, the hub gradually onboarded PCPIP practices, and as hub support expanded, the volume of IDLs and OPLs actioned increased accordingly.

Note for Figures 12, 13, 14 and 15:
Data from August 2024 onwards comes from Docman. The count is a lower limit of the true value, because it relied on staff recording standard texts in the audit detail, and this recording was not always 100% complete. For some months the count was also affected by deletion of items from Docman that occurred prior to extraction of the data. In particular, around 19 IDLs and 26 OPLs completed by the hub were missing from August 2025 because of deletion at one practice. Data was not recorded prior to August 2024.

Figure 16: Count of polypharmacy reviews completed by pharmacists in South-East Edinburgh from October 2023 to September 2025

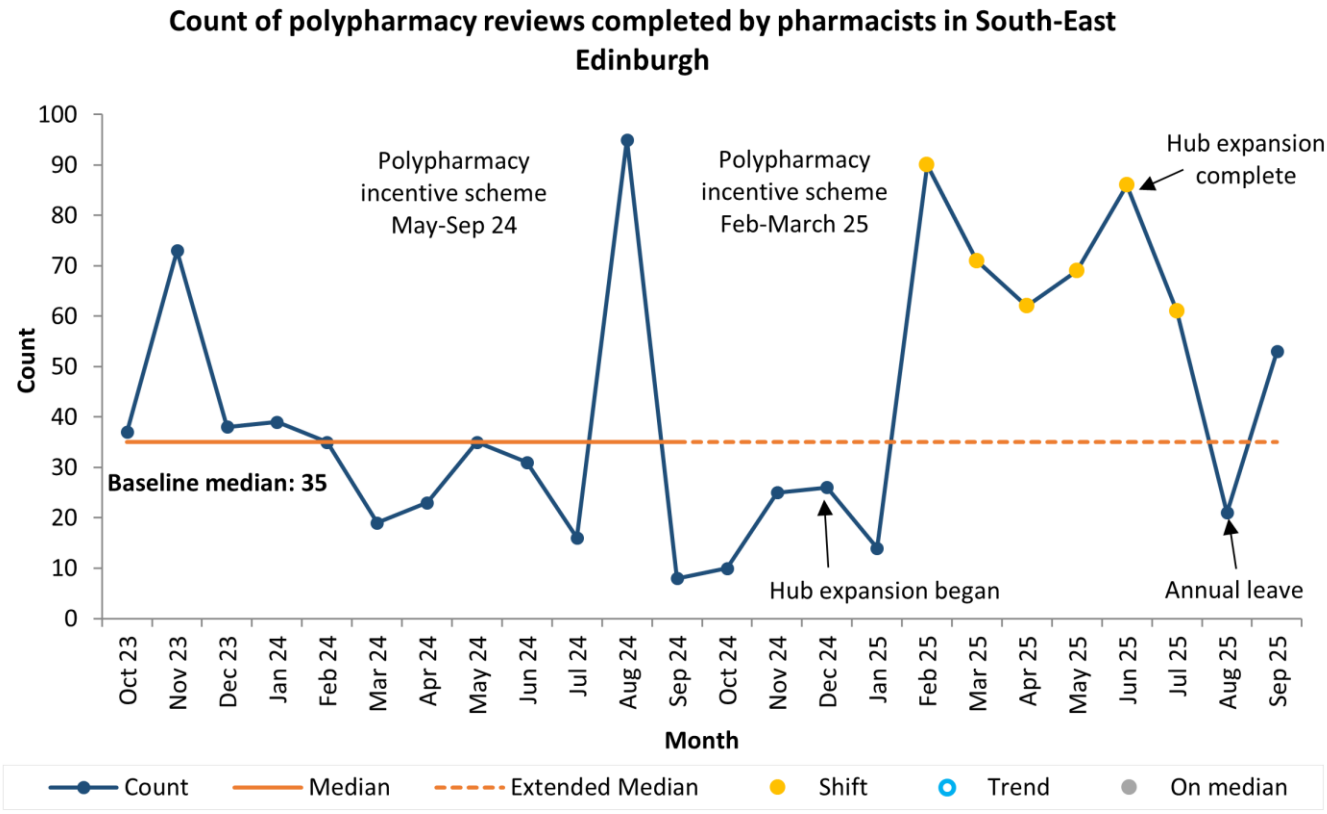


Figure 16 shows the number of polypharmacy reviews completed by pharmacists in South-East Edinburgh. In August 2024, there was a sharp increase which coincided with the introduction of a polypharmacy incentive scheme. The number of polypharmacy reviews decreased when the incentive scheme finished. However, when the incentive scheme was reintroduced in February and March 2025, polypharmacy review numbers were maintained in the months following. This is likely attributable to the expansion of the hub to additional practices, which increased pharmacist capacity to undertake polypharmacy reviews. There was a decrease in August 2025 which can be attributed to higher levels of annual leave over the summer period.

CTAC

Table 13: Edinburgh City HSCP CTAC impact

Planned improvement	Activity	Outcome
Improving access to CTAC in South-East Edinburgh by opening two new CTAC rooms and recruiting additional nurses	• Two new CTAC rooms were opened. Edinburgh HSCP had already planned to develop a CTAC treatment room in the demonstrator site area prior to PCPIP, and they used PCPIP funding to build an additional room. • Additional CTAC nurses were recruited.	• The number of CTAC appointments delivered each month in South-East Edinburgh increased by 87% (see *Figure 17*). • The additional capacity in South-East Edinburgh reduced the median percentage of people travelling to another locality to access CTAC from 37% to 9% (see *Figure 18*).

		• Recruitment of extra staff strengthened service consistency and resilience.
Creating a robust training and induction plan for new staff throughout the first 3 months of the role	• Engagement was undertaken with CTAC leads across other health boards to support the development of training plans. • The training plan was tested and refined. • Training feedback was requested in a staff survey.	• All CTAC nurses recruited through PCPIP completed the training plan. • In the staff survey, 100% of respondents reported they felt 'very confident' to provide care in the following tasks: wound care, ear care, suture removal and dopplers. There were mixed confidence levels in providing vaccinations. • The number of staff was too small to meaningfully assess the training plan's impact on service delivery.
Introducing cluster working to increase resilience	• CTAC staff worked across all four treatment rooms within the south-east of the city. The team aimed to ensure that leave and supervision were covered to reduce cancellations for patients.	• The number of appointments cancelled by the service reduced by 39% from the baseline median (see *Figure 19*).
Introducing daily safety huddles	• A daily safety huddle template was designed and tested.	• Safety huddles provided a structured opportunity to review daily workload and confirm necessary equipment, support and skillset. Anecdotal evidence suggests issues were identified earlier in the day leading to fewer last-minute cancellations.
Review the current appointment template and pilot a revised version to ensure all treatments are allocated equitably and staff have sufficient opportunities to maintain competencies across all CTAC tasks	• Limited variation in appointments was noted to impact staff wellbeing, contributing to perceived higher turnover and absence rates. • The team were unable to identify a suitable template to test and as such the intended change was not tested.	• Suitable appointment templates are still being explored.

Figure 17: Count of CTAC appointments delivered in South-East Edinburgh from January 2024 to November 2025

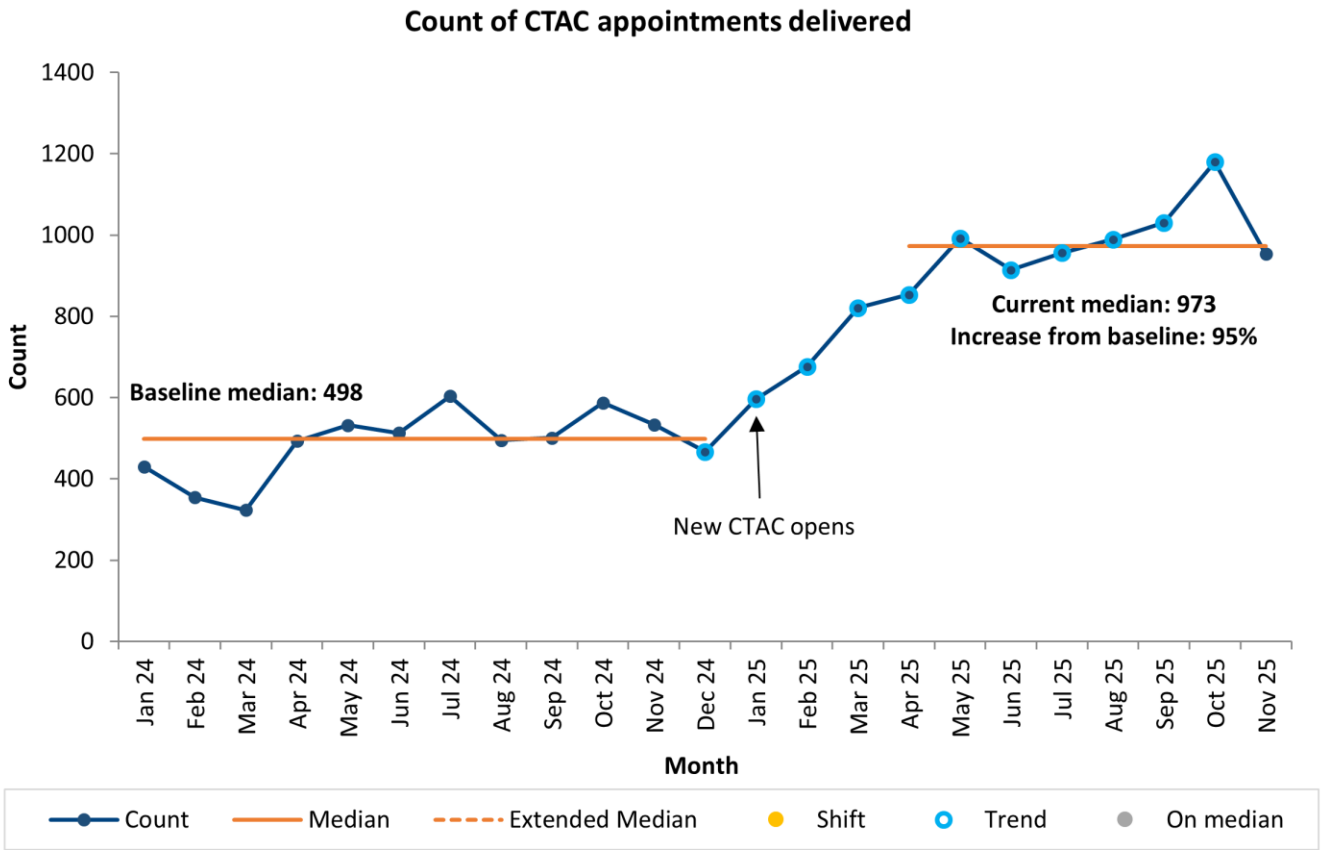


Figure 17 highlights that the number of CTAC appointments delivered in South-East Edinburgh increased from a baseline median of 498 to a new median of 973. This can be attributed to increased staffing and the opening of new treatment rooms.

Figure 18: Percentage of South-East Edinburgh patients seen at CTACs outside South-East Edinburgh from January 2024 to November 2025

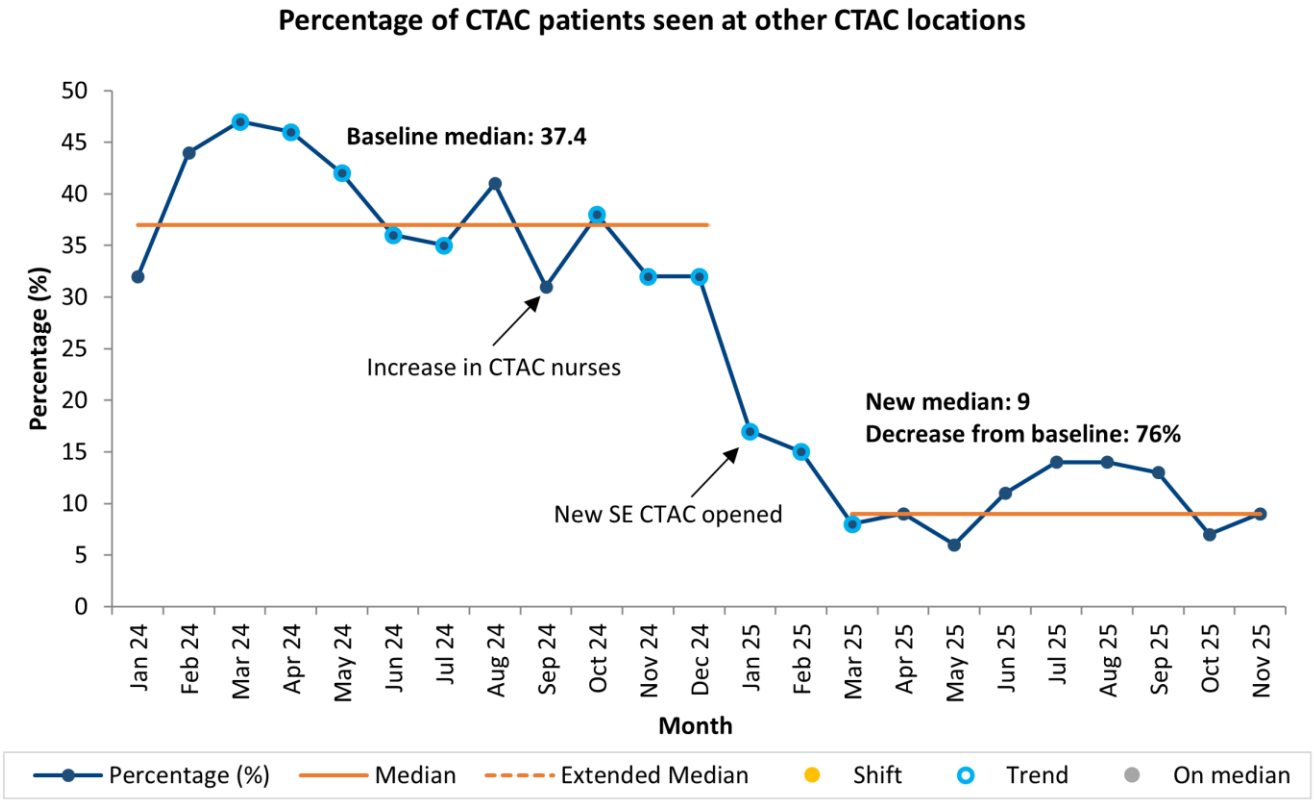


Figure 18 highlights that, as CTAC capacity increased, fewer patients needed to travel to other locations to receive care.

Figure 19: Count of CTAC cancellations by service from January 2024 to November 2025

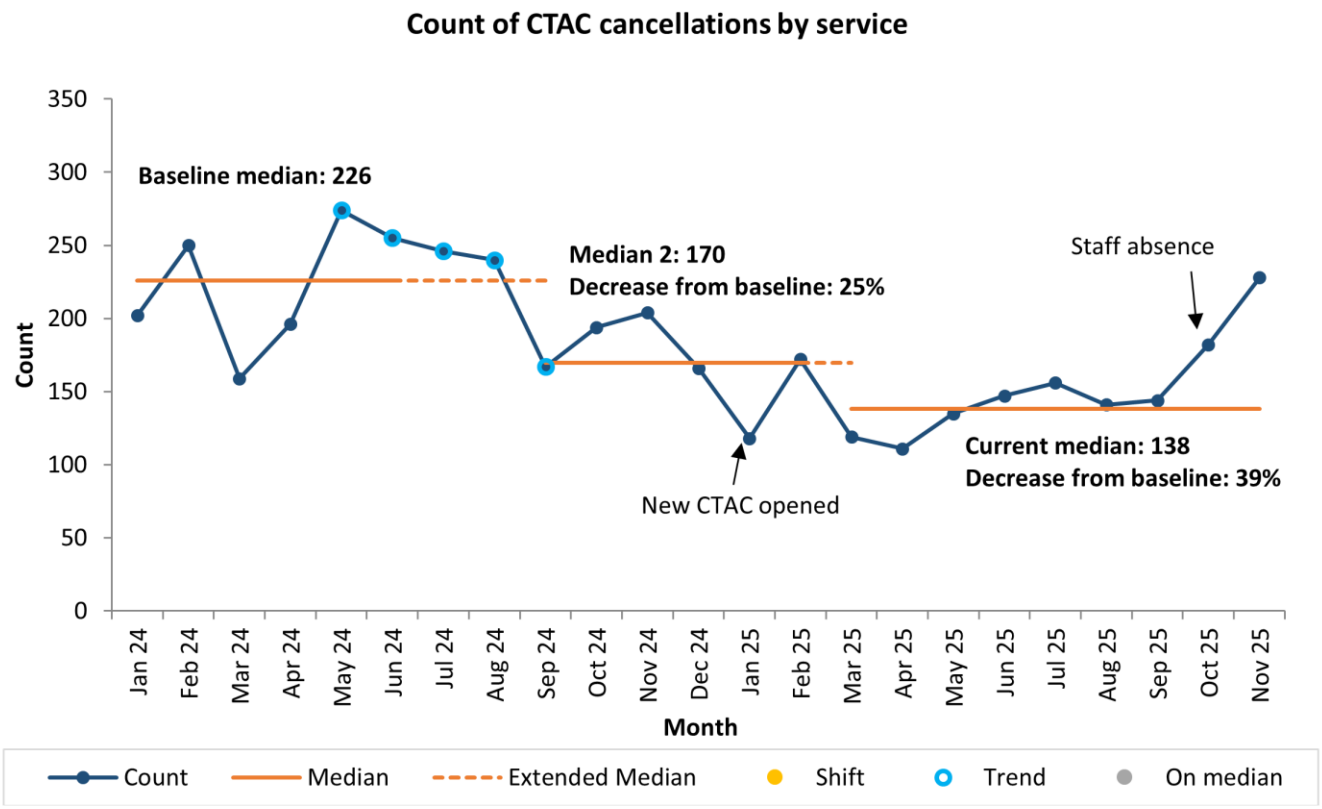


Figure 19 highlights the count of CTAC appointments cancelled by the service in South-East Edinburgh. This was reduced by 39% from a median of 226 cancellations to 138 cancellations per month.

MDT working

Table 14: Edinburgh City HSCP MDT working impact

Planned improvement	Activity	Outcome
Enhanced practices		
Recruitment of 2.0 WTE MDT staff in three enhanced practices.	• Enhanced practices completed a local WoCA, which was used to identify the roles needed to meet demand. • All three practices identified the need for additional ANP resource. • ANP roles were advertised but could not be filled. • Other MDT roles identified and recruited to were: - Practice A: mental health nurse - Practice B: pharmacist with mental health interest, and	• It was not possible to recruit to ANP posts because of a lack of suitably qualified applicants. • Although the recruitment of other MDT members identified was successful, the timeframe of PCPIP was too short to fully embed these new staff in practice. • Some qualitative feedback from practices indicated that the expanded MDT helped reduce pressure on services.

Planned improvement	Activity	Outcome
Enhanced practices		
	- Practice C: MSK physiotherapist and mental health nurse.	
GPN		
Engaging with GPNs in the demonstrator site to understand GPN activity and identify potential opportunities for collaborative working with other members of the MDT in areas such as chronic disease management (CDM).	• Early engagement sessions were held with GPNs and practice managers to explore GPN activity. • GPNs completed WoCAs. • Practice nursing leads offered support with training needs analysis, but this work did not progress.	• Progress was limited by delays in publishing the 'Transforming Roles paper 6: role of the general practice nurse 2025'. There are ongoing discussions about the impact of the paper on the role and areas for development. • The transformation of nursing roles is an NHS Lothian priority, with relevant activities being progressed out with PCPIP by NHS Lothian nursing committees.

Learning

Workforce

- Inability to recruit ANPs meant that the enhanced practices work could not be fully tested or evaluated. This was because of a lack of suitably qualified applicants and has been an ongoing challenge for Edinburgh City HSCP. The primary care ANP workforce is small, and practices can also employ ANPs directly, which means they have greater flexibility around remuneration than boards/HSCPs, who must adhere to Agenda for Change pay scales.
- Recruitment of CTAC nurses was delayed because of the requirement to use a board wide recruitment process which made it challenging to ensure suitable candidates were appointed. This was followed by retention challenges, including one nurse securing a post only after a few months working in CTAC.
- The demonstrator site tested the PSW role, a new role in NHS Lothian. Pharmacists and pharmacy technicians reported that the role added value by allowing them to focus more on clinical responsibilities. Three PSWs have enrolled in a local preregistration pharmacy technician course, demonstrating the role can act as a pipeline to develop pharmacy technicians and retain staff within the team.

Data and information

- Working with the local intelligence support team (LIST) to develop a dashboard enabled the team to understand overall demand for medicines reconciliation and where and when work was being completed without needing to collect manual data. This was facilitated by existing NHS Lothian data infrastructure which is not currently replicable across Scotland.
- Overall understanding of CTAC demand remains limited. It was not possible to obtain data on any work undertaken by practice nurses which could be transferred to CTAC, and WoCA data was only collected by GPNs in some practices.
- There were different IT systems used across GP practices and CTAC. As the CTAC dashboard was maintained outside of the primary care team, it was difficult to get information about how it worked. For example,

whether cancellations were counted in the month in which the appointment would have taken place or in the month in which it was cancelled.

Infrastructure

- Building work to complete new CTAC rooms overran which caused a delay to the service starting.
- Finding accommodation for the pharmacotherapy hub was very challenging because of lack of available office space. Population growth and restrictions on capital expenditure resulted in difficulties housing all the staff needed across primary care. This resulted in the new hub team working in North-West Edinburgh for several weeks, which impacted morale and delayed the opportunity to establish ways of working.

Ways of working

- The PSW role and the expansion of the hub helped create capacity for practice pharmacy teams to complete more advanced pharmacotherapy tasks.
- Lead pharmacists enhanced hub efficiency through structured training plans and assessments. This enabled technicians to work independently and reduced the need for second checks.
- Variations in practice processes made it challenging to standardise services. The pharmacotherapy hub aimed to implement a standard agreement with practices to define ways of working. However, practices had different preferences for communication methods which meant the hub had to customise this for each individual practice. When completing an IDL or OPL, hub staff needed to refer to agreements for each practice daily, which slowed down their work.
- Making changes incrementally was helpful and enabled the team to understand impact before making further changes, for example onboarding practices to the hub gradually.
- Monthly project board meetings to review and discuss QI data helped sustain progress and address challenges as they occurred.

Stakeholder engagement

- Engagement with GPs was vital and local clinical leads played an important role in this. Attending cluster meetings to share progress updates and data helped secure engagement.
- Patient engagement using discovery conversations was undertaken and primarily resulted in positive feedback. This was not effective in generating improvement ideas. See *Appendix 6, Table 13 and 14* for the pharmacotherapy and CTAC discovery conversations plans.

NHS Shetland journey

Context

The NHS Shetland demonstrator site includes the whole health board area. The population is approximately 23,000 and there are nine GP practices. There were eight practices with 2C status during the programme. According to the Scottish Government's RESAS classification, Shetland is described as 'islands and remote'. Communities live across multiple islands and access to care can be challenging because of reliance on ferries for interisland travel. There are limited specialist services locally and residents rely on ferry or air transport to access secondary care in mainland Scotland.

There are pockets of deprivation according to SIMD and many areas are deprived in terms of geographic access to services.

Situation

Since the introduction of the GMS contract, advanced physiotherapy practitioners and CLWs were introduced in two locations. Vaccination services were successfully embedded through the VTP.

Prior to PCPIP, it was estimated that pharmacotherapy services were provided to 77% of the population and delivered approximately 60 – 65% of the workload. The primary care pharmacy team delivered non-patient facing tasks remotely which enabled them to provide some services to the most remote island practices and to employ a remote working pharmacist based in mainland Scotland. Pharmacists also worked in some practices to deliver patient facing activities including clinics. The implementation gap for pharmacotherapy was understood as primarily because of resource scarcity and the challenges of serving a dispersed island population.

The CTAC function was provided in practices by GPNs and HCSWs who were health board employed in all but one practice. There was high use of GPN time to provide some of the CTAC tasks which could have been completed by HCSWs. There was also variation in recall systems and templates used for the monitoring and management of LTCs across practices.

NHS Shetland had an existing programme of primary care redesign focused on:

- prevention and early intervention
- tackling health inequalities
- demonstrating best value
- shifting the balance of care, and
- meaningfully involving communities.

NHS Shetland considered some of the barriers to full contract implementation and how to address them including digital development, innovative ways of working and phased approaches to delivery.

Approach

The focus of NHS Shetland's PCPIP proposal is outlined below.

Improving outcomes, effectiveness and efficiency of pharmaceutical care in general practice in NHS Shetland by:

- continuing to transition work to the existing primary care pharmacy team, not as a separate pharmacotherapy service
- growing the pharmacy team
- increasing the proportion of people prescribed regular medications who benefitted from a timely medication review
- maintaining effective monitoring of high-risk medications and provision of polypharmacy reviews, and
- enabling pharmacists and pharmacy technicians to focus on routine and complex reviews, allowing GPs to provide leadership and focus on complex cases.

Delivering full CTAC services in NHS Shetland by:

- improving skill mix and making better use of HCSWs
- increasing the proportion of people with a cardiovascular condition who had access to timely LTC monitoring and management
- improving data quality and anchoring review and recall processes to birth month
- ensuring equitable access by developing flexible working models and improving digital infrastructure, and
- spreading use of the House of Care (HoC) process.

The NHS Shetland team worked with Healthcare Improvement Scotland to further understand their current system by collecting and reviewing data, engaging stakeholders and using QI tools. Key insights from this work were:

- there was significant variation in the monitoring and management of LTCs. Inconsistent recall systems and fragmented processes led to gaps in proactive care
- patients in remote island communities faced inequitable access to services
- medication reviews were conducted reactively in response to prescription limits and there was no proactive structured approach. This increased the risk of medication-related harm.
- challenges with data exacerbated the issues and additional analyst capacity was needed to address these, and
- engaging with practices was vital and funded sessions from a GP and practice manager were needed to support this work.

Resourcing

Investment

NHS Shetland were allocated investment of £1.03m. This was originally for an 18-month period from April 2024. The forecast spending changed over time for each site because of adaptation of plans and responding to changed circumstances, and there was an agreement in 2025 to reprofile the 2025/26 spending to cover the whole financial year, allowing programme spending to continue until the end of March 2026.

Table 15: NHS Shetland investment and spending

	2024/25 actual	2025/26 actual (Q3)	2025/26 forecast (Q4)	Total
Pharmacotherapy				
Staffing costs	£99,000	£125,338	£43,938	£286,276
Non-staffing costs	£10,000	£11,444	£4,800	£26,644
Subtotal	£109,000	£136,782	£48,738	**£312,920**
CTAC				
Staffing costs	£154,000	£132,783	£40,242	£320,025
Non-staffing costs	£12,000	£1,452	£1,000	£14,452
Subtotal	£166,000	£134,235	£41,242	**£334,477**
MDT working				
Staffing costs	£147,000	£129,335	£46,561	£322,896
Non-staffing costs	£20,000	£4,200	£1,400	£25,600
Subtotal	£167,000	£133,535	£47,961	**£348,496**
			Grand total	**£995,893**

Staffing

Table 16: NHS Shetland staffing allocation

	PCIP 7 (March 2024)				PCIP 8 (March 2025)				Q3 delivery plan (December 2025)			
	PCIF	Other	PCPIP	**Tota WTE**	PCIF	Other	PCPIP	**Total WTE**	PCIF	Other	PCPIP	**Total WTE**
Pharmacotherapy												
Pharmacist	3.1	0	0	**3.1**	3.1	0	1.8	**4.9**	3.1	0	1.8	**4.9**
Pharmacy technician	1.8	0	0	**1.8**	1.8	0	0	**1.8**	1.8	0	0	**1.8**
PSW	0	0	0	**0**	0	0	1	**1.3**	0	0	1	**1**
CTAC												
Nursing	1.3	0	0	**1.3**	1.3	0	0.8	**2.1**	1.3	0	0.8	**2.1**
HCSW	2.0	0	0	**2.0**	2.0	0	2.5	**4.5**	2.0	0	2.5	**4.5**
Other	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
PCPIP project												
Primary care facilitator	0	0	0	**0**	0	0	0.4	**0.4**	0	0	0.4	**0.4**
Project officer	0	0	0	**0**	0	0	0.5	**0.5**	0	0	0.5	**0.5**
Data analyst	0	0	0	**0**	0	0	1	**1**	0	0	1	**1**
Practice management	0	0	0	**0**	0	0	0.4	**0.4**	0	0	0.4	**0.4**
GP support	0	0	0	**0**	0	0	0.2	**0.2**	0	0	0.2	**0.2**

Impact

Pharmacotherapy

Table 17: NHS Shetland pharmacotherapy impact

Planned improvement	Activity	Outcome
PSW completing administrative tasks and level 1 medication reviews across all 2C practices.	• A PSW was added to the pharmacy team and trained. • Reports were run from the Shetland Health Information Platform (SHIP) for each practice showing medications which had not been ordered. • PSWs and trainee technicians reviewed the reports and stopped medications if they were no longer required. • Patient records were escalated to a pharmacist for review if medications were still required but not being ordered or any other issues arose.	• This process helped the pharmacy team identify patients who were not ordering their medications and were at risk of harm. • One patient had not ordered their antidiabetic medication in the last 18 months and was contacted to arrange monitoring and counselling on the importance of the medications. The patient was 'over the moon' that someone had taken a proactive interest in their health and wellbeing.
Implementing a pharmacist led medication review process across all 2C practices.	• Prior to PCPIP, medication reviews often relied on prescription issue limits leading to ad hoc reviews and unscheduled workload. • Pharmacist time was increased in one practice initially to test a new process. • Using SHIP, the pharmacist collated a list of patients on regular medication by birth month. • Patients' medications were reviewed 3 months after their birth month, allowing sufficient time for their birth month LTC review to take place. • Triage by the pharmacist assessed whether the review should include patient contact. • Following testing in one practice the process was implemented and spread to all other 2C practices.	• The proportion of medication reviews completed by a pharmacist across all practices increased by 269% (see *Figure 20*) and the proportion of reviews requiring patient contact completed by the pharmacy team increased by 186% (see *Figure 21*). This work would otherwise have been completed primarily by GPs. • The proportion of people on regular medication who had a medication review within 180 days of birth month increased from a median of 68.5% to 79.7% (see *Figure 22*). • In the pilot practice, requests for acute prescriptions and reauthorisation of repeat prescriptions reduced. This indicates that a robust review process reduced the volume of

Planned improvement	Activity	Outcome
		unscheduled level 1 work (see *Figure 23*). • All practices now have established a 3-month time-lagged medication review process following LTC appointments.
Increasing the uptake of serial prescriptions.	• During medication reviews, appropriate patients were switched to a serial prescription. • The duration of serial prescriptions was standardised at 56 days. • Patients were contacted to explain the change.	• The proportion of people with repeat medications who accessed these via serial prescription increased from 7.3% to 7.8% and continues to trend upwards (see *Figure 24*).
Embedding remote working for pharmacists.	• One remote working pharmacist was already in post and another two were recruited. • New ways of working were developed including ensuring hybrid options for all meetings and agreeing methods of communication. • This ensured these pharmacists were fully integrated into both the pharmacy team and individual practice teams. • Remote working pharmacists regularly visited Shetland which helped build relationships with colleagues and provide opportunities for face-to-face patient contact. • Pharmacist support was extended to geographically isolated practices with remote working pharmacists carrying out reviews and remote consultations.	• Previously, some practices in NHS Shetland had no pharmacy support because of geographical isolation. Since the introduction of remote working pharmacists, every practice now has some pharmacy capacity every week, ensuring a more equitable service. • Remote working pharmacists have contributed to the increased number of medication reviews carried out across NHS Shetland and greater continuity of care for patients.
Deliver two polypharmacy reviews per 1,000 practice population.	• The team agreed not to deliberately target or incentivise polypharmacy reviews but to monitor the impact of a robust medication review process on this indicator.	• The rate of polypharmacy reviews per 1,000 practice population has started to increase from a baseline median of 0.9 (see *Figure 25*).

Figure 20: Percentage of medication reviews completed by a pharmacist from January 2023 to January 2026

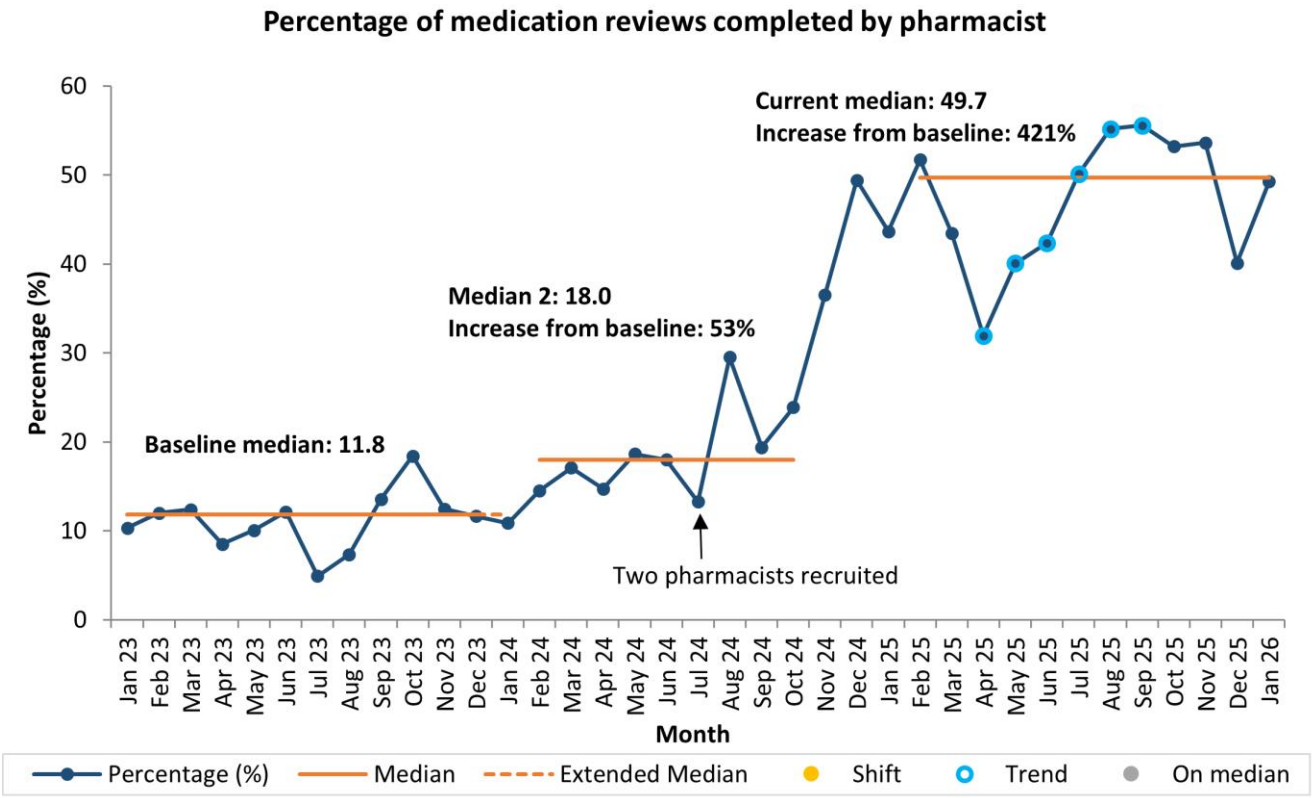


Figure 20 displays the percentage of medication reviews completed by pharmacists. The median increased from 11.8% to 49.7%, indicating that pharmacists completed medication reviews which would previously have been actioned by other clinicians in GP practices.

Figure 21: Percentage of medication reviews requiring patient contact completed by the pharmacy team from January 2023 to January 2026

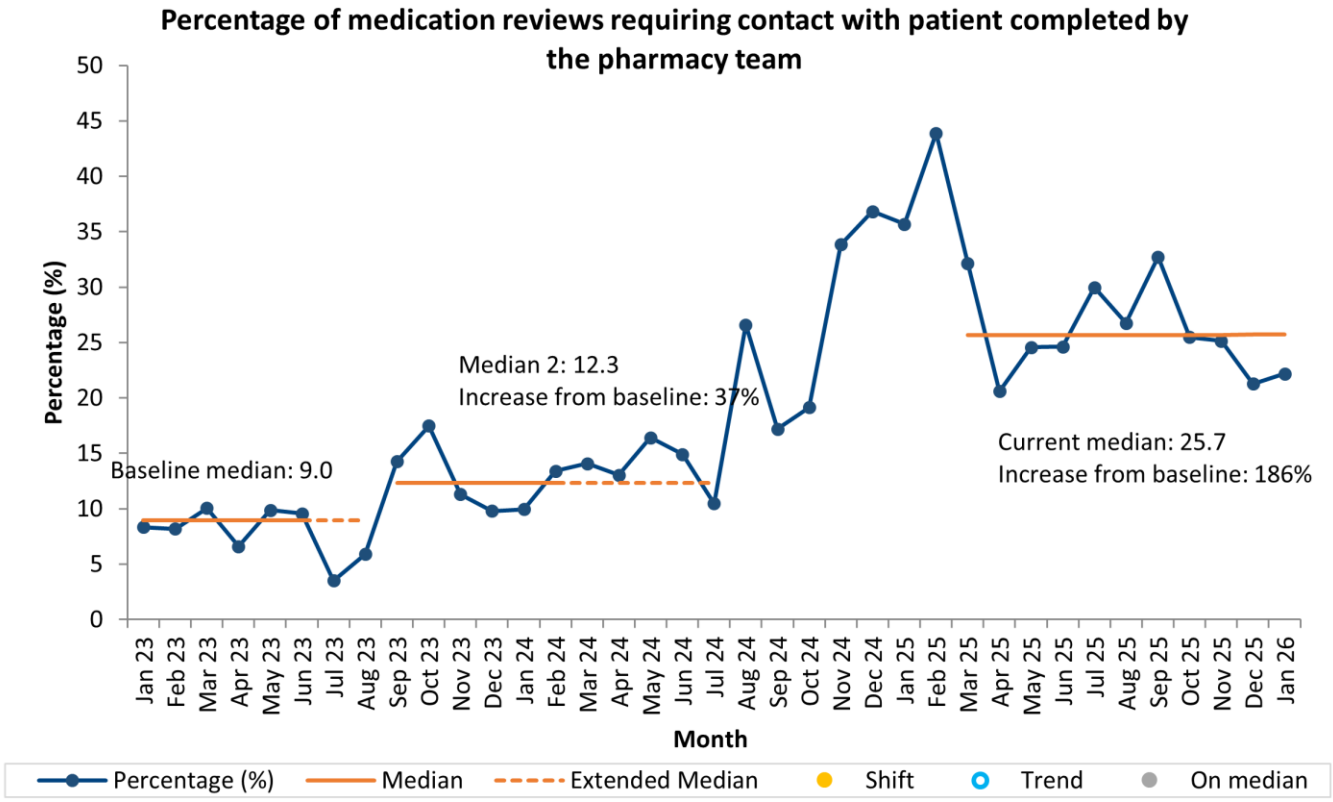


Figure 21 highlights the percentage of medication reviews which required contact with a patient completed by the pharmacy team in NHS Shetland. The baseline median increased from 9% to 25.7%. This indicates that the increase in medication reviews completed by pharmacists included medication reviews with the patient which would have previously been completed by a GP, as well as notes-based reviews.

Figure 22: Percentage of people on regular medication who have had a medication review completed within 180 days of birth month from January 2023 to January 2026

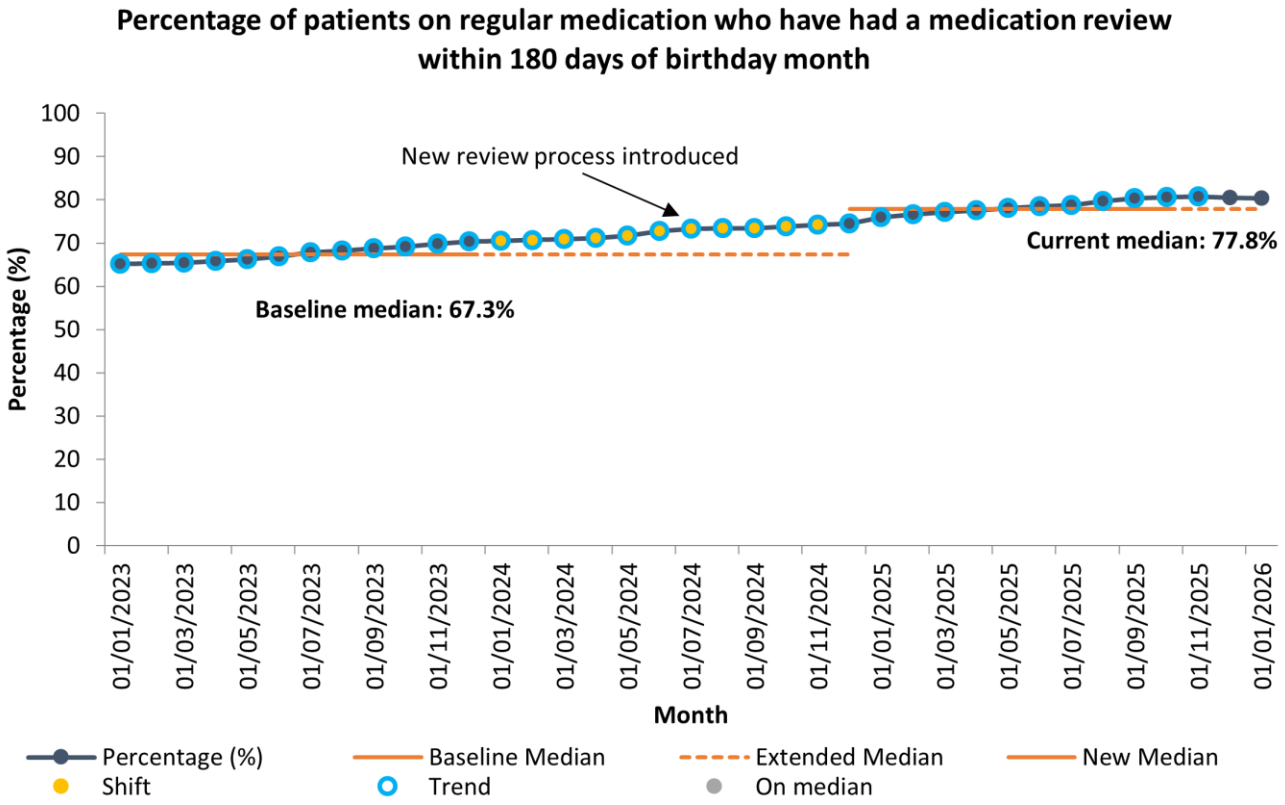


Figure 22 shows the proportion of patients on regular medication who received a medication review within 180 days of their birthday month. The median increased from 67% to 80%, reflecting the impact of the pharmacist-led review process.

Figure 23: Acute prescription and repeat prescription reauthorisation requests in one practice from November 2023 to August 2025

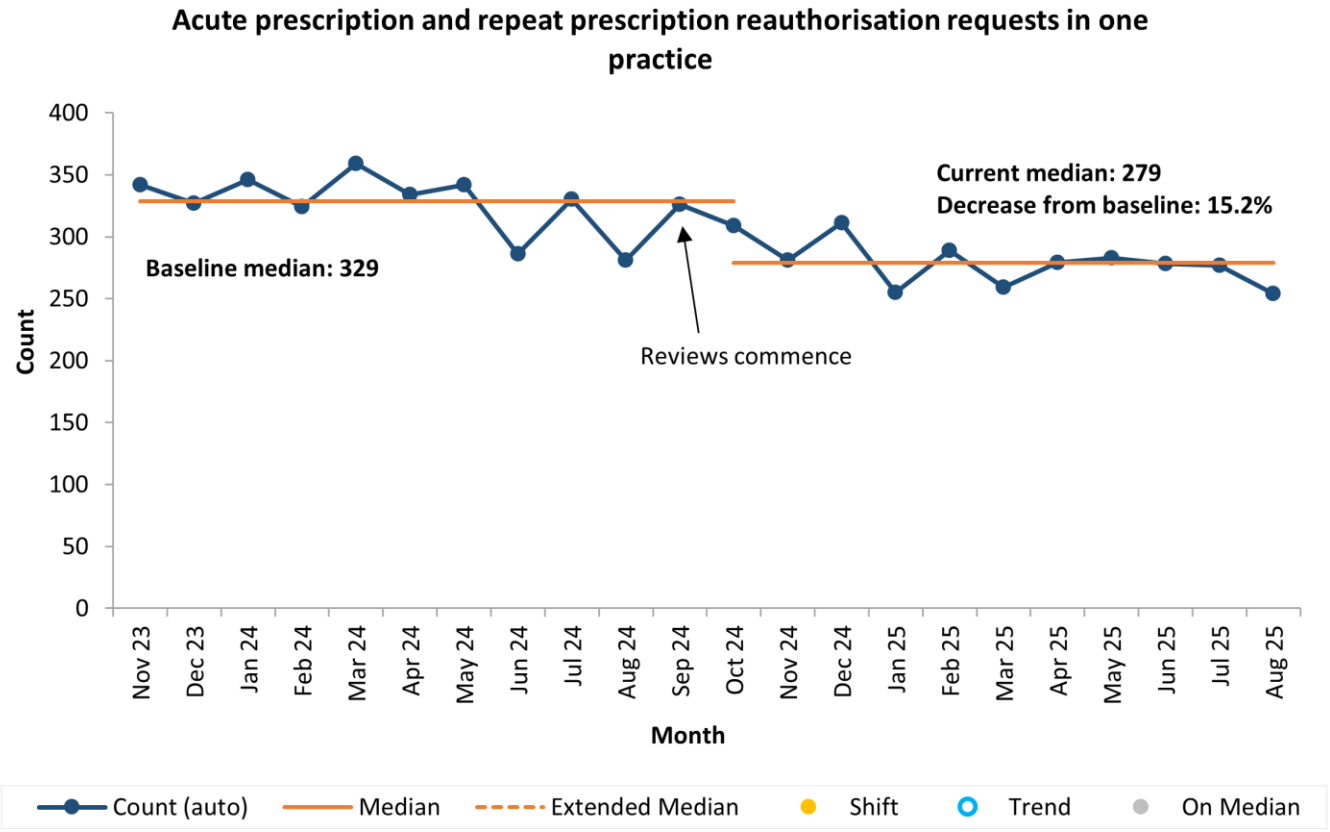


Figure 23 highlights that the monthly number of acute prescription and repeat prescription reauthorisation requests in one practice reduced from a median of 329 to a median of 279 following the introduction of the medication review process.

Figure 24: Individuals with a serial prescription as a percentage of those with repeat prescriptions from January 2023 to January 2026

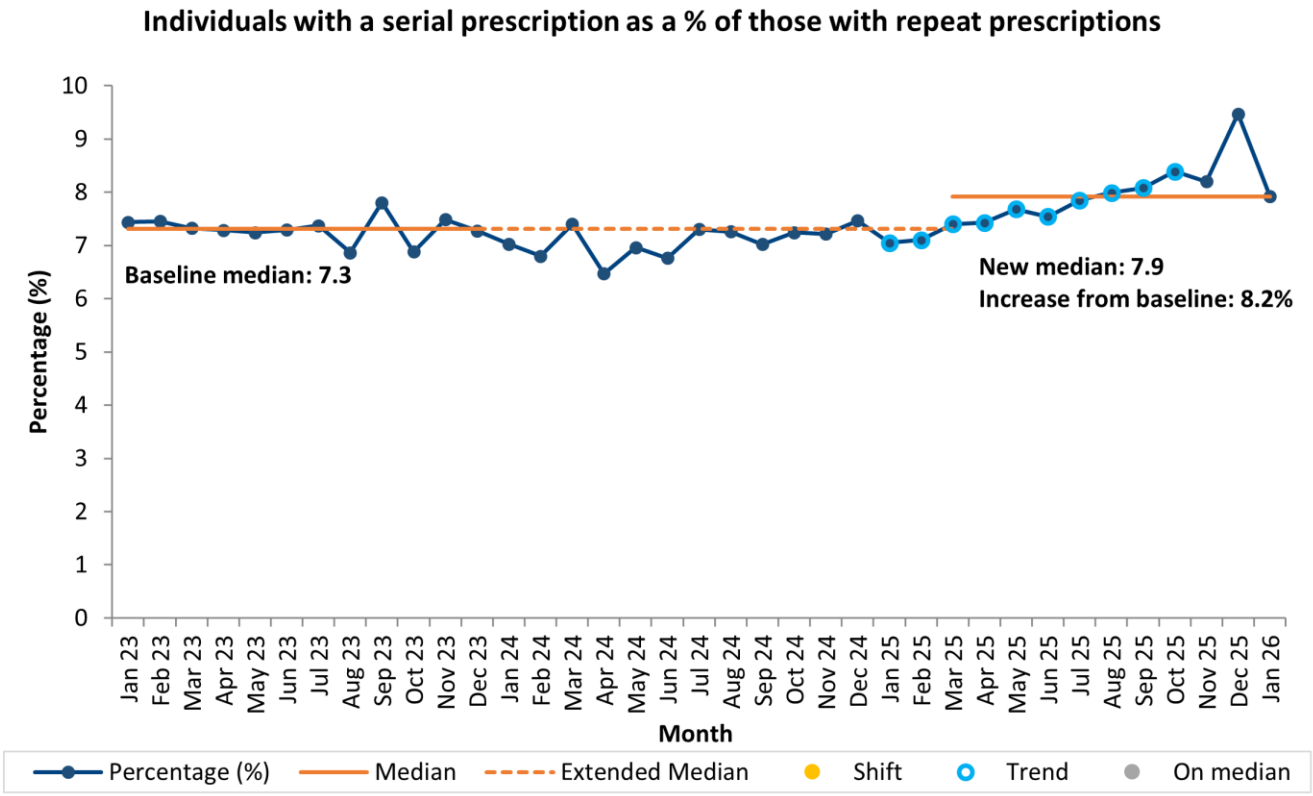


Figure 24 shows that the median proportion of people with a repeat prescription who had this issued as a serial prescription increased from 7.3% to 7.9%.

Figure 25: Quarterly rate of polypharmacy reviews completed per 1,000 list size from March 2022 to December 2025

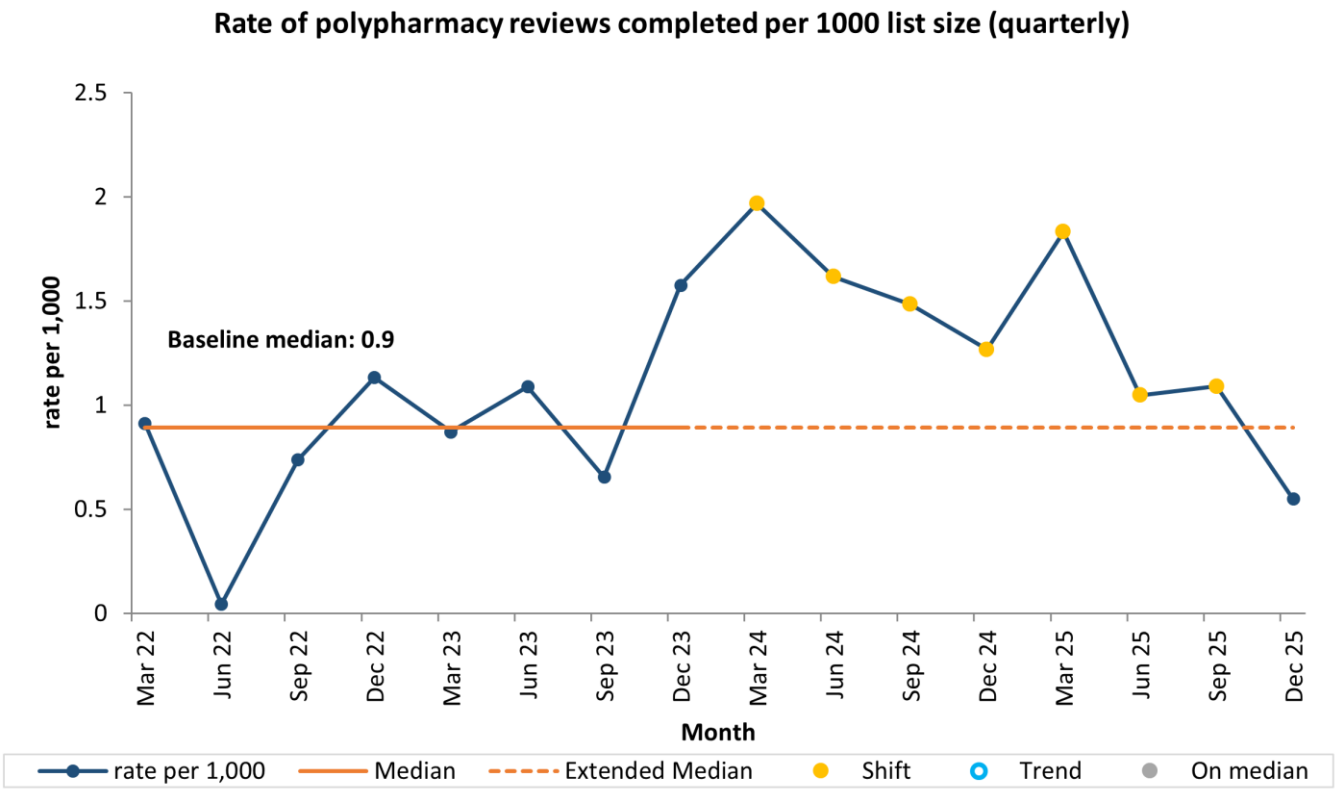


Figure 25 shows the rate of polypharmacy reviews completed per 1,000 list size. The rate of polypharmacy reviews completed initially shifted above the median, but the shift has not been sustained.

CTAC

Table 18: NHS Shetland CTAC impact

Planned improvement	Activity	Outcome
Introducing a single template for all practices to record LTC monitoring and review appointments.	• A working group was formed including data analysts, nurses, administrative staff and practice managers. • The group reviewed processes across all NHS Shetland practices to identify inconsistencies in recording. • A standardised template and agreed set of clinical read codes were developed and tested in practices. • Practice visits were used to deliver training and follow up support. • The team used monthly data from the SHIP to monitor template usage and assess progress.	• The percentage of appointments recorded using off-template read codes reduced from 30% to 7% (see *Figure 26*). • Better coding has resulted in more complete and consistent data across all GP practices and staff feel more confident in recording and using the information.

Planned improvement	Activity	Outcome
Delivering cardiovascular LTC management using the HoC model.	• Lists of patients due or overdue for monitoring appointments were generated using SHIP. • A single, standardised process to review patients in their birth month was introduces across all practices. • Patients were invited to attend for required checks and blood tests, and the data was entered onto a standard template. • A follow up letter was sent informing patients of their results and inviting them to book a review appointment. • Invites and acceptances were tracked, and a dashboard showing the percentage of overdue appointments in each practice was distributed monthly to the team.	• The percentage of people with a cardiovascular LTC who have attended a monitoring appointment in the past 15 months increased by 39% (see *Figure 27*). • All practices had less than 30% of reviews overdue by February 2025. • By November 2025, 85% of patients with a cardiovascular LTC were coded as having had their annual review within the last 15 months.
Introducing a fixed roster for CTAC in the three largest practices and a central booking system for patients.	• A peripatetic model of CTAC delivery was tested, with staff moving between practices. • Staff struggled to adjust to different practice systems and processes, and it was not always possible to find available rooms. • In response designated CTAC days were introduced in three practices along with a centralised booking system. • Practice managers in remote practices managed the booking system as their patients often needed to travel. • Patients could attend for phlebotomy at any 2C practice.	• Practices reported that staffing LTC monitoring is more consistent and that having embedded staff helped reduce duplication in admin processes. • CTAC staff reported that the new system enabled them to build stronger working relationships with practices and provide better continuity of care for patients.

Figure 26: Percentage of off-template Read codes used to code LTC monitoring and management appointments from January 2023 to January 2026

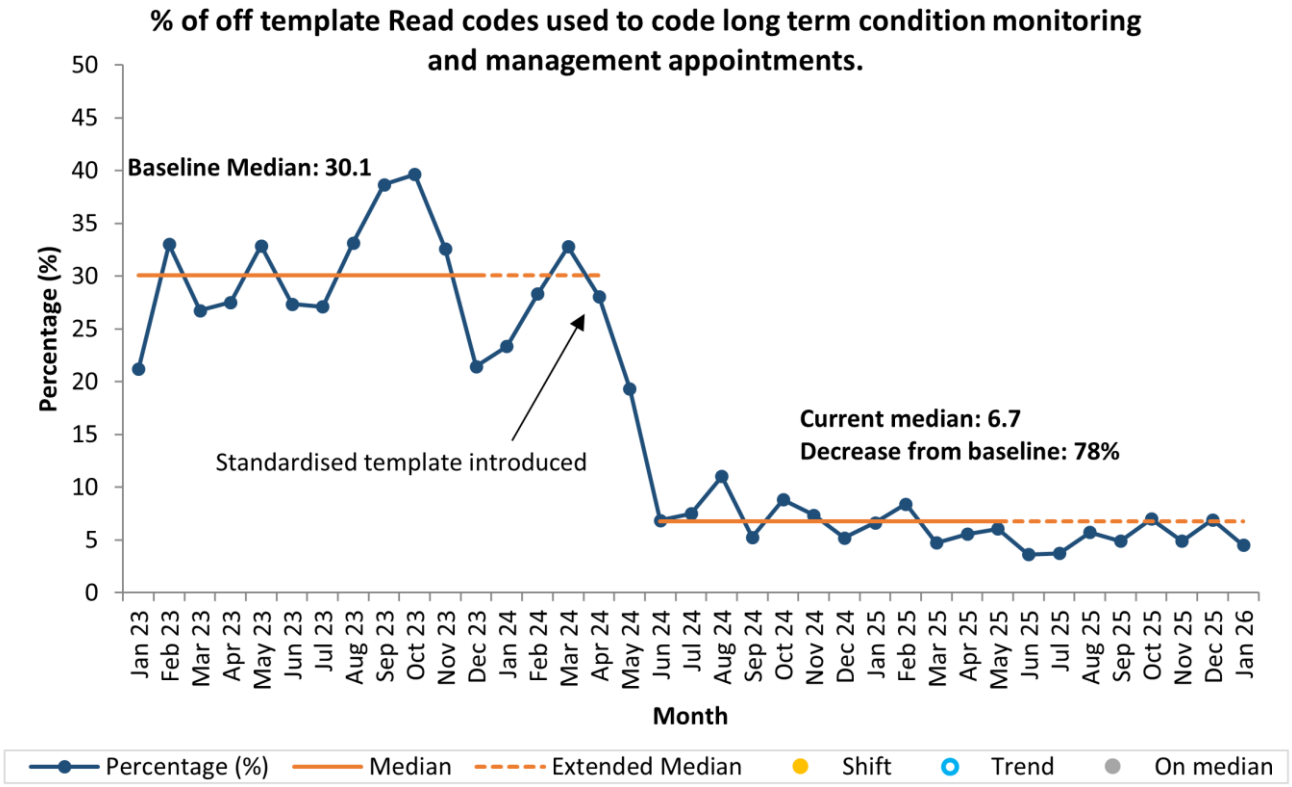


Figure 26 shows the percentage of off-template read codes used to code LTC monitoring and management appointments reduced by 78% since the introduction of the standardised template.

Figure 27: Percentage of people with a cardiovascular LTC who have attended a monitoring appointment in the past 15 months from January 2023 to February 2026

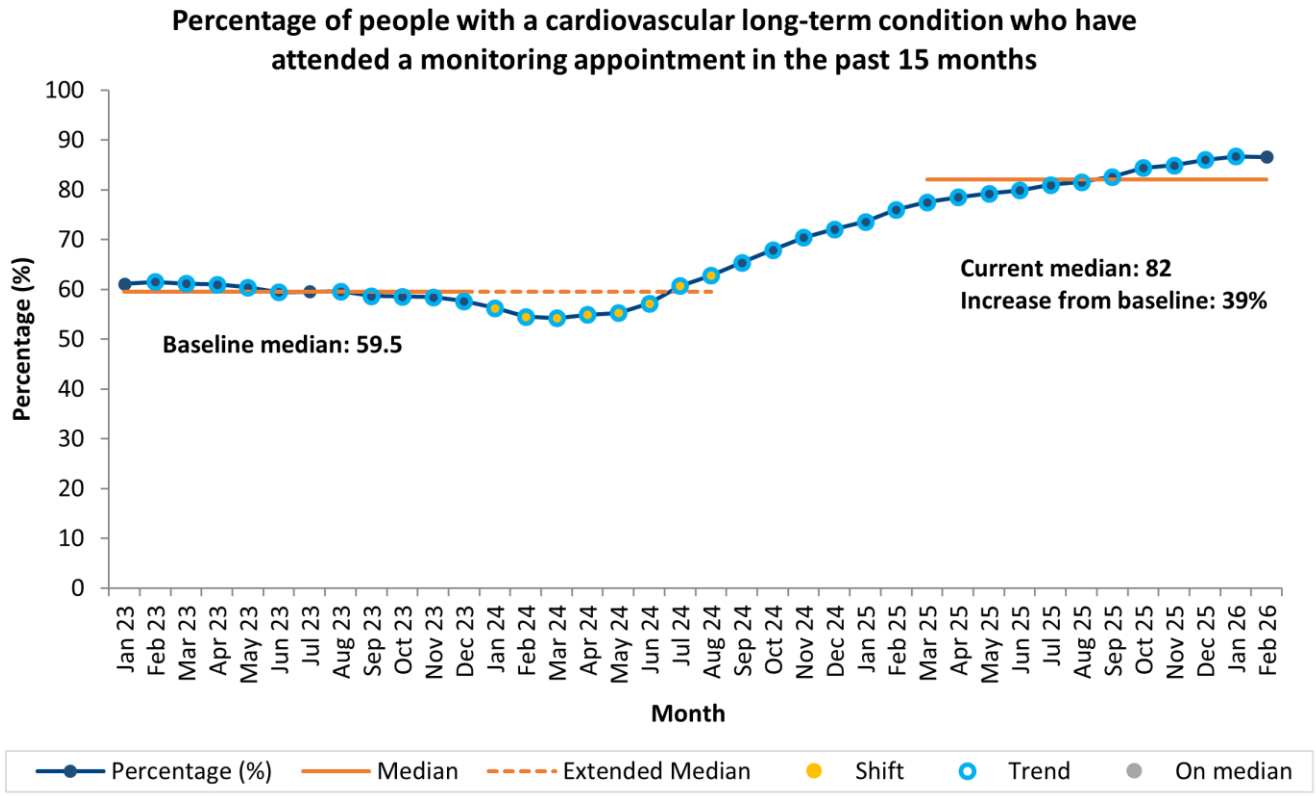


Figure 27 shows the percentage of people with a cardiovascular LTC who have attended a monitoring appointment in the past 15 months increased by 39%.

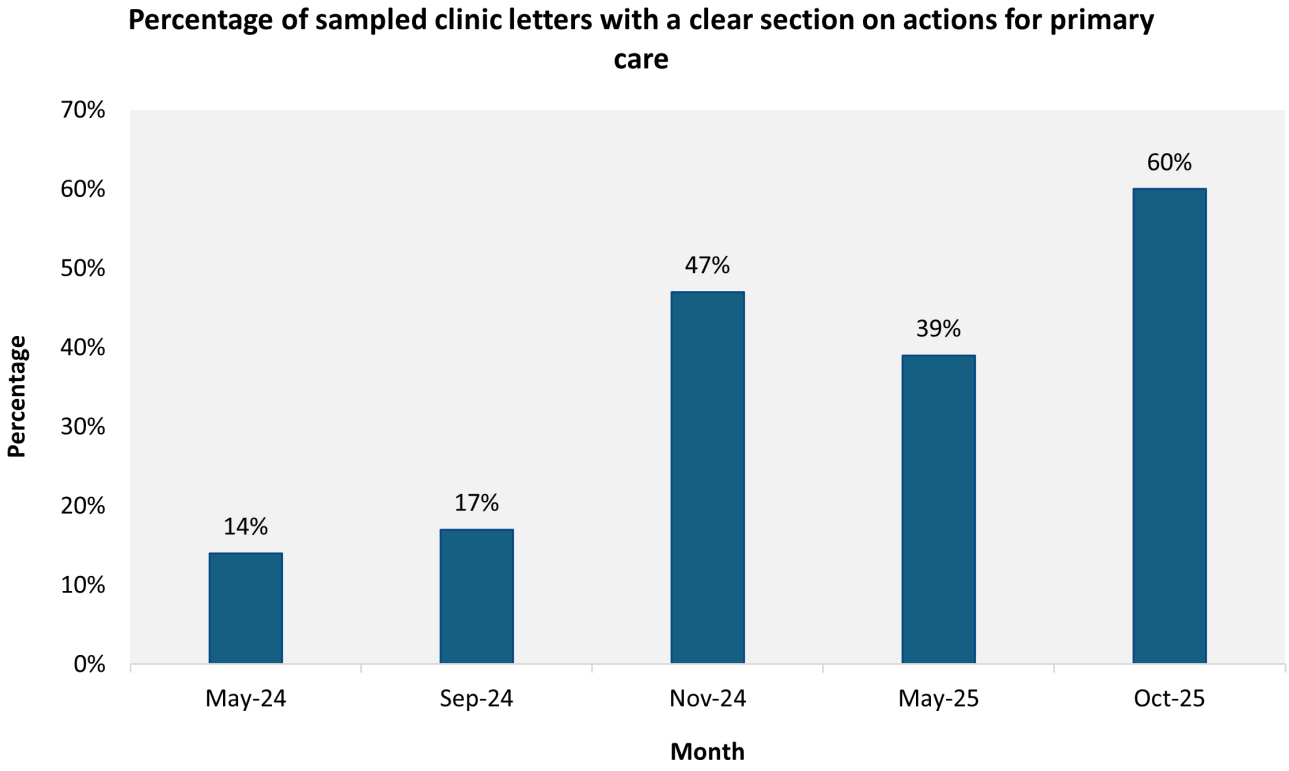
MDT working

Table 19: NHS Shetland MDT working impact

Planned improvement	Activity	Outcome
Increasing the number of clinic letters coming to primary care that can be actioned by admin or pharmacotherapy teams.	• Clinic letters did not clearly highlight actions for primary care including medication changes and so a senior clinician needed to review letters. • The GP lead consulted with secondary care and community colleagues to explain the risks and difficulty with task transfer. • A clinic letter template with sections on actions for primary care and secondary care was added to IT systems for secondary care teams to use.	• The proportion of clinic letters with a clear section on actions for primary care increased to 60% of sampled letters in October 2025 (see *Figure 28*). • Feedback from GPs suggests that medication changes on clinic letters were being primarily actioned by the pharmacy team.

Planned improvement	Activity	Outcome
	• Data was sampled regularly to understand how the template was being used. • A workflow optimisation project to upskill admin teams has commenced. This aims to help them identify clinic letters they can action and direct letters appropriately to MDT members.	

Figure 28: Percentage of sampled clinic letters with a clear section on actions for primary care in May 2024, September 2024, November 2024, May 2025 and October 2025



The team worked with secondary care clinicians to implement a new structure to clinic letters, with a clear section specifying actions for primary care. *Figure 28* shows the manual data sampling that was undertaken every few months to gauge the ongoing success of this initiative. The addition of clear actions for primary care enables the pharmacy team to process more clinic letters without needing advice from other MDT members.

Learning

Recruitment

- Recruitment of PSWs and HCSWs supported service development and redesign.
- Offering remote working opportunities allowed for a greater pool of candidates for roles.
- Offering check-ins and virtual huddles for remote working staff members helped combat possible isolation or exclusion.

Data and information

- Monthly local reports with RAG status for individual practices allowed for early identification of variation across practices.
- Embedding use of SHIP into LTC recall and medication review processes allowed for effective monitoring of these initiatives over time, and highlighted variation across practices.
- WoCAs requiring manual data collection and collation proved challenging for staff. The 2C practice model made it easier to require practice involvement but meant that it was not possible to offer financial support.
- Improved coding allowed for better record-keeping and more accurate and up-to-date information in patient records.
- Employing a data analyst allowed for continued development of SHIP and up-to-date information being readily available for workstream leads.

Infrastructure

- Several PCPIP initiatives resulted in a reduction in waste or duplication within practices. The standardised medication review process reduced the number of duplicate medication reviews being coded for individual patients and reduced the volume of acute prescription requests.
- It was challenging for CTAC staff to find physical space in practices when testing a peripatetic model.
- IT issues necessitated workarounds, particularly when accessing patient records remotely. This was time-consuming for staff needing to log into several different system and also led to risks, for example having to hand-write labels for blood samples.

Ways of working

- Focusing on medication reviews showed benefits in reducing the volume of routine level 1 pharmacotherapy work such as acute prescription and repeat prescription reauthorisation requests.
- The introduction of CTAC services allowed for a clearer distinction between GPN and CTAC roles. CTAC now offers year-round access to LTC monitoring which means GPNs can focus on continuity of care and expert nursing.
- Standardisation of coding and documentation for reviews allowed for more joined up care between pharmacotherapy and CTAC services, with medication reviews being scheduled after LTC appointments where appropriate. This meant up-to-date results and monitoring were available in the patient's record for their medication review.
- The improved clinic letter structure supported task transfer from GPs to the pharmacy team.
- Administrative staff were involved in clinic letter processing, booking of CTAC and medication review appointments and appropriate task escalation when clinical input was required.

Stakeholder engagement

- It was important to have buy-in from senior management to communicate a shared vision to staff members.
- The success of the programme relied on creating buy-in with existing team members and newly recruited staff.
- GP engagement varied over the course of the programme. GP leadership on the clinic letters work proved crucial but it was challenging to engage GPs in collecting data for WoCAs.
- Practice manager engagement when carrying out WoCAs was important, as was practice managers' knowledge and understanding of new CTAC functions, such as the booking system.
- Discovery conversations were used as a tool for gathering patient feedback to be incorporated into system changes.

- Ongoing engagement with secondary care clinicians was critical to the success of the clinic letters work.

Conclusions and recommendations

Since the publication of the GMS contract, there has been a consistent ambition across NHS Scotland to implement the new primary care service models it introduced. The contract sought to alleviate GP workload and expand the role of the MDT to meet growing population needs. PCPIP, commissioned by the Scottish Government as the first programme of its kind, was established to test whether further implementation of pharmacotherapy and CTAC services could be achieved through additional investment, targeted support and the application of QI methodology. The findings demonstrate that, with this support, demonstrator sites were able to strengthen both CTAC and pharmacotherapy services.

During PCPIP, demonstrator sites expanded CTAC capacity by increasing treatment room access, adding staff and improving booking systems. Skill mixes were adapted, new training plans developed and discovery conversations with patients helped inform service design. Completion of the WoCAs by GPNs further clarified which CTAC related activities remained within general practice.

Pharmacotherapy, being a more mature service, saw further enhancement. Several sites established or expanded pharmacotherapy hubs, enabling level 1 work to shift away from practice teams and free capacity for more complex clinical activity. Sites also developed new roles, such as advanced pharmacist practitioners, PSWs and remote pharmacists and expanded the pharmacy technician role to include HRMM, acute prescribing and leadership in medicines reconciliation. As capability increased across pharmacotherapy level 1 and 2 work, more level 3 activity, including polypharmacy reviews and specialist clinics, was delivered. There is a description of the different pharmacotherapy levels in *Appendix 13 - list of abbreviations and terms*.

However, the programme also highlighted an ongoing challenge: whether full implementation of pharmacotherapy and CTAC, as originally described in 2018, remains achievable 8 years on. Despite additional investment and demonstrable improvements, there were still challenges in the implementation of the GMS contract across all demonstrator sites. CTAC provision varied widely between areas because of existing service structures, workforce availability and local clinical priorities, resulting in locally shaped service models rather than a uniform national approach. It was also recognised that implementation of other MDT roles out with the scope of PCPIP, for example mental health nursing, ANPs, advanced physiotherapy practitioners and CLWs, also remained incomplete or inconsistent across demonstrator sites.

Findings suggest that implementing every component of the contract as originally written may not necessarily deliver the most efficient or effective model of MDT working. Some elements of the contract do not align with where MDT roles can add greatest value. For example, pharmacists completing acute prescriptions may hinder their capacity to undertake polypharmacy reviews.

Taken together, the evidence from this programme suggests that even with additional investment, and notwithstanding the lack of a national definition of full implementation, there are still challenges with the full implementation of the GMS contract. It is unclear what scale of further investment would be needed to deliver it. Eight years on, parts of the contract are less relevant or practical in today's context, and the findings show that local flexibility is essential. It is therefore appropriate for local systems to prioritise MDT investment based on population need, workforce feasibility and the value each role brings to patient care.

These insights directly inform **recommendation 1**, which calls for refreshed expectations and a flexible, needs-based approach to MDT development.

Recommendation 1 **Reset national expectations to align MDT development with improving outcomes and making best use of resources.**

Scottish Government should move from a rigid interpretation of 'full implementation' of the GMS contract to a flexible, value-based approach. This should enable local prioritisation based on population need, workforce feasibility, person-centred care and the reduction of health inequalities.

Overall, QI approaches enabled improvement in pharmacotherapy and CTAC, but only when supported by the right conditions. The findings suggest that QI approaches helped teams design, test and embed safe, more consistent, more sustainable services. However, the extent of improvement was determined not by QI capability alone, but by the availability of workforce, functioning IT, strong leadership and supportive infrastructure.

Where QI capability, relational engagement and leadership were strong, teams were able to redesign pathways more quickly, respond to operational issues and build workforce pipelines.

All sites demonstrated that workforce redesign (particularly through roles such as pharmacy technicians, PSWs, Advanced Pharmacy Practitioner HCSWs, and remote working pharmacists) could shift substantial workload away from GPs and practice nurses. The application of QI approaches supported safer expansion and clearer role delineation within MDTs (for example testing competency frameworks, supervised inductions, iterative redesign of roles)

Demonstrator sites showed that QI methods were most effective where leadership (clinical and managerial) was stable, and visible practice teams, independent contractor GPs, and CTAC/pharmacotherapy staff were actively engaged, communication channels were clear and iterative patient voices were incorporated meaningfully. However, where leadership capacity was thin, or engagement inconsistent, the QI journey slowed and opportunities for testing or scaling were inhibited.

These insights directly underpin **recommendation 2**.

Recommendation 2 **Embed improvement principles and realistic timelines.**

Future primary care change programmes should integrate QI principles from the outset, with structured planning, recruitment, evaluation and sustainability phases.

Across PCPIP, it became clear that local context and population need play a critical role in informing the design and delivery of primary care improvement. Demonstrator sites adopted hybrid models (including combining hub and practice-based models, remote and face-to-face models), based on their local population needs and infrastructure. Teams expressed a strong desire to address health inequalities while ensuring continuity of care for people accessing new MDT-delivered services.

Findings from the four demonstrator site reports show that QI methods enabled teams to design, test and embed standardised processes such as technician led medicines reconciliation, structured medication reviews,

common CTAC templates, birth month recall systems and consistent SOPs. These changes reduced variation, improved data quality and enhanced reliability of care. However, teams also learned that standardisation must be paired with relational working and local tailoring, as overly centralised processes risked weakening MDT cohesion and flexibility.

These insights directly inform **recommendation 3.**

Recommendation 3	**Apply hub/hybrid models selectively according to function.**

Hub models should be used for high volume administrative or technical tasks, while practice-based working should be prioritised for clinical integration, discussion and continuity of care.

Robust data systems were a critical enabler and their absence a major constraint. QI requires trustworthy data.

Demonstrator sites with strong digital infrastructure were able to track activity, identify variation, monitor medication review performance and evaluate processes. This supported faster learning cycles and evidence-based redesign. In contrast, areas with fragmented or inconsistent data systems found it harder to measure impact, plan capacity or sustain improvements. Infrastructure and IT constraints frequently limited the extent to which QI learning could be applied. Despite strong QI work, progress was repeatedly slowed by problems with premises, digital access, order comms platforms or booking systems. These limitations delayed tests of change, constrained service hours and sometimes increased administrative burden. QI helped teams adapt and troubleshoot locally, but could not overcome wider systemic infrastructure barriers, highlighting the need for national level investment. The findings indicate that reliable digital infrastructure is essential and that IT system integration is foundational to implementing the GMS contract at scale. Robust IT systems are essential for safe MDT working, effective QI and sustainable service delivery.

This directly supports **recommendation 4.**

Recommendation 4	**Invest in IT system integration and outcome focused monitoring.**

Integrated IT systems, standardised coding, and analytic capability should be prioritised. A national MDT monitoring framework that is long-term, trend based, equity sensitive and focused on improvement should be established.

2.2 Findings from developing a culture of continual improvement

This section describes how Healthcare Improvement Scotland supported the development of a culture of QI throughout the programme.

Demonstrator sites

In the previous section (*Section 2.1*) it was explained how Healthcare Improvement Scotland worked closely with each **demonstrator site**, using a QI approach (*Figure 2*), to inform the development and delivery of local improvement plans.

National improvement collaborative

Context

The primary care improvement collaborative was delivered in two phases using distinct improvement approaches: Phase 1 (April 2024–March 2025) and Phase 2 (April–September 2025). Both phases aimed to build QI capability, support teams in understanding their systems, and test changes. Most participants were GP practices, followed by pharmacotherapy and CTAC teams. The improvement collaborative invited participation from primary care teams across Scotland, other than the four PCPIP demonstrator sites.

Approach

Phase 1: (April 2024–March 2025)

- Used a sprint approach (4–8 weeks) to provide structured, short-term improvement support through coaching and drop-in sessions. Teams were encouraged, but not expected to, participate in a sprint.
- Teams received coaching, drop-in sessions and QI skills training.
- 24 teams participated in four sprints. Reduced uptake for later sprints resulted in bespoke coaching being offered to 10 teams.
- Activities for all teams in the collaborative focused on building QI knowledge and capability as well as peer learning including online QI teaching sessions, group coaching, and informal drop-ins.

Phase 2 (April–September 2025)

- Shifted to a slightly longer sprint, structured based on the Breakthrough Series Collaborative model (adapted from Institute for Healthcare Improvement's Breakthrough Series Collaborative).
- Included three formal learning sessions and three group coaching sessions, with individual coaching during action periods.
- Designed to support broader participation, peer networking and more flexible engagement.
- Introduced a Health Equity Sprint focused on inequalities.
- All teams were expected to undertake an improvement project.

Across both phases, the methodology focused on:

- building QI capability through structured learning and coaching.
- supporting teams to understand their systems, test changes and apply QI tools.

- facilitating peer learning and sharing through events and digital platforms.

A total of 137 primary care teams, from all 11 eligible NHS boards, signed up for the collaborative in both Phase 1 and 2. Of those 137 teams, 48 teams actively participated in improvement work. In phase 1, 24 teams took part in improvement sprints, while phase 2 saw 17 teams complete improvement projects and seven teams participate in a health equity improvement sprint.

Some of the topics addressed included workflow optimisation, appointment management, care navigation, call volume, acute/repeat prescribing, polypharmacy reviews, and health equity.

Impact

A measurement plan and evaluation framework were developed to assess progress and outcomes of the collaborative. Quantitative measures were used to capture engagement with the collaborative and its activities. Additionally, a range of qualitative measures based on the Kirkpatrick model (Kirkpatrick, D.L.,1959) captured the experience of and impact on participating teams using ongoing feedback, polls and surveys.

The limited timescales and fluctuating engagement meant that it was not possible to reach the stage of reliably implemented improvements evidenced by data. Despite this, participating teams were able to show progress in understanding their system and identifying and prioritising changes to test.

Training and workforce development

- A pharmacy team used a staff survey during the 'understanding the system's' phase to identify their area of focus. From this, they developed an aim to increase pharmacist prescribing confidence through 1-1 mentorship with a senior pharmacist. They tested the mentorship approach and used a Learning Needs Analysis to evaluate impact.
- A CTAC team identified that the demand for a specialist team member (lymphoedema nurse) exceeds capacity and focused on upskilling other MDT members (HCSWs) to support this work. The team used a process map to understand what happens in a typical appointment. They developed a guidance resource pack for newly trained staff and are using surveys to measure the impact of the training on delivery of the service.

Using data tools to understand MDT demand

- One team was working to improve the processes for letters going to the appropriate GP (workflow). Their current process meant that letters are sent to whatever GP is available that day. The team completed a data collection exercise and discovered only one third of clinic letters were reaching the most appropriate clinical staff member on first attempt which requires reassignment and results in increased work and delays. The team considered change ideas to test including developing guidance for the administrative team.
- Two board-run (2C) practices, consisting of mainly locum GPs and bank nurses, used a WoCA tool to assess demand and capacity. Their findings supported their business request for additional team members, specifically healthcare assistants.
- A team of mental health nurses used the 'last 10 patients tool' to understand current demand. The team had originally planned to work on reducing waiting times to their services, but the data collected through the last 10 patients tool highlighted inconsistent processes. The team were then supported to complete a process

map to understand the current approach and identify areas for improvement. As a result, the team adjusted their aim to focus on creating a reliable triage system.
- Another team completed a WoCA to identify administrative activities that were being completed by GPs. The data also highlighted the value of the in-house pharmacist in the MDT.

Using QI tools to understand processes and identify priorities for improvement

- Two teams used process mapping to understand their current CDM pathway to ensure the most effective use of practice nurse and other team members' capacity. This helped the team develop measures and change ideas to test including adding CDM results review appointments in GP diaries. The GPs can then decide whether the patient needs to come in for review. This could support a reduction in inefficient use of appointments for CDM reviews.
- A practice team held a process mapping session with GP and administrative colleagues focused on immediate discharge and clinic letters – the session helped the team to identify areas for improvement in their processes. Change ideas generated included: co-designing a document management pathway resource/cheat sheet to help the admin team decide on the workflow of letters; giving a member of the admin team protected and undisturbed time to review incoming letters; and allocating time at monthly all-staff meetings to review letters causing uncertainty in the team.

Using QI approaches to support pharmacotherapy improvements

- A team led by a pain specialty pharmacist aimed to improve safety by focusing on high-risk medications. The team tested providing a risk/benefit information leaflet, including an offer for medication review, onto prescription slips for patients prescribed long-term Tramadol.
- A pharmacy team is working to develop a process for people admitted to a care home to have a polypharmacy review started within 4 weeks of admission.

Supporting the reduction of health inequalities

- The collaborative tested the use of a QI sprint approach focused on health equity. Seven GP practice teams participated and focused on Cardiovascular Disease Directed Enhanced Service (CVD DES), continuity of care, did not attend (DNA) rates and cervical screening. By the end of the sprint, all four teams working on CVD DES had submitted completed reviews via ESCRO.
- One team in phase 2 worked on a project with a health equity focus – they aimed to reduce the number of DNA appointments, particularly among patients with complex mental health or substance use issues. Their approach included testing improvements to their DNA processes, such as developing more person-centred content for their DNA letters. They are also planning a future test of working with their CLWs to understand the issues leading to DNAs for this group of patients.

There were also examples of positive impact for participating teams including:

- improved QI knowledge
- confidence to apply QI, and
- networking opportunities.

The quotes below are examples of feedback from collaborative team members.

- 'How to implement the plan do study act (PDSA) cycle and not be afraid of failure, but to learn, adapt and move forward.'

- ‘I have learned about driver diagrams and priority matrix.’
- ‘Applied use of QI tools such as PDSAs.’
- ‘I loved the coin spinning and thought this was a great way of explaining PDSA.’
- ‘We are usually just firefighting. The admin team have lots of ideas – they knew it was an inefficient process – they felt their voices were heard, and that’s probably the most important thing.’
- ‘Great to meet others who are undertaking projects.’
- ‘It was good to hear from other colleagues regarding their ideas for health improvement work.’
- ‘…enjoyed the network opportunity.’
- ‘Interactive and enjoyed the network opportunity.’
- ‘Helpful to have (coach’s) input to drill down to what we should measure.’
- ‘We have all benefited from making the time to implement workflow optimisation properly, ensuring we had a robust SOP, rolling the change out in stages and properly monitoring the results and making changes where necessary. I believe the main benefit we all gained from this was having the feeling of being held to account for ensuring we implemented change safely and didn't rush to an end result.’

Learning

- **Short timescales:** The sprint model (4–8 weeks) was too brief for teams to collect enough data to demonstrate impact especially without baseline data. Phase 2 timescales had similar limitations in the context of fluctuating engagement.
- **Capacity and engagement:** Many teams faced staff pressures and limited capacity, resulting in fluctuating engagement and early withdrawal from activities.
- **Limited QI experience:** Teams often lacked quality improvement knowledge, skills and local infrastructure to support sustained improvement work.
- **Access to data:** Teams had restricted access to local data, which hindered planning, measurement, and the ability to evidence progress.

Learning system

Context

The learning system was developed in alignment with the Healthcare Improvement Scotland Quality Management System (QMS) focusing on gathering insights, making sense of learning and translating that learning into action. The component was co-designed with partners in advance of the PCPIP evaluation.

The PCPIP learning system enabled staff to actively participate and apply knowledge gained in their improvement work, as well as through wider engagement across the primary care system. Activities included online webinars and workshops, in-person national events and the development and dissemination of written resources and session recordings.

Content for the learning system activity was co-designed with stakeholders and partners and prioritised in year one with the PCPIP Clinical Care and Governance group. Learning system resources, primarily written by the Healthcare Improvement Scotland improvement team and PCPIP teams, drew on learning from across the demonstrator sites, collaborative teams, and the learning system activities.

Approach

The learning system team coordinated and facilitated a 2-year programme of learning activities, including a structured calendar of sessions and events. The team also provided editorial support for the development of resources, working closely with PCPIP teams and National Clinical Leads, and approved content for sharing across the primary care system.

Table 20: Learning system activities

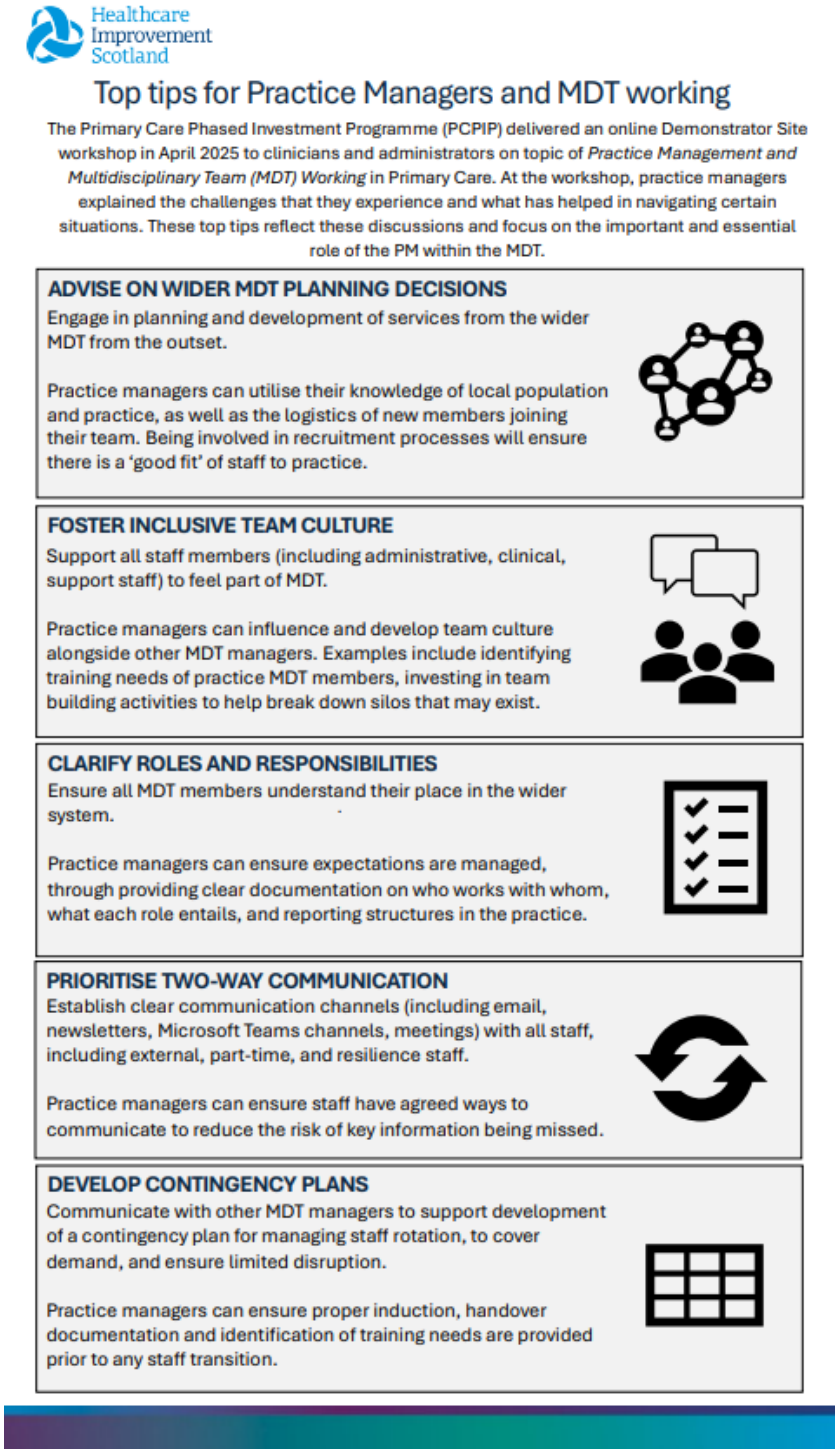
Activity	Topic	Audience
Webinars (n=6)	• Introduction to PCPIP • MDT working in primary care • Continuity of care and the MDT • Practice nurse and CTAC exploring the connections between CTAC and GPN • Patient experience • Advancing pharmacists role in primary care	All system
Workshops (n=7)	• Understand your system (DCAQ) • Considering Impact of inequalities • CTAC/Pharma silos or systems • Improving MDT working • Continuity of care • MDT working and practice management • Holding the gains	Demonstrator sites
Learning resources (n=>50)	Included learning from demonstrator sites, collaborative teams, and learning system activities.	All system
Professional networks (n=3)	GP, nursing and pharmacotherapy	Professional groups
National Events (n=2)	• Planning PCPIP • Learning from PCPIP	All system

Impact

Most sessions incorporated reflective or evaluative elements, including questionnaires, live polling, facilitated discussion and feedback forms. This was used to inform the development of resources and identify further improvement opportunities. For example, facilitated discussions in demonstrator site workshops and professional network meetings offered real-time insight into factors that support or hinders MDT working, how practices understand their systems, how continuity of care can be strengthened and how inequalities are experienced and addressed in primary care.

Insights were collated, summarised and frequently led to further discussion and refinement of ideas. Participants were routinely asked about key learning points and intended actions. Workshop discussion notes were used to develop practical resources, often presented as concise 'tips' to support application in practice (see *Figure 29*).

Figure 29: Resource developed from the online demonstrator site workshop in April 2025 focusing on 'practice management and MDT working in primary care'.



Post-webinar sessions indicated that participants found the sessions helpful and relevant, for example, 77% of the participants of the continuity of care demonstrator site workshop said they found the session helpful and feedback suggests they really valued the discussion time.

Through professional networks, it emerged that CTAC and GPN staff perceived limited opportunities for professional development and progression. These insights directly informed the development of CTAC and GPN

showcase videos with highlighted clear career paths and opportunities within these roles. Such learning has the potential to inform future recommendations related to workforce development and career advancement.

Learning

Informal learning discussions have played an important role in shaping the ongoing delivery of PCPIP and the development of supporting resources.

Due to the nature of the learning system activities, feedback was primarily collected through online mechanisms following webinars and workshops. While this provided useful reflective insight, it offered limited depth and consistency for formal evaluation purposes. However, several themes, including MDT functioning, continuity of care, community nursing workforce development and approaches to addressing inequalities, emerged consistently across multiple sessions. These themes were not explored using formal qualitative methodologies because of Healthcare Improvement Scotland workforce capacity constraints. However, key insights and learning from PCPIP and associated resources have been published on the Healthcare Improvement Scotland website (PCPIP learning resources).

Resource-based learning is currently being collated and will be published over the next 6 months on the primary care improvement website, contributing to the ongoing development of the learning system.

Conclusions and recommendations

Combining the national improvement collaborative with the PCPIP learning system, alongside targeted QI support for the demonstrator sites, enabled teams to embed a culture of learning both within and beyond the demonstrator sites. The programme contributed to a culture of continual improvement, demonstrated by the breadth of QI activity and learning across sites.

Learning played a central role in demonstrator site development. Teams benefited from masterclasses on QI methodology, driver diagram development and measurement planning, supported by Healthcare Improvement Scotland improvement teams and local QI teams where available. National Clinical Leads further contributed through professional networks, workshops and national events. Demonstrator sites also shared their expertise through presentations, videos and learning summaries, though these summaries did not fully capture the depth of learning generated, leading to the adoption of more detailed case studies. As the programme progressed, it became clear that demonstrator sites needed opportunities not only to highlight achievements but also to reflect on patient outcomes and identify next steps.

This shared learning, and the curiosity it stimulates, is central to encouraging wider engagement and motivating teams across Scotland to pursue their own improvement journeys.

The collaborative strengthened early QI capability by helping teams understand their systems, build confidence in QI tools and methodologies, and test practical changes. Across two phases teams received coaching, peer learning opportunities and structured improvement support. Despite short timelines, variable engagement and data access challenges, participating teams made progress in areas such as workflow optimisation, pharmacotherapy, MDT development and tackling inequalities.

The learning system complemented this work by capturing insights and sharing learning across the wider primary care system. Through webinars, workshops, national events, written resources and professional networks, the system enabled staff to reflect, connect and apply lessons from demonstrator sites and collaborative teams. Recurring themes such as MDT functioning, continuity of care and inequalities were explored through feedback and facilitated discussions, informing the development of practical resources to support improvements in practice.

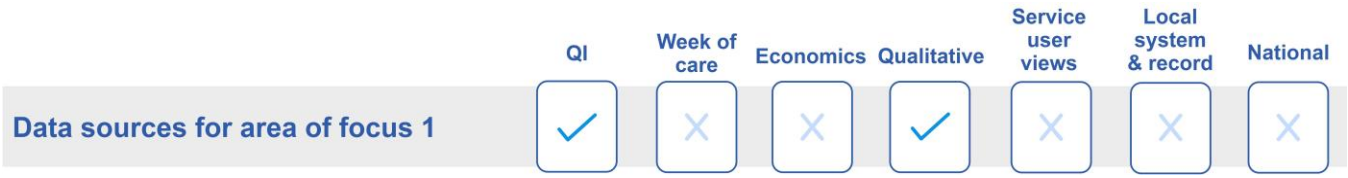
Taken together, these findings show that while PCPIP successfully initiated a culture of improvement, sustaining and strengthening this culture requires QI principles to be embedded from the outset; clear, collaborative governance structures; early relationship building; and tailored support based on local readiness and capacity. These insights underpin **recommendation 2**.

Recommendation 2 **Embed improvement principles and realistic timelines.**

Future primary care change programmes should integrate QI principles from the outset, with structured planning, recruitment, evaluation and sustainability phases.

2.3 Findings from the evidence gathered to inform implementation of the GMS contract

Area of focus 1 - Key conditions for change and enablers required to support MDT working



Based on the **qualitative data**, the following conditions and enablers were identified.

Structural conditions

- GMS contract and guidance
- Resource
- Physical and digital infrastructure
- Practice context
- Primary and secondary care interface

Relational conditions

- Stakeholder engagement and communication
- Trust between senior leadership, health boards and practices

Transformative conditions

- Changing mindsets

Enablers

- Building a supportive and collaborative workplace
- Informal learning opportunities and equitable access to training
- Clearly defined and understood roles and responsibilities
- Interdisciplinary communication

Structural conditions

Five structural conditions for change were identified from the qualitative data: the GMS contract and guidance; resource; physical and digital infrastructure, practice context and primary and secondary care interface.

GMS contract and guidance

Findings from the qualitative data suggest that the intent to develop extended MDTs brought in by the GMS contract changes lacked clarity for GPs and practice staff responsible for implementing it. This included ambiguity around the funding pathways and health board model of MDT implementation, an absence of easily

identifiable policy for practices on decision-making regarding funding and resource allocation, and lack of guidance on role parameters of MDT staff members. Implementation varied considerably across practices, which was found to be because of perceived ambiguities and a reported lack of sufficient guidance. These factors appeared to influence both the extent to which MDT working was adopted and the overall acceptability of the contract and associated changes to primary care staff.

Resource

Across demonstrator sites, leadership teams and GPs reported perceived underfunding of PCIP in their health boards, preventing them from fully delivering the contract. They also expressed concerns about long-term stability of funding and the implications of potential reduction or withdrawal of funding for PCIP and PCPIP services. Lack of available workforce to fulfil MDT roles was also reported in each of the demonstrator sites, particularly with regard to ANPs and pharmacotherapy roles, preventing adequate implementation of the MDT. Adequate and sustainable funding and staff resource, and a model of resource allocation that was understood by and acceptable to key stakeholders, was therefore identified from the qualitative data as a condition for change associated with the implementation of the MDT in primary care.

The allocation of funding to boards aligned with the GMS contract, to support the implementation of the MDT, was a key concern for GPs and practice managers. They perceived the model to create a division in governance that was detrimental to professional relationships, and to be ineffective in supporting shared decision-making and shaping MDT teams based on local needs. They further felt the model did not account for the individual context within which practices work, nor considered practices as businesses. GPs and practice managers reported that direct investment would enable them to use the funding most effectively, to employ MDT staff according to practice need, and taking account of practice finances. These findings suggest that agreed governance and leadership structures were important to support resource allocation within health boards that was acceptable to key stakeholders in the primary care system.

Physical and Digital infrastructure

Suitable physical and digital infrastructure was identified from the qualitative data as a condition for change to support MDT working in primary care. Across demonstrator sites and staff groups, physical and digital infrastructure to support MDT working was reported as inadequate. Lack of sufficient and appropriate accommodation was reported as a barrier to colocation and a collaborative working environment; unconnected, outdated and inaccessible electronic systems were reported as barriers to communication and the coordination of service user care. Lack of suitable digital infrastructure was discussed as a particularly important concern when MDT staff are not physically located within the GP practice. The data suggests that investment in physical and digital infrastructure in primary care was a prerequisite for MDT working and needed to be considered in parallel with workforce planning.

Practice context

The analysis highlighted a large variation across practices in how they operated, their priorities, the needs of their local populations and environmental factors such as rurality and deprivation. Maturity of existing models of care also varied, where some practices had well-established, integrated MDTs, others were only beginning to explore team-based approaches. These contextual differences strongly influenced readiness for change and shaped the ease, pace and appropriateness of MDT implementation.

Primary and secondary care interface

Across staff groups, participants perceived increased workload in primary care linked to pressures in secondary care. Delays and backlogs in specialist services were reported as shifting responsibility onto GPs, who felt increasingly expected to manage patients awaiting secondary care intervention. Many also highlighted a rise in presentations from patients with complex, multi-morbid conditions requiring specialist input, further intensifying the strain on primary care. This was particularly evident in areas with elderly populations.

There was evidence of primary and secondary care services working together to improve service user coordination and care, highlighting the potential for secondary and primary care to work together efficiently. The data suggests that addressing the interface between primary and secondary care is a condition for change in implementing the MDT.

Relational conditions

Two relational conditions for change were identified from the qualitative data: stakeholder engagement and communication, and trust between senior leadership, health boards and practices.

Stakeholder engagement and communication

There was a perceived lack of engagement and communication between the health board and GPs and practice teams, particularly regarding decision-making relating to the development of the GMS contract, funding and resource allocation. Analysis suggests this had a detrimental impact on implementation of the MDT in some areas and created a barrier to trust. Inclusive and transparent engagement and communication between the health board and practices, particularly regarding decision-making, was therefore identified as a condition for change from the data. Engagement and communication were inferred as important for practice awareness and understanding of the GMS contract, and for building trust and credibility amongst stakeholders in the primary care system. Analysis of the qualitative data also identified clearly defined and shared change and implementation objectives as important to engaging stakeholders.

Trust between senior leadership, health boards and practices

Trust was highlighted as a condition for change and interpreted frequently across qualitative data. Trust in senior leadership and the model of MDT implementation was broadly low amongst practice stakeholders in most demonstrator sites. This was because of lack of engagement in GMS contract design and delivery, insecure funding and resource allocation, and the health board funding model. Where there was evidence of engagement - though this data was limited - trust appeared to be positively impacted. As well as being identified as a key enabler for MDT working, trust in leadership at senior and practice level, and trust in the model of change in primary care were inferred from qualitative data analysis as important for successful implementation of MDT working.

Transformative conditions

One transformative condition for change was identified: changing mindsets.

Changing mindsets

The data, directly and by inference, suggests that in some areas there was hesitancy in adopting new ways of working in primary care, particularly among GPs and in rural or smaller practices where longstanding systems

were firmly established. Resistance to change in primary care is perceived by some staff as detrimentally impacting the implementation of MDT working. Supporting a shift in mindset of delivery level stakeholders has therefore been identified as a condition for change. Engagement of GPs and practice staff in proposed changes to account for local priorities and needs is likely to be important in addressing concerns around structural changes. This may support confidence in building new service models and overcome resistance to change.

Enablers

Four enablers required to support MDT working were identified in the qualitative data: building a supportive and collaborative workplace; informal learning opportunities and equitable access to training; clearly defined and understood roles and responsibilities; and interdisciplinary communication. The enablers differ from the key attributes outlined in area of focus 4 in that the enablers are factors that facilitate MDT working while the attributes are core characteristics of effective MDT working.

Building a supportive and collaborative workplace

Trust within the MDT, while it could take a while to build, was considered by staff as important for task-sharing across the MDT and helped them feel valued, empowered and respected in their role. Additionally, support from both line managers and peers was discussed by MDT staff as important for skill development, as well as practical and clinical advice and wellbeing. When managers were not easily accessible, staff felt unsupported and frustrated, especially when this caused delays in competency sign offs, which then limited their scope of practice. Peer support was viewed as particularly important during times of change or for those staff groups who worked autonomously. MDT staff noted the importance of being welcomed by practice staff and feeling included as part of the practice team for effective MDT working. Therefore, the data suggests building a supportive and collaborative workplace is important for MDT working as it instils trust and provides opportunities for shared learning which enables teams to communicate effectively, support one another and deliver safe, coordinated care.

Informal learning opportunities and equitable access to training

Staff reported informal learning played an important role in the development of the MDT. For example, interdisciplinary training, shadowing and upskilling were all reported to assist staff to work more efficiently together, reduce reliance on GPs and increase job satisfaction. Furthermore, feedback between colleagues offered support and was viewed to reduce errors such as inappropriate referrals. However, staff reported formal training opportunities and protected learning time were not provided equitably across practices and staff groups, and some staff were not able to fully deliver their role because of incomplete training, which created inefficiencies. Structured supervision and protected learning time were reported as beneficial in supporting new staff and reducing the burden on senior clinicians, ultimately strengthening team performance and service user safety. Therefore, the data suggests informal learning opportunities and equitable access to training are important to support MDT working through enhancing skills development, job satisfaction and promoting a shared understanding of roles.

Clearly defined and understood roles and responsibilities

MDT staff believed their roles and responsibilities were not well understood by practice staff, which often resulted in inappropriate referrals and insufficient service delivery. Staff reported that when MDT members understood each other's role, this was likely to facilitate MDT working by instilling mutual respect and trust. This contributed to changing mindsets of delivery level stakeholders mentioned previously. Staff reported without role clarity there is potential for confusion, inefficiency and tension between members of the team. Staff

acknowledged where there were differences in roles and skill sets, even within the same discipline, which contributed to confusion. This was addressed within some practices through the introduction of visual aids to improve the appropriateness of referrals and meetings to clarify roles. However, service specifications were viewed as too rigid with the view there is benefit in retaining some flexibility within roles to respond to changing demands and workloads in primary care. Therefore, the data suggests clearly defined roles and responsibilities support MDT working as it enables appropriate referrals, reduces duplication and ensures a more seamless pathway for service users.

Interdisciplinary communication

Effective communication between clinical and non-clinical staff was viewed as important for MDT working to support clinical decision-making, providing service user continuity and building relationships with colleagues. Staff also viewed communication as important to improve the quality of referrals and reduce the risk of clinical errors. Staff valued having agreed structures in place to allow for routine communication such as structured MDT meetings, but this was not consistent across practices. Staff reported informal and ad hoc communication, especially in co-located environments, was highly valuable for timely advice and, therefore, avoiding delays in care. An 'open-door' culture supported this informal mode of communication, which was reported to increase accessibility of staff, yet it was acknowledged that this had the potential to interrupt clinics. Staff viewed having relationships and established communication channels with secondary care further supported effective service user coordination. Therefore, the data suggests communication between MDT members from different disciplines (including non-clinical staff) was important to support MDT working as it enabled improved collaboration to deliver high quality care to service users.

Based on the **QI data** from the demonstrator sites, the following were identified as **key enablers** to support MDT working:

- Data and information
- Workforce
- Effective communication

Below are some examples to illustrate the enablers. Find more information about the demonstrator sites' journeys in *Section 2.1.*

Data and information

- NHS Shetland focused on improving the way LTC monitoring appointments are coded by CTAC. This work successfully reduced the percentage of off-template read codes used for these appointments. CTAC nurses reflected that this increased their confidence about where to find information and how to record activity.
- Edinburgh City HSCP worked with PHS to develop a dashboard for their pharmacotherapy hub. The dashboard provided data that enabled the pharmacy team to monitor workload and turnaround times, plan staffing to meet demand, and engage GP practices in discussions about their use of the hub.
- NHS Shetland used SHIP to understand how care was delivered across the health board. It is a locally designed, MDT-led intelligence system that links data from primary care, acute and specialist services, laboratories and other key data sources to provide a comprehensive view of patient care, supporting decision-making and service development.
- NHS Ayrshire & Arran collected data about the types of patient appointment completed by advanced pharmacist practitioners. Collecting and reviewing this data helped them understand how the advanced

pharmacist practitioner role fits into their existing structure and the potential for appropriately triaging appointments from GPs.
- NHS Ayrshire & Arran created practice profiles to help their CTAC team understand the context of different GP practices. By August 2025, all practices had a profile in place. Staff provided feedback via surveys that they had the information they needed and felt prepared to work with different practice teams.

Workforce
- NHS Ayrshire & Arran collected data on the length of time taken for CTAC HCSW resilience staff to complete training in all the required competencies. The average time was 14 weeks from starting in post because of delays in being able to access some of the training needed. This has been a barrier to delivering full CTAC specifications to all practices.
- Edinburgh City HSCP recruited hub lead pharmacists who managed the expansion of the hub. The team focused on developing structured training plans to build staff confidence in completing medicines reconciliation. Quarterly surveys were issued to assess hub staff confidence. Strengthening staff capability enabled the hub to increase the volume of work completed while maintaining service quality.
- NHS Borders established a pharmacist technician-led hub, designed to bring the pharmacy team, including a pharmacist, together in one location. The hub aimed to strengthen support and supervision, enhance training opportunities and promote staff wellbeing. In a hub staff survey, all respondents agreed, to some extent, that the hub gave them a greater sense of being part of a team. They also reported that they received adequate support at work and can readily seek advice from senior staff members.
- NHS Borders established a CTAC workforce, through a combination of TUPE transfers and standard recruitment methods.
- NHS Ayrshire & Arran enhanced their CTAC resilience model by testing an adapted skill mix and introducing an improved induction process. The resilience model reduced the number of CTAC cancellations and helped prevent work from defaulting back to GP practices, ensuring a more reliable and sustainable service.

Effective communication
- NHS Shetland worked with secondary care clinicians to implement a new structure to clinic letters, with a clear section specifying actions for primary care. Manual data sampling was undertaken every few months to gauge the ongoing success of this initiative. The addition of clear actions for primary care enabled pharmacy technicians to process more clinic letters without needing advice from pharmacists or GPs. This approach ensured that work was directed at the right person the first time, reducing unnecessary delays.
- The Edinburgh City HSCP project team attended GP cluster meetings and practice manager meetings during different points in the programme. They used these meetings to gather feedback on the local WoCA, provide updates about the CTAC service, and encourage practices to join the pharmacotherapy hub. Regular engagement helped to keep practices informed about the programme.
- NHS Borders held feedback sessions with practices following their local WoCA. There was positive feedback from practices about the sessions, and it helped to build practice engagement with other parts of the programme.

Gaps and limitations

- The qualitative evidence relied on perceptions, experiences and inferred causal mechanisms. The absence of quantitative measures restricted the assessment of the relative importance or strength of the identified conditions for change.

- There was substantial variation across practices and health boards in areas such as physical and digital infrastructure, workforce composition, the maturity of MDT models, and wider practice context, including rurality, deprivation levels and population needs. This level of heterogeneity made it challenging to determine which enabling conditions for MDT working were universally necessary and which were dependent on local circumstances, ultimately limiting the generalisability of findings.
- There was no patient-level outcome data linked to MDT enabling conditions (for example, continuity, inequalities, quality of care).

Conclusions and recommendations

The findings across area of focus 1 suggest that effective MDT working in Scottish general practice depends on a combination of structural, relational and contextual conditions. Structural factors, including the clarity and usability of the GMS contract, resource availability and physical and digital infrastructure, shaped how MDTs functioned. Ambiguity in contract guidance, the lack of a national definition of 'full implementation', variable implementation across practices and pressures at the primary-secondary care interface created uneven adoption of MDT working. The findings highlight the need for models that allow thoughtful local adaptation rather than uniform application.

Relational conditions were equally influential. Engagement, trust and shared ownership between health boards, practices and MDT members emerged as essential foundations. Communication, both formal structures, such as regular MDT meetings, and informal day-to-day interactions, played a central role in building cohesion, supporting safe care and enabling teams to respond collectively to operational pressures. Demonstrator sites with strong communication cultures were better able to embed QI, navigate new roles and processes, and align team goals to the needs of their population.

The findings further highlight the enabling effect of capability building. Investment in training, role clarity, digital tools and improvement methods strengthened team confidence and capacity. However, persistent gaps in interprofessional understanding, unclear responsibilities and differing employment models between independent contractor practices and health boards continued to challenge cohesion. A wider culture shift is needed to support shared learning, mutual respect and genuine integration across professional groups.

Workload pressures, service complexity and the pace of work were significant contextual challenges. Staff across general practice and MDT roles described unsustainable workloads, insufficient downtime and a growing risk of burnout. The findings also point to the need for much stronger stakeholder engagement from the earliest stages of contract implementation. Many staff reported not feeling involved or informed in decisions shaping MDT models, contributing to tension, limited buy-in and unclear expectations.

Professionals often expressed uncertainty or reluctance about the roles they were assigned, and without shared acceptance, MDT working remained fragile. There is a need to align all professions for patient care not to be compromised, as true MDT working, by definition, cannot be achieved without collective understanding, trust and agreement across all stakeholders.

Addressing these structural and relational issues will be essential for future iterations of MDT design. Strengthening early engagement and collaborative working, alongside ensuring clear guidance, adequate and sustainable funding, appropriate digital infrastructure and suitable accommodation, would help build the

relational conditions required for successful MDT working. In turn, this would support teams to understand one another's roles, recognise each other's value, and work together with greater clarity, trust and shared purpose.

These insights directly inform **recommendations 5 and 6.**

Recommendation 5	Establish clear governance and engage with all relevant stakeholders at the programme design stage.

Clarity of governance, roles and responsibilities across Scottish Government, Healthcare Improvement Scotland, NHS boards, HSCPs and GP practices should be established early, with formal engagement where practices will lead change or provide data.

Recommendation 6	Ensure enabling conditions for effective MDT working.

Stakeholders should ensure MDT models include the necessary structural, relational and cultural conditions to function effectively, including clear roles, supportive infrastructure and protected learning time.

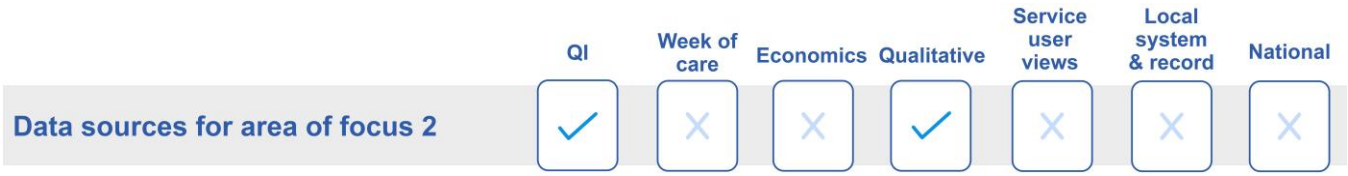
There are examples of how demonstrator sites addressed some of the mentioned barriers to the implementation of the GMS contract. For example, in relation to data related barriers, Edinburgh City HSCP developed a dashboard for elements of pharmacotherapy and NHS Shetland used SHIP to prioritise patients for LTC review. In relation to infrastructure barriers, NHS Borders were able to find accommodation to base a pharmacotherapy hub which improved implementation of some elements of pharmacotherapy. Progress was possible where local teams had the capacity and capability to build or adapt systems, but such solutions were not universally available, and variation in digital infrastructure continued to limit reliability, consistency and effective cross-team working.

Taken together, these insights underline that improving MDT working requires establishing system-wide digital foundations that enable reliable data sharing, consistent coding and clear role identification. Only with integrated IT systems and supportive infrastructure can MDTs function effectively and overcome the relational and structural tensions identified in the programme. These findings directly inform **recommendation 4.**

Recommendation 4	Invest in IT system integration and outcome focused monitoring.

Integrated IT systems, standardised coding, and analytic capability should be prioritised. A national MDT monitoring framework that is long-term, trend based, equity sensitive and focused on improvement should be established.

Area of focus 2 - Learning from the QI approach embedded in PCPIP to support future implementation of the MDT and policy development



According to the **qualitative data**, researchers identified nine learning points and four PCPIP outcomes from qualitative data collected from interviews with PCPIP leadership and Healthcare Improvement Scotland QI team.

Learning points

- Codesign and embed QI in programme planning and bid development
- Build realistic and structured timescales, including time for planning, recruitment and evaluation
- Clearly define roles, responsibilities and expectations for partnership working
- Conduct QI skills and needs assessment to understand expertise and provide tailored support where needed
- Prioritise developing open and trusting relationships with demonstrator site teams
- Ensure effective QI support is tailored to local needs and built on collaborative relationships
- Provide support with data collection and interpretation as this is essential to strengthen the application of QI
- Create a dedicated and supportive space for sharing learning, which is owned by demonstrator site leadership
- Embed sustainability planning

PCPIP outcomes

- Improvement in QI skills and capacity
- Culture for improvement
- Utility of additional Scottish Government funding
- Involvement of service users

See below more details on these.

Learning points

Co-design and embed QI in programme planning and bid development

The design and bidding process for PCPIP was perceived as misaligned with the principles of QI, making it difficult to fully embed a QI approach. Demonstrator sites were required to deliver system wide changes within a short timeframe, which was not conducive to traditional QI methods such as small-scale testing and iterative learning. PCPIP delivery plans were developed during the bidding process, prior to a full understanding of local

systems, data availability and data quality. This was perceived to limit flexibility and created reluctance to adapt plans in response to emerging insights. As a result, opportunities to embed QI were constrained.

These findings suggest commissioners (Scottish Government) should work collaboratively with Healthcare Improvement Scotland to embed QI principles in the design of future programmes. This includes early consultation with potential bidders in the design phase, so teams are better positioned to test changes, learn from what works and adapt their approach over time. This would allow Healthcare Improvement Scotland and commissioners to provide tailored guidance on how to incorporate QI principles into bid proposals, including advice on adaptive delivery and data use for evidence-informed change. Offering support to design the programme during the bidding process could help ensure programme plans are locally relevant and improvement-ready from the outset. This emphasises the importance of assessing QI readiness to tailor support effectively, which is also discussed in the theme 'Conduct QI skills and needs assessment to understand expertise and provide tailored support where needed'.

Build realistic and structured timescales, including time for planning, recruitment and evaluation

The compressed 18-month timescale of PCPIP was reported to limit opportunities for thorough planning, recruitment, induction, delivery and evaluation. The extent of early-stage planning was underestimated, which affected clarity of objectives, stakeholder engagement and trust-building. Demonstrator site leads highlighted that recruitment delays of MDT staff, time for staff training and evaluation activities were not fully considered and time spent on these further reduced the delivery window. Healthcare Improvement Scotland staff also reported a lack of dedicated time for planning and recruitment of staff to support QI work.

These findings suggest that to support future MDT implementation, programme timelines should allow for realistic and dedicated phases of mobilisation, including co-designing measurement plans, setting expectations and building relationships. Evaluation planning should be integrated from the outset, with timelines for evaluative activities explicitly stated and shared across demonstrator sites teams. Without sufficient time and structure, system change efforts risk being rushed, underprepared and less impactful. The data suggests a structured timeline incorporating programme planning, delivery and evaluation is necessary to support meaningful improvement and generate robust evidence for sustainability and future funding.

Clearly define roles, responsibilities and expectations for partnership working

Demonstrator site leads were unsure about the roles of different partners involved in PCPIP. Ambiguity around Healthcare Improvement Scotland's role, shifting expectations and limited early engagement with the approach created confusion and mistrust among demonstrator site teams. Some perceived Healthcare Improvement Scotland as a monitoring body rather than a partner in improvement, which affected how openly they engaged with the support offered. Others reported they were unclear about what kind of input to expect or how to work with Healthcare Improvement Scotland effectively. This lack of clarity was compounded by limited time for early-stage planning and engagement, which affected relationships and delivery.

These findings suggest that to gain the full benefits of collaborative working and support effective implementation of the MDT, roles and responsibilities between Healthcare Improvement Scotland and demonstrator site teams should be clearly defined and consistently communicated from the outset of the programme. This clarity would build trust, align expectations and enable meaningful partnership working throughout delivery. Positioning Healthcare Improvement Scotland as a partner in improvement rather than a passive observer or external assessor may encourage more proactive engagement and unlock the full potential of Healthcare Improvement Scotland QI team. The data suggests that this is particularly important in systems

where internal improvement infrastructure already exists and where perceptions of oversight may create barriers to open collaboration.

Conduct QI skills and needs assessment to understand expertise and provide tailored support where needed
Both demonstrator site leads and Healthcare Improvement Scotland staff highlighted the importance of conducting a structured assessment of QI skills and organisational readiness prior to initiating support.

Healthcare Improvement Scotland staff reflected that there was limited engagement early in the programme to assess demonstrator sites' readiness, capacity and skills for QI. Across demonstrator sites, QI capacity varied considerably, yet this was not sufficiently understood at the outset. The absence of this led to misalignment between the support provided by Healthcare Improvement Scotland and the actual needs of demonstrator sites. In demonstrator sites with limited QI experience, leads and Healthcare Improvement Scotland staff felt that insufficient time was spent introducing the basics of QI and underlying principles. Whereas in demonstrator sites with established internal QI teams, Healthcare Improvement Scotland support was sometimes perceived as duplicative or clashing with local priorities. These misalignments affected engagement in the QI approach and the quality of relationships between Healthcare Improvement Scotland and demonstrator site teams.

QI support, when appropriately tailored to needs, contributed positively to skill development, confidence and ownership of the QI process. The findings suggest that a pre-programme assessment of QI readiness and capacity would have benefited demonstrator sites teams, allowing Healthcare Improvement Scotland to offer intensive coaching where needed and strategic input where internal expertise is already present. This learning point is closely linked to others concerning early relationship building, need for embedded QI in the programme, and the clarification of roles and expectations. Together, these findings highlight the importance of grounding future programmes supporting MDT implementation and policy development in a nuanced understanding of local context and need.

Prioritise developing open and trusting relationships with demonstrator site teams
Developing open and trusting relationships between Healthcare Improvement Scotland and demonstrator sites teams was a critical enabler of effective QI support and MDT implementation. Where relationships were strong, characterised by transparency, regular communication and clinical leadership within Healthcare Improvement Scotland, teams were better able to engage with QI methods, adapt delivery plans and address implementation challenges collaboratively. In-person engagement, particularly early in the programme, was viewed as beneficial for establishing rapport, surfacing local complexities and ways of working, and laying the groundwork for productive virtual collaboration.

Relational barriers included:

- capacity constraints (Healthcare Improvement Scotland and demonstrator site teams)
- unrealistic expectations
- Healthcare Improvement Scotland staffing changes and a perceived transactional nature of early QI support
- poor relationships associated with delays in data sharing
- resistance to QI support, and
- limited uptake of improvement activities.

These challenges were perceived to be compounded where GP practices were excluded from formal agreements, undermining their engagement and ownership of PCPIP work. The findings underscore the

importance of prioritising early relationship building with demonstrator site teams and ensuring inclusive governance structures that formally involve GP practices. This can help to clarify expectations, build shared ownership and foster stronger engagement - particularly when practices are expected to lead change and share data. Without these conditions, QI support risks being underutilised or resisted, limiting its impact on MDT implementation. Future QI programmes should consider embedding early in-person support and facilitating internal QI capacity to strengthen relationships and trust, both of which are foundational to sustained engagement and successful implementation.

Ensure effective QI support is tailored to local needs and built on collaborative relationships
QI support from Healthcare Improvement Scotland was perceived to be most valued and effective when tailored to the specific needs of demonstrator sites. Strong relationships enabled flexible, ad hoc support and open discussions, which facilitated a targeted QI approach.

Leadership valued specific QI tools that helped streamline processes, particularly for CTAC and pharmacotherapy. Beyond the tools, the QI support was valued for providing structure, focus and motivation to drive improvements in primary care. Additionally, leadership teams found the external perspective offered by Healthcare Improvement Scotland particularly helpful, as it encouraged critical reflection on their implementation approach and introduced alternative ways of thinking. Healthcare Improvement Scotland QI team played a key role in sustaining engagement by helping teams contextualise setbacks as part of a typical improvement process, thereby mitigating discouragement. The embedded nature of internal QI support enabled stronger interpersonal relationships, which facilitated the provision of emotional and esteem support alongside practical and informational guidance.

Provide support with data collection and interpretation as this is essential to strengthen the application of QI
Data support was particularly valued by leadership teams, who appreciated the ability to demonstrate progress and identify areas for improvement through a better understanding of their systems and processes. However, the process of data collection during implementation revealed significant challenges, including limited availability and variable quality of data within primary care. These issues suggest a need for sustained investment in building data capability across primary care to ensure that improvement efforts are informed by reliable and accessible data.

When communication about the purpose, value and expectations of data collection was unclear, demonstrator sites teams often perceived it as an additional burden rather than a shared responsibility. This contributed to frustration and resistance, and in some cases, mistrust around data sharing. For QI to be effective in future MDT implementation, data should be positioned as a core enabler of improvement, not an administrative task or secondary concern. The findings demonstrate that effective use of data requires early engagement with delivery teams, inclusive governance and ongoing support to build confidence in using data meaningfully. This would ensure that improvement efforts are informed by reliable data and that all stakeholders are aligned in their understanding of its role.

Create a dedicated and supportive space for sharing learning, which is owned by demonstrator site leadership
While some demonstrator site leads felt they had meaningful opportunities to engage with other demonstrator sites and share learning, others described limited interaction and inconsistent collaboration. Demonstrator sites found the learning opportunities provided by Healthcare Improvement Scotland to be too formal and structured, which limited opportunities for open peer-to-peer exchange. Healthcare Improvement Scotland QI team recognised this and noted that some workshops did not provide enough time for demonstrator site leads

to engage informally with one another. In response, many demonstrator site teams created their own informal learning spaces outside of the PCPIP structure. It was important to leadership that demonstrator site teams could meet and share learning without the presence or involvement of Healthcare Improvement Scotland or Scottish Government.

Learning was consistently reported to be most effective when driven by demonstrator site teams themselves, shaped by their priorities and local contexts. This autonomy fostered relational trust and enabled more relevant, actionable exchange. The insight highlights the learning that future QI programmes should prioritise locally owned learning spaces which are supported, but not directed, by national bodies. When demonstrator site teams can be empowered to lead learning, it can strengthen collaboration, support decision-making and enhance the relevance of shared insights.

Embed sustainability planning

Demonstrator site leads noted that the absence of embedded sustainability plans posed a significant risk to the continuation of implemented changes beyond the funding period. The limited time for delivery and reliance on fixed term contracts for MDT staff were consistently identified as barriers to long-term service integration. Further, while there was clear appetite among demonstrator site leadership to continue QI work, concerns were raised about the lack of resources and capacity to sustain these efforts once PCPIP funding ended, particularly in relation to CTAC and pharmacotherapy services.

These findings raise critical concerns for future policy development. If sustainability is not considered from the outset, short-term gains risk being lost, and the momentum built through QI efforts may not translate into lasting change. Embedding sustainability planning, including workforce stability, long-term funding strategies and integration of QI into routine practice, is essential to ensure MDT models and the 'culture for improvement' can be maintained and scaled.

PCPIP outcomes

Improvement in QI skills and capacity

The involvement of Healthcare Improvement Scotland appears to have improved QI skills and capacity within demonstrator site teams, though the extent of this varied across demonstrator sites and leadership roles. This support was perceived to be particularly valuable in teams with limited prior experience in QI, where Healthcare Improvement Scotland input helped build confidence and capability. This finding highlights the potential for external QI support to build local improvement capacity, especially in contexts where internal expertise is limited. Strengthening QI capability within leadership teams can enhance ownership of change, improve implementation quality and support sustainability. Future programmes should assess existing QI capacity early and tailor support to build skills where needed, ensuring that all teams are equipped to lead and sustain MDT improvements.

Culture for improvement

There is evidence that participation in PCPIP began to foster a culture of improvement within demonstrator site teams. Leadership reported a shift in mindset, with increased familiarity and use of QI terminology, and a growing appreciation for data to inform change. Demonstrator site leadership noted that they and their delivery teams continued to build on their QI skills through further projects and training. However, there was some concern about the feasibility of continuing QI without dedicated support structures and the risk that this progress will not be sustained. This finding suggests that QI embedded in programmes like PCPIP can catalyse a

shift in organisational culture, helping teams adopt improvement mindsets and build capability, increasing the likelihood that demonstrator site teams will adopt QI approaches in the future.

Long-term investment in QI infrastructure was seen as necessary to embedding and maintaining a culture of improvement, which will support future MDT implementation. This includes access to expertise, protected time for improvement work, and opportunities for ongoing learning and reflection. Embedding these elements into routine practice would help to ensure QI becomes a lasting and meaningful part of how teams work, rather than a time-limited intervention.

Utility of additional Scottish Government funding

Leadership generally perceived that PCPIP funding enabled 'fuller' implementation of the GMS contract. Funding was primarily used to recruit MDT staff, which leadership noted would have been extremely challenging, if not impossible, without PCPIP. While each demonstrator site tailored implementation to its local context, ranging from practice to health board-wide approaches, leaders consistently reported that 'full' implementation as outlined in the contract was unrealistic within the scope and time of PCPIP. Recruitment challenges, workforce supply constraints, and structural barriers such as IT systems, premises and GP practice buy-in and support were reported to further limit progress.

The additional Scottish Government funding was instrumental in enabling short-term improvements, but its temporary nature raises concerns about sustainability. Demonstrator site leads stressed that without continued investment, it would be challenging for demonstrator sites to maintain changes to MDT services or embed QI practices beyond the funding period. The data highlights the need for future programmes to include detailed, costed sustainability plans from the outset, to address recurrent staffing costs and long-term resource requirements. These insights also reinforce the importance of aligning funding models with realistic delivery expectations and timelines.

Involvement of service users

The absence of service user involvement in the demonstrator site bid process and the development of PCPIP significantly limited opportunities for meaningful engagement. Without early input from those directly affected by service change, implementation lacked the perspective of lived experience. This not only constrained the relevance and responsiveness of service design but also missed a critical opportunity to coproduce change in partnership with communities. When leadership teams were asked about service user involvement, they confirmed that it had not been part of the process. Healthcare Improvement Scotland proposed the use of the CEIM approach to retrospectively explore service user perspectives; however, this was a reactive measure rather than a proactive design feature. Service users should be actively and meaningfully engaged in shaping delivery plans from the outset, and any form of engagement should avoid being 'tokenistic'. Commissioners and Healthcare Improvement Scotland should provide structured guidance and support to bidders on how to embed co-production principles, ensuring that service change is developed with, not just for, the people it affects. Embedding this expectation early will help ensure that service redesign is grounded in local needs and supports more equitable and sustainable change. This relates to the first two learning points, in which co-design and a more thorough phase for planning were highlighted as gaps in the programme.

The demonstrator sites took a **QI approach** during the programme. These are some examples of how QI approaches were used.

- Creating the conditions for change
- Understanding the system
- Small-scale testing
- Measurement over time

Find more information about the demonstrator sites' journeys in *Section 2.1*.

Creating the conditions for change

Creating the conditions for change is key to successful QI work. QI is most effective when stakeholders are engaged from the outset and help to shape priorities.

- NHS Borders met with practices before establishing the CTAC booking hub and refined their plans based on the feedback received. This early engagement helped to foster good working relationships with practices.
- They also adopted a patient-engagement approach when planning the development of the CTAC booking hub. This helped them to co-design a centralised CTAC booking hub that aims to be both equitable and responsive to local needs.

Understanding the system

Teams can use understanding the system knowledge to help them identify the right improvements to make.

- NHS Shetland recognised there was variation in the monitoring and management of LTCs across practices. To explore this variation, a MDT working group was formed, bringing together data analysts, nurses, administrative staff and practice managers.
- The group reviewed processes across all NHS Shetland practices to identify inconsistencies in how information was recorded. They then developed a standardised template and an agreed set of clinical read codes and tested this in practices. The team used monthly data from the SHIP to monitor template usage and assess progress.

Small-scale testing

Small-scale testing is an important component of QI as teams can test a change in one area before spreading the change more widely.

- NHS Ayrshire & Arran adopted a QI approach to reduce the number of acute prescriptions issued by introducing a prescribing decision tree. The team began by testing the tool in a single practice while collecting baseline data in two additional practices. Once the initial testing demonstrated improvement, the decision tree was introduced in two other practices.
- Starting with small-scale testing allowed the team to build confidence that the change was effective before spreading it more widely. This was an appropriate application for QI methodology, but the programme timescales meant that only a limited number of practices tested the change.

Measurement over time

Measurement over time is an important component of QI as it helps teams understand variation and highlights whether a change is resulting in an improvement.

- Edinburgh City HSCP expanded their pharmacotherapy hub and increased the number of IDLs and outpatient letters being processed remotely by the hub. The hub expanded to an additional six practices over a period of 7 months, which allowed the team to monitor the impact of hub expansion on the service provided to existing practices.

Gaps and limitations

- Limited access to local data, inconsistencies in data systems, burdens associated with manual data collection, and significant variation in data quality hindered teams' ability to reliably measure impact, understand their systems or utilise data to guide improvements.

Conclusions and recommendations

The PCPIP experience demonstrates the benefits of taking QI approach early and intentionally is essential for effective MDT development. Examples of improvements are included in the demonstrator sites' journeys. Findings from both the qualitative analysis and QI data suggest that improvement work depends on realistic timelines, adequate planning, flexibility to test and refine changes, clear expectations around roles, relationships and availability and quality of data. Early relationship building, structured assessments of QI capability, and consistent communication emerged as core enablers, emphasising that relational and organisational readiness must be built in from the outset of any future MDT improvement programme.

Challenging timescales limited the demonstrator sites' ability to undertake improvement and tailor support to local context. At the same time, significant system constraints, most notably inadequate primary care data infrastructure, limited the ability of sites to reliably evidence impact. Inconsistent coding practices, manual data collection, and variable data quality reduced opportunities for shared learning and limited the development of a national understanding of MDT impact. These findings highlight the need for future policy to prioritise integrated digital systems, consistent measurement approaches and ongoing analytical support to enable QI to operate effectively at scale.

The findings also suggest that future programmes should adopt a clearer model of collaboration, characterised by shared problem-solving, open communication, co-design and integrated QI expertise within MDT teams from the beginning. Healthcare Improvement Scotland's role should be clearly understood by all stakeholders. It has also been reported that sustainability planning, stronger leadership and meaningful service user involvement are essential components of future programme design. Interprofessional learning, role clarity and cultural cohesion remain significant challenges for MDT working.

Taken together, these findings show that successful MDT implementation cannot be achieved through role expansion alone. For future policy development, this means investing not only in MDT roles themselves but also in the QI conditions that allow these roles to deliver safe, reliable and scalable improvements in patient care. Healthcare Improvement Scotland has developed the Scottish Approach to Change which comprises a full and extensive toolkit to support QI, change and redesign.

These insights directly inform **recommendation 2**.

Recommendation 2	**Embed improvement principles and realistic timelines.**

Future primary care change programmes should integrate QI principles from the outset, with structured planning, recruitment, evaluation and sustainability phases.

Area of focus 3 - MDT services that should be prioritised for further development

Based on the **qualitative data**, researchers generated summaries of the impact of the MDT model experienced by each primary care staff group who took part in the qualitative evaluation, and the impact of the role of each of these staff groups on the primary care system at practice level. This includes perceived and experienced impact on the primary care workforce, workload and service users. While the staff groups are presented individually, it is important to note that these roles are interconnected in primary care. Please note that staff groups are listed alphabetically not in order of priority.

- Administration staff, including practice admin staff and reception staff
- ANPs
- CLWs
- CTAC
- First contact physiotherapists (FCPs)
- GPNs
- GPs
- Mental health staff
- Pharmacotherapy
- Practice managers

See below more details on these.

Administration staff

Administration staff report being under increased pressure, in a role with evolving complexity, and high emotional demands. Administrative staff are the first point of contact for service users, and they reported increased responsibility in their role, including being expected to triage to the most appropriate MDT staff member based on self-reported service user symptoms without formal training or a clinical background. Administrative staff and clinicians raised this as a potential risk to service users and said it created anxiety for many administrative staff. As the first point of contact, administrative staff reported frequent complaints from service users who did not understand the triaging system, who wanted to see a specific clinician or who did not want to disclose symptoms. This was also reported as causing significant stress. Staff report that the introduction of MDT inadvertently created operational strain on admin teams, by creating additional administrative processes. Further, some admin staff reported lack of formal training and lack of managerial support. The data suggests training should be provided to support administrative staff in their role, and a focus on administrative staff wellbeing should be prioritised.

ANPs

The ANP was reported as a highly valued role across the staff groups in primary care. ANPs were discussed by GPs as key to reducing their workload and improving access to appointments for acute care. They were reported as having a significant role in managing demand and were perceived to be particularly important in rural areas where there was a shortage of GPs.

ANPs reported that they are increasingly receiving referrals for complex service user presentations and discussed that their role was expanding, sometimes without formal support mechanisms and training. As a result of the changes which were seen as moving towards more task-based working, ANPs perceived themselves as being particularly well-positioned to deliver holistic, person-centred care, based on the nature and scope of their role and the continuity they can offer to patients. The data suggests that ANPs are an integral part of the MDT team in primary care and that consideration of the development on the ANP role, and the implications of this for role definition of ANP and the GP, should be prioritised.

CLWs

CLWs expressed high levels of job satisfaction and felt that they could make a genuine positive impact on people's lives by connecting them with relevant services and information. By offering longer appointments and exploring wider determinants of health and wellbeing, CLWs believed they could empower individuals to make better informed health and social related choices. Staff highlighted the value of CLWs, noting that they were especially helpful for referring service users with complex social needs who do not require medical treatment or who need support accessing specific services. CLWs were perceived by other staff in primary care as knowledgeable about local resources and having a vital and unique role in providing tailored social support to service users. CLWs highlighted that they seek to address the social determinants of health, meaning that their role could potentially contribute to the reduction of health inequalities. However, the CLW service is currently not available across all demonstrator sites where there is believed to be a need. The data suggests CLWs are highly regarded by primary care staff and that consideration of having a CLW service in all areas where it is needed, should be prioritised.

CTAC

CTAC services were reported to improve access for service users requiring treatment room care, such as blood tests, wound dressings and ear irrigation. By shifting these responsibilities from GPNs, CTAC was reported to enable GPNs to focus on more LTC management. GPs generally did not perceive a reduction in workload because of CTAC. The CTAC service was reported to be more effective when the service was co-located with practice staff, CTAC staff had autonomy over appointment management and were empowered to provide care beyond the immediate task. In some areas, innovations such as home visits and multi-site flexibility further improved access for specific groups.

Implementation of CTAC across the demonstrator sites was reported to introduce notable challenges. Where CTAC was not perceived to align with established practice ways of working, it was seen as a source of inefficiency. In some cases, CTAC staff were reported to lack the full range of skills required for effective service user care, resulting in increased workload for GPs and other practice staff. A key concern regarding CTAC was the task-based nature of the CTAC model, which was perceived to fragment the service user journey and weaken the holistic, relationship-based care previously provided through GPNs. Staff highlighted that this disrupted relational continuity of care and could risk service users disengaging from care. In one demonstrator site, CTAC hubs were reported as more challenging for service users to access (as they are required to travel for treatment which was previously provided at their local GP surgery, creating both geographical and financial

barriers), with potential implications for widening health inequalities. CTAC staff reported low job satisfaction related to increasing workload demands, insufficient support and an inflexible role specification, which further undermined the potential benefits of the service and posed risks to staff retention. While CTAC offers opportunities to redistribute workload within primary care, the data suggests that realising the full potential will require greater integration with practice teams, improved coordination with GPNs, enhanced support and recognition of CTAC staff, and a stronger focus on continuity and holistic care.

FCPs

FCPs reported feeling well integrated and supported in their primary care role and that they provide timely and specialised treatment and advice to service users with MSK issues. GPs reported that FCPs assisted in reducing their MSK-related caseload. Service users can be triaged directly to FCPs rather than via the GP, which reduces GP involvement and allows for early intervention. Early intervention was reported to then reduce the need for referrals to secondary care, and to help promote self-management. FCPs reported that their longer appointment times allowed for comprehensive assessment, service user education and follow up opportunities. FCP services in some areas were reported as having generated waiting lists of up to 4 weeks. FCPs in one demonstrator site reported that some staff, especially locums, were not always aware of the FCP role, which could result in underutilisation. The data suggests that FCPs provide timely, specialised care for MSK issues and that consideration to ensure full utilisation of the FCP role for better integration of the FCP service into primary care should be prioritised.

GPNs

GPNs felt largely overlooked in the GMS contract and felt that they were not engaged in any discussions about how their role may change with the introduction of the MDT, particularly the CTAC service. Many expressed uncertainty about the direction of their role with some GPNs believing that CTAC was taking away key responsibilities which posed the risk of deskilling and their role becoming inert. GPNs believed that the role focus on LTC management had reduced the nature of treatment room type of activities and increased the amount of administration. This impacted on the wellbeing of GPNs and caused tension within the teams. GPNs reported that time constraints made it challenging to provide holistic care and include lifestyle conversations within appointments. The data suggests maximising the benefits of the GPN role, consideration role clarification and development in context to the other primary care nursing role and having measures in place to reduce the administrative burden on the GPN role, should be prioritised.

GPs

GPs described how their role under the GMS contract and within MDT working shifted from providing ongoing, relationship-based care for a wide range of patient needs, to managing individuals with increasingly complex health challenges. Alongside this, they reported growing administrative and supervisory responsibilities linked to the introduction of MDT staff. This heavier workload, dominated by complex care needs, was seen as having a negative impact on GP wellbeing and contributing to difficulties in recruiting and retaining GPs. Many GPs reported that they are considering retiring earlier, reducing their hours or cutting the number of sessions they work. Trainee GPs who observe these pressures first-hand are reportedly reevaluating their career plans and are less inclined to pursue full-time roles in general practice.

GPs reported not identifying with the role of ‘expert medical generalist’ as described in the GMS contract. They regard themselves as integral to clinical oversight in primary care, and to the delivery and coordination of comprehensive and continuous care. Their positioning as expert medical generalists, and some elements of the MDT, was not perceived as aligned with this role. Furthermore, as primary care teams have expanded to

accommodate the MDT, GPs discussed new challenges such as managing the divisions of line management and ultimate clinical responsibility, with the health board and supervision of MDT staff. These mounting pressures have had a negative impact on GP job satisfaction, recruitment and retention. The data suggests that reevaluation of role of the GP as 'expert medical generalist' should be prioritised, to ensure that the role and remit of the GP is meaningful to the GPs themselves and permits integration with the rest of the MDT team.

Mental health staff

The integration of mental health staff into primary care was widely regarded as a positive development, enabling more timely, holistic support for service users and easing the workload of GPs. Staff consistently highlighted the value of mental health staff, who offer longer consultations, early intervention and improved coordination with both primary and secondary care services. This approach was reported to prevent unnecessary escalation to specialist or secondary care services and was perceived to enhance service user experience.

However, staff reported that limited availability and workforce shortages mean that demand continues to exceed capacity. Mental health staff were often only present in practices on certain days, resulting in waiting lists and inconsistent continuity of care. While referral pathways to secondary care remain important, they were reportedly not always suitable for service users who could be managed within primary care if adequate resources were available. Despite these challenges, mental health staff reported high job satisfaction and strong collaborative relationships within the MDT. The data suggests that to fully realise the benefits of integrating mental health staff within primary care, for both staff workload and service user experience, further investment in workforce capacity and more consistent, and equitable, provision across practices may be required.

Pharmacotherapy

Pharmacotherapy was widely regarded as a positive development in primary care, contributing to improved medicines safety and reducing GP workload. GPs particularly valued the support provided by pharmacists and pharmacy technicians in delivering level 1 pharmacotherapy tasks, which helped to make their workload more manageable. Pharmacotherapy staff reported that they could dedicate more time than GPs to reviewing medications and discharge letters, allowing them to identify potential errors. They also contact service users to discuss their prescriptions which was perceived to be valued by service users, improve safety and enhance continuity of care.

Where pharmacists deliver polypharmacy reviews, this was seen as enhancing comprehensive care by managing multiple health problems and medications simultaneously. However, pharmacists reported that the growing volume of level 1 tasks limited their capacity to engage in more advanced (level 3) activities, reducing opportunities for skill development and job satisfaction. Upskilling and role introduction of pharmacy technicians and PSWs was identified as a key enabler for expanding service capacity, as this allowed more time for pharmacists to focus on advanced tasks. The benefits of pharmacotherapy were most evident when staff were co-located within practices, facilitating communication and timely support. However, high turnover of pharmacotherapy staff was highlighted as a persistent challenge, creating instability within the service. The data suggests that to maximise efficiency, more consistency in pharmacotherapy staffing and increased opportunities for more varied and advanced clinical work should be prioritised.

Practice managers

Practice managers are central to the effective functioning of primary care, and many reported persistently high workloads and limited contingency to allow for leave or periods of absence. This lack of flexibility was reported

to contribute to poor work-life balance and a risk of burnout, with some managers considering leaving their roles because of ongoing stress and insufficient support. These pressures appeared particularly acute in practices where the role has shifted to become more administratively focused, sometimes at the expense of business management responsibilities, leading some to feel their professional contribution was diminished.

Staff reported that the introduction of the MDT model further increased the complexity of their role. Practice managers are now responsible for coordinating a broader range of staff, including those with external line management, and providing informal supervision and pastoral support across the MDT. This expansion of responsibilities was not always matched by increased recognition or support, and many practice managers felt their contributions to the MDT were overlooked. Communication gaps with health boards, such as limited notice about new MDT staff appointments or high levels of sickness absence in health board staff, were reported to further complicated workforce planning and day-to-day management.

Although practice managers have limited direct contact with service users, their role is critical in enabling smooth practice operations, supporting staff wellbeing and ensuring the MDT functions effectively. The data suggests that these indirect contributions are essential to maintaining the quality and continuity of care delivered to service users. To support the contribution of practice managers within the MDT, particularly in coordinating the MDT and maintaining operational resilience, investment in role capacity, clearer structures for MDT integration and interdisciplinary communication may be required.

A key focus of the **WoCA** was the potential for task transfer from GPs and GPNs to other members of the MDT as well as the potential time saved to allow GPs and GPNs to be expert generalists. Understanding these patterns was essential for assessing workload redistribution, optimising workforce utilisation and informing future service design and policy.

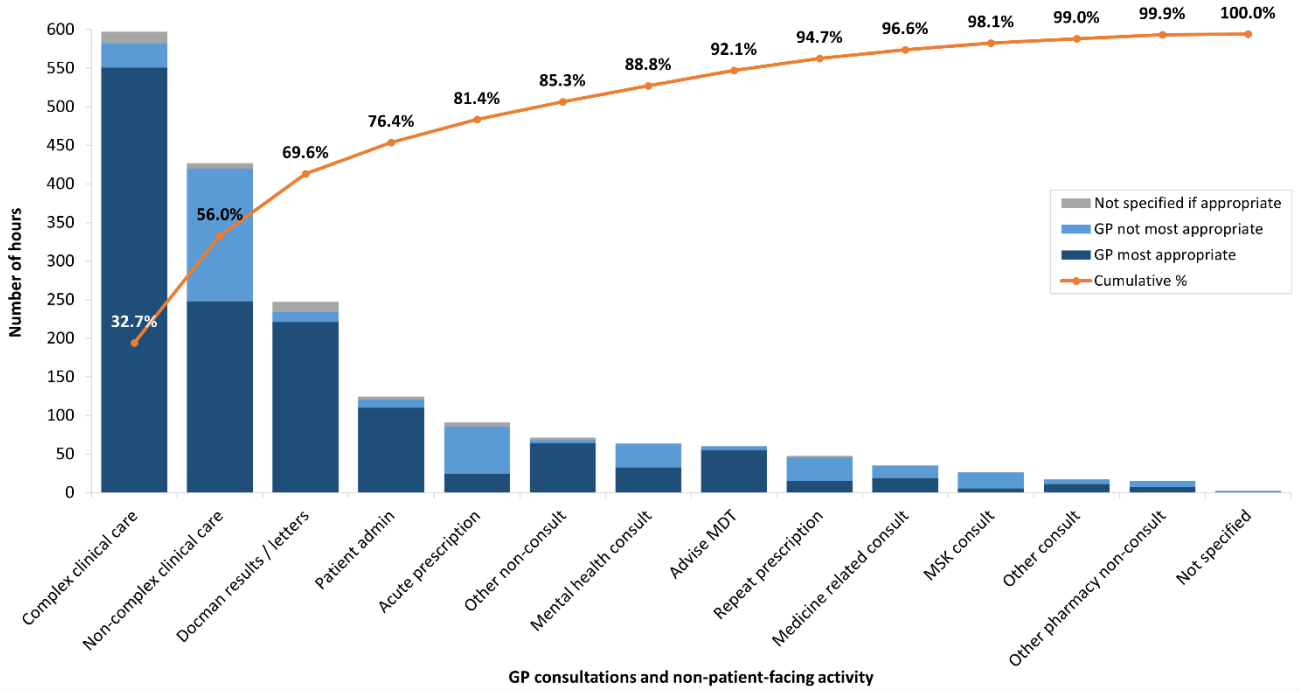
This has been broken down by:

- GP Consultations
- GP non-patient facing activity
- GPN activity, including non-patient facing activity
- Pharmacotherapy activity

See below more details on these.

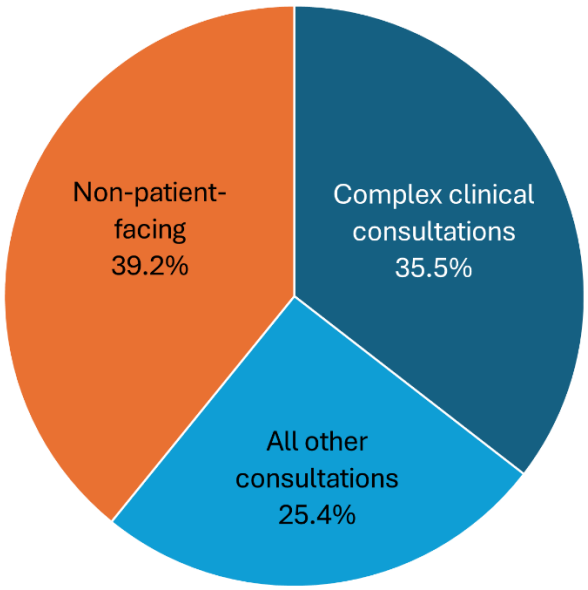
All GP activity

Figure 30: Time spent on GP consultations and non-patient facing activities, all sites



- A total of 27,437 consultations and activities were recorded across the 18 practices, accounting for 1,827 hours and 44 minutes of GP time
- GPs reported that 22.4% of the time they recorded for consultations and non-patient facing activities was spent on tasks that could have been more appropriately directed to another member of the MDT.

Figure 31: GP time spent, all demonstrator sites



Balance of time across consultations and non-patient facing activity

- Across all sites combined, GPs reported spending an average of 35.5% of their time on complex clinical care consultations, which are regarded as the core component of the expert medical generalist role.
- They reported spending 25.4% of their time on all other consultations.
- The remaining 39.2% of their time was spent on non-patient facing activities.

Note: This chart *(Figure 31*) excludes consultations and activities where the type of activity was not specified, and therefore percentages may differ from other analyses in this report.

GP consultations

- A total of 5,423 consultations were recorded across the 18 practices over 5 working days, accounting for 1,168 hours and 38 minutes of GP time.
- GPs reported that 87.7% of their consultation time was spent on either complex clinical care (51.1%) or non-complex clinical care (36.5%).
- GPs reported that 24% of the time they recorded for consultations was spent on consultations that could have been more appropriately directed to another member of the MDT.

These figures were taken from *Appendix 8, Figure 1*.

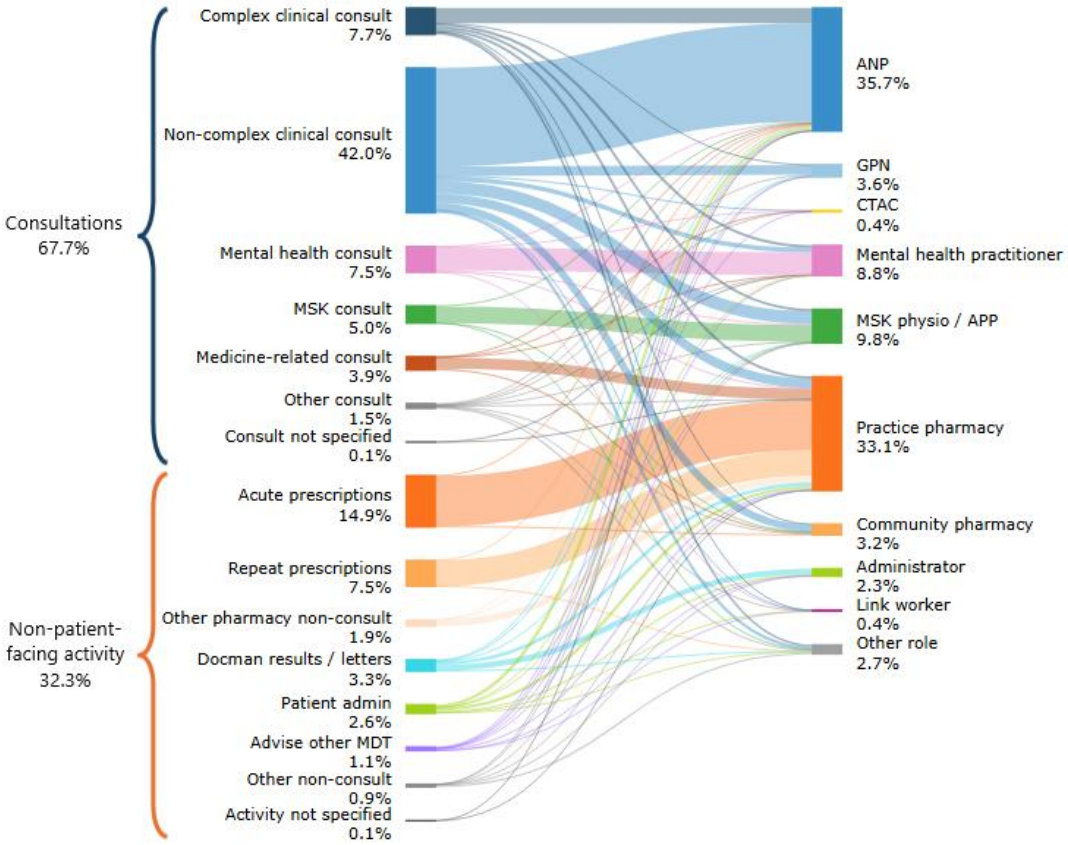
GP non-patient facing activity

- A total of 22,014 activities were recorded across the 18 practices, accounting for 659 hours and 6 minutes of GP time.
- Of this, 56.4% was spent on either Docman results and letters (37.5%) or patient administration tasks (18.9%), which collectively included tasks such as reviewing lab results, responding to outpatient correspondence and making referrals.
- Overall, GPs reported that 20.1% of the time taken for non-patient-facing activities could have been more appropriately carried out by another member of the MDT.

These figures were taken from *Appendix 8, Figure 3*.

GP consultations and activities more appropriate for other MDT staff

Figure 32: Flow diagram showing all activities GPs reported were more appropriate for other MDT members, all sites



The left-hand side of the diagram in *Figure 32* shows the time spent on various types of consultation and non-patient facing activities that GPs identified as more appropriate for other members of the MDT. The right-hand side shows the MDT member that GPs reported was more appropriate for each task. The percentage at each node represents the proportion of all values on that side of the chart. (Note: Tasks that GPs reported as being appropriate for themselves are not included in this diagram).

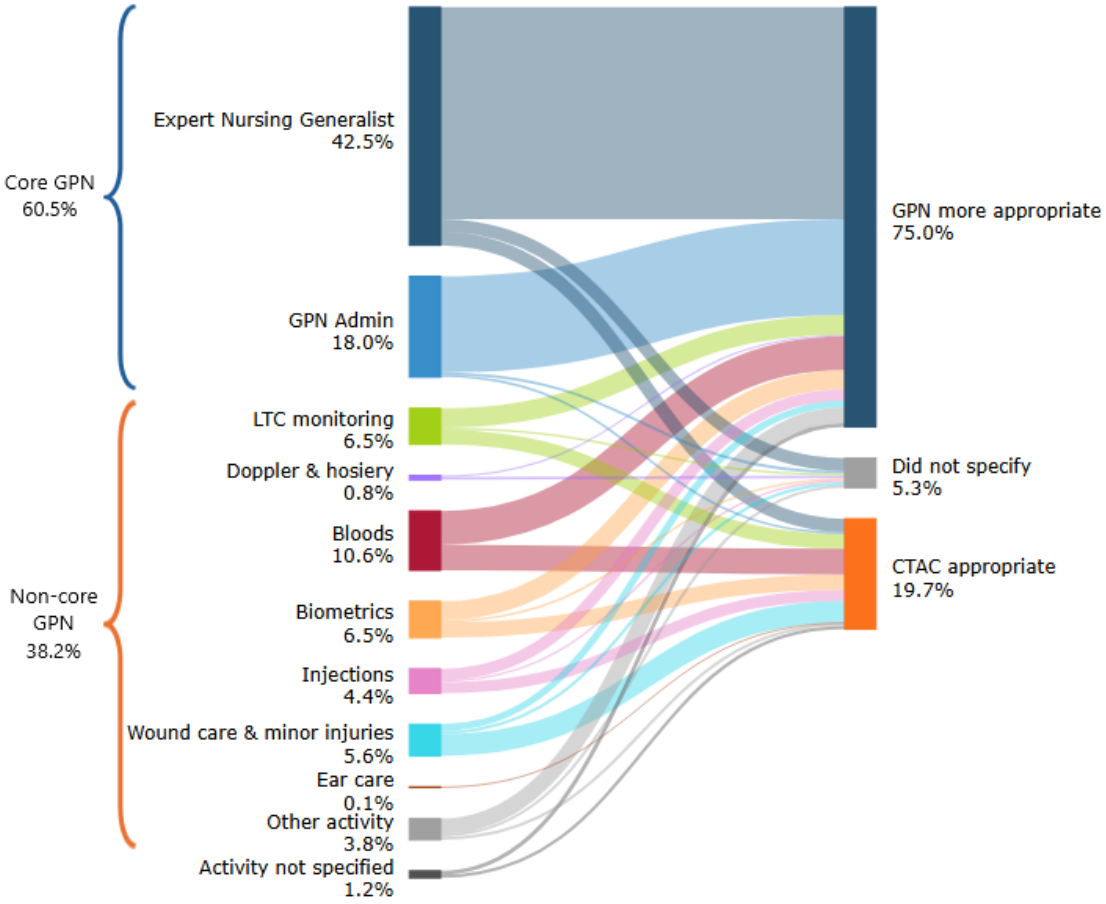
- While there was some variation across activities GPs reported were more appropriate for other MDT members, findings across all demonstrator sites' flow diagrams are similar (see *Appendix 8*). This suggests that it is largely representative of the wider system, whilst acknowledging that there will be differences between individual practices.
- Considering both consultations and non-patient-facing activity, GPs reported similar potential time savings by transferring activities to ANPs or practice pharmacy staff. Most of the potential time that could be saved by ANPs came from consultations, whereas the potential saving through practice pharmacy staff was mainly through non-patient facing activities.
- The data also suggests potential savings of GP time from other MDT members, in particular mental health practitioners and MSK physiotherapist/advanced physiotherapist practitioners. A good understanding of the local context is required to interpret the data locally, considering the local service model and staffing.

GPN data

- A total of 1,932 appointments and activities were recorded across the 18 practices, accounting for 333 hours and 52 minutes of GP time.
- GPNs reported that 60.5% of their time was spent on core GPN activities: expert nursing generalist (42.5%) or GPN admin (18.0%).

These figures were taken from *Appendix 8, Figure 13*.

Figure 33: Flow diagram showing all GPN activities, all sites



The left-hand side of the flow diagram in *Figure 33* shows the percentage of time taken for all appointments and activities undertaken by GPNs. The right-hand side shows whether the GPN reported CTAC would have been appropriate or not. This is mirrored in the pie charts below. The percentage at each node represents the proportion of all values on that side of the chart.

There was a lot of variation between the different demonstrator site level GPN flow diagrams (see *Appendix 8*). This suggests that they are not representative of the wider system. This is likely to be because the audit sample size for GPNs is smaller than for GPs (generally only one GPN per practice) and the way GPNs are set up in practices is less uniform than that of GPs.

Figure 34: GPN activities, all sites

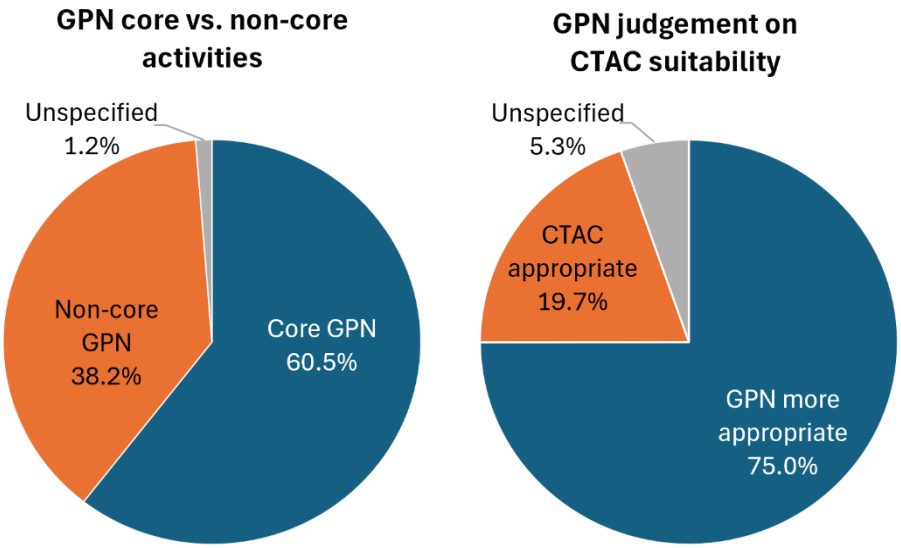


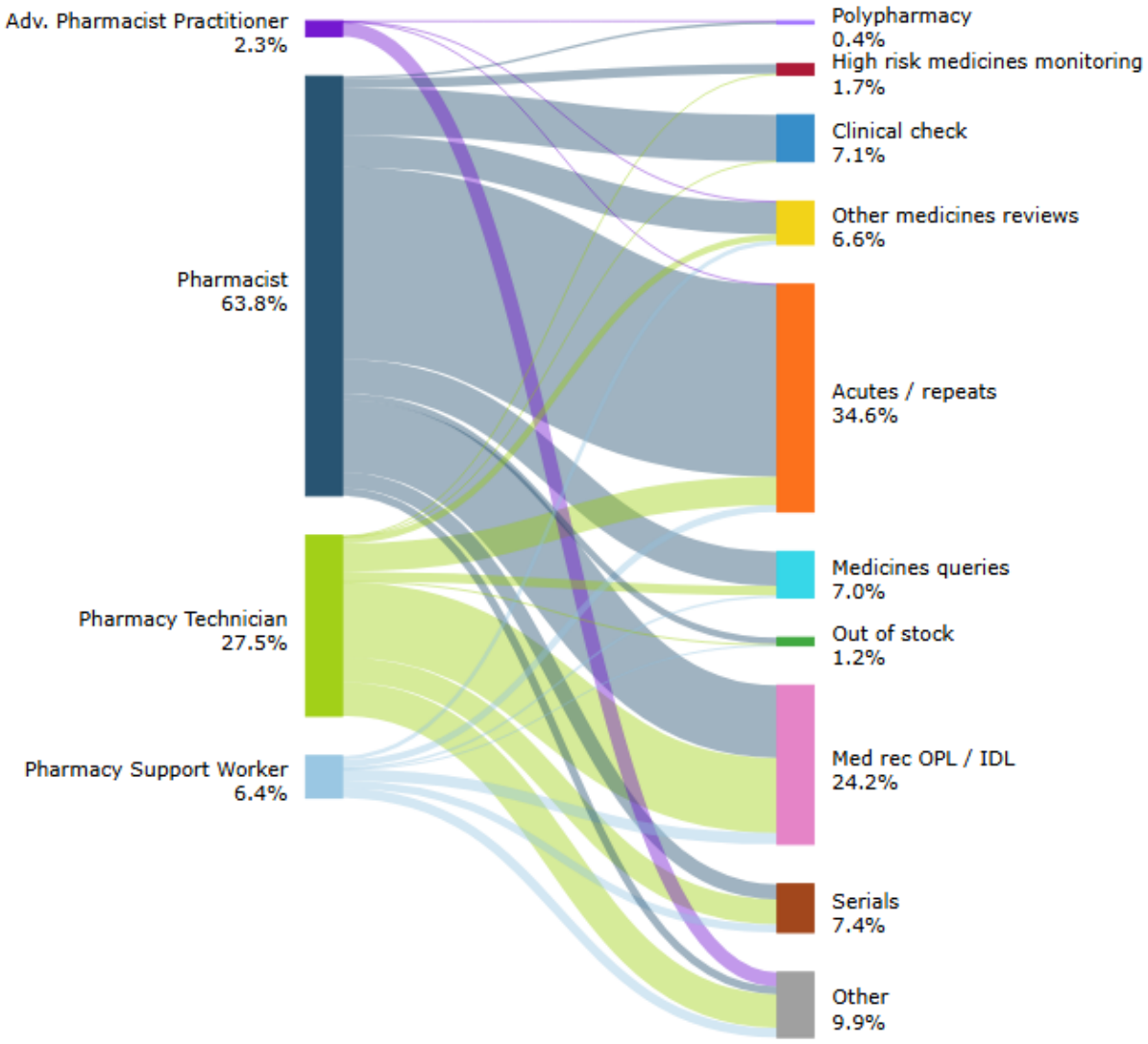
Figure 34 shows that there was no total alignment between non-core GPN activity (38.2%) and what GPNs considered appropriate for CTAC (19.7%). Not all non-core GPN tasks could be transferred to CTAC because of multiple factors such as case complexity, the provision of multiple services, professional judgement and the need to maintain continuity of care.

- There was considerable variation across the demonstrator sites in terms of CTAC specification, maturity of service and staff skill set. Staff were asked if CTAC could have carried out the activity, assuming a fully available CTAC service. However, since not all practices had full CTAC services, this may have affected how staff responded.
- NHS Borders and NHS Ayrshire & Arran data closely aligned with the tasks expected to be performed by CTAC. For example, many of the non-core GPN activities were considered appropriate for CTAC.
- GPNs in Edinburgh City HSCP reported a large number of appointments involving blood tests. This could reflect the different systems for phlebotomy in Edinburgh City HSCP.
- GPNs in NHS Shetland reported the lowest percentage of expert nursing generalist activities compared to the other sites. This could be driven by the different set-up of healthcare on an island. There were a high percentage of activities where it was not specified whether CTAC was appropriate or not in NHS Shetland. Missing information like this makes it harder to draw conclusions from the data.

These figures were taken from *Appendix 8*.

Pharmacotherapy data

Figure 35: Flow diagram showing all pharmacy tasks, all sites



The left-hand side of the flow diagram in *Figure 35* shows the members of the pharmacotherapy team who completed tasks across all sites. This includes hub staff as well as those based in practices. The right-hand side shows the types of tasks completed. The percentages represent the number of tasks in each category. Percentages on each node are the percentage of all the values on that side of the chart.

- Overall, 5,141 pharmacotherapy tasks were recorded: 120 by advanced pharmacist practitioners, 3,281 by pharmacists, 1,412 by pharmacy technicians, and 328 by PSWs.
- 58.8% of tasks recorded by pharmacotherapy staff were acute/repeat prescriptions (34.6% or 1,779 tasks) or medicines reconciliation (OPL/IDL) (24.2% or 1,242 tasks).
- NHS Ayrshire & Arran was the only site to have the role of advanced pharmacist practitioner. This is a relatively new role and involves a lot of patient-facing work. These appointments were recorded in the 'other' category. Tasks completed by advanced pharmacist practitioners tended to be complex and time-consuming, therefore it was possible that they recorded fewer tasks than other members of staff.

- NHS Borders had a higher percentage of tasks carried out by pharmacy technicians and PSWs than other demonstrator sites. Recruitment challenges for pharmacists led to the development of a hub model for pharmacotherapy in NHS Borders, with 81% of pharmacy tasks carried out in the hub. The comparable figure for other sites was 11% or less.
- NHS Shetland had the highest percentage of tasks carried out by pharmacists (89.0%), 55.7% of the tasks were other medicines reviews.

Additional charts in relation to the WoCA can be found in *Appendix 8.*

An **economic analysis** was undertaken to explore the potential efficiency and resource implications of MDT working in primary care, using the WoCA as the sole data source.

It focused on:
- the extent to which GP workload could be redistributed to other MDT staff, and
- the associated indicative cost implications.

See below for more details.

As mentioned in *Appendix 6 - Data collection and analysis methodology*, after attempting Cost Consequence Analysis (CCA) and Discrete Choice Experiment (DCE), it was decided that the WoCA data was the only source of data that could be used for the economic analysis.

Applying GP pay rates[5] to their time suggests an estimated resource cost of £106,665 for tasks during the audit week across participating practices, covering a registered list size of 130,182. This equated to £819 per 1,000 registered patients. Extrapolated to the Scottish population (registered list size 6,052,826), this suggests a possible resource cost for GPs of approximately £5m per audit week, or £208.7m per year, assuming 42.1 working weeks per year (see limitations in *Appendix 6*).

The first step was to aggregate the total time GPs reported spending on tasks that could have been undertaken by another staff member. This represented the hypothetical maximum (upper bound) resource saving, assuming general practice always had consistent access to the appropriate MDT staff (*Table 21*).

[5] Rates taken from Personal Social Services Research Unit (PSSRU), now the Care and Outcomes Research Centre (COReC).

Table 21: Hours spent by GPs on tasks where they were not the most appropriate person, and % breakdown of the most appropriate people identified

Staff member	Hours on not appropriate tasks	% of hours spent on tasks where GP was not the most appropriate person, where the most appropriate person listed was									
		Admin	ANP	GPN	CTAC	Practice pharmacy	Community pharmacy	Physio	MH nurse	CLW	Other
GP (patient facing tasks)	277 hours and 22 minutes	N/A	50.01%	4.60%	0.58%	9.99%	4.40%	14.13%	12.93%	0.57%	2.79%
GP (non-patient facing tasks)	132 hours and 24 minutes	7.18%	5.6%	1.47%	0.13%	81.38%	0.68%	0.76%	0.21%	0.09%	2.49%

Analysis

Two key features of the WoCA shape this analysis: first, the data was collected retrospectively; and second, the audit did not capture how long different staff groups took to complete the same tasks. To reflect these limitations and avoid a false sense of precision, the analysis was deliberately simplified to support generalisability across Scotland.

This analysis does not include GPN data from the WoCA, as CTAC staff were the only other MDT group GPNs could delegate to and so the potential efficiency savings were expected to be minimal given overlap in Agenda for Change pay bands. In addition, it includes only the alternative staff groups most frequently identified by GPs as appropriate for the largest share of their allocated work. As shown in *Table 21*, ANPs were identified as the most appropriate staff group for 50% of GP patient-facing tasks where the GP had identified the task was more appropriate for someone else. Mental health nurses and physiotherapists were together appropriate for a further 27%. Practice pharmacy staff were identified as most appropriate for 81% of GP non-patient facing tasks where a GP had identified the task as being more appropriate for someone else.

In the absence of data on relative task duration across staff groups, the analysis assumes a broad range in which ANPs, pharmacy staff, mental health nurses and physiotherapists would take between 50% and 400% of the time taken by GPs to complete the same task. This range was selected pragmatically, informed by discussions with clinical experts, to avoid any under-estimate or over-estimate of efficiency savings.

Potential resource efficiencies were estimated using relevant Agenda for Change pay bands for ANPs and pharmacy staff[6], alongside GP and Agenda for Change unit cost data. These were £240 to £270 per hour for GPs (the lower cost for non-patient facing tasks, the higher value for patient facing tasks). Other staff costs were £71 per hour for ANPs and practice pharmacists (Band 7 on average assumed) and £60 per hour for mental health nurses and physiotherapists (Band 6 on average assumed). COReC data are preferred because they include on-costs, qualification costs, overheads and travel.

[6] Workforce statistics, Public Services Delivery Scotland

For the audit week, across participating WoCA sites, the resulting range of potential efficiency savings - assuming sufficient ANP and pharmacy staff were consistently available to support GPs - is set out in *Table 22*.

Table 22: Cost comparison of GPs undertaking tasks they felt could be done by ANPs, practice pharmacy, mental health nursing or physiotherapy staff

Appropriate staff member	Cost incurred by GP doing these tasks	Comparative cost of appropriate staff member to do these tasks (shown as a ratio for GP: appropriate staff member time taken to complete tasks)				Range of difference in cost of GP vs appropriate staff member at ratios of 1:0.5 to 1:2 in terms of time taken to complete tasks	Range of difference in cost of GP vs appropriate staff member at ratios of 1:0.5 to 1:4 in terms of time taken to complete tasks
		1:0.5	1:1	1:2	1:4		
ANP	£39,238	£5,188	£10,377	£20,753	£41,507	£18,484 to £34,049	-£2,269 to £34,049
Practice pharmacy	£33,339	£4,808	£9,617	£19,234	£38,468	£14,105 to £28,531	-£5,129 to £28,531
Mental health nurse	£9,752	£1,085	£2,169	£4,338	£8,676	£5,414 to £8,668	£1,076 to £8,668
Physiotherapy	£10,824	£1,206	£2,412	£4,824	£9,648	£6,000 to £9,618	£1,176 to £9,618
Total ANP and practice pharmacy	**£72,577**	**£9,997**	**£19,994**	**£39,987**	**£79,974**	**£32,589 to £62,580**	**-£7,398 to £62,580**
Total mental health and Physiotherapy	**£20,576**	**£2,291**	**£4,581**	**£9,162**	**£18,324**	**£11,414 to £18,286**	**£2,252 to £18,286**
TOTAL	**£93,153**	**£12,287**	**£24,575**	**£49,149**	**£98,298**	**£44,003 to £80,065**	**-£5,146 to £80,865**

Potential savings were estimated per 1,000 registered patients by applying PHS practice list size data to each of the practices included in the audit[7]. The combined registered population across participating sites was 130,182. On this basis, the estimated potential saving for a single audit week ranged from - £40 to £621 per 1,000 registered patients.

While these figures can be extrapolated to a national level, such estimates should be interpreted with caution. Applied to the Scottish registered population (6,052,826), the implied saving would be between - £0.242m and £3.75m per week, or - £9.9m to £154.0m per year, assuming 41.2 working weeks per year. The number of working weeks per year is a proxy measure based on the number of working weeks Agenda for Change clinical staff spend not on annual or continuing professional development (CPD) leave and was used to be more conservative because if it has been assumed that 52 working weeks per year this would assume every week was as productive as the WoCA weeks, but it is known that in practice, demonstrator sites chose their audit weeks as ones where they were likely to have, for example, fewer staff on annual leave, which may therefore be an optimistic measure for scaling up to an annual figure.

The data in *Table 22* above can also be used in another way to consider the range of additional investment needed for PCPIP demonstrator sites to improve capacity sufficiently to realise the benefits of using non-GP MDT staff in clinical practice. So, for example, if the focus was on practice pharmacy staff taking on all relevant tasks from a GP, the data indicate that funding up to £38,468 per week would be needed across demonstrator sites to reduce to zero the number of tasks GPs undertake where a practice pharmacy staff would have been the more appropriate staff member. This assumes that practice pharmacy staff would take less than or up to four times the amount of time to complete the task as a GP, and also assumes that the remaining tasks GPs were still

[7] Public Health Scotland Open Data

undertaking that they noted would be more appropriate for a practice pharmacy staff, would not be harder to reallocate to practice pharmacists than tasks that these other MDT staff have already taken on, for example only capacity is influencing the number of tasks GPs felt were more appropriate for another staff member. Over a year (assuming 41.2 working weeks) the required investment to reduce the number of non-appropriate tasks for GPs that could be done by a member of the pharmacotherapy team, would be up to £1.175m. However, it should be noted that this assumes the maximum additional time required by a GP would be £1.585m.

This analysis demonstrates the potential resource gain for GP practices of investing in ANPs, pharmacy staff, mental health nurses and physiotherapists, as part of their MDT to help manage workload pressures. By focusing only on the four staff groups identified as having the greatest potential to substitute for GP activity, the analysis provides a fair illustration of the gains available to GP practices. However, it should be noted that other issues exist in addition to time spent and the unit costs of staff hours (for example emerging clinical complexities, cases that may require multiple team members regardless of complexity, staff absences, training issues and/or other constraints on the availability of the most appropriate staff member, or clinicians' own choices and preferences within their day-to-day roles).

From a policy perspective, the findings support continued investment in MDT working within general practice, to maximise opportunities for more efficient use of GP time. The analysis does not seek to specify the optimal number of MDT disciplines, such as ANPs, pharmacy staff, mental health nurses or physiotherapists required by individual practices. Decisions on workforce composition and skill mix should be made at practice level, informed by local population needs, service demand and existing workforce skill mix.

Gaps and limitations

- There was no patient-level outcome data linked to MDT activity (for example, continuity, health outcomes, inequalities impact) which created difficulty attributing changes to MDT roles because of reliance primarily on qualitative perceptions and a one-week snapshot WoCA.

Conclusions and recommendations

Given the variation in practice size, demographics and workforce pressures across Scotland, practices should have the flexibility to shape their MDT in a way that best meets local demand. Rather than prioritising one role over another, the focus should be on creating the system conditions (clear role definition, effective integration, and adequate support) that enable every part of the MDT to thrive. With this foundation in place, practices can tailor their MDT configuration to meet the specific needs of their population, ensuring that care remains responsive, sustainable and person-centred.

MDT working is where professionals from different disciplines collaborate to achieve shared goals, such as providing integrated patient care or completing complex projects. Therefore, each member of the team has an important role in contributing and without them the project would not succeed.

The WoCA showed potential contribution from each member of the MDT. It predominantly focused on asking GPs and GPNs which other members of the MDT could deliver aspects of their job. It is evident from the data collected from pharmacotherapy teams that the number of tasks undertaken by the pharmacotherapy teams

contributed to shifting GP workload. A similar conclusion for CTAC services could not be drawn. The number of CTAC appointments was collected, but the data was incomplete, so full analysis could not be carried out.

While GPs can and have been managing multiple patient presentations successfully over many years, the training and expertise other professionals bring to the MDT were shown to be beneficial. For example, the expert medicines knowledge that pharmacists can offer to patients during polypharmacy reviews, or the increased time community links workers could spend addressing complex social circumstances.

Although there is potential for task transfer to the wider MDT, qualitative data on different professions' reflections show the potential for unintended negative impacts on job satisfaction and staff retention. Learning suggests the need to shift from traditional thinking and move towards maximising MDT working whilst balancing person centred care.

These insights directly inform **recommendation 7**.

Recommendation 7 **Codesign MDT configuration based on local population needs.**

MDT configurations should be developed collaboratively, reflect local population needs and ensure all professional groups are valued equitably.

The demonstrator site findings show that different elements of the MDT require different delivery models based on local needs and existing services to function effectively. All demonstrator sites delivered at least part of their pharmacotherapy service through a hub model. Certain tasks, such as medicines reconciliation and actioning IDLs, were well suited to hybrid or hub-based working, ensuring consistency, equitable coverage across practices and efficient use of staff time. However, other elements of the pharmacotherapy role, particularly polypharmacy reviews and more complex medicine-related consultations, were reported to benefit from pharmacists being physically located within the practice. Co-location enabled more timely communication, better integration with the wider MDT, and improved continuity for service users. Some of the efficiencies gained through hub working were reduced when paper prescriptions were still required to be printed and signed by a GP in the practice, creating additional steps in the workflow. However, the addition of pharmacy hubs required suitable funding to support accommodation, which was also challenging. On the other hand, in one demonstrator site, CTAC hubs were reported as more challenging for service users to access with potential implications for widening health inequalities. While CTAC offers opportunities to redistribute workload within primary care, the data suggests that realising the full potential will require greater integration with practice teams, improved coordination with GPNs, enhanced support and recognition of CTAC staff, and a stronger focus on continuity and holistic care.

Overall, the findings suggest that a blended approach may be optimal, with hub models used for high-volume administrative tasks and practice-based working prioritised for activities requiring clinical discussion, relationship-building, and team-based care. These insights underpin **recommendation 3**.

Recommendation 3 **Apply hub/hybrid models selectively according to function.**

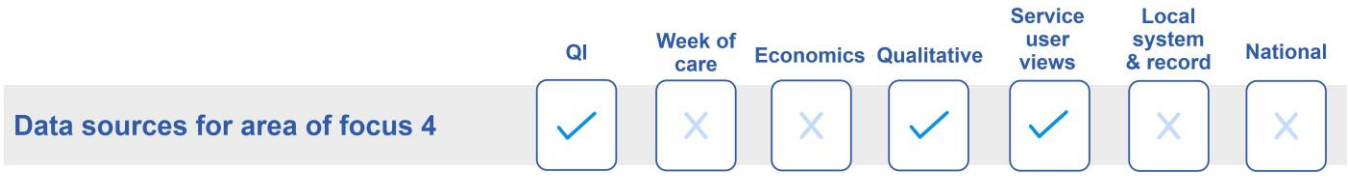
Hub models should be used for high volume administrative or technical tasks, while practice based working should be prioritised for clinical integration, discussion and continuity of care.

The collected data has several limitations and is therefore not able to support prioritisation of any member of the MDT over another. For example, WoCA data is predominantly a retrospective opinion of what tasks could be transferred to other disciplines, and economic analysis was based on one source of data (WoCA). Future work should consider the financial cost of enabling conditions, for example, the cost of physical and digital infrastructure to support MDT working. Also, patient outcomes should be explored. There is also a gap in data and exploration of GPN as expert nursing generalist, with further work required to explore their role in person-led care, prevention and value within the MDT. These insights directly inform **recommendation 8**.

Recommendation 8 **Expand evaluation of MDT impacts over time.**

Further evaluation of MDT working is required to understand long-term impacts on service users, workforce and wider system functioning.

Area of focus 4 - Key attributes of a sustainable and effective model of MDT support



Researchers identified 11 **key attributes** of a sustainable and effective model of MDT support from the **qualitative data**.

The key attributes were:

- Practice needs assessment
- Stable and sustainable funding
- Flexible delivery models
- Defined and shared objective
- Quality assurance and monitoring
- Agreed recruitment and line management processes
- Stability and continuity of workforce
- Satisfied and well workforce
- Career pathways for MDT staff in primary care
- MDT working to support holistic care
- Well informed service users

Find more information below.

Practice needs assessment

The MDT model, as laid out in the GMS contract, was perceived by GPs and practice managers to be too prescriptive and not appropriate for some practices, particularly those in rural areas. The deployment of MDT staff by the health board was reported by several practice staff to be standardised, rather than based on a local and practice needs assessment. As a result, the implementation of MDT services was reported by numerous participants as not aligning with practice demographics and size, systems and processes, priorities and long-term vision. This was reported to create inefficiencies, challenges with existing staffing and resistance to MDT implementation from practices (see area of focus 1, conditions for change). In one demonstrator site, practices were given the opportunity to set preferences for some MDT roles based on need, which leadership felt enabled a more appropriate allocation of staff. These findings suggest that increasing engagement with practices to co-design an MDT model tailored to practice need could improve the effective use of health board provided resources.

Stable and sustainable funding

Demonstrator site leads and GPs reported that funding for PCIP was insufficient and not responsive to increases in demand, which inhibited long-term service stability. Perceived lack of transparency surrounding funding (and understanding from practices regarding allocation decisions) created strain in the relationship between practices and the health board. Many GPs and practice managers reported that they would prefer to have greater financial autonomy to enable them to make sustainable decisions based on local need and context. Financial

autonomy was also reported as important for GP partner recruitment and retention. These findings suggest that a more stable and sustainable funding model in primary care, which prioritises long-term, responsive and transparent investment, would enable practices to plan and deliver their MDT services more effectively.

Flexible delivery models

Delivery models such as hub or hybrid (colocation and hub) were employed to offer flexibility and coverage, especially in rural or resource-limited settings. Staff reported that these models offer benefits such as improving resilience by providing cover for annual leave and sickness absence, and distribution of workload that allows staff to support multiple practices. Staff reported that the hybrid model allowed them to retain relationships, informal learning and confidence gained through colocation. Staff perceived, however, that being allocated to multiple practices or working hubs only often undermined relationships with practice teams and reduced confidence in clinical decision-making. Further issues were identified by staff, such as inappropriate referrals and inconsistent processes across practices which increased workload. It was viewed that having set days in the same practice or a static base was more sustainable, supported staff integration, installed confidence and strengthened MDT relationships, while still recognising that hub models offered benefits for service equity and cover. These findings show that flexible delivery models like hub and hybrid approaches support sustainability by improving coverage and resilience while retaining opportunities for relationship building and informal learning. Clear processes and appropriate referrals are important to reduce workload and support effective MDTs.

Defined and shared objective

Across staff groups, there was not a consistent understanding of, or shared objective for, MDT working. Staff noted that the contract does not define 'MDT' in primary care, nor how the different disciplines should work together, which has prevented a shared understanding and consistent implementation. As mentioned previously, there was a perception that the GMS contract was ambiguous and provided insufficient guidance. This lack of shared vision was also linked to the lack of engagement with primary care staff in the contract design (see areas of focus 1 conditions for change). Staff perceived that, in primary care, MDT working was often task-shifting across siloed services; this contrasted with the perceived collaborative MDTs in secondary care. This perspective limited opportunities for communication and building trust across MDT members.

As highlighted in area of focus 3, most GPs did not identify with the term 'expert medical generalist' or view themselves as clinical leaders of the MDT. Other staff groups highlighted differences in ways of working between practice and health board employed staff, such as working hours and responsibilities, which contributed to tensions and perceived inequalities. These dynamics were reported to negatively affect team morale and MDT coordination. These findings suggest that establishing a shared purpose for collaboration, alongside clearly defined roles, responsibilities and working arrangements for both practice and health board employed staff, could support the development of a more effective and sustainable MDT.

Quality assurance and monitoring

The Quality Outcomes Framework (QOF) previously monitored delivery of evidence-based care for LTCs. It was recognised that QOF was replaced by the introduction GP Clusters to fulfil the QI, assurance and planning role. However, some staff reported a problematic gap in quality assurance monitoring because of the removal of QOF and with the absence of a replacement framework. This gap was reported to have created uncertainty amongst some demonstrator site leads, GPs and practice managers about how to measure and monitor performance and improve standards of care. Some participants perceived that QOF encouraged GP accountability for quality. Some participants said the removal of QOF has led to a decline in the systematic monitoring of LTCs and routine

health checks and potentially prevented a means of monitoring health inequalities at a population level. It was reported that some practices continued to monitor chronic conditions using their own recall systems, although this added to their workload. These findings suggest that clear, consistent frameworks to support accountability and monitoring of outcomes could improve the standard of care delivered by MDTs.

Agreed recruitment and line management processes

Recruitment of MDT staff through the health board was widely reported by GPs and practice managers as a barrier to effective team working. Staff reported that practices had little involvement in selecting staff, limiting their ability to recruit staff to meet their specific needs, and to build trust and relationships (refer to areas of focus 1 conditions for change). Staff acknowledged that this lack of control also hindered workforce planning, with new staff often arriving at short notice and without structured induction, creating inefficiencies and confusion around supervision. Disparities in contract conditions between health board employed and practice employed staff were reported as creating tension and division within the MDT. Some practice-based staff reported that having line management under the health board further complicated matters, as they perceived practices had no influence over working hours or leave, and were left to manage the clinical risk, day-to-day coordination and have clinical supervisory responsibility without formal authority. Practice staff also highlighted that performance issues were difficult to address, as they were handled externally, leaving practice staff unaware of outcomes. These findings suggest that because of these challenges, mutually agreed recruitment and line management processes between practices and health board for MDT staff, with consideration of stronger autonomy for practices, could support a more effective and sustainable MDT.

Stability and continuity of workforce

Continuity of health employed board staff within MDTs was identified by practice employed staff as a challenge for service planning and integration of new members of staff. Similarly, health board employed staff found continuity issues as a barrier to integrating into new practices. Unplanned redeployment of health board employees disrupted team stability, especially when practices had invested in their training. Smaller practices appeared to be more affected by these changes. Contingency or locum staff, who were potentially unfamiliar with practice systems and ways of working, when placed at short notice, were also noted as creating challenges for continuity and efficiency. Staff reported that GP shortages were common, with some practices introducing 'buddy' systems to maintain continuity of care. The data revealed that the administrative teams also faced high turnover and sickness absence, with recruitment hindered by low pay and increasing responsibilities. GPs reported that, while roles such as Advanced Pharmacy Practitioners and ANPs were valuable, when there were absences, responsibility was then returned to the GPs, resulting in increased workload. Staff reported that CTAC staff absence led to cancelled or rescheduled appointments with some of this workload subsequently redistributed to GPNs. Staff vacancies impacted on morale and, in some cases, made staff consider leaving their role. In addition, it was reported that because of many MDT staff working part-time across multiple practices, this made it difficult to adapt to varying cultures and systems, particularly in rural areas. These findings suggest that addressing the challenges of achieving staff continuity, team stability and integration within MDTs could support an effective and sustainable MDT.

Satisfied and well workforce

The data indicates low levels of job satisfaction in primary care, linked to increasing demand, shifting responsibilities, loss of task variation and poor work-life balance. This was reported to compromise the wellbeing of staff and the stability of the workforce, with risks of burnout and attrition. This in turn was perceived as a barrier to attracting new staff to primary care. To address this, staff emphasised the need for clearly defined roles, variety in day-to-day activities and strategies to minimise overtime.

Across staff groups, parity in pay, meaning that staff with comparable roles, responsibilities and qualifications are paid equally, was highlighted as important for job satisfaction. Inconsistencies in pay or banding of staff for similar roles between practices and health boards was perceived as unfair, creating discontent and tension between some staff groups. These findings suggest that parity in pay and improved job satisfaction, including reduced burnout, across primary care staff would support a stable and sustainable workforce.

Career pathways for MDT staff in primary care

The data suggests that the new roles and services that were introduced without clear career pathways, left many staff uncertain about role progression. GPNs and CTAC staff expressed concern about limited career development opportunities and general uncertainty about their role identity. Pharmacy technicians and support workers, although exposed to upskilling opportunities, were unclear about their overall career trajectory in primary care. This lack of a clear career framework risks deskilling and demoralising staff, especially when combined with a task-based model of care. Concerns about deskilling were raised from GPNs, pharmacists and GPs because of changes in their role (refer to area of focus 5 for further details on each professional group). Staff felt that having clear career pathways was important for retention and sustaining a skilled workforce in primary care. These findings have highlighted the need for clear career pathways and role identity across new and established roles. Establishing and supporting implementation of structured development opportunities and career frameworks could help retain a skilled and motivated workforce, important for MDT sustainability.

MDT working to support holistic care

Staff frequently reported that the expansion of the MDT introduced a more task-based model of care. Roles were perceived to be increasingly focused on task completion rather than supporting whole-person outcomes. As discussed earlier, CTAC in particular was seen to limit opportunities to provide holistic care, resulting in a more fragmented service user journey and a risk of disengagement. In two demonstrator sites, GPNs noted that fewer service users received routine vaccinations because they were not able to offer them during appointments. They perceived this to be because vaccination provision was transferred outside the practice, leaving them unable to offer opportunistic vaccinations during appointments. GPs further reported that service users often saw multiple members of the MDT before receiving a diagnosis or treatment plan, highlighting inefficiencies and a lack of coordinated care within the current model.

Some MDT services, particularly pharmacotherapy, mental health, advanced physiotherapy practitioners and CLWs, were reported to support holistic care through specialist skills and longer appointment times. With more time available, these staff had opportunities to provide service user education and signposting tailored to service user needs.

Overall, staff expressed concerns that a task-based model of care can overlook the complexity of service user needs, reduce opportunities for relationship-based care, and pose risks to safety and continuity when no one maintains an overall view of the service user's care. The data suggests shifting the focus to holistic care, with improved coordination across the disciplines, may increase the efficiency and sustainability of the MDT model.

'Well informed service users

Staff perceived that MDT services were not well-recognised or understood by service users, which led to service user frustration and confusion. Staff reported that consequently they often spent clinic time explaining the role of the MDT, especially around areas such as a referral. The provision of posters and information in practice reception areas was viewed by staff as a useful way to improve awareness and arrangement of new services. Despite service users' lack of awareness of MDT services, staff believed that increasing workforce capacity was creating new demand. Staff reported that increased appointment availability through MDT services was encouraging service users to use primary care services more frequently. Staff also felt that service users' expectations were changing. Although seeing a GP was still an expectation amongst service users, there was a shift towards service users valuing quicker access to services via an alternative healthcare professional. However, staff reported that this often resulted in service users being seen by multiple different professionals. Staff perceived that there is a lack of understanding amongst service users of what warrants an urgent or routine appointment in primary care, which was causing increased administrative burden and clinic time required to inform service users. These findings reveal that clearer communication with and better MDT awareness for service users will help manage service user expectations, save clinic time for staff and support the efficient use of MDT services.

Based on the learning from the demonstrator sites' **QI journeys**, the following were deemed **attributes** of a sustainable and effective model of MDT support.

- Right care, right person
- Consistency of service

Find more information below.

Right care, right person

The right care, right person approach supports safe delegation, improves efficiency and ensures patients receive the best care from the right person in the MDT.

- NHS Shetland increased the number of annual medication reviews on all patients prescribed regular repeat medicines which indicated that pharmacists are now completing medication reviews which would previously have been done by other clinicians in GP practices. They also increased the percentage of those medication reviews completed by the pharmacy team which required contact with patients. This indicated that the increase in medication reviews completed by pharmacists now includes more holistic medication reviews with the patient as well as notes-based reviews.
- Edinburgh City HSCP introduced the PSW role, recruited additional pharmacy technicians and established hub lead pharmacists. The team aimed to have the hub complete more level 1 work, which would enable practice pharmacy teams to focus on more advanced pharmacotherapy tasks. PSWs supported the pharmacotherapy team with a range of tasks including non-clinical medication reviews, serial prescription administration, monthly Vision/EMIS searches, cost saving projects and medicines optimisation support. Following the introduction of the PSW role and the expansion of their pharmacotherapy hub the team distributed a survey to practice pharmacy staff: 71% of respondents agreed to some extent that the hub has improved their ability to dedicate more time to level 2 tasks; 60% reported an increased ability to focus on level 3 tasks. The QI data shows that pharmacy technicians had more capacity to complete more advanced tasks such as HRMM and acute prescribing.

- NHS Ayrshire & Arran introduced the advanced pharmacist practitioner role. During the programme the percentage of complex patients with a polypharmacy review completed by an advanced pharmacist practitioner in the last 12 months increased. These patients would previously have needed to see a GP for this review.

Consistency of service

A consistent service is built on resilience. Even during periods of disruption, resilience ensures patients have timely access to the care they require without cancellations or unnecessary delays.

- NHS Ayrshire & Arran expanded their CTAC resilience service to cover long-term absence, maternity leave, vacancies and priority interventions CTAC appointments. Resilience staff covering a higher proportion of appointments provides a more consistent service and reduces the risk of appointment cancellations or work defaulting back to practices in the event of staff shortages.
- Edinburgh City HSCP recruited additional CTAC nurses and opened two new CTAC rooms. At the same time, the team refined booking processes to improve efficiency and patient care. This included reviewing how many wound care appointments were scheduled and allocating patients to staff with the appropriate skills to deliver the required intervention from the outset. These changes provided a more consistent service and reduced the risk of work defaulting back to GP practices.
- NHS Borders' pharmacotherapy hub provided a consistent service during a period of hub expansion with 95% of IDLs completed within 48 hours. This demonstrates that despite increased activity, patients continued to receive timely access to medication changes.
- Edinburgh City HSCP collected similar data illustrating a similar consistency of service, again during a period of hub expansion as it took on medicines reconciliation duties for more practices within the demonstrator site.

For further information on the demonstrator sites' journeys please see *Section 2.1*.

Citizens' Panel data highlighted the following:

- improved access
- continuity of care, and
- awareness of the roles within the MDT.

For more information on the feedback from the Citizens' Panel please see *Appendix 12*.

Feedback from the Citizens' Panel indicated that service users generally experienced **improved access** to care and timely support following the implementation of the MDT. Respondents **appreciated the continuity of care** and trusted relationships with healthcare professionals. Many were **not aware of the roles within the MDT** and did not understand the difference between rapid access to services and maintaining personal continuity. While most participants reported positive experiences and viewed the quality of care as high, there were noticeable gaps in understanding the functions and coordination of the MDT. This suggests that although the expansion of MDTs has enhanced capacity and responsiveness, further efforts are needed to raise public awareness, ensure coordinated care and maintain relational continuity alongside operational efficiency.

Gaps and limitations

- Qualitative evidence indicates a significant limitation arising from the absence of a national framework to guide MDT operations. The lack of a national framework resulted in inconsistent practices, unrealistic expectations, ambiguous responsibilities and uneven implementation across boards and practices.
- Available data is insufficient for a comprehensive assessment of workforce capacity gaps. While QI evidence demonstrates the benefits of 'right care, right person', there was no plan to collect systematic data on the actual time requirements or sustainability of expanded roles, such as advanced pharmacy practitioners, PSWs or technicians.
- No patient-level data was available to directly link MDT models with specific outcomes. As a result, the evaluation could not determine whether different MDT configurations, including hub, hybrid or co-located models led to measurable impact on patient outcomes, continuity of care or equity.

Conclusions and recommendations

Key attributes of sustainable MDT working were identified in this section. Some of these attributes have already been discussed in previous areas of focus. Findings suggest that preserving continuity of care requires system level attention to workload, culture, role clarity and wellbeing across the MDT.

In terms of continuity of care, service users described continuity as essential to feeling understood, supported and confident in their care. Many emphasised that seeing the same professional, whether a GP or CLW, provided emotional security and practical benefits. They highlighted that familiarity allowed staff to understand their health conditions and life context without repeated explanations, and this is deeply valued. A consistent frustration was having to repeat their story when they could not see the same clinician. Several users noted that busy practices and appointment pressures meant they were often unable to book with the GP they preferred, leading to gaps between appointments and a sense of disrupted care. Some described feeling like 'just a file', with care perceived as task-focused rather than relational. Whilst service users appreciated that not every health professional needs full background knowledge for all tasks, they felt that GPs in particular should maintain a sense of continuity. Some service users noted that lack of continuity risks things 'falling through the cracks', reduces confidence, and can lead to repeated consultations without progress.

In contrast, where continuity is present, service users described seamless, consistent and holistic care, particularly within practices where it was felt that clinicians knew families well. They associated continuity with rapport, trust, compassion, better understanding of LTCs, and fewer communication breakdowns. Overall, service users highlighted a clear preference for continuity of clinician, linked to better experiences, reduced repetition, improved trust and safer, more person-centred care.

These insights directly underpin **recommendation 9**.

Recommendation 9	**Protect continuity of care.**
Ensure MDT development enables joined up care and better continuity.	

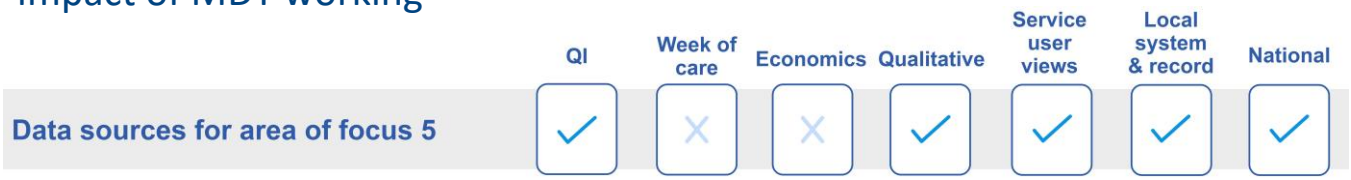
Staff across primary care reported significant challenges with maintaining continuity and stability within MDTs, driven by high turnover, unplanned redeployments, part-time working across multiple sites, and difficulties integrating new staff into diverse practice cultures. Smaller practices were particularly affected, and reliance on contingency or locum staff often disrupted efficiency. Shortages of GPs and frequent absences of MDT members led to increased workload for remaining staff, cancelled appointments and pressure on GPs and GPNs to absorb additional tasks, negatively impacting morale and retention. Job satisfaction was reported as low because of rising demand, shifting responsibilities, limited task variety and poor work-life balance, contributing to burnout and making recruitment harder. Staff also highlighted inequities in pay and banding across practices and health boards as a source of frustration and tension. Overall, the findings indicate that improving staff continuity, role clarity, pay parity and wellbeing is essential for creating a stable, effective and sustainable primary care workforce.

These insights directly underpin **recommendation 10**.

Recommendation 10 **Ensure workforce stability and wellbeing.**

Ensure MDT development protects staff stability and wellbeing through balanced workloads and meaningful roles.

Area of focus 5 - Support requirements for monitoring and evaluation of the impact of MDT working



Extensive qualitative research was carried out during PCPIP, and these findings have been incorporated into most areas of focus. Although the qualitative data gathered was rich and insightful, their use for monitoring and evaluating the impact of MDT working was not feasible.

A set of national and local sampling quantitative measures were used to inform requirements for monitoring and evaluation of the impact of MDT working and recommendations on future system wide measures. See the evaluation overview for more information about which measures were considered. *Appendix 10* includes a list of the indicators proposed for evaluation purposes and whether it was feasible to use them or not.

National data available from national reporting systems were requested from PHS for the measures below.

Primary care activity data

- Number of encounters for GPs, GPNs and members of the wider MDT
- GP referrals to elective care

Data on unscheduled care

- Accident & emergency (A&E) attendees who are not admitted to hospital
- Potentially preventable admissions
- Use of NHS24 and out of hours (OOH)

Patient outcome data

- National Therapeutics Indicator (NTI) data
  - Falls, fractures and delirium, (anticholinergics)
  - Mental health triple whammy
  - Poor asthma control
  - Type 2 diabetes and atherosclerotic cardiovascular disease (ASCVD) management
  - Wound care

Based on the **national data**, the following were identified.

- National data could not be used to inform any meaningful conclusions on the work carried out during the lifespan of PCPIP because of the limited amount of time / number of data points available since the start of the programme. Therefore, these data have not been included within this report.
- These measures have the potential to be useful for assessing trends over longer periods of time. However, healthcare systems are complex and influenced by multiple factors, making it difficult to attribute patterns seen in these data to system level changes. These indicators do not provide definitive proof about the quality of care (good or poor) and should not be used to make judgements about quality or performance.

PHS was commissioned in February 2025 to lead on the **local data collection and analysis** of PCPIP's evaluation of the GMS contract. PHS staff supported the collection of the following data to understand access to care, improved medicines management, continuity of care and impact of MDT on the workforce.

Access to care

- Encounters
- LTC care – diabetes and chronic obstructive pulmonary disease (COPD).

Continuity of care

- Adjusted St Leonard's Index of Continuity of Care (aSLICC)

Improved medicines management

- Serial Prescriptions

Impact of MDT on the workforce

- Sickness absence rate
- Vacancy rate
- Turnover rate

Find more information below.

PHS provided an analysis of the local data collection they supported. The analysis of these measures can be found in *Appendix 9*.

Based on the **local sampling data collection and analysis**, the following insights were identified.

- The data presented in *Appendix 9* show changing trends which could be attributed to local PCPIP implementation in some instances. Increasing trends were observed in some practices, and where feedback was available, some actions related to PCPIP could have contributed to the trend. However, the number of practices across all indicators which saw either no change or an opposing trend makes it difficult to definitively attribute PCPIP as the cause, though this is likely to be the case in some practices. Although PHS and Public Services Delivery Scotland (formerly NHS Education for Scotland (NES)) analysed workforce indicators, inconsistent survey submissions and small sample sizes made this data unreliable for inclusion. This, in part, highlights the variable nature of PCPIP implementation, which made it challenging to use routine data to measure such changes, and underlines the importance of embedding appropriate monitoring and QI approaches with interventions.

- A key theme for general practice in Scotland is the availability and quality of data. The analysis to understand PCPIP implementation required a high number of bespoke analyses and conversations. Nonetheless, these serve as an initial set of indicators for general practice more broadly. Significant effort and resources were required to gather the data included in this section, and such efforts would not be easily replicated on a national scale. Were such data more readily available, variation in local coding practice would likely limit the validity of comparisons between practices and so limit the potential for scaling nationally to promote learning between different areas. Comparisons between practices were limited in this analysis because of these variations. A key area for improvement to enhance the sharing of data and intelligence within general practice is improving data availability. Within that, data quality, and any national efforts towards the important aim of improving data availability and accessibility (such as the Primary Care Data and Intelligence Platform) would need to have methods of improving the quality of such locally collected data.

According to the **QI data**, the following were key factors to support **monitoring and evaluation** of the impact of the MDT.

- Access to data and information
- Consistent measurement
- Understanding DCAQ

Find more information below.

Access to data and information

Digital infrastructure provides teams with access to data and information, enabling them to make effective, data driven decisions.

- Edinburgh City HSCP worked with PHS to develop a dashboard for their pharmacotherapy hub. The dashboard data helped the pharmacy team to monitor work and turnaround times, plan staffing to meet demand coming into the hub and engage GP practices to discuss their use of the hub.
- It was possible to develop the dashboard because of Edinburgh City HSCP's existing data sources and IT infrastructure. In contrast, another demonstrator site explored developing a similar dashboard but was unable to proceed because of insufficient infrastructure.

Consistent measurement

Consistent measurement approaches across demonstrator sites makes data easier to interpret. This enables insights to be drawn from across sites and contributes to better quality evaluation and shared learning.

- NHS Borders and Edinburgh City HSCP had measures focused on the percentage of IDLs completed within 48 hours by the pharmacotherapy hub. The 48-hour turnaround is a widely accepted target among pharmacotherapy teams for timely medicines reconciliation. NHS Borders recorded this information manually, while Edinburgh City HSCP extracted this information from their dashboard.
- Consistent measurement was challenging for many measures because of variation in approaches across demonstrator sites. For example, all four demonstrator sites aimed to improve serial prescriptions but measured it in different ways.
  - NHS Ayrshire & Arran measured the percentage of serial prescriptions issued for 56 weeks.
  - NHS Borders measured the serial prescriptions as a percentage of all repeat prescriptions.

- Edinburgh City HSCP measured serial prescriptions as a percentage of all repeat prescriptions.
- NHS Shetland measured the percentage of individuals with a serial prescription as a percentage of people with an active repeat prescription.

- A set of national measures would enable more effective monitoring and evaluation of MDT support and facilitate evidence-based improvements across sites.

Understanding DCAQ

DCAQ supports teams taking a QI approach to sustainably reduce waiting times and improve flow**.**

- Edinburgh City HSCP used a CTAC data dashboard to track appointments and cancellations. Initially, the dashboard did not distinguish whether cancellations were made by the service or by patients. This resulted in manual data collection, which was time-consuming for administrative staff. The dashboard has since been updated to include this breakdown. As a result, the demonstrator site now has a clearer understanding of CTAC activity.
- Although understanding of cancellations and activity has improved, the total CTAC demand is still unclear. It would require manual data collection to understand the number of patients being seen by GPNs and district nurses who could be seen by CTAC.

For further information on the demonstrator sites' journeys please *see* *Section 2.1*.

According to the **qualitative data**, relational and informational continuity of care matters to service users as it builds trust, reduces the need to retell their story, and helps them feel known and supported. It appears to be most important when managing long-term, complex or sensitive conditions.

Service user data collection explored service users' perceptions and experiences of primary care related to the 4C's[8] – contact, comprehensiveness, coordination and continuity. While the service user dataset was relatively homogenous (as highlighted in *Appendix 11*), it provided valuable insights and highlighted important areas for consideration and further evaluation in primary care. See *Appendix 11* for more details on the insights on service users' perceptions and experiences gathered from the qualitative data.

Suggested improvements/changes

There were a number of suggested improvements to primary care made by service users, based on their experiences and perceptions.

- Easier and more reliable methods of making appointments, including alternatives to the 8 o'clock phone bottleneck, online booking, shorter waits and clearer signposting on the website.
- A hybrid access model (for example, walk-ins in the morning, pre-booked slots later) and extended opening hours.
- Continuity by condition such as having the same GP manage the same aspect of care, especially for mental health.
- Reception interactions that feel supportive with clearer explanations for questions asked.
- Stronger self-management support (resources, guidance, signposting).

[8] Dr. Barbara Starfield's core functions forming the foundation of high-quality, continuous general practice and primary care

- Overcome car parking constraints which can impact access and experience, especially at busy or shared sites.

Citizens' Panel provided feedback from service users.

For more information on the feedback from the Citizens' Panel please see *Appendix 12.*

Citizens' Panels in Scotland provide a structured way to gather healthcare users' views in Scotland, offering representative insights and policy-relevant feedback, but they also face limitations such as sample size, representativeness and depth of engagement.

However, if Citizens' Panels were used for monitoring the impact of MDT contracts on service users, they should be complemented with other engagement methods (for example interviews, focus groups, patient forums, lived experience panels) to ensure depth, inclusivity and responsiveness to emerging changes.

Gaps and limitations

- Currently, no national, standardised MDT measurement set exists; indicators, coding and operational definitions differ across boards and practices.
- There are too few national data points and a short time limit conclusion.

Conclusions and recommendations

The findings from PCPIP suggest that while a broad range of qualitative insights and local data were collected, and provided valuable information, these sources were not suitable for routine ongoing monitoring of MDT impact. Qualitative findings were rich and offered important contextual understanding, but their resource-intensive nature and methodological limitations mean they cannot form the basis of a sustainable evaluation system for MDT working. Similarly, national activity and outcome measures, although relevant to understanding long-term trends, were too limited in frequency and too influenced by wider system factors to support meaningful conclusions within the programme time. Some of the national measures were intended to establish a baseline and inform the creation of a standard set of national measures for ongoing monitoring and future evaluation of the impact of the MDT component of the GMS contract.

Local sampling undertaken by demonstrator sites and PHS provided more immediate insights, yet significant variation in data completeness, coding practices and workforce data submissions limited their reliability. These challenges highlight the need for stronger foundational support to enable consistent, scalable evaluation of MDT impact. A key learning point is that meaningful monitoring requires not just data collection, but the analytical capability and capacity, infrastructure, and measurement standardisation to allow comparison across settings. Without these elements, practices and HSCPs cannot reliably track the effects of MDT investment or identify where improvements are taking place. These findings directly reinforce **recommendation 11**.

Recommendation 11 **Adopt a QMS approach.**

Scottish Government and boards should adopt a QMS approach integrating planning, assurance, control and improvement, with QI support tailored to local readiness.

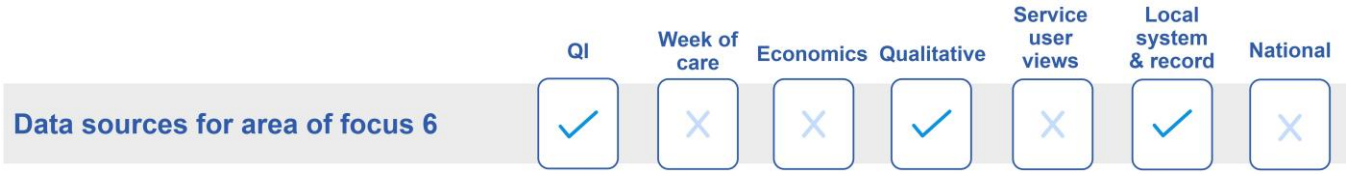
The findings emphasise that robust data systems are foundational to monitoring and evaluating MDT working. Digital infrastructure emerged as a core enabler. Where demonstrator sites had strong IT systems and dashboards, it encouraged the use of data and promoted data literacy. MDT teams could monitor contract implementation progress, plan resourcing, and make data-driven decisions. Having helpful data can encourage people to collect better quality data, leading to a self-fulfilling cycle. In contrast, sites with weaker infrastructure were unable to replicate even basic analytical tools, reinforcing the need for a national approach to improving data availability, data quality and accessibility in primary care. Establishing a standardised national measurement set is central to this, ensuring comparability and enabling meaningful evaluation across different levels (for example practices, clusters, HSCPs, boards).

Strengthening national digital platforms, improving coding consistency, and investing in local analytical capacity will be essential to building an evaluation system that can reliably measure the impact of MDT working in the future. These improvements will create the conditions for sustained learning, better governance, and more effective decision-making as MDT working continues to develop across Scotland. These insights directly inform **recommendation 4**.

Recommendation 4 **Invest in IT system integration and outcome focused monitoring.**

Integrated IT systems, standardised coding, and analytic capability should be prioritised. A national MDT monitoring framework that is long-term, trend based, equity sensitive and focused on improvement should be established.

Area of focus 6 - Requirements to ensure MDT working supports the reduction of health inequalities



Researchers identified nine actions from the **qualitative data** which could support a reduction in health inequalities. These actions reflect participants' perceptions and understanding of health inequalities and barriers to accessing primary care. They also highlight existing strategies to **address inequalities** and **missingness**.

- A framework or programme designed to address health inequalities.
- Acknowledge and address the wider determinants of health.
- Equity in provision of resources.
- Education, training and capacity to address health inequalities.
- Develop a standardised and agreed upon approach to managing DNAs and missingness.
- Effective interpreter and translation services.
- Equitable access to hubs.
- Service user education and awareness of services.
- Empower MDTs to address health inequalities.

See more information below.

A framework or programme designed to address health inequalities

Demonstrator site leads and GPs reflected that they did not think the GMS contract had sufficient focus on health inequalities to guide implementation of the MDT in primary care. They felt the contract was not clearly underpinned by the aim of reducing health inequalities, and that the term 'health inequalities' lacked definition and guidance for implementing inequalities-focused healthcare. Participants felt that health inequalities were therefore not viewed as a priority by health boards. The data suggests that a clearly defined and embedded focus on health inequalities in the implementation of MDT working would support the reduction of health inequalities in primary care.

Acknowledge and address the wider determinants of health

The experience and perception reported by participants across the demonstrator sites was that growing demand for primary care services is in large part driven by increasing unemployment, economic difficulties and social issues. Participants also discussed the insufficient availability of social support and care, substance misuse services and mental health services, which often results in service users returning frequently to primary care. The data suggests that addressing the wider socioeconomic and environmental determinants of health is integral to MDT working supporting the reduction of health inequalities in primary care. The qualitative data suggests that the role of the CLWs is important to this.

Equity in provision of resources

Primary care staff reported that a fairer distribution of funding and MDT services tailored to the practice needs and population could play an important role in addressing inequalities. In areas that faced deprivation, GPs believed that the current need for mental health workers far outweighs current provision. The data suggests that equitable allocation of resources and increasing mental health staffing in areas of need should be considered to allow MDT working to support the reduction of inequalities.

Education, training and capacity to address health inequalities

Many primary care staff struggled to identify which groups of people may face barriers to accessing services. Some staff reported that older adults may hesitate in seeking healthcare and may face challenges when trying to make an appointment. Other groups that were identified by staff included individuals who are housebound, those with additional or mental health issues, and individuals with learning disabilities. Practice managers raised concerns about service users who frequently miss appointments and were consequently viewed as a strain on resources. Staff reported minimal training opportunities in health inequalities, and it was noted that guidance on culturally appropriate care is lacking. Limited capacity and resources were believed to be the barriers to overcoming these issues. The data suggests that increasing staff awareness of health inequalities, provision of training in health inequalities and ensuring sufficient resources to address complex service users should be considered to allow MDT working to support the reduction of inequalities.

Develop a standardised and agreed upon approach to managing DNAs and missingness

Approaches to managing DNAs and missingness (characterised by the recurring pattern of not taking up offers of care or support) varied considerably across practices. Strategies reported to address DNAs included contacting service users through letters, text messages or phone calls and recording DNAs in clinical systems, typically overseen by practice managers or administrative staff. In some practices, continued non-attendance was reported to result in service users being removed from the practice list. Service users with dementia, mental health conditions or chaotic lifestyles were recognised as being more likely to miss appointments and require enhanced support to facilitate their engagement with primary care. Some clinical staff reported making additional efforts to contact these individuals, following non-attendance. A few practices described proactive strategies to tackle DNAs, such as receptionists contacting vulnerable service users to remind them of upcoming appointments and discussing DNAs at the weekly practice meeting to identify service users at risk. However, some staff placed the blame for DNAs on service user behaviour.

This finding indicates that missed appointments often reflect complex needs yet can result in exclusion from care. With the introduction of the MDT and task-based model of care there is a risk that missingness may become less visible, as no single staff member maintains oversight of service user care. The data suggests that this could lead to fewer follow-ups and service users from their care, potentially widening health inequalities. This highlights a need for a standardised and agreed upon approach to managing DNAs across practices, which promotes equitable engagement with primary care to prevent missingness.

Effective interpreter and translation services

Service users with limited English proficiency were identified as facing barriers to accessing primary care. While most staff have access to telephone interpreters or translation services, the effectiveness of these services varied across demonstrator sites. While one service was reported as reliable and effective, another was described as time-consuming and unintuitive, which was believed to result in a poor consultation and experience for service users. Where the interpreter service was perceived to be ineffective, staff discussed using alternatives such as Google Translate or relying on a family member to provide interpretation. Although these

were preferred by some staff, there is a risk of mistranslation which could negatively affect service user understanding and outcomes. In areas with a high proportion of service users requiring language support, this was reported to impact on service capacity and increase pressure on appointment scheduling, because of the need for longer appointments.

The findings highlight inconsistent access to effective interpretation and translation services across practices, suggesting that improved and more consistent access to these services in primary care, and training on how to use them effectively, would allow for more seamless integration into consultations to reduce health inequalities. Additionally, a few staff demonstrated limited awareness of the languages spoken locally, suggesting a need to improve understanding of local population needs.

Equitable access to hubs

Primary care staff reported that travel to hubs may pose challenges for service users relating to cost, mobility levels and age. A few GPs further reported that service users who are agoraphobic or have anxiety may only feel comfortable coming to their GP practice for an appointment. On the other hand, CTAC services offer flexible, multi-site care that was of benefit to certain groups such as people in full-time employment. The data suggests that there were challenges and benefits for different groups of service users, as identified by primary care staff, and that these should be considered to allow MDT working to support the reduction of inequalities.

Service user education and awareness of services

While expanding the MDT has the potential to widen access, staff noted that this impact was limited when services users were unaware of what services were available or how to access them. Staff reported that confusion about MDT roles, such as the roles of pharmacotherapy teams, led to missed opportunities for care. Staff also highlighted that where service users were informed and encouraged to engage, it helped reduce stigma in support seeking for mental health concerns and improve access to care.

Staff perceived that national efforts to promote NHS services were not always effective at reaching those most in need, and locally tailored approaches to education and awareness were seen as more impactful. The data suggests that MDTs can contribute to reducing health inequalities by embedding patient education and communication into routine care.

Empower MDTs to address health inequalities

Staff across two demonstrator sites shared examples illustrating how MDT working can help address health inequalities when teams were enabled to work flexibly and in partnership with service users to meet the needs of the population.

In one practice, the role of a reception team member was developed into that of a patient services manager. Positioned as front-of-house contact, they became the first point of interaction for service users, which reportedly helped build rapport through regular interactions. The staff member noted that this enabled them to notice when a service user was having a difficult day or was experiencing social or personal challenges that could affect their health or engagement with services. By promptly relaying these observations to the relevant MDT member seeing the service user that day, the patient services manager highlighted that this helped preempt potential issues and contributed to a more holistic understanding of the service user's situation.

In another practice, administrative and clinical staff collaborated to develop a clinic offering a mix of health and social interventions. The initiative was designed to target service users who rarely attended the practice,

particularly those from more deprived areas, including individuals recently released from prison. The aim was to provide general health checks while fostering relationships with service users and increasing awareness of available support within the primary care setting. The clinic focused on preventative care through informal conversations to understand individual needs. Staff reported that service users responded positively, with many expressing appreciation for being invited and enthusiasm about accessing care they were previously unaware of. Staff felt this approach helped bridge gaps in engagement and highlight the value of proactive outreach.

In a different demonstrator site, a GPN reported that part of their role involved providing targeted support to refugees and asylum seekers in the local area. This included conducting health screenings, administering vaccinations and signposting individuals to wider health and social services. They felt their role contributed to both preventative healthcare and improving trust and access to services for this group. Staff perceived that these initiatives were effective in building trust, raising awareness of available support, and fostering more equitable access to care.

These staff-reported examples suggest that MDTs can play a pivotal role in reducing health inequalities when supported to build sustained relationships with service users, tailor services to local needs, and integrate health and social care through proactive, context-sensitive outreach.

QI data

Below are some examples of how demonstrator sites addressed health inequalities during the programme.

- Local needs assessment
- Improving access to services
- Increasing patient engagement

Local needs assessment

Understanding local population demographics provides teams with insight that supports the delivery of more person-centred care.

- An Edinburgh City HSCP practice focused on improving their understanding of interpreter demand and first United Kingdom (UK) registrations. The team created a Pareto chart which showed the most frequently requested interpreter languages. This information was used to guide how the practice communicates with patients, ensuring information is accessible to those whose first language is not English.

Improving access to services

Improving access to services in remote areas or areas of deprivation can support the reduction of health inequalities.

- Edinburgh City HSCP focused on expanding capacity by recruiting additional CTAC nurses and opening new CTAC rooms in areas with high levels of deprivation. This increase in capacity reduced the need for patients to travel to other CTAC locations to receive care. By bringing the service closer to home, the team improved access for patients with limited travel options, ensuring the service was delivered more equitably.
- NHS Shetland introduced a fixed CTAC roster in the three largest practices and a centralised booking system. Practice managers at remote practices managed the booking system as their patients often needed

to travel. CTAC staff reported that the new system enabled them to build stronger working relationships with practices and provide better continuity of care for patients.

Increasing patient engagement

All demonstrator sites carried out patient engagement activities to better understand service user experiences.

Demonstrator sites completed Equalities Impact Assessments (EQIAs), which identified potential disparities in care. Although it was not possible for demonstrator sites to address every issue raised, particularly where issues fell beyond the scope of the programme, some demonstrator sites developed a RAG status list of priorities based on their EQIA findings. This enabled them to focus on the issues they could realistically address within PCPIP timescales.

- NHS Borders used patient engagement to co-design a centralised CTAC booking hub. Before commencing patient engagement activities, the team completed a RAG status list of the protected characteristics in relation to the CTAC booking hub to prioritise involvement in the project. Each demonstrator site also conducted discovery conversations with service users, using tools from the CEIM. While feedback was overwhelmingly positive, these conversations also surfaced valuable insights that have guided further improvements across the demonstrator sites.

For further information on the demonstrator sites' journeys please see *Section 2.1*.

PHS was commissioned to lead **local data collection and analysis** and the data focused on assessing the following area of **inequality**:

- Whether inequalities in access, based on health board SIMD quintile, are evident through analysis of direct encounters recorded in GP systems.

The **local sampling data collection and analysis** revealed the following insights across most practices.

- SIMD quintiles follow similar trends in direct encounters over time for both GP and wider MDT staff groups. No evidence indicates that any single population group is disproportionately affected, either positively or negatively.
- Interpretation is constrained by known data quality issues, inconsistent role coding, limited numbers of practices providing feedback, and the use of a local rather than national SIMD approach. The analysis used health board SIMD quintiles to examine deprivation, ranking areas relative to others within the same board rather than on a national scale. This method more accurately reflects local patterns of inequality, although an area classified locally as SIMD 1 may not correspond to the most deprived areas nationally classified as SIMD 1. These findings underscore the need for enhanced primary care data quality, a more consistent coding system, and a shift toward centralised data extraction processes to improve future monitoring of access and equity.

A detailed analysis of the local inequalities experienced by participating practices is presented in *Appendix 9.*

Gaps and limitations

- Quantitative data quality was limited by inconsistent deprivation measures, variable coding practices, incomplete and low volume datasets, and uneven participation across practices, all of which reduced comparability and confidence in observed trends. The absence of centralised or standardised data extraction further constrained the ability to interpret patterns reliably.
- The findings are limited to staff-level and system level data. The lack of patient-level data, such as protected characteristics, interpreter requirements and longitudinal care pathways, limits the analysis of variations in access, experience and outcomes. This limitation restricts the ability to assess the impact of MDT on population level inequalities.

Conclusion and recommendations

The findings suggest that MDT working can only reduce health inequalities when the system is explicitly designed with this aim in mind. They also highlight that the current GMS contract lacks a clear definition, direction or ambition in relation to health inequalities, resulting in inconsistent prioritisation across health boards. Embedding a defined, resourced and widely understood framework for tackling inequalities, supported by national and local guidance, would help ensure that MDT implementation is consistently aligned with reducing inequity rather than relying on individual board or practice interpretation.

The findings also emphasise that MDTs must be equipped to recognise and respond to the wider determinants of health. Service demand is often driven by unemployment, financial strain, social care gaps, substance use and mental health pressures, factors for which primary care alone cannot address. MDT roles such as CLWs appear to be critical, but the findings also identify the need for equitable resource allocation, especially for mental health provision in deprived areas, and better training for staff on which groups are at highest risk of poor access or disengagement. Building MDT capability therefore requires both strengthened social-care interfaces and investment in skills, awareness and cultural competence.

To prevent MDT models inadvertently widening inequalities, practices require consistent approaches to preventing and managing missed appointments. The findings show that current practice varies widely, from proactive outreach to punitive list removal, with missed appointments often reflecting complex needs rather than lack of motivation. With MDT roles becoming more distributed, there is a risk that 'missingness' becomes less visible without a standardised, equity-focused approach. Similarly, inconsistent access to effective interpreter services and variable understanding of local language needs present further barriers.

Ensuring equitable access to MDT-delivered services also requires attention to service design, including the location of hubs, travel requirements and the need for flexible, person-centred alternatives for people with mobility issues, anxiety or limited means. Staff reported that lack of awareness or understanding of MDT roles can prevent patients from benefiting from expanded services, suggesting that patient-facing education and communication must be embedded within MDT workflows. Effective MDTs were those able to work flexibly, build sustained relationships and deliver proactive outreach, such as clinics designed to reach seldom-heard groups, targeted support for refugees and asylum seekers, and front-of-house roles that build trust and enable anticipatory care. These findings directly reinforce **recommendation 12**.

Recommendation 12 **Develop a national health equity framework.**

A national health equity framework for primary care should be developed to support equitable access and outcomes, supported by MDT staff skilled in addressing inequalities.

The findings demonstrate that reducing inequalities requires robust local data to understand population needs, tailor MDT responses and monitor impact. Strengthening primary-care data systems, standardising coding, and capturing protected characteristics and interpreter needs will be essential to assess whether MDT working is genuinely improving equity in access, experience and outcomes. Taken together, these insights directly underpin **recommendation 4**.

Recommendation 4 **Invest in IT system integration and outcome focused monitoring.**

Integrated IT systems, standardised coding, and analytic capability should be prioritised. A national MDT monitoring framework that is long-term, trend based, equity sensitive and focused on improvement should be established.

Current primary care models have largely been designed around the needs and workflows of healthcare professionals rather than the needs and preferences of the population. Findings suggest that service users' understanding of MDT roles and structures is variable and highlight the need for clearer public communication about general practice and MDT roles, helping people to understand who is involved in their care and how continuity and access can be balanced within modern primary care models. These insights directly support **recommendation 13**.

Recommendation 13 **Strengthen public communication about MDT roles.**

Public communication should clearly articulate that general practice care is delivered by MDTs with different areas of expertise, using national messages complemented by local tailoring.

Section 3: List of recommendations for MDT development in primary care

The 13 recommendations presented in this section were developed to support sustainable MDT development within the context of the GMS contract in Scotland. They are intended to provide clear, actionable and evidence-based guidance for strengthening MDT development in primary care.

The recommendations were developed and refined through structured, iterative discussions with clinical and organisational colleagues, drawing on the emerging themes from the findings. The final set was written using consistent language and a uniform format to support clarity for policymakers, health boards, GP practices and MDT staff. Each recommendation sets out a high-level strategic ambition, supported by concise, practical actions that describe how it can be implemented in practice. They are designed to provide sufficient specificity to guide action while remaining adaptable to diverse local contexts. Collectively, the recommendations aim to be achievable, scalable and aligned with system priorities. They aim to connect national expectations with local flexibility, while balancing immediate system changes with the longer-term improvements needed to embed effective MDT working.

Table 23: Summary of recommendations

Recommendation	Summary	Key actions
1. Reset national expectations to align MDT development with improving outcomes and making best use of resources	Shift from rigid 'full implementation' to flexible, value-based MDT development focused on population need, workforce feasibility and person-centred outcomes.	• Co-design local priorities using population/inequality data. • Allow flexible MDT configuration. • Allocate resources based on value and need. • Use person-centred outcomes as success measures.
2. Embed improvement principles and realistic timelines	Integrate QI principles and realistic planning, recruitment and evaluation timelines into programme design.	• Apply QI methods (PDSA, process mapping, run charts, logic models). • Build in time for recruitment and onboarding. • Develop evaluation plans early. • Tailor QI support to readiness.
3. Apply hub/hybrid models selectively	Use hub models for technical/administrative tasks and practice-based models for clinical integration and continuity of care.	• Allocate reconciliation/discharge tasks to hubs. • Keep patient facing work in practices. • Apply hybrid models when needed. • Regularly review model suitability.
4. Invest in IT system integration and Outcome Focused Monitoring	Integrated IT systems, standardised coding, and analytic capability should be prioritised. Establish a national MDT monitoring framework that is long-term, trend based, equity sensitive and focused on improvement.	• Standardise coding and role identifiers. • Improve digital IT system integration across sectors. • Build analytic capacity locally/nationally. • Develop long-term outcome/continuity/equity measures.
5. Establish clear governance and engage with all relevant stakeholders at the programme design stage	Define roles and responsibilities between Scottish Government, Healthcare Improvement Scotland, NHS boards, HSCPs and GP practices, with early formal engagement where practices lead or provide data.	• Create governance maps and role clarity. • Agree GP practice responsibilities early. • Clarify data expectations and resourcing. • Include GPs in programme governance of improvement work related to the GMS contract.
6. Ensure enabling conditions for MDT effectiveness	Ensure MDT models have the required structural, relational and cultural conditions to function effectively.	• Provide clear role descriptions and guidance. • Establish supervision/line management clarity. • Protect MDT time for learning/case discussion. • Invest in digital and physical infrastructure.

Recommendation	Summary	Key actions
7. Co-design MDT configuration based on local need	Develop MDT configuration collaboratively to reflect local population needs and ensure services are prioritised accordingly.	• Use local data and community input. • Co-design with all MDT roles and GPs. • Match skill mix to population needs. • Review configuration regularly.
8. Expand evaluation of MDT impacts over time	Conduct ongoing evaluation of MDT impacts on service users, workforce and system outcomes.	• Commission longitudinal and mixed method studies. • Include staff and service user experience data. • Evaluate continuity, equity and systemic impact. • Share learning nationally.
9. Protect continuity of care	Ensure MDT development enables joined up care and better continuity.	• Assess continuity impacts in service design. • Design models of care that support relational, informational and management continuity.
10. Ensure workforce stability and wellbeing	Ensure MDT development protects staff stability and wellbeing through balanced workloads and meaningful roles.	• Provide supervision and reflection time. • Monitor workload, complexity of workload and burnout risk. • Optimise staff's skills and experience.
11. Adopt a QMS approach and tailor improvement support	Use a Quality Management System to integrate planning, assurance, control and improvement. Tailor QI supports local capacity.	• Align programme processes with QMS. • Assess skills and capacity early. • Provide targeted coaching and support. • Focus on learning, not performance judgement.
12. Develop a national health equity framework	Create and implement a national framework to support equitable access and outcomes, with MDT staff skilled in addressing inequalities.	• Produce a national equity improvement framework. • Provide staff training on inequalities. • Use equity sensitive indicators. • Support local equity action plans.
13. Strengthen public communication on MDT roles	Improve national communication explaining MDT roles, complemented by local messaging targeted to those most in need.	• Develop clear national materials on MDT roles. • Support boards/practices with local resources. • Target key groups with tailored messages. • Use multiple communication channels.

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