

Primary Care Phased Investment Programme

Multi-disciplinary working evaluation first update report

February 2025

Purpose

An overview of progress made up to end of December 2024 evaluating the impact of multidisciplinary team working as outlined in the 2018 General Medical Services (GMS) contract.

Background

The 2018 General Medical Services (GMS) contract set out to reduce GP and GP practice workload through the establishment of wider Primary Care multi-disciplinary teams (MDTs). The Primary Care Phased Investment Programme (PCPIP) aims to demonstrate the impact MDT working has on workload and quality of care, and the impact that additional quality improvement support within PCPIP has had on improving implementation of Community Treatment and Care (CTAC) services and Pharmacotherapy (PT). PCPIP started in April 2024 and activity with NHS boards and HSCPs is due to stop by October 2025.

PCPIP has four core components:

- NHS Ayrshire and Arran, NHS Borders, a locality in Edinburgh City HSCP and NHS Shetland using quality improvement and additional investment to reach fuller implementation of CTAC and PT,
- 107 general practices, CTAC and PT services from 12 boards taking part in a national improvement collaborative to implement local changes that improve access to care and fuller implementation of CTAC and PT,
- A national learning system to facilitate peer to peer learning on the implementation of the MDT working across Scotland, and
- The evaluation of the impact of MDT-working as outlined in the 2018 GMS, and convening a small expert group to review the emerging evidence to make recommendations for future development of the MDT.

This report focuses on an update on the evaluation workstream within PCPIP and covers activity up to end of December 2024. A second update report will be published in the summer of 2025 to cover activity up to end of June 2025. The final report and recommendations are due in December 2025.

The proposed evaluation was agreed with Scottish Government in October 2024, allowing detailed design and data collection to begin. The evaluation will explore the impact that MDT working has had on patients and their carers, the primary care workforce and the wider system. It will also explore the role that QI had in the implementation of MDT working. <u>The evaluation proposal can be downloaded from the PCPIP web page</u>.

The design of the evaluation proposal involved a <u>review of existing evidence</u>. The summary of that evidence review has also been included in this report. The existing evidence has helped inform the detailed design and delivery of the evaluation, with a priority focus on collecting data that is missing from the existing evidence base.

The data collection and analysis focuses on collecting data from the four demonstrator sites within PCPIP. Data collection has been grouped into six workstream:

- Board-wide data from existing national reporting systems,
- Board-wide data from surveys,
- Local sampling of local systems and records,
- Local sampling with week of care audits,
- Local sampling for economic analysis, and
- Interviews and focus-groups.

<u>Appendix 1</u> contains a timeline for all workstreams, outlining when they are collecting and analysing data.

Summary of existing evidence

The evidence review used databases Medline, Embase and HMIC to identify articles published 2018 onwards, focusing on the (re)design, or delivery of, primary care services in Scotland.

The literature review identified changes to service delivery that have been made to implement the GMS 2018 contract. Staff and service users' perceptions of the impact of these changes was also explored in several studies. The review also sought to specifically identify evidence of impact of CTAC and pharmacotherapy services in Scotland. Overall, the evidence suggests that changes resulting from implementation of the GMS contract have generally been described by staff as having a neutral impact with little change to their perceived workload. Staff identified numerous challenges to contract implementation and MDT working, including: training and development needs to address these changes, confusion over unclear supervision responsibilities, low staff morale, and difficulties in hybrid working across teams and working remotely. Those delivering care in highly deprived or remote and rural areas may experience further difficulties to delivering the aims of the GMS 2018 contract, which likely exacerbates staffing challenges such as retention and recruitment.

Service users were generally accepting of the expansion of the MDT to undertake tasks traditionally associated with the GPs, without a perceived reduction in the quality of care. However, some service users, particularly those with complex health needs and from deprived areas, expressed a desire to see a GP rather than another member of the MDT.

Whilst the evidence reviewed has indicated that changes to primary care services have been made in line with the GMS 2018 contract and expansion of MDT working, the data available from primary 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 2018 GMS contract.

This review has identified gaps in the evidence such as primary care staff and service users' experiences of these changes to primary care. It was highlighted that representation from certain staff groups such as practice administration staff, healthcare support workers and mental health workers is limited. The review has also illustrated a need for an evaluation of the implementation of CTAC and pharmacotherapy services in Scotland.

See <u>Appendix 2</u> for details on individual studies identified in the review, and their key findings.

Board-wide data from national reporting systems

This data already exists and is available from national reporting systems. The table below lists the concepts the evaluation will explore with each measure and the individual measures. The evaluation proposal provides additional rational for why these five National Therapeutic Indicators (NTI) were selected.

Concept	Measure(s)				
	NTI Anticholinergics				
	NTI Mental Health Triple Whammy				
Improved care through MDT	NTI Poor Asthma Control				
has improved outcomes	 NTI Type 2 Diabetes and ASCVD management 				
	NTI Wound care				
Changes in primary care	• Number of service-user contacts for GPs, GPNs and members of the wider MDT.				
activity	GP referrals to elective care				
	A&E attendees who are not admitted to hospital				
Improved delivery of primary	Potentially Avoidable Admissions				
unscheduled care	 Use of unscheduled care pathways (Pathways including at least one NHS 24 step or at least one OOH step) 				

Scope and data definitions

Data was requested from Public Health Scotland (PHS) for the list measures using the following criteria:

- Only from the start of 2022 onwards, due to impact of COVID on earlier results.
- For the whole demonstrator sites, this includes whole of Edinburgh HSCP rather than data for the individual practices in Edinburgh HSCP taking part in PCPIP.
- For all of Scotland and for Scotland excluding the demonstrator sites.

For the purposes of this report the data for Edinburgh is shown for the whole HSCP, and the comparator is for the whole of Scotland. Future reports aim to show data for the rest of Scotland (Scotland minus the demo sites), and some data source could be shown at demonstrator locality-specific for Edinburgh.

Different data sources have different caveats which should be considered. More details about the measures included in this report and their definitions is shown in <u>appendix 3</u>.

Progress with collecting data

The majority of data has been accessed with the support of PHS national reporting teams and using their online publications. Additional work is progressing to access to two final sets of data.

Da	ata access established	Additional work required to access data
٠	NTI Anticholinergics	• Number of service-user contacts for GPs,
٠	NTI Mental Health Triple Whammy	GPNs and members of the wider MDT.
٠	NTI Poor Asthma Control	 Potentially Avoidable Admissions
٠	NTI Type 2 Diabetes and ASCVD	
	management	
٠	NTI Wound care	
٠	GP referrals to elective care	
٠	A&E attendees who are not admitted to	
	hospital	
٠	Use of unscheduled care pathways	
	(Pathways including at least one NHS 24 step	
	or at least one OOH step)	

Data on GP referrals, A&E attendance and unscheduled care pathways has been provided by PHS as management information which is not generally used for publication. Further work is required to ensure all provided national data can be published externally for use in the evaluation.

Observations so far

This early data has been collected to establish a baseline trend to help identify any changes the QI work and additional investment cause over the next year in the demonstrator sites. This early data already demonstrates variation in trends between the different demonstrator sites that could change through fuller implementation of the MDT.

NTI - Falls, fractures & Delirium (anticholinergics older people %)

Medicines with anticholinergic activity can result in medicine related harm, especially in older adults. It is well recognised that medicines with a high anticholinergic burden can cause temporary shortterm impairment in cognition, including attention and reaction time. There may also be an association with falls, and increased mortality and cardiovascular events. Investment in pharmacotherapy should result in a greater proportion of people having polypharmacy reviews, and a reduction in the prescribing of medicines with a high anticholinergic burden in vulnerable populations. A lower percentage represents good care.



Chart 1 – Falls, fractures & Delirium (anticholinergics older people %)

NTI - Mental Health Triple Whammy

People in receipt of 3 or more of benzodiazepine/z-drug, opioid (including Tramadol), gabapentinoid, antidepressant, antipsychotics: The combination of three or more of these medicines increases the risks of medicine-related harm. The 'benzo-burden' is important – this is the total benzodiazepine-type drug load prescribed per day – because benzodiazepines, z-hypnotics and gabapentinoids have similar synergistic effects: sedation, respiratory, depression, etc. These may interact with an individual's conditions to cause more adverse effects and avoidable medicine-related harm. Investment in pharmacotherapy should result in a greater proportion of people having polypharmacy reviews, and a reduction in the number of people prescribed three or medicines included in NTI mental health triple whammy.



Chart 2 – Mental Health Triple Whammy:

NTI - Poor Asthma Control

Scottish Governments Respiratory Conditions Quality Prescribing Strategy Improvement Guide 2024 to 2027 makes the clinical recommendation to review patients that are taking three or more reliever inhalers (short acting beta agonists) annually. However, the clinical and patient consensus was to prioritise those prescribed six or more annually. Reducing SABA use in people with asthma is an effective measure of effective asthma reviews and resultant better asthma control as people are using either regular inhaled corticosteroids (ICS) preventer therapy or ICS/LABA prn in mild asthma. Investment in CTAC and pharmacotherapy should enable practice nurses, pharmacists, and GPs to support more people with their asthma. Good asthma management at practice level should be associated with a smaller percentage of people prescribed 6 or more short acting beta agonists a year.



Chart 3 - Poor Asthma Control (6 or more bronchodilators %)

NTI - Type 2 Diabetes and atheroslecrotic cardiovascular disease (ASCVD) management

People with diabetes and established atherosclerotic cardiovascular disease, heart failure and/or renal disease are known to benefit from SGLT-2i or GLP-1RA regardless of HbA1c. These medicines have positive evidence for cardiovascular and renal outcomes and additional indications for use (atherosclerotic cardiovascular disease (ASCVD), chronic heart failure (CHF), chronic kidney disease (CKD)), independent of glycaemic control. Due to these co-morbidities, there may be individuals with Type 2 Diabetes who may benefit from these medicines, especially if glycaemic control not at target. With investment in CTAC and pharmacotherapy, there should be more time available for practice nurses, pharmacists, and GPs to support people with their diabetes. Good care should result in a higher proportion of suitable people being prescribed these medicines.



Chart 4 - Type 2 Diabetes and atheroslecrotic cardiovascular disease management (ASCVD)

NTI - Wound Care

A Health Technology Assessment (HTA) for the use antimicrobial wound dressings (AWDs) in the healing of chronic wounds, found the clinical and cost effectiveness evidence for antimicrobial wound dressings was either insufficient to draw conclusions on the use of AWDs, or showed no difference in healing outcomes compared with non-AWDs. Therefore, the routine use of AWDs to heal chronic wounds in NHS Scotland is not recommended. With investment in CTAC services and standardised protocols for wound care, it would be expected that the use of antimicrobial wound products would decrease, however there are other considerations such as time to vascular assessment, time to heal and patient outcome. A lower percentage represents good care.



Chart 5 - Antimicrobial Wound Products (%)

Next steps

Next steps for Board-wide data from national reporting systems is to:

- Work with PHS to ensure we can publish all provided data in future reports.
- Update this data on a quarterly basis.
- Progress work to access the final two measures.
- Add Scotland-wide (excluding the demonstrator sites) comparators to the charts.
- Explore options to limit the Edinburgh HSCP data to focus only on the demonstrator site locality and not the whole of Edinburgh HSCP.

Board-wide surveys

Board-wide surveys will survey users and the MDT workforce (including GPs and GPNs) to better understand their care experience. The concepts to be explored in the evaluation are listed in the table below.

Concept	Measure(s)
User experience	 Small number of existing HACE questions that relate to the system-level measures on experience and awareness.
Workforce experience	• Focus on questions related to feeling valued, supported, and fulfilled, as well as awareness of other roles in MDT.
workforce experience	• Focus on questions related to realing valued, su fulfilled, as well as awareness of other roles in I

Scope and data definitions

Service user experience surveys will supplement the user interviews and focus groups. The service user survey will comprise system-level measures on experience and awareness questions from the existing Scottish Government's Health and Care Experience (HACE) survey. Repeating the same questions from the national surveys should allow a degree of comparison with results from previous HACE surveys to identify any changes in local trends. It is currently anticipated continuity of care and access to care will be key themes to be explored with the user survey. However, this may change as emerging evidence from the interviews and focus groups and from local sampling of IT systems and records will be used to complete the design of the survey.

A multidisciplinary workforce survey will supplement the workforce interviews and focus groups. It is anticipated the survey will comprise questions relating to feeling valued, supported, and fulfilled as well as awareness of other roles in the MDT. The survey will be tailored based on emerging learning from the interviews and focus groups.

The intention is to keep both survey short with around five questions per survey.

Progress with collecting data

Surveys will be used to start data collection in late summer 2025, with data being analysed and written up as part of the final report in December 2025.

Next steps

Next steps for Board-wide surveys are to:

- Short list questions from HACE to include in user survey.
- Monitor emerging evidence from interviews and focus groups to narrow focus and design of surveys.
- Work with demonstrator sites to develop distribution system to ensure surveys reach their target participants.

Local sampling of IT systems and records

Sampling of local data is required to obtain operation data for the evaluation where there is no national system that routinely collects and shares the data. Due to the need to use ad-hoc processes to obtain this data, it is highly unlikely that the required data can be obtained and analysed from every practice in all four demonstrator sites within the timescale of the evaluation. Sampling data from a small number of practices per demonstrator site will be conducted instead.

The Local Intelligence Support Team (LIST) from PHS will lead the local data collection and analysis. LIST have mechanisms in place with local services to access local data. The concepts to be explored in the evaluation through local sampling of data are listed in the table below.

Concept to explore	Measure(s)
Access to care	 Service-users who have accessed practice and Board-delivered MDT services by SIMD. Comparison of service-user SIMD profile per MDT service with local population by SIMD to identity gaps. Percentage of long-term condition reviews attended. Time to third appointment
Continuity of care	 Proportion of consultations with the person's regular care provider out of all consultations (UPC index)
Improved medicine management	 Percentage of all dispensed prescriptions that are serial prescriptions. Proportion of repeat prescriptions not requested or no longer required. Change in costs due to de-prescribing and medicines optimisation.
Pressures on services	Count of days at each Operational Pressures Escalation Levels

Measure(s)			
(OPEL)			
 Staff turnover rate Vacancy rate Absence rate 			

Scope and data definitions

Where possible, the practices that volunteer for the week of care audit will be the same practices used to sample local data.

Detailed data definitions need to be fully developed to ensure consistent data is produced across all sampled practices in the four demonstrator sites. Data definitions need to consider local constraints in data availability and will be finalised after the participating practices have been recruited.

It is anticipated that most data definitions should be finalised relatively easily however measures on Continuity of Care and Pressures on services are anticipated to require more detail design work and local adaption to produce meaningful results. Initial work suggests the Count of days at each Operational Pressures Escalation Levels will be difficult to consistently produce data and is at risk of not be usable in the evaluation.

Progress towards collecting data

PHS have mobilised their capacity to support local sampling and data analysis. The data collection will begin following the recruitment of practices for the week of care audit.

Next steps

Next steps for local sampling of IT systems and records are to:

- Recruit practices from each demonstrator site to be involved in local sampling.
- Finalise detailed data definitions that ensure consistent data is produced across all sampled practices in the four demonstrator sites while considering local constraints in data availability.
- Extract and analyse the data.

Local sampling with week of care audit

The week of care audit will produce data to better understand activity within GP practices and across the MDT. This will help to identify whether the most appropriate member of the MDT is undertaking clinical activity. This may highlight areas where GP and GPN time could be released to allow them to act as expert medical generalists and expert nurse generalists respectively. Due to the manual time required to undertake a week of care audit, the data collection will be limited to a small number of practices per demonstrator site to reduce the risk of overburdening the system. The concepts to be explored in the evaluation through the week of care audit are listed in the table below.

Concept to explore	Measure(s)
Care is being delivered by the most appropriate member of the MDT	 Time spent by GPs and GPNs that could have been delivered by another member of the wider MDT. Time spent by GPs, GPNs and other members of the wider MDT on appropriate cases. Count of activity delivered by MDT members outwith GPs and GPN.

Scope and data definitions

Data collection will occur at the same time across all participating practices during an agreed week (five consecutive days) in March 2025, June 2025 and September 2025. The proposed audit weeks within each month have been selected to avoid public holidays, local school holidays in the demonstrator sites, and any significant events in the other components of the PCPIP programme. The same practices will repeat the audit to help identify changes over time as MDT working progresses towards fuller implementation.

GPs will be asked for two sets of data for:

- **Clinical consultations**: GPs will keep a log of consultations, including: the main reason for appointment; time spent; whether they were the most appropriate person to have the consultation and if not, then who in the MDT would be more appropriate for the consultation.
- Non-consultation tasks: GPs will keep a log of non-patient facing activities, including: the type of task including the approximate number (e.g. 10 acute Rx); time spent; whether they were the most appropriate person to do the task and if not, then who in the MDT would have been best to carry out the task.

GPNs will be asked to complete a log of their activities, including: the main activity/reason for appointment; time spent; whether CTAC could have completed the activity.

Most other MDT members will be asked to complete a log of number of consultations and wholetime equivalents. Additional clinical engagement is taking place in January 2025 to finalise the data collection for Pharmacists to ensure there is a suitable balance between collecting sufficient data, including non-consultation data, with the time required to log data. Several practices per HSCP in each demonstrator site will be recruited to take part in the week of care audit. All efforts will be made to recruit a range of practices who's list population mirror the demographics of the HSPC area.

Progress towards collecting data

Healthcare Improvement Scotland has worked in collaboration with clinicians to design a data collection tool and supporting guidance. They are designed to enable the collection of high-quality data while limiting the data collection burden on participating clinicians. Additional work is required to finalise the pharmacy collection tool which is due to occur in January 2025.

Information sharing processes for sharing data between Healthcare Improvement Scotland and practices have also been developed and data validation tools for processing the large volume of data that the audit will agreed.

A data visualisation tool to share the results of the week of care audit is in development and will be finalised after the pharmacy data collection tool has been completed.

Next steps

Next steps for the week of care audit are to:

- Recruit several practices per HSCP in each demonstrator site to take part in the week of care audits.
- Tested and refine the data collection tool and guidance in each demonstrator sites.
- Engage with recruited practices to prepare for data collection in March 2025.

Local sampling for economic analysis

The economic analysis will use local data to inform the costs and benefits accrued by demonstrator sites over the duration of PCPIP. The concepts to be explored in the evaluation the economic analysis are listed in the table below.

Concept to explore	Measure(s)
Financial impact of MDT working	 Time spent by staff member given context described in each "vignette" and preferences for time taken.
	 Costs borne by Primary Care practices and multi-disciplinary teams in organisation of services and provision of care to provide chosen outcomes under consideration by the demonstrator sites.
	 Change in costs due to de-prescribing and medicines optimisation.

Scope and data definitions

The economic analysis requires local data to inform the costs and benefits accrued by demonstrator sites over the duration of PCPIP. Each demonstrator site has developed a quality improvement measurement plan with outcome and process measures to evaluate their tests of change. The economists will utilise this data, utilise the week of care audit data and collect further measures required for the economic analysis.

It will predominantly focus on collection of costs and detailed information from staff about the work involved in completing common tasks, appropriateness and preferences for delegation and an estimate of time taken. This will allow us to consider the potential additional capacity within the MDT workforce.

Progress towards collecting data

Data collection for costs and scenarios will start in January 2025, starting with NHS Ayrshire and Arran demonstrator site.

Next steps

Next steps for the economic analysis are to:

- Finalise review of local quality improvement measure plans to identify what data is already being collected can be used within economic analysis.
- Work with demonstrator sites to prepare for data collection and creation of scenarios.
- Engage with MDT members to document work involved in completing common tasks.

Interviews and focus groups

Qualitative research methods being used to collect data across the demonstrator sites. Data collection will occur between September 2024 and October 2025 and comprises of the following:

- Uni-disciplinary focus groups and semi-structured individual/paired interviews with members of the primary care (PC) workforce
- Semi-structured interviews with service users.

A multi-strategy and pragmatic approach is being adopted to identify, access and recruit samples of the PC workforce and service users across the demonstrator sites.

Concept to explore	Data collection groups
Impact on service users	Service-usersPC Workforce
Impact on workforce	PC Workforce
Impact on system	System leadersQI support
Impact of taking a QI approach	System leadersQI support

Scope and data definitions

Qualitative data methods include individual or paired interviews, and uni-disciplinary focus groups. Data collection will be carried out with members of the PCPIP project/leadership teams (at the beginning and end of PCPIP) and primary care staff teams, including:

- GPs [plus locums]
- General Practice Nurses
- pharmacy staff
- Advanced Nurse Practitioner
- CTAC staff
- Practice managers, and
- administration staff.

These disciplines have been prioritised given the focus on CTAC and Pharmacotherapy services in PCPIP programme. Additional primary care services regulated under the GMS contract (such as musculoskeletal physiotherapists, community mental health services, community link workers) will

be included in the qualitative data collection depending on the capacity and representation in previous and ongoing research.

Qualitative interviews will also be carried out with service users in each of the demonstrator sites.

The key areas of exploration for each of the groups being interviewed is included in the interview schedules. Four interview schedules have been developed, with an individual schedule for leadership, GPs, general PC workforce and services users. <u>Appendix 4</u> contains the interview schedule used for the first phase of leadership interviews. The interview schedules will be shared after the data collection for the specific group is complete. This is to avoid prior knowledge of the data collection exploration points from skewing the results.

The anonymity of participants is a key consideration and will be reflected in the presentation and structure of any outputs. For example, data will be analysed across the four demonstrator sites and not by demonstrator site. Thematic data analysis will be carried out within and across demonstrator sites to look for key themes across demonstrator site leads, staff groups and service users. The reporting of findings will be presented by theme and not by demonstrator site, to mitigate the risk to participant confidentiality and anonymity. Contextual factors relevant to or aligned with the findings of demonstrator sites will be highlighted across themes.

Progress towards collecting data

Qualitative data collection is progressing well, and we are achieving higher engagement than was initially anticipated. Qualitative research is concerned with the depth of data collected, as opposed to the number of respondents normally associated with quantitative data collection. It is possible the qualitative evaluation is reaching data saturation for certain staff groups (for examples GPs). There will be an assessment of the saturation of the data in January 2025, to ensure that data collection activities are not being planned or conducted with participants from staff groups where data is not required.

Where possible, focus group data collection is being carried out at existing primary care network and cluster group meetings, to minimise burden on participants and the system. This has been well received and has been implemented where possible to reach certain staff groups. Although the use of existing network/cluster meetings to collect data occasionally included participants working in non-PCPIP practices. There has also been a very encouraging response from individual GP practices keen to be involved. Practices are assisting with the identification of practice employed staff such as General Practice Nurses, Advanced Nurse Practitioners and Healthcare Support Workers, as well as service users.

Data collection for the leadership and project team members commenced in October 2024 and has been completed across all the demonstrator sites (n=36). Data collection for the staff groups commenced October 2024 and is currently ongoing in two of the demonstrator sites (Edinburgh and Borders, n=76). Data collection for service users commenced November 2024 and is currently ongoing in two of the demonstrator sites (Edinburgh and Borders, n=6). Data collection for the remaining two demonstrator sites will commence early in 2025. It should be noted, for some areas, this may be prior to PCPIP-related changes being implemented. The identification of service users has been conducted by the practice managers/staff. This approach has been driven by the need to minimise any participation coercion and to meet GP practice preference. However, there is the risk that this could result in participant selection bias.

Observations so far

Although the qualitative data collection is progressing well, the qualitative data analysis has not yet commenced, therefore it is not yet possible to share observations at this point.

Next steps

- Continue with qualitative data collection from staff groups working in Borders and Edinburgh demonstrator sites (current to April 2025).
- Continue planning meetings and activities with the appropriate service/PCPIP leads from Ayrshire & Arran and Shetland demonstrator sites (current to January 2025).
- Health service researchers to assess the level of data saturation (January 2025).
- Commence data collection from staff groups working in Ayrshire & Arran and Shetland demonstrator sites (January 2025).

Next progress update report

The next progress report will be based on activity up to end of June 2025 and will be published in July 2025.

It is anticipated the next progress update will give more detail on:

- Board-wide data from existing national reporting systems containing all scoped data with a comparison with Scotland (exclude demonstrator sites),
- Board-wide survey design to be finalised and with the final survey questions,
- Local sampling of local IT systems and records will contain definition of measures and sharing of initial data,
- Local sampling with week of care audits will contain results from March 2025 audit and tools used to collect data. There will not be sufficient time from the completion of the June 2025 week of care audit to included full results in the next update report,
- Local sampling for economic analysis, and
- Interviews and focus-groups will have additional schedules for the primary care workforce interviews.

More information

For more information, please contact Healthcare Improvement Scotland's Primary Care team by emailing <u>his.pcpteam@nhs.scot</u>.

Appendix 1: Evaluation timeline

	Jan 25	Feb 25	Mar 25	Apr 25	May 25	Jun 25	Jul 25	Aug 25	Sep 25	Oct 25	Nov 25	Dec 25
Board-wide data from existing national reporting systems		Data for r mea	emaining sures		Data u	ıpdate			Data u	update	Summary analysis	
Board-wide data from surveys					Survey desig	gn	Distr	ibution Data co	llection	Ana	lysis	
Local sampling of IT systems and records	Mobilise team	Detailed specifi	measure ication		[Data collectio	on and analysi	S		Summary	y analysis	
Local sampling with week of care audit	Detailed design	Practice recr and mobil	ruitment isation Audit	Analysi	mobili s	isation Audit	Analysis	mobilis	ation Audit Ar	nalysis S	ummary analysis	
Local sampling for economic analysis	Scenario	planning and design	template		C	Data collectio	n			Analysis		
Interviews and focus groups	2	Staff groups d	lata collection Gervice user d	n ata collection	n	Analysis	Analysis Leadership colle	ohase 2 data ction	Ana	Sum	mary analysis	
Reporting	Progress report					Progre repor	ss t			Final write	-up	Final report

Appendix 2: List of studies identified in the evidence review and their key findings

In addition to the references identified in this review, Healthcare Improvement Scotland previously conducted an evidence review for the Scottish Health Technologies Group (SHTG) that also explored MDT working in primary care. This can be downloaded from <u>the SHTG website</u>.

Resource	Results
Resource Birt et al. (2023). What happens when pharmacist independent prescribers lead on medicine management in older people's care homes: a qualitative study	Results Older people in care homes frequently experience polypharmacy, increasing the likelihood of medicine-related burden. Pharmacists working within multidisciplinary primary care teams are ideally placed to lead on medication reviews. A randomised controlled trial placed pharmacists, with independent prescribing rights (PIPs), into older people care homes. In the intervention service, PIPs worked with general practitioners (GPs) and care home staff for 6 months, to optimise medicine management at individual resident and care home level. PIP activity included stopping medicines that were no longer needed or where potential harms outweighed benefits. This analysis of qualitative data examines health and social care stakeholders' perceptions of how the service impacted on care home medicine procedures and resident well-being. Setting: Primary care pharmacist intervention in older people care homes in England, Scotland and Northern Ireland. Participants Recruited from intervention arm of the trial: PIPs (n=14), GPs (n=8), care home managers (n=9) and care home staff (n=6). Results There were resonances between different participant groups about potential benefits to care home residents of a medicine service provided by PIPs. There were small differences in perceptions about changes related to communication between professionals. Results are reported through three themes (1) 'It's a natural fit'—pharmacists undertaking medication raview in care homes fitded within
	undertaking medication review in care homes fitted within multidisciplinary care; (2) 'The resident is cared for'—there were subjective improvements in residents' well-being; (3) 'Moving from "firefighting" to effective systems'—there was evidence of changes to care home medicine procedures.
	Conclusion This study suggests that pharmacist independent prescribers in primary care working within the multidisciplinary team can manage care home residents' medicines leading to subjective improvements in residents' well-being and medicine management procedures. Care home staff appreciated contact with a dedicated person in the GP practice

Resource	Results
Buist, et al. (2019). An evaluation of mental health clinical pharmacist independent prescribers within general practice in remote and rural Scotland	Pilot with two GPs in remote and rural Scotland, exploring impact of specialist mental health pharmacist independent prescribers. Clinically effective (reduced scores on depression and anxiety tools) and positive responses from both patients (survey) and staff (interviews: pharmacists and wider MDT [GPs, psychiatrists, practice manager). Themes from staff interviews: willingness to embrace service redesign; not negative impact of contract (rather neutral than positive); space constraints and poor digital infrastructure. Limits: very small sample; high attrition, and low response rate.
Buist, et al. (2018). A multi- perspective evaluation of specialist mental health clinical pharmacist prescribers practising within general practices in NHS Highland	Conference abstract report of an evaluation of a pilot service in two GP practices in which specialist mental health clinical pharmacist prescribers carried out medication reviews with patients with anxiety and/or depression. Key findings: demonstratives effectiveness of pharmacists performed medication reviews and demonstrates patients' satisfaction with care from pharmacist. Pharmacist actions described during the consultations included prescribing, further referral, assessing patients for response and tolerability to antidepressants and reviewing patients' understanding of medications and adherence. Upon completion of the pilot at 12 months, 45.3% of patients had PHQ-9 and/or GAD-7 scores reduced by 50%. Patients responding to a questionnaire using the CARE measure rated care as excellent or very good but the response rate to the questionnaire was low (21.4%).
Donaghy, et al. (2024). Primary care transformation in Scotland: a qualitative study of GPs' and multidisciplinary team members' views	Qualitative interviews with 8 (non-cluster lead) GPs and 22 new primary care MDT staff conducted between May – June 2022 from the same three health boards found that no perceived reduction in GP workload and no improvement in the care of patients with complex problems such as multimorbidity. Challenges reported by MDT staff included the fast pace of primary care, building new relationships, training and professional development needs, line management issues, and (the lack of) monitoring and evaluation of performance. Other challenges included the ongoing effects of the pandemic, lack of time, difficulties with hybrid working, and low staff morale. Challenges were most marked (though different) in urban deprived areas and in remote and rural settings.

Resource	Results
Donaghy, H. Henderson, D.	Aim To explore progress in the implementation of the GP contract in
Wang, H. H. Guthrie, B.	Scotland in terms of the MDT and cluster working.
Thompson, A. Mercer, S.	Qualitative interview study with key national primary care stakeholders
W. (2023). Primary care	(PCSs) (n = 6) and cluster quality leads (CQLs) in clusters serving urban high
transformation in	deprivation areas (n = 4), urban mixed areas (n = 4), and remote and rural
Scotland: qualitative	areas $(n = 4)$.
evaluation of the views of	all interviewees felt that progress on both MDT expansion and cluster
national senior	working was slow, even before the pandemic. None of the COLS (and few
stakeholders and cluster	PCSs) felt that GP workload had reduced significantly, nor that the care of
quality leads	patients with complex needs had improved. Lack of time and poorly
	developed relationships were key barriers, as was a lack of relevant
	primary care data, and additional support (including guidance,
	administration, training, and protected time).
	Conclusion Key PCSs and CQLs in different areas of Scotland report limited
	progress in primary care transformation, only partly related to the
	pandemic. There is a need for better workforce planning and support if the
	new GP contract is to succeed in transforming primary care in
Deve shu et al. (2024)	Scotland.
Donagny, et al. (2024).	Qualitative interviews with 30 patients conducted between November
Primary care	from practices in the same three health hoards found that natients
transformation in	attributed recent changes in general practice to the COVID-19 pandemic
Scotland: qualitative	rather than the new contract. Concerns included access to GP
evaluation of the views of	consultations (especially face-to-face ones), short consultation length and
patients	poor continuity of care. Although generally positive about consultations
	with MDT staff, most patients still wanted to see a known GP for health
	concerns that they considered potentially serious. These issues were
	especially concerning for patients with multiple complex problems,
	particularly those from urban deprived areas. Patients in our sample were
	accepting of first contact care from the MDT but still wanted continuity of
	care and longer face-to-face consultations with GPs.
Laton-Hart & Mercer	The purpose of this study was to compare the working lives and intentions
(2022). How do the	Scotland. This study was a quantitative analysis of survey data from the
working lives of general	Scottish School of Primary Care national working lives survey. GPs were
practitioners in rural areas	classified as working in 'non-rural' or 'rural' practices based on the Scottish
compare with elsewhere	Government's rural binary classification system.
in Scotland? Cross-	A total of 2465 GPs returned the survey, giving a response rate of 56%.
sectional analysis of the	Rural GPs in Scotland are more satisfied with their working lives than GPs
Scottish School of Primary	working elsewhere in Scotland, which is mainly due to higher job
Care National GP Survey	satisfaction in female GPs in rural areas. Despite this, rural GPs as a whole
	have a higher intention to leave their job in the next 5 years than their
	non-rural counterparts. Although some of these differences are small, they
	may signal serious implications for the future care of patients in rural area.

Resource	Results	
Hayes et al. (2020). Working lives of GPs in Scotland and England: Cross-sectional analysis of national surveys	Comparison of cross-sectional analysis of survey responses of GPs in England and Scotland. This study has demonstrated that compared with GPs in England, GPs in Scotland have lower intentions to reduce work participation, as well as higher levels of job satisfaction, lower job stressors and lower negative job attributes. These differences were of a reasonably large magnitude (one-third to one-half of SD), and thus likely to be meaningful in practice. It is possible that these differences relate, at least in part, to the recent changes in primary care in Scotland, including the new GP contract.	
Hepburn (2023). Advanced practice physiotherapists in Scottish primary care: Axial Spondyloarthropathy epidemiology, time to diagnosis, and referrals to rheumatology	Generate empirical knowledge of a Musculoskeletal (MSK)Advanced Practice Physiotherapist (APP) Service in Scottish Primary Care; (2)Identify the incidence and baseline time to diagnosis of Axial Spondyloarthropathy(AxSpA); (3) Identify APP Rheumatology referral fulfilment of the NICE 2017Guidelines and Spondylarthritis Diagnosis Evaluation (SPADE) Tool; (4) CalculateAPP Rheumatology referral conversion rates for AxSpA diagnosis and further investigation; (5) Contribute towards the current body of literature for informing analysis of MSK APP services within Scottish Primary Care. Methods: An audit and evaluation approach was undertaken over a 3-year period (May 2019–April 2022). Relevant clinical cases from the whole- service dataset were identified and analysed, using retrospective electronic healthcare record re-view and descriptive statistical techniques. Results: A total of 37,656 primary care MSK APP consultations took place, with N = 19 suspected AxSpA referrals made to Rheumatology. N = 6 cases of AxSpAwere diagnosed by a Rheumatologist (31.6%). The mean age of individuals diagnosed with AxSpA was 39.6 8.8, and 66.7% (4/6) were female. Mean time to diagnosis was 3.4 years, and incidence per-10,000 person-years was 1.6. Compliance of referrals with the NICE 2017 Guidelines and SPADE Tool Criteria was78.9%. Of those diagnosed with AxSpA, 66.7% met both referral criterion sets. Conclusion: Those referred by an MSK APP from primary care had a 5.1- year shorter time to diagnosis than the previous reported UK average of 8.5 years. APPs identified relevant AxSpA features in referring to Rheumatology and supported effective implementation of the local secondary care pathway.	
iHub (2019). Week of Care Audit for Community Treatment and Care (CTAC) Service Planning in Perth and Kinross HSCP	Week of care audit of general practice nursing to plan CTAC service in Perth and Kinross. Collected data on number of nursing appointments, type of nursing activity, who requested appointment, and duration. Average consultation time was 14.7 minutes. phlebotomy was primary activity.	

Resource	Results
iHub (2023). Designing and delivering Community Treatment and Care (CTAC) Services	 High level case study of Ayrshire and Arran designing, testing and implementation of CTAC services. No gold standard CTAC delivery model. Should be designed to be of greatest benefit to local patients and community services. CTAC services predominantly delivered in practices, within a team in each HSCP. Approach 1 Primary care team engaged with general practice teams. 2 General practice supported primary care implementation team to scope demand and activity. 3 Learning and development programme coproduced. 4 Service delivery specification development programme coproduced. 4 Service delivery specification developed, and workforce needs identified. 5 Small scale test of change. 6 Implementation of CTAC services. 7 Sharing of learning and spread. Impact Patients Decreased waiting times. Increased range of interventions available. For example, the introduction of a vascular service along with the reintroduction of ear irrigation increased the services available to patients. Staff Recruitment and retention of staff. For example, a structured learning and development programme supporting career development, contributing positively to recruitment and retention of staff. General practice Support to transform roles. Integration and collaboration.
Innes (2019). General Practice Nurse education in Scotland - now and in the future	Key findings: over half of GPNs are over 50, with profession facing challenges in terms of sustainability. GPNs make up 37% of general practice clinicians, with the portion of consultations taken up by GPNs increasing in the last decade. Recognition of training neds for GPNs, Sg created the 'transforming roles' programme to refresh the role and educational requirements of GPN in line with GMS contract. Limited visibility of GPN nursing in education, with many pre-reg nursing students having no exposure to GP care. GPs are often reluctant to release nurses for training and to offer educational placements for pre-reg students. NES to establish GPN training places for newly qualified nurses to address gap. GPN role expansion critical to GMS implementation but workforce has variable training opportunities to achieve 'expert nursing generalist'.

Resource	Results
Resource MacVicar. (2023). Characteristics of prescribing activity within primary care in Scotland 2013-2022 of general practitioners, nurse, pharmacist and allied health prescribers: A retrospective cross- sectional study	Results Aim To explore the characteristics of prescribing activity of common drugs dispensed by community pharmacies in Scotland by prescribing groups of general practitioners, nurses, pharmacist and allied health professionals. Specifically, to compare overall drug prescribing frequency by prescriber group and identify emergent prescribing patterns of individual drugs. The data from Public Health Scotland on frequency of the ten most common drugs prescribed and dispensed from community pharmacies between 2013 and 2022 by prescriber group were examined, applying descriptive statistics using secondary data analysis. There is a growing contribution of nurse independent prescriber activity within primary care although still a relatively small proportion compared to medical practitioners. The pattern of increased prescribing of medications for long term and chronic conditions such as proton pump inhibitors by all prescribers is suggestive of multi-disciplinary professionals supporting increased patient demand. This study provides a baseline to evaluate current service provision in further research and enable professional, service and policy development.
Mercer & Fitzpatrick (2020) Progress of GP clusters 2 years after their introduction in Scotland: findings from the Scottish School of Primary Care national GP survey	Cross sectional national survey of work satisfaction of GPs in Scotland (2018). Key findings: Cluster leads reported that clusters were meeting regularly and were friendly and well organised but not always productive. Support for cluster activity (data, health intelligence, analysis, quality improvement methods, advice, leadership, and evaluation) was suboptimal.
Mercer et al. (2023). Is Scotland's new GP contract addressing the inverse care law?	A study linking datasets on avoidable mortality in people aged under 75 years of age in 2019 and 2022 from the National Registers of Scotland and the general practice workforce survey for the same years from Public Health Scotland was analysed by practice deprivation deciles. The researcher concluded that avoidable mortality was 4.8 times (2019) and 4.9 (2021) times higher in the most deprived decile of the population compared with the most affluent. Rates of preventable mortality were 6.5 (2019) and 6.0 (2022) times higher and treatable mortality was 2.9 (2019) and 3.1 (2021) times higher in the most deprived decile compared with the most affluent decile. Higher numbers of all types of clinicians were concentrated in practices serving the most affluent patients. These data on MDT staff relate only to those employed by the GP practices. Stakeholder feedback from one HSCP (Glasgow City) indicated that the only element of the primary care improvement plan with direct staff allocation linked to deprivation relates to the community links workers. Potential barriers to increasing the HSCP-employed MDT staff in practices more impacted by deprivation include lack of available staff, funding constraints and facilities constraints, although more research on the distribution of staffing is needed.

Resource	Results
Ross & Wightman. (2019). Advanced practitioner physiotherapist as 1st point of contact in a GP cluster in Lanarkshire	Explored impact of appointing advance practice physiotherapists (APP) to GP practices in Lanarkshire. Screening and booked MSK patients to APP. 20-minute consultations were used. Key findings: majority of GP's MSK workload was safely and effectively managed by APP without GP referral. Patients were satisfied with the service and were positive about speed of process. Limits: case study approach with one GP cluster.
Slater et al. (2021). Improving access to primary care: a mixed- methods approach studying a new review appointment system in a Scottish GP practice	Background: A Scottish general practitioner (GP) practice proposed an improvement intervention, shorter pre-bookable 'review' appointments, to increase appointment capacity and meet their patients' demand for appointments. Staff are now able to pre-book these review appointments for patients, guaranteeing that the patient will see the same GP or advanced nurse practitioner (ANP) for both initial and review appointments. By shortening the review appointments, more patients were seen each day, hence the appointment capacity increased. The aim of this project was to examine the impact of the improvement intervention, pre-bookable review appointments, using a mixed-methods approach. Ethnographic methods (non-participant observation, participant observation and eight semi-structured interviews with administrative staff) provided qualitative data, to understand the appointment system and to identify areas for further improvement. Quantitative data were then collected to assess: the number of patients receiving 'on the day' appointments, with the aim for this to be 95% (outcome measure); by how much the number of appointments available had increased (process measure) and the administrative staff workload (balancing measure). Results: During a 7-week period, 3months post-intervention, a median of 93% of patients received an 'on the day' appointments available increased by 43%. Administrative staff workload (number of calls received per day) remained the same. Patients prefer being able to book in to see the same GP (continuity of care) and the ability to book in advance. Administrative staff workload decreased in terms of dealing with less frustrated patients. Main suggestions for improvement include introducing later appointments. The introduction of pre-booked (review and online) appointments. The introduction of pre-booked (review and online) appointments system include gaining clinician (GP/ANP) opinions on review appointments and trialling later appointments.

Resource	Results
Strachan et al. (2022). A realist evaluation case study of the implementation of advanced nurse practitioner roles in primary care in Scotland	To evaluate Advanced Nurse Practitioner (ANP) role implementation in primary care across Scotland in contributing to primary care transformation, and establish what works, for whom, why and in what context. Methods: Two phases conducted March 2017 to May 2018: (1) multiple case studies of ANP implementation in 15 health boards across Scotland, deductive thematic analysis of interviews, documentary analysis; (2) in- depth case studies of five health boards, framework analysis of interviews and focus groups. At the time of the evaluation, the implementation of ANP roles in primary care in Scotland was in early stages. Capacity to train ANPs in a service already under pressure was challenging. Shifting elements of GPs workload to ANPs freed up GPs but did little to transform primary care. Local evaluations provided some evidence that ANPs were delivering high- quality primary care services and enhanced primary care services to nursing homes or home visits. Impact: ANP roles can be implemented with greater success and have more potential to transform primary care when the mechanisms include leadership at all levels, ANP roles that value advanced nursing knowledge, and appropriate education programmes delivered in the context of multidisciplinary collaboration.
Sweeney et al. (2024). Patients' experiences of GP consultations following the introduction of the new GP contract in Scotland: a cross-sectional survey	Survey of 1,000 patients who had consulted a GP in the previous four weeks, conducted between August – November 2022 from practices in three health boards, sampling urban affluent, urban deprived and remote/rural areas, found that patients in deprived urban areas had the greatest health needs and frequency of GP attendance. The same group also had the poorest experience of GP consultations, with lower levels of satisfaction, perceived GP empathy, patient enablement and symptom improvement. The findings are consistent with other research which suggests a persistence of the inverse care law. Older patients were over-represented among the responders.

Resource	Results
Wright, et. al (2021). Development and feasibility testing of an evidence-based training programme for pharmacist independent prescribers responsible for the medicines-related activities within care homes	Introduction The UK pharmacists with independent prescribing rights (pharmacist independent prescribers [PIPs]) are authorised to prescribe within their areas of competence. The aim of this research was to develop a training and accreditation process (training programme) to enable PIPs to operate safely and effectively within care homes. Located in England, Scotland and Northern Ireland across four sites and based on a systematic review, it consisted of four phases: (1) initial stakeholder engagement, (2) uni- professional focus groups and interviews, (3) expert panel consensus and (4) feasibility testing. Differences in baseline knowledge of PIPs required inclusion of a Personal Development Framework and the provision of a mentor. Face-to-face training focussed on managing medicines for a complex older person, minimising prescribing costs and supporting people without capacity. Provision of time to understand local context and develop relationships with care homes and general practitioners was identified as a central requirement. PIPs were assessed for competency.

Appendix 3: Specification of measures from boardwide existing national reporting systems

Measure	Further detail	Caveats
National Therapeutics Indicator - Anticholinergics National Therapeutics Indicator - Mental Health Triple Whammy	Falls, Fractures and Delirium: number of people aged ≥75 years dispensed > 10 items of strong or very strong anticholinergics (mARS 2&3) per annum as a percentage of all people aged ≥75 years people in receipt of 3 or more of benzodiazepine/z-drug, opioid (including Tramadol), gabapentinoid, antidepressant, antipsychotics (excluding depots)	1. Levomepromazine not included as generally used in palliative care 2. Opioids include: buprenorphine, fentanyl, morphine, oxycodone
		(with/without naloxone), pentazocine, tapentadol, hydromorphone, pethidine, tramadol (with/without paracetamol) 3. Formulations excluded: injectables, suppositories, enemas
National Therapeutics Indicator - Poor Asthma Control	The number of people prescribed 3 or more short- acting beta-agonist (SABA) inhalers per annum as a percentage of all people prescribed SABAs or number of people prescribed 6 or more short-acting beta-agonist (SABA) inhalers per annum as a percentage of all people prescribed SABAs	

Measure	Further detail	Caveats
National Therapeutics Indicator - Type 2 Diabetes and ASCVD management National Therapeutics	People prescribed SGLT2 and/or GLP1 in the same quarter as a nitrate and/or nicorandil, aspirin or clopidogrel as a proportion of people prescribed anything from BNF 060102 in the same quarter as a nitrate and/or nicorandil, aspirin or clopidogrel Antimicrobial wound products as a percentage of total wound products (items)	
	products (items)	
GP Referrals to elective care	This shows the rate per 1,000 population of referrals from GPs to outpatient clinics	The figures in this analysis include consultant-led clinics only and align to the national standards for consultant-led new outpatient appointments and inpatient and day case admissions as outlined in the Stage of Treatment publication. Please note that some NHS boards and services report on all additions to the waiting list, while others only report clinically vetted referrals. For new outpatients, the eight key diagnostic tests (upper endoscopy, colonoscopy, lower endoscopy, cystoscopy, Computer Tomography (CT), Magnetic Resonance Imaging (MRI), barium studies (x-ray) and non-obstetric ultrasound) are excluded from these figures.
A&E attendees who are not admitted to hospital	People who attend A&E but are not admitted into hospital	This data only includes 'New' and 'Unplanned Return' attendances at A&E, i.e. excludes those who are 'Recall' or 'Planned Return'

Measure	Further detail	Caveats
Use of unscheduled	The percentage of unscheduled	NHS 24 pathways are based on
care pathways	care pathways which include at	completed calls only and where
(Pathways including	least one NHS 24 step, and the	there is a valid CHI for a call.
at least one NHS 24	percentage of which contain at	
step or at least one	least one out of hours step	OOH data is incomplete for
Out of Hours (OOH)		August & September 2022 due to
step)		a system outage and should be
		treated with caution.

Appendix 4: Leadership interview schedule (phase 1)

- **1.** What's your role/within the leadership team?
- **2.** To what extent do you think that your Health and Social Care Partnership (HSCP)/ health board has implemented the GMS contract?

Prompts: Any barriers or facilitators to implementation of GMS contract so far? Any benefits or drawbacks for staff, service-users and wider system? Support for implementation?

3. What about CTAC and Pharmacotherapy aspects of the GMS contract?

Prompts: Any barriers or facilitators specific to setting up and integration these services? Any benefits or drawbacks for staff, service-users and wider system?

4. Do you think additional funding for CTAC and Pharmacotherapy will support implementation of the GMS contract?

Prompts: Why? Why not? What would help to support contract implementation?

5. What were your expectations of working with the HIS QI support team as part of your involvement with PCPIP?

Prompts: existing QI capacity in boards? Leadership support for QI locally?

6. What has been your experience of working with the HIS QI support team?

Prompts: What has been useful? What could be better? Working with other DS teams. Service user engagement (?)

7. Have any changes been made in these early stages (either to bid or service delivery) following support from PCPIP and the HIS team?

Prompts: HIS QI support, additional funding, culture for improvement