Adherence to NHS Talking Therapies: Final Evaluation Report

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Executive summary

Background

NHS Talking Therapies – formerly known as Improving Access to Psychological Therapies (IAPT) – provide evidence-based psychological treatments for common mental health problems. Evidence shows that attending more sessions improves outcomes, with a national expectation that at least 48% of people should achieve reliable recovery.[1] However, many patients drop out before completing treatment. Previous research by the NHS England Behavioural Science Unit (BSU) highlighted the importance of clear expectations and flexible access in supporting engagement with therapy and that many services were already implementing interventions to improve adherence.

Purpose of the evaluation

The BSU commissioned the Strategy Unit to evaluate these adherence-focused interventions and assess their impact on reliable recovery and session attendance.

Methods

Services were recruited through convenience sampling. This included those identified in the earlier BSU work; services responding to an open call on NHS Futures; insights from discussions on the Talking Therapies forum; and outreach via key stakeholders who shared an invitation through their networks. Interventions were screened for eligibility.

Qualitative interviews were conducted with staff involved in designing and/or delivering interventions. Quantitatively, national IAPT data were analysed using matched and synthetic counterfactuals and difference-in-differences methods to estimate intervention effects on two outcomes: attending five or more sessions; and achieving reliable recovery. Findings from the different analytical approaches were synthesised through meta-analysis.

Summary findings

- **Qualitative findings:** interventions commonly focused on providing information, expectation-setting, exploring readiness for therapy, offering flexible appointment options, supporting people on waiting lists, managing waiting lists to reduce waiting times, and training staff to improve adherence and engagement. Patient involvement

[1] NHS England. NHS Talking Therapies: Service standards. Available at: https://www.england.nhs.uk/mental-health/adults/nhs-talking-therapies/service-standards/. [Accessed 23rd February 2026]

improved the relevance of materials, while capacity constraints limited delivery. No consistent key performance indicator (KPI) for adherence currently exists.

- **Quantitative findings:** all methods showed small but positive effects (around one-two percentage points per year for each outcome), though many estimates were not statistically significant. Multi-component interventions improved adherence, while information and whole-service service approaches were more effective for reliable recovery. These subgroup findings are based on a small number of studies and should therefore be interpreted with caution.
- **Integrated findings:** High-performing services shared common features – early engagement, clear expectations, flexible and accessible pathways and strong staff capability. A logic model produced as part of the evaluation summarises how these mechanisms may support better engagement, session completion and recovery.

Conclusions and recommendations

Services are implementing a wide range of interventions, but capacity remains a challenge. While quantitative effects are modest and uncertain, they consistently trend in a positive direction.

Key recommendations are to:

- Introduce a national adherence KPI and centrally coordinated intervention resources to support delivery of interventions
- Use the logic model to guide future service improvement and evaluation
- Expand evaluation across more regions and incorporate patient perspectives
- Provide protected staff time for engagement activities
- Ensure written materials are concise, accessible, and co-designed with patients.

Note

The case studies included in this report are based on qualitative research conducted for the Adherence to NHS Talking Therapies evaluation and so reflect what participants in that research told us. Current service standards and policy for NHS Talking Therapies are set out in the NHS Talking Therapies manual. Section 6.4.4 states that *"Services should ensure that changes to practice are fully in the interest of providing effective treatment, and do not just aim to improve performance on national standards"* and sets out examples of practices that may appear to improve individual metrics but are not beneficial for patients. If there is any discrepancy between practices reported in these case studies and the standards and policy set out in the manual, it is the manual that should be regarded as best practice.

Glossary

Term (Acronym)	Definition
Adherence	In the context of this report, adherence refers to whether a patient stays in talking therapies treatment and does not drop out until the treatment has been completed or ended due to a mutually agreed reason.
Caseness	Caseness refers to when a referral meets the threshold on validated measures of depression or anxiety to be considered a clinical case. Scores are collected routinely during care contacts and if a patient's result is above the clinical cut-off on either their depression or anxiety measure (or both), the referral is classed as a case. These standards are set out in the NHS Talking Therapies Manual. See also: Generalised Anxiety Disorder Questionnaire (GAD-7) and Patient Health Questionnaire (PHQ-9).
Coarsened exact matching (CEM)	CEM is a data analysis technique used to reduce bias when comparing intervention and control groups. It works by temporarily grouping variables into broader categories (coarsening) and then exactly matching intervention and control units within those categories. This approach improves balance and transparency in the matching process.
Cognitive behavioural therapy (CBT)	CBT is a type of evidence-based talking therapy that helps people change how they think and act. It is used to treat mental health conditions like depression, anxiety, post-traumatic stress disorder (PTSD), insomnia, substance use, and long-term pain. CBT involves working with a therapist to understand symptoms and learn practical ways to manage them.
Counterfactual	A counterfactual is used in data analysis as an estimate of what would have happened to the performance of a service in the absence of the intervention being evaluated. It provides the baseline scenario against which the actual outcomes are compared, helping to isolate its intervention effect.
Data Quality Maturity Index (DQMI)	DQMI is a composite measure developed by NHS England to assess the quality of data submitted by providers of NHS-funded care to national datasets. The DQMI reflects how well an organisation collects, completes, validates and uses its data.
Did not attend (DNA)	DNA refers to when a patient does not attend or misses an appointment without giving the service enough notice to cancel or reschedule it.

Term (Acronym)	Definition
Difference-in-differences (DiD)	DiD is a statistical data analysis method for estimating causal effects by comparing changes in outcomes over time between a treatment group and a control group. It assumes that without the intervention, both groups would have followed parallel trends (see also: Synthetic DiD).
Disengagement	In the context of this report, disengagement refers to when a patient withdraws from NHS Talking Therapies services or discontinues treatment before it is completed, despite the need for ongoing care.
Eye-movement desensitisation and reprocessing therapy (EMDR)	EMDR is a structured therapy used to treat trauma by helping patients focus on distressing memories while experiencing bilateral stimulation, such as eye movements. This process is linked to reducing the vividness and emotional impact of the memories. EMDR is provided by many NHS Talking Therapies services.
Forest plot	A graphical display used in meta-analysis to show the estimated intervention effects from individual studies alongside the overall pooled effect. Each study is represented by a marker (often a square) with a horizontal line indicating its confidence interval, while the pooled estimate is typically shown as a diamond. Forest plots make it easy to compare study results, assess consistency and visualise the strength and precision of the combined evidence.
Generalised Anxiety Disorder-7 (GAD-7)	The GAD-7 is a seven-item self-report questionnaire used to screen for and measure the severity of generalised anxiety disorder. Respondents rate symptom frequency (for example, nervousness, worry, restlessness) over the past two weeks, on a scale from zero ("not at all") to three ("nearly every day"). Scores range from 0-21, with higher totals indicating greater severity. In NHS Talking Therapies services, caseness for this measure of anxiety is defined as a score of eight or above.
GitHub	GitHub is a web-based platform for version control and collaborative software development, built on Git. It enables users to manage code repositories, track changes, collaborate on projects, and automate workflows through features like pull requests and issue tracking.

Term (Acronym)	Definition
Heterogeneity (in random-effects meta-analysis)	In a random-effects model, heterogeneity reflects the idea that each study estimates a different underlying effect rather than all studies sharing a single common effect. This between-study variability can arise from differences in populations, interventions, service design and local contexts. Random-effects models explicitly incorporate this variability by estimating both within-study variance (sampling error) and between-study variance (the heterogeneity component). Higher heterogeneity indicates that study results differ more than would be expected by chance alone, which affects the precision and generalisability of the pooled estimate (see also: Meta-analysis).
High Intensity Therapists (HITs)	HITs are mental health professionals who deliver evidence-based therapies for conditions like depression, anxiety, OCD, and PTSD. They assess patients, plan treatment, and provide regular sessions to support recovery within NHS Talking Therapies services. HITs provide high-intensity therapies for complex or severe presentations (usually at Step 3), in contrast with Psychological Wellbeing Practitioners (see also: Psychological Wellbeing Practitioners and Stepped care model).
Improving Access to Psychological Therapies (IAPT)	IAPT is the former name of NHS Talking Therapies (the name was used from 2008 until 2023). It was a national NHS programme launched in 2008 to increase access to evidence-based psychological therapies for adults with common mental health conditions, such as depression and anxiety.
Improving Access to Psychological Therapies (IAPT) dataset	Now referred to as the NHS Talking Therapies dataset, this is a national patient-level data collection in England that records activity, outcomes and service use for adults receiving NHS-funded treatment for anxiety and depression. This dataset is still commonly referred to as the IAPT dataset and has been used with this meaning in this report.
Limbic / Limbic Care / Limbic Access	A set of digital tools used in some NHS Talking Therapies services to support referral, triage and patient engagement. Limbic Access is an online referral assistant that guides people through the self-referral process. Limbic Care is an app-based intervention offered to patients after assessment to help maintain engagement while they wait for treatment.

Term (Acronym)	Definition
Logic model	A logic model is a structured, visual representation that explains how a set of inputs and activities are expected to lead to specific outputs, outcomes and impacts. It maps the assumed cause-and-effect relationship within an intervention, showing the pathway from what the service invests and does to the changes it aims to achieve. Logic models are often used in planning, evaluation and implementation to clarify how and why an approach is expected to work.
Meta-analysis	A statistical technique that combines results from multiple independent studies or analyses to produce a single, pooled estimate of treatment effects. By aggregating evidence, meta-analysis increases statistical power, reduces the influence of random variation and helps identify consistent patterns across different datasets. Depending on the model used (for example, fixed-effects or random-effects), it can account for differences between studies (see: Heterogeneity) while providing an overall summary of the evidence.
NHS England (NHSE)	NHS England is the national body responsible for overseeing the planning, commissioning and delivery of NHS services in England. It sets priorities, allocates funding, support local health systems and ensures that services meet national standards of quality, safety and performance.
NHS England Behavioural Science Unit (BSU)	The BSU is a specialist team within NHSE that applies behavioural insights and psychological research to improve health services, patient outcomes and staff engagement. It uses evidence from behavioural science to design, test and evaluate interventions that encourage healthier behaviours, reduce inequalities and optimise service delivery.
NHS Talking Therapies	NHS Talking Therapies involve structured conversations with trained professionals to support mental wellbeing. These include a wide range of evidence-based talking therapies such as CBT, counselling, interpersonal therapy and EMDR. They help individuals manage conditions such as anxiety, depression and stress through evidence-based techniques and coping strategies.

Term (Acronym)	Definition
NHS Talking Therapies (TT) and Individual Placement Support (IPS) National Programme Delivery Group	A national NHS group that oversees the delivery of evidence-based psychological therapies for common mental health conditions and the Individual Placement Support model of supported employment, ensuring consistent implementation and improved outcomes across England.
NVivo	NVivo is a qualitative data analysis software that helps researchers organise, code, and analyse unstructured data such as interviews, open-ended survey responses, journal articles, and social media content. It supports a range of research methodologies and facilitates insight generation.
Patient Health Questionnaire-9 (PHQ-9)	A nine-item self-report screening tool for depression. It assesses the frequency of depressive symptoms over the previous two weeks, with each item scored from zero ("not at all") to three ("nearly every day"). Scores range from zero to 27, with higher totals indicating greater severity. In NHS Talking Therapies, caseness for this measure of depression is defined as a score of ten or above.
Preceptorship	Preceptorship is a structured form of workplace training and support which helps newly qualified professionals (such as therapists) transition to becoming confident and competent practitioners.
Propensity score matching (PSM)	PSM is an analytical technique for reducing selection bias by matching intervention and control units with similar characteristics, based on their estimated probability (propensity score) of receiving an intervention. It aims to approximate random assignment in observational studies.
Psychological Wellbeing Practitioners (PWPs)	PWPs are mental health professionals who support people with anxiety and depression through brief, evidence-based therapies. They assess needs, deliver one-to-one or group interventions, and collaborate with other services to help individuals manage their recovery. PWPs deliver low-intensity interventions such as guided self-help and psychoeducation (see also: High Intensity Therapists and Stepped care model).

Term (Acronym)	Definition
Quasi-experimental study design (QED)	QEDs aim to establish cause-and-effect relationships without random assignment of participants to intervention and control groups. Instead, subjects are assigned based on non-random criteria, such as pre-existing conditions or external factors. These designs are useful when fully randomised experiments are impractical or unethical, allowing researchers to study interventions in real-world settings while accounting for potential confounding variables.
Readiness for therapy questionnaire (RTQ)	A readiness for therapy questionnaire is a tool designed to assess a client's motivation and readiness for change before starting therapy. It is a valuable measure to predict outcomes like therapy completion and recovery outcomes.
Recovery (including reliable recovery and reliable improvement)	In the context of NHS Talking Therapies, Recovery means a patient no longer meets clinical criteria for anxiety or depression. Reliable improvement reflects a significant reduction in symptoms, while reliable recovery combines both clinical recovery and measurable improvement.
Selection bias	Selection bias is a type of systematic error that occurs when the participants, groups or data chosen for a study are not representative of the target population. This non-random selection can distort results, create misleading associations and limit the generalisability of findings.
SilverCloud	SilverCloud is an online CBT programme that offers flexible access to mental health and wellbeing modules. It includes interactive tools, activities and videos designed to help users identify and challenge negative thoughts and behaviours.
Stepped care model (includes Step 2 and Step 3 therapy)	Stepped care is an approach to treatment used in NHS Talking Therapies services which ensures that individuals receive the least intensive, evidence-based treatment appropriate to their needs. They can gradually 'step-up' to more intensive treatment as needed. Therefore, if a patient begins on the lower intensity Step 2 therapy (which may include guided self-help or computerised CBT) but requires more treatment, they can be referred to the higher intensity therapy at Step 3 (such as a course of one-to-one therapy with a High Intensity Therapist). Patients can also start treatment at Step 3 if this is deemed clinically appropriate.

Term (Acronym)	Definition
Synthetic difference-in-difference (synthetic DiD)	Synthetic DiD is a data analysis method. It is an extension of DiD that incorporates synthetic control techniques to construct a weighted combination of control units. This improves the match with the intervention group's pre-intervention trends, enhancing robustness when the parallel trends assumption may not hold (see also: Difference-in-Differences).
The Strategy Unit (SU)	An NHS internal consultancy providing specialist analytical, evaluation and research services to support evidence-based decision-making and improved outcomes across health and care.
Therapy agreement	A therapy agreement is a written contract that outlines the terms of therapy, agreed upon by both therapist and patient before sessions begin. It provides clarity, sets expectations, and ensures informed consent.
Unified Data Access Layer (UDAL) platform	UDAL is an analytical environment that provides a secure, standardised framework for accessing and managing NHS and social care data from multiple sources. It streamlines data retrieval and supports integrated analysis across systems.

1. Introduction

1.1.1 Background

NHS Talking Therapies – formerly known as Improving Access to Psychological Therapies (IAPT) – provide evidence-based psychological interventions for a range of common mental health problems such as anxiety disorders and depression. This includes cognitive behavioural therapy (CBT), counselling for depression, eye-movement desensitisation and reprocessing (EMDR), couples therapy for depression and interpersonal therapy (IPT). Some services also have employment advisors who can offer employment support to patients in therapy.

NHS Talking Therapies usually involve patients talking to a trained professional about their thoughts, feelings and behaviours. Therapists also assign patients practical exercises and tasks that they are encouraged to do during and between sessions. These tasks are designed to support the patient to apply skills or techniques they have learned in therapy, and may include completing worksheets or monitoring diaries.[2] Patients are given questionnaires throughout their treatment to complete. These include measures relating to anxiety and depression (the nine-item Patient Health Questionnaire or PHQ-9,[3] a measure of depression, and the seven-item Generalised Anxiety Disorder Questionnaire or GAD-7,[4] a measure of anxiety) as well as measures of daily functioning which are recorded at each appointment.

Therapy is delivered according to a model of stepped care, which means that patients receive the lowest intensity treatment that is appropriate for their needs. Lower intensity therapy includes guided self-help or group-based psychoeducation. Many services also provide digitally enabled therapies such as computerised CBT (CCBT). These deliver clinical content online which the patient can access with guidance and regular support from a trained therapist. Higher intensity therapy usually consists of one-to-one in-person or remote therapy.

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[2] NHS England. (2025) *NHS Talking Therapies, for anxiety and depression*. Available at: https://www.england.nhs.uk/mental-health/adults/nhs-talking-therapies/ [Accessed 17th February 2026].
[3] CORC. (2017) *Patient Health Questionnaire (PHQ)*. Available at: https://www.corc.uk.net/outcome-measures-guidance/directory-of-outcome-measures/patient-health-questionnaire-phq/ [Accessed 17th February 2026].
[4] CORC. *Generalised Anxiety Disorder Assessment (GAD-7)*. Available at: https://www.corc.uk.net/outcome-measures-guidance/directory-of-outcome-measures/generalised-anxiety-disorder-assessment-gad-7/ [Accessed 17th February 2026].

Demand for NHS Talking Therapies has grown over the last decade; referrals have risen from 1.1 million[5] to 1.8 million between 2015 and 2025.[6] In 2024-25, 55% of people who started NHS Talking Therapies completed a course of treatment (defined as at least two treatment sessions).[6]

Recovery is measured by "caseness", or whether a person can be identified as a clinical case. A person meets the criteria for clinical caseness if their symptoms are severe enough at referral in line with their scores on questionnaire measures for anxiety and depression (for the PHQ-9, the clinical cut-off is a score of ten or more, and for the GAD-7, the clinical cut-off is a score of eight or more).[7] An individual is categorised as being "reliably recovered" if they move from clinical case status at the start of treatment to non-clinical status at the end, and the change in symptoms is statistically significant.[8]

There is evidence that attending more sessions (adhering to treatment) is associated with better outcomes.[9] The national service recovery standard is that 48% of patients achieve reliable recovery.[1] Evidence indicates that, for a typical patient, at least five treatment sessions are generally required to reach this level of improvement.[10] However, many patients drop out before completing treatment. Reasons for drop-out are varied but commonly include: feeling better; perceived inconvenience or impracticality of

[5] NHS Digital. (2015) *Psychological Therapies, Annual Report on the use of IAPT services – England, 2014-15*. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/psychological-therapies-annual-reports-on-the-use-of-iapt-services/annual-report-2014-15 [Accessed 17th February 2026].
[6] NHS Digital. (2025) *NHS Talking Therapies, for anxiety and depression, Annual reports, 2024-25*. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/nhs-talking-therapies-for-anxiety-and-depression-annual-reports/2024-25 [Accessed 17th February 2026].
[7] NHS England (2025) *NHS Talking Therapies for anxiety and depression manual*. Available at: https://www.england.nhs.uk/publication/the-improving-access-to-psychological-therapies-manual/ [Accessed 17th February 2026].
[8] NHS Digital. (2025) *NHS Talking Therapies Monthly Statistics Including Employment Advisors, Performance March 2025 and Quarter 4*. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/nhs-talking-therapies-monthly-statistics-including-employment-advisors/performance-march-2025-and-quarter-4-2024-25-data/outcomes [Accessed 17th February 2026].
[9] Clark, D., et al. (2018) 'Transparency about the outcomes of mental health services (IAPT approach): an analysis of public data', *The Lancet*, 391 (10121), pp. 679-686. Available at: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)32133-5/fulltext [Accessed 17th February 2026].
[10] Clark, D (2025). *NHS England Talking Therapies Team: Autumn Statement Part 2 webinar on further enhancing outcomes in NHS Talking Therapy services* [Webinar 26:30]. Available at: https://oxcadatresources.com/nhs-england-talking-therapies-team-2025-autumn-statement-part-2-webinar-on-further-enhancing-outcomes-in-nhs-talking-therapy-services/ [Accessed 18th December 2025].

appointments; breakdown of the therapeutic relationship; dissatisfaction with group settings and miscommunication.[11]

There is also some emerging evidence that patient expectations at the assessment stage can influence whether they begin treatment, as well as their outcomes from treatment. Bowker et al. (2025)[12] found that a patient's 'first impressions' of therapy at assessment, and their expectations about whether they would benefit from treatment, predicted whether they would attend their first session of treatment as well as their post-treatment outcomes. However, it did not predict whether they would drop out of treatment once they had started.

NHSE's Behavioural Science Unit (BSU) recently surveyed 259 NHS Talking Therapies practitioners to investigate perceived reasons for patient non-adherence in NHS Talking Therapies services and possible solutions. Two main themes emerged as factors contributing to patient engagement with NHS Talking Therapies: setting clear patient expectations about the service, and increasing flexibility to support attendance. Some respondents reported that their NHS Talking Therapies services were already implementing measures to improve therapy adherence. This included providing information to patients about expectations for therapy and providing a therapy agreement for patients.[13]

1.1.2 The purpose of this evaluation

The NHSE BSU commissioned the Strategy Unit (SU) to provide an independent evaluation of existing interventions being carried out by local NHS Talking Therapies services which aimed to increase adherence to therapy. The selection of services was informed by the previous work of the BSU.

[11] Ghaemian, A., et al. (2020) 'Therapy discontinuation in a primary care psychological service: why patients drop out', *The Cognitive Behaviour Therapist*. Available at: https://doi.org/10.1017/S1754470X20000240 [Accessed 12th December 2025].
[12] Bowker, S., Saxon, D. & Delgadillo, J. (2025) 'First impressions matter: The influence of initial assessments on psychological treatment initiation and subsequent dropout', *Psychotherapy Research*, 35(3), pp. 368-378. Available at: https://doi.org/10.1080/10503307.2024.2308164 [Accessed 12th December 2025].
[13] NHSE Behavioural Science Unit (2025). Report: Patient adherence to NHS talking therapies treatment: a practitioner perspective. Unpublished but available to NHS staff on NHS Futures at: Adherence to NHS Talking Therapies - NHS Talking Therapies, for Anxiety and Depression - Futures [Accessed 12th December 2025].

This evaluation builds on earlier BSU work (see section *1.1.1*) to explore what services have done to improve adherence and engagement, and whether these actions improve adherence and reliable recovery. The aim is to use the findings to make recommendations about how NHS Talking Therapies services could improve adherence and engagement with treatment. The evaluation questions were:

- What interventions are NHS Talking Therapies services implementing to increase engagement with services?
- Are these interventions effective, compared to routine service provision, in reducing the proportion of NHS Talking Therapies patients who meet the minimum definition of treatment completion (two treatment sessions) but then disengage after only two, three, or four sessions?

1.1.3 Structure of this report

The remainder of this report is organised as follows:

Section 2: outlines the methods used for both qualitative and quantitative components of the evaluation.

Section 3: profiles adherence-focused interventions implemented by NHS Talking Therapies services that participated in the evaluation and introduces the typology used to classify interventions.

Section 4: summarises the key cross-cutting themes emerging from the qualitative data.

Section 5: presents the findings from the quantitative analyses.

Section 6: integrates the qualitative and quantitative evidence to provide an exploratory synthesised interpretation of findings.

Section 7: sets out the conclusions and recommendations to inform future work on improving adherence and engagement within NHS Talking Therapies.

2. Methodology

2.1 Evaluation scoping stage

The scoping stage included the following activities:

- Identifying the evaluation questions and the evaluation activities that would be used to address them (outlined in *Table 2.1*)
- Identifying and agreeing the methods and variables for the impact analysis.

Table 2.1 The evaluation questions mapped against the activities that will address them

Evaluation questions	Evaluation activities	
	Interviews with staff	Impact analysis
Interventions to enhance engagement What interventions are NHS Talking Therapies services implementing to increase engagement with services?	✓	-
Effectiveness of interventions in treatment completion Are these interventions effective, compared to routine service provision, in reducing the proportion of NHS Talking Therapies patients who meet the minimum definition of treatment completion (two sessions)[14] but then disengage after only two, three or four sessions?	-	✓

2.2 Recruitment of NHS Talking Therapies services

The evaluation team recruited NHS Talking Therapies services for the evaluation using several approaches:

- Targeted follow-up with known implementers of adherence interventions. Recruitment began with providers who, in a previous NHSE BSU survey, reported introducing one or

[14] See *NHS Talking Therapies Metadata*, measure reference number M076. Available at: https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/improving-access-to-psychological-therapies-data-set/improving-access-to-psychological-therapies-data-set-reports [Accessed 8th December 2025].

more local interventions to improve therapy adherence, and who expressed a willingness to be contacted for future related research

- Open calls via NHS Futures. The pool was expanded through outreach on the NHS Futures platform,[15] including two forum posts in June 2025 and a feature in the 'Latest in NHS Talking Therapies' news carousel
- Manual scanning for forum activity. The team reviewed relevant NHS Futures forum discussions to identify additional services that appeared to have introduced adherence-focussed changes
- Key-informant outreach:
  - In September 2025, Regional Mental Health Leads and the NHSE Coordinator for Health, Work, Prevention and Inequities (HWPI) were invited to disseminate information about the evaluation within their areas and encourage interested services to make contact
  - Members of the NHS Talking Therapies (TT) and Individual Placement Support (IPS) National Programme Delivery Group also shared information about the evaluation within their networks and encouraged services to express interest.

In total, 18 potential services were identified (listed in *Annex 6: Services identified*). The evaluation team invited all 18 services to an initial meeting to assess feasibility for the evaluation and to support the development of intervention typologies: 15 services participated in the meeting and three did not respond.

Of the 15 services:

- Nine were included in the qualitative strand of the evaluation, on a first-come, first-served basis.
- Nine were included in the quantitative strand.

[15] See Heggart, R. (2025) *NHS Futures forum post: Improving adherence by Rachel Heggart*. Available at: https://future.nhs.uk/NHSTalkingTherapies/view?objectId=28385355, 4th June 2025. [Accessed 1st September 2025].
See Heggart, R (2025) *NHS Futures forum post: Adherence to NHS Talking Therapies by Rachel Heggart*. Available at: https://future.nhs.uk/NHSTalkingTherapies/view?objectId=28499819, 17th June 2025. [Accessed 1st September 2025].

- Two services included in the qualitative strand were not analysed quantitatively because their interventions were either not yet fully implemented or applied only to a small subset of patients, meaning no measurable impact on service-level adherence was expected
- A third service was excluded because their intervention activity could not be isolated within the national dataset but was analysed qualitatively
- Two additional services, which came forward later in the evaluation and were suitable for quantitative analyses, were subsequently included.

2.3 Ethics and information governance

An outline Data Protection Impact Assessment (DPIA) was completed to describe the proposed qualitative recruitment approach, interview procedures and the planned handling of findings. This submission included the participant information sheet and an initial version of the interview topic guide (see *Annex 1: Participant information sheet* and *Annex 2: Topic guide*). In August 2025, NHS England's Information Governance team confirmed that a full DPIA was not required, given the low-risk nature of the personal information data being processed.

Potential participants received a participant information sheet at the point of invitation. The evaluation team obtained verbal consent from participants in relation to taking part in the interview and allowing it to be audio recorded for transcription.

The quantitative impact analysis was conducted in accordance with the Unified Data Access Layer (UDAL) Acceptable Data Use Guide[16] (accessible via NHS Futures login) and was further governed by the restrictions set out in the NHS Digital Sharing Framework Contract and Data Sharing Agreement. Under these arrangements, registered members of the Strategy Unit were granted access to IAPT data solely for the agreed purpose and in accordance with the principle of data minimisation. All data were pseudonymised by the UDAL team prior to access, ensuring that individual-level identifiers were not available to Strategy Unit analysts. The pseudonymised data were held within a secure environment,

[16] See *NHS Futures document: UDAL – Acceptable Data Use Guide.* Available at: https://future.nhs.uk/connect.ti/NCDR/view?objectId=108906373 [Accessed 29th August 2025].

with access restricted to named individuals only, ensuring compliance with ethical and information governance requirements.

2.4 Qualitative strand

2.4.1 Qualitative interviews and data analysis

The evaluation team conducted interviews with staff from services who had been involved in designing and/or delivering an adherence intervention. The number of interviews completed by each service is shown in *Table 2.2*.

Interviews were semi-structured and followed a topic guide covering the background to the service, the nature of the intervention, key enablers and challenges and perceived outcomes. The topic guide is included in *Annex 2: Topic guide*. All interview audio recordings were transcribed verbatim.

Data were thematically analysed, using both deductive and inductive coding approaches[17] to identify key themes. NVivo software was used to support data management and analysis.

Findings from each interview were developed into individual case studies to support learning about interventions being delivered by services. These are available separately (see *Adherence to NHS Talking Therapies: case studies report – forthcoming*).

Section *3* of this report presents synthesised findings from the nine case study sites (services) included in the qualitative analysis. Two case study sites were excluded from the qualitative analysis: one case study site was excluded from the qualitative synthesis as the service had not yet conducted a specific adherence intervention, but was conducting a survey exploring reasons for disengagement. Another case study was written up for the Dr Julian service, which can be used to increase service capacity, but is not itself a commissioned NHS TT service and was therefore excluded.

To ensure anonymity of participants throughout the report, quoted participants are referred to as 'service staff'.

[17] Deductive coding refers to coding the data to a pre-defined set of codes in a codebook developed during qualitative analysis. Inductive coding refers to finding key patterns and themes in the qualitative data.

Table 2.2 Number of interviews and participants for each of the included NHS Talking Therapies services

NHS Talking Therapies service	Number of interviews	Number of participants
Cornwall and Isles of Scilly	2	2
Devon	2	2
Kent and Medway	1	2
Hampshire	1	2
North East Hampshire and Farnham	2	3
Portsmouth	1	1
Plymouth	1	1
North East London Foundation Trust (NELFT)	1	2
Tower Hamlets (London)	2	2
Total	**13**	**17**

2.4.2 Limitations of qualitative methods

The following limitations should be considered when interpreting the qualitative findings:

- **Convenience sampling and self-selection:** Recruitment relied on services volunteering to take part, which may have introduced self-selection bias. Services who were more interested in the topic may have been more likely to put themselves forward to take part
- **Limited geographical representation:** Services included in the qualitative evaluation were all based in the South of England (including four from the South West region, three in the South East, and two from London). As a result, the findings may not reflect the experiences of services from the North or East of England, although some services from these regions are represented in the quantitative analysis (see section *5*). Services outside of England (for example, Scotland, Wales and Northern Ireland) were out of scope for this evaluation. The limited geography may have also limited the extent to which the evaluation included innovative approaches to improving adherence to talking therapies
- **Lack of patient perspectives:** The evaluation did not include interviews with patients, meaning there is no direct evidence on the acceptability or perceived suitability of the

interventions from a patient/service-user perspective. This could be explored in future work, using methods such as coproduction and/or interviews with stakeholders with lived experience

- **Treatment fidelity** was not in scope for this evaluation, but may be an additional factor which affects adherence. This could be a possible factor to be explored in future research
- The evaluation design did not include explicit consideration of the impact of **health inequalities and trauma-informed approaches** to adherence. Where services did focus on these issues as part of their adherence interventions, this is explored in the relevant case study. These issues could be explored in further detail in future research.

2.5 Quantitative strand

The aim of the quantitative strand was to provide an impact evaluation to assess the extent to which observed changes can be attributed to the interventions. The methods compared the observed change with an estimate of what would have occurred in the absence of the intervention – the counterfactual.

2.5.1 Study design

The impact analysis was based on retrospective analysis of existing data from the IAPT dataset. The aim was to estimate the effect of interventions on NHS Talking Therapies patients' behaviours and outcomes.

2.5.2 Outcome measures

Two outcome measures were defined in line with the underlying causal assumptions (see section *1.1.1*), which states that increasing the average number of treatment sessions attended during a referral increases the likelihood of patients achieving reliable recovery:

1. The proportion of discharged referrals in which the patient attended five or more treatment sessions
2. The proportion of discharged referrals in which the patient achieved reliable recovery.

Detailed definitions of these measures are provided in *Annex 3: Outcome measures*. The measures were selected based on the evaluation briefing document, feasibility testing, consultation with members of the NHS Talking Therapies and Individual Placement Support National Programme Delivery Group, and approval by members of NHSE's BSU.

Outcome 1 assessed the impact of the process on treatment adherence, specifically the number of sessions attended. Outcome 2 assessed the intended outcome of the interventions, namely the achievement of reliable recovery.

2.5.3 Counterfactual construction and matching

To understand whether each intervention made a difference, the evaluation needed to estimate what would have happened to the service if the intervention had not taken place. This counterfactual was created by comparing each intervention service with similar NHS Talking Therapies services across England that had no known adherence interventions. Matching helps reduce bias by ensuring that the comparison services are as similar as possible to the intervention service before the change occurred.

Because no single method is perfect, the evaluation team used four different approaches to construct these counterfactuals: propensity score matching (PSM), coarsened exact matching (CEM) and two versions of synthetic control methods. Each method makes slightly different assumptions and looks for similarity in different ways. Using several approaches allowed the evaluation team to check whether the findings were consistent regardless of the method used. If different methods point to similar results the evaluation team can be more confident that the findings reflect real effects rather than quirks of a particular analytical technique.

Full details of the matching variables, optimisation procedures and implementation of each method is provided in *Annex 4: Matching variables and methods*.

2.5.4 Analytical techniques

Intervention effects were estimated using the difference-in-differences (DiD) approach. This method compares changes in outcomes over time between intervention and comparison services, while controlling for underlying trends. By focusing on differences in pre- and post-intervention trajectories, DiD strengthens causal inference by reducing bias from unobserved, time-invariant factors.

To ensure validity, the key assumptions underlying DiD, including the parallel trends assumption (which is a test that the intervention and control groups would have followed the same trends without the intervention), were tested. Pre-intervention outcome trajectories were visually inspected and only comparator services that satisfied the parallel trends assumption were retained for analysis.

In addition to counterfactuals derived from matched services, analyses were also conducted using synthetic controls. These were constructed as weighted combinations of control units to provide closer alignment with intervention services' pre-intervention trends.

To synthesise findings across services, results from individual analyses were combined using meta-analysis. Multiple parallel meta-analyses were undertaken, each corresponding to a different matching process (PSM, CEM and two synthetic controls). This approach generated pooled estimates of intervention effectiveness while accounting for variation across methods.

Further details of each analytical method are provided in *Annex 5: Analytical techniques*.

2.5.5 Limitations

2.5.5.1 Small sample sizes and implications for meta-analysis and DiD

Across both the meta-analyses and DiD studies the number of eligible services was small, which limited statistical power and reduced the precision of intervention effects.

In the meta-analyses the number of studies was small (typically nine, and eight in one analysis) which also affected the stability and reliability of heterogeneity estimates, even with the Hartung-Knapp adjustment applied. This adjustment is a statistical method designed to give more cautious, reliable results when only a small number of studies are available.

For the DiD analyses, each service acted as its own intervention unit, meaning causal estimates were based on a single time series. Standard errors were often large, confidence intervals wide and only relatively large effects could reach statistical significance. Although pooling results across services improved precision, uncertainty remained due to the small number of contributing studies.

2.5.5.2 Hidden or unmeasured changes in comparison services

The donor pool – the set of comparison services used to construct counterfactuals – excluded any services with known interventions, though unreported or undocumented changes may still have occurred. Such hidden interventions could dilute estimated effects or introduce bias. More broadly, because the analyses rely on observational data, unmeasured differences between intervention and comparison services may persist even after matching or synthetic control methods are applied. Each counterfactual approach carried its own assumptions and residual confounding cannot be ruled out.

2.5.5.3 Diffuse or staggered intervention timing

Many services implemented multi-component interventions over several months, and in some cases over a year. This made it difficult to define a clear intervention start date and to isolate the effect of individual components. A diffuse intervention period also increases the risk of misclassifying pre- and post-intervention observations which can weaken estimated effects.

2.5.5.4 Limited pre- or post-intervention data

Because the version of the IAPT dataset available for analysis holds activity from January 2022, services that introduced changes several years ago (December 2022 in one case) have limited pre-intervention data. This reduces confidence in the parallel-trends assumption and increases sensitivity to short-term fluctuations. Conversely, services that implemented changes in early 2025 had limited post-intervention observations, restricting the ability to detect sustained effects or assess longer-term trends.

2.5.5.5 Heterogeneity in interventions, populations and contexts

Interventions varied substantially across services in content, intensity and form. Local context, workforce factors and population characteristics also differed. These sources of heterogeneity may contribute to variation in observed effects and limit the generalisability of findings. Even where pooled estimates are presented, they should be interpreted as averages across diverse settings rather than universally expected outcomes.

2.5.5.6 Data quality, measurement limitations and temporal patterns

The analyses rely on routinely collected administrative data, which may contain measurement error, incomplete records or variation in coding practices across services. In addition, outcomes may be influenced by seasonal patterns, operational pressures or external shocks (such as service mergers, workforce changes, local service redesign) that are not fully captured in these models. These factors may introduce noise or bias into effect estimates.

2.5.5.7 Unobserved consequences and broader impacts

The analyses focused on two primary outcomes: adherence to treatment and reliable recovery. Other potential effects of the interventions – positive or negative – were not examined. This means any unintended consequences, such as impacts on staff workload, patient experience, equity of access, or service flow, may not have been captured. As result, the findings should be interpreted with awareness that the interventions could influence aspects of care not measured in this evaluation.

3. Summary of adherence interventions

This section provides an overview of the adherence-focused interventions implemented across the NHS Talking Therapies services that participated in the evaluation. The interventions varied in scope, intensity and target population, reflecting the diverse operational contexts and priorities of each service. While some initiatives centred on improving the clarity and accessibility of information provided to patients, others introduced new digital tools, enhanced staff training or developed approaches for specific groups at risk of disengagement.

Table 3.1 summarises the interventions included in the quantitative and qualitative strands of the evaluation. It outlines each intervention, the analytical approach applied in the evaluation; and the categorisation of the intervention types developed for analysis and reporting. Together, these summaries illustrate the breadth of strategies adopted to support patient engagement and adherence across the NHS Talking Therapies pathway.

The evaluation team applied two classification frameworks to each intervention service based on an assessment of the detail included in their qualitative case study. These classifications were used in sub-group meta-analyses. For a summary of findings from the subgroup meta-analyses see section *5.5 Subgroup analyses*, or for more detailed results see *Annex 11: Outcome 1 subgroup meta-analysis* and *Annex 12: Outcome 2 subgroup meta-analysis*.

The classifications were:

- **Informational** vs **multi-component** interventions:

  Informational interventions focused on adapting the information provided to patients, such as details about therapy or expectations of the therapeutic process.

  Multi-component interventions included changes to service processes or policies, often alongside improvements to patient-facing information. These interventions were expected to have larger effects because they act on multiple parts of the care pathway, potentially generating additive improvements in measured outcomes.

- **Targeted** vs **non-targeted or mixed** interventions:

  Targeted interventions were designed for specific subgroups, such as patients receiving Step 2 therapy, adults aged 65 and older, those on a counselling pathway, or in one service, patients in a single London borough during an initial rollout.

Non-targeted or mixed interventions were generally aimed at the whole service care pathway or included some subgroup-specific elements within a broader, service-wide approach. These interventions were hypothesised to exert a greater influence on service-level outcomes than those focused on specific subgroups, which may have more limited reach.

Table 3.1 Description of adherence interventions included in the evaluation

Service	Description of interventions	Analytical strand(s)	Intervention type(s)
NHS Bradford District and Craven Talking Therapies	Limbic Care app, a digital therapy offer which offers psychoeducational resources and conversational support and is accompanied by support from therapists; training for staff about the Limbic Care app	Quantitative evaluation	Multi-component; targeted
NHS Cornwall and Isles of Scilly Talking Therapies	Pre-therapy engagement call designed to answer questions about therapy; written information about therapy	Qualitative and quantitative evaluation	Informational; non-targeted or mixed
TALKWORKS Devon NHS Talking Therapies	Communications-focused interventions to improve information provided to patients, including written information; informational videos about the therapy assessment and what to expect from therapy; online booking system for appointments; therapist preceptorship which includes a focus on the patient-therapist relationship	Qualitative and quantitative evaluation	Multi-component; non-targeted or mixed

Service	Description of interventions	Analytical strand(s)	Intervention type(s)
NHS Kent and Medway Talking Therapies	Staff training relating to increasing uptake and engagement with SilverCloud (CCBT); targeted support and referral pathway for older adults (including check-in calls for patients on the waiting list); Limbic Care app	Qualitative and quantitative evaluation	Multi-component; non-targeted or mixed
NHS Talking Therapies Hampshire	Therapy agreement which establishes expectations of both patient and therapist	Qualitative and quantitative evaluation	Informational; targeted
TalkPlus, North East Hampshire and Farnham	Discharge policy; administrative staff training; waiting list video; one-at-a-time sessions	Qualitative and quantitative evaluation	Multi-component; non-targeted or mixed
NHS North Yorkshire Talking Therapies	Communications aimed at improving access to digital therapy options (such as CCBT and virtual therapy appointments) by adults aged 65 and over	Quantitative	Multi-component; targeted
NHS Talking Therapies Portsmouth	Readiness for therapy questionnaire	Qualitative evaluation	Informational; targeted
NHS Plymouth Talking Therapies	Therapy contract explaining expectations of both therapists and patients; waiting list coordinator to manage the waiting list and offer appointments in line with patients' availability	Qualitative evaluation	Multi-component; non-targeted or mixed

Service	Description of interventions	Analytical strand(s)	Intervention type(s)
NHS Talking Therapies North East London Foundation Trust (NELFT)	Welcome pack providing information about what to expect from therapy; groups first policy which involves most patients being offered group therapy; community engagement / outreach focused on providing information about therapy offer	Qualitative and quantitative evaluation	Multi-component; non-targeted or mixed
NHS Tower Hamlets Talking Therapies	Pre-therapy workshops providing information about two of the main therapy offers (CBT and counselling)	Qualitative and quantitative evaluation	Informational; non-targeted or mixed

4. Qualitative findings

Summary of Qualitative Findings

Key features of interventions aiming to improve adherence

Across nine NHS Talking Therapies services, interventions to improve adherence focused on providing information, changing operational delivery or policies, or both. The interventions addressed the following aspects of adherence and engagement:

- Providing information to clarify expectations of therapy: including providing communication materials about the content and structure of therapy and what to expect. Various formats including information sheets and videos were used
- Actively engaging with patients to discuss expectations and explore their readiness for therapy: for example: using a questionnaire or conversation with the patient; an interactive workshop or pre-therapy phone call; and a contract or agreement to make the commitment explicit
- Increasing flexibility and choice for patients: by making it easier for patients to book or reschedule their own appointments or by matching patients' preferences to the availability of appointment slots
- Training staff in improving patient engagement and adherence with therapy, for example by training therapists about increasing adherence with therapy, and training administrative staff about application of discharge and disengagement policies
- Managing the waiting list to increase capacity and/or reduce the number of people waiting for therapy
- Providing support to patients on the waiting list to encourage them to stay engaged, for example, telephone calls and an app with CBT-based psychoeducational resources.

Enablers and barriers

Enablers of implementation included: having input from patients to make interventions more accessible and appropriate for patients; and being able to share learning with colleagues.

Barriers to implementation included: workload and capacity challenges that affected the time staff could spend time on interventions; and challenges with ensuring consistency of implementation of interventions.

Self-reported outcomes

Key self-reported observed outcomes were:

- Slightly higher therapy completion rates for people who had attended a pre-therapy workshop for CBT, compared to those who had not attended a workshop
- Reduced appointment non-attendance (did not attend (DNA)) rates over time in a service which had carried out multiple interventions. Some interventions focused on patient communication and others focused on staff training about the therapeutic relationship.

4.1 How interventions targeted adherence and engagement with NHS Talking Therapies

This section describes the key features of the case study interventions that aimed to increase adherence and engagement with NHS Talking Therapies. These are summarised as separate themes.

4.1.1 Clarifying expectations of therapy

Several services (Devon, Cornwall and Isles of Scilly, NELFT, North East Hampshire and Farnham) implemented interventions designed to give patients information about therapy and clarify expectations. They provided the information in written and video format. For example, NELFT created a condensed version of their patient information pack, which they called a 'miniature welcome pack'. This illustrated information leaflet describes what to expect from the service and what types of therapy are offered, as well as an explanation of the therapeutic journey. NELFT also carried out community engagement and outreach activities with local communities to raise awareness about the service's talking therapies offer, clarify expectations about therapy, and discuss any barriers to access. Consultation with community groups informed changes to the written information the service sends to patients as well as the information provided on their website.

Like NELFT, Cornwall and Isles of Scilly created information sheets and leaflets about the therapy courses that the service offers, including frequently asked questions and information about what to expect. Both services spent time ensuring that the resources were short and easy to read. A few participants reported that the conciseness of the information was important to increase the likelihood of patients reading the information. However, another participant reported that it was difficult to track whether patients actually read the information, as there is a large amount of other information that patients routinely receive from the service during the therapy pathway.

Based on feedback from patients, both NELFT and Cornwall and Isles of Scilly made improvements to the documents to increase their accessibility and readability.

One of the services (Devon) updated the information on their website about their service offer. This included creating a comprehensive website FAQ page which explains all aspects of therapy, including referral criteria, the types of therapy offered, and what is expected of patients.

"The [website FAQ page] was something that we developed purely just… [to provide]… transparency, about who we are, what we do, and what therapy will look like, because sometimes people can feel like they're going into the unknown with therapy. If you don't have good communication, if you don't explain what it's going to look like, it can feel very daunting, whereas we were really trying to… reduce the anxiety that people might feel. Also, to be quite upfront about what we can offer and what we can't offer."

Service staff

In addition, two services (Devon and North East Hampshire and Farnham) produced videos as an alternative to the written format for providing information about therapy and what to expect. Devon produced a video showing the location of the clinic and how to navigate it. They also produced a video about what to expect from an initial assessment appointment, from the point of view of patients accessing the appointment by phone, video call, or in-person at the clinic. Similarly, North East Hampshire and Farnham produced a video aimed at patients on the waiting list for therapy, which describes the patient pathway and what to expect at each point of the therapeutic pathway.

Providing information in advance of therapy may serve more than one purpose: as well as clarifying expectations about therapy, written information or videos may also act as a memory aid or reminder about what will happen at each stage of therapy. Information provided in advance of starting treatment may also have the added benefit of helping to reduce anticipatory anxiety for any patients who are anxious because of the uncertainty of what to expect from the therapy process.

4.1.2 Exploring readiness for therapy, and making the commitment to therapy explicit

Some services took a more active approach to expectation setting. Rather than just providing information, they engaged patients in conversations to explore their readiness to engage with therapy.

For example, in addition to providing information sheets about their therapy offer, Cornwall and Isles of Scilly delivered pre-course engagement calls to patients on the waiting list for treatment. During the call, patients were given an opportunity to ask any questions about their upcoming therapy. As the calls were delivered by staff who also deliver the therapy, they were intended to act as a short introduction to the therapist and therefore the therapeutic relationship. Participants reported that a phone call may be less

intrusive than a full appointment for people with anxiety. They also found that the calls prompted patients to think about their readiness for therapy, and in some cases this resulted in people coming to the realisation that they were not ready, and dropping out, which had the benefit of freeing-up spaces on the waiting list.

Similarly, Tower Hamlets designed and implemented pre-therapy workshops for counselling and CBT respectively. These workshops were interactive and acted as an introduction to therapy. They set expectations for treatment and gave advice about how to raise any difficulties early on in the therapeutic pathway so they can be discussed and addressed. Patients were also encouraged to think about how they might get the most out of therapy, by spending time thinking about their reasons for attending, any goals they wished to achieve, and any questions they wanted to ask their therapist.

In addition, Portsmouth recently started implementing the Readiness for Therapy Questionnaire.[18] This is a validated 12-item questionnaire which covers topics such as readiness for change, and willingness to challenge thoughts and to change behaviour. The therapist usually asks the patient to complete the questionnaire and it is used as a basis for a discussion about therapy. Currently this is only being used for patients where it is seen as clinically appropriate, for example with patients who are identified as being likely to disengage or drop out of treatment. In future Portsmouth plan to scale-up the use of the questionnaire and use it pre-emptively with more patients at the start of therapy.

Two services (Hampshire and Plymouth) used interventions which involve a therapy contract or agreement between patients and therapists. This is a collaborative document which is used as a prompt for a conversation about the patient's readiness for therapy and willingness to commit to it, and any barriers that may affect their engagement. The document outlines the expectations for both patients (for example, homework, attendance of sessions, completion of questionnaires) and therapists (for example, confidentiality and provision of evidence-based treatment). The services differed in terms of whether the contract/agreement was given to patients before starting therapy or whether the therapist completed it with the patient during a therapy session. However, both services reported

[18] Ghomi, M. et al. (2021) *Development and validation of the Readiness for Therapy Questionnaire (RTQ)* Available at: https://www.researchgate.net/publication/352837103_Development_and_validation_of_the_Readiness_for_Therapy_Questionnaire_RTQ [Accessed 17th February 2026].

using it as a basis for a conversation with patients about their readiness and willingness to engage with therapy.

> *"We have a therapy contract that we would… run through with patients, to make sure that expectations are really clear, so that's what they can expect from us and what we can expect from them… It would [include] the usual things around… confidentiality, attendance. The importance of… completion of [questionnaire] measures and homework… We've got to be really clear [about expectations]… The position that we need to achieve is that patients make an informed decision about entering treatment, and they can only do that if they've got the information to inform their decision, of course. So, it's an important part of the engagement process."*
>
> Service staff

Hampshire carried out a quality improvement process for the therapy agreement which involved gathering feedback from staff as well as patients, to understand their experiences of using it in treatment. The feedback was used to refine the therapy agreement and improve its accessibility and readability.

Overall, the interventions described in this section provide information and clarify expectations in an interactive way which requires input from the patient. This may include having a conversation about therapy, attending a workshop, or making a commitment to therapy. In comparison to written or video information resources, this is more of an active method of providing information to patients and allows therapists to track whether patients have taken on board the information and then to explore their readiness and/or commitment to therapy.

4.1.3 Increasing flexibility and choice for patients

Several services have used interventions to improve the flexibility of the service offer, to make it easier to book appointments and to access treatment. For example, some of the services (Devon, Plymouth, North East Hampshire and Farnham, and Cornwall and Isles of Scilly) have online booking systems which allow patients to choose and book appointments in line with their own availability. Although most services use these booking systems for initial appointments, once patients have started therapy it is possible for them to change their appointment slots by discussing it with their therapist directly.

"We…have an online booking function… to try and reduce DNA rates. So the idea being that we previously used to just allocate patients appointments. Once they'd self-referred, we'd give them an appointment, whereas now if can't get hold of someone… we'll ask them to get in touch with us, and we'll then agree an appointment over the phone or we'll send them a link to our online booking [system] so that they can actively choose when they have the appointment. So that they can… do it at a time that works for them, with the hope being that that would reduce the number of DNAs for the service."

Service staff

Plymouth is currently piloting a waiting list co-ordinator role to contact patients on the waiting list and match appointment availability with patient availability and preferences for therapist characteristics such as gender. The aim is to enable patients to have more choice, and to increase the efficiency of allocating therapy slots to patients on the waiting list.

Many of the services also offer flexibility and choice in terms of how patients can access therapy. For example, several services have remote and online options for therapy, which do not require the patient to travel to an appointment. In addition, early morning and evening appointments may be more accessible for people who work or have other commitments during the day.

Overall, increased flexibility of appointments and availability of different ways to access therapy may support people to stay engaged with therapy if this makes therapy more accessible and more possible to manage alongside everyday commitments.

4.1.4 Supporting patients on the waiting list for therapy

A few of the services have used interventions to support patients while they are on the waiting list for therapy. For example, Kent and Medway uses the Limbic Care app which provides psychoeducation and resources for patients, including CBT-based tools and exercises. The app also provides AI-supported conversational support via a chatbot.

"I think the premise behind [the Limbic Care app] is trying to reduce… drop out… between assessment and treatment… it's a package that therefore allows [patients] to still hopefully feel connected. So it manages their expectations about what's going to happen, but it also gives them a way of reaching out in that app as well to let them know that there's various things that they can be doing whilst they're waiting… it's all part of that process. So, the idea is it will really enhance that engagement and reduce that drop out."

Service staff

Similarly, Plymouth offers a five-week psychoeducational course (Overcoming Trauma) which is for patients awaiting treatment for post-traumatic stress disorder (PTSD). This offers information about PTSD and tools and techniques for managing symptoms while waiting for treatment.

In addition, Kent and Medway partner with their local Age UK (a charity supporting older adults), to improve access and engagement with NHS Talking Therapies by older adults. As part of this, the local Age UK offers weekly befriending calls to older adults who are on the waiting list for Step 3 treatment. The intention of this is to maintain a line of communication and engagement with the patient. It also allows for the patient to ask any questions that they might have about the therapy process.

Overall, these interventions aim to help prepare patients for therapy by requiring them to actively engage with therapy before beginning treatment. Tools such as Limbic Care aim to begin the process of therapy early by giving patients the opportunity to complete CBT-based exercises, to help prepare patients for the therapy process itself.

4.1.5 Managing the waiting list

Some of the services used interventions designed to reduce waiting times and the amount of people on the waiting list for therapy. Participants from two services (Plymouth and North East Hampshire and Farnham) described their discharge and disengagement policies, which focus on discharging patients who are not engaging in treatment and are missing appointments. Both services advertise their policies to patients in advance (for example, via letters sent to patients) so that the expectations are clear from the outset. The policies specify that patients will be discharged after a pre-specified number of missed appointments or pre-defined time period of not responding to contacts from the service. They also have mitigations in place for patients who have extenuating circumstances which may prevent them attending appointments (for example, those with childcare

commitments, long-term health conditions, or other personal circumstances which may temporarily affect their attendance at appointments). This allows them to keep patients on the caseload if needed so they can re-engage and return to regular appointments when they are ready.

> *"We try and use all the three different methods [phone, text message, email] to contact [patients]. If they haven't contacted us back, if they've responded, then we'll carry on, but if there's no contact whatsoever, we move them through to… discharge and planning. We [email] them a letter giving them twenty-eight days to get in contact with us. So it gives them a clear cut-off point. It just enables us, so the waiting list isn't too big, so we can concentrate on people that are engaging and are… getting back in contact with us. If they contact us within those twenty-eight days, then that's absolutely fine and we'll put them back on the waiting list, and we'll start again, and try and contact them and book them in."*
>
> Service staff

Many of the NHS services sub-contract another provider or company to boost the service's capacity and enable them to see more patients and manage the waiting list. For example, as mentioned in section *4.1.3*, the Dr Julian service is a non-NHS service which is subcontracted by other NHS Talking Therapies services needing extra capacity. It uses a digital platform to provide therapy which patients can access virtually. This sub-contracting arrangement can be used by NHS Talking Therapies services as needed to meet increased demand. In addition, a few services changed their service offer to enable them to see more patients and increase the overall number of patients moving through the service. For example, participants from North East Hampshire and Farnham described their service's 'one-at-a-time' sessions, which are one-off sessions targeted at patients who are waiting for Step 3 and may need some therapy, but not a full course of treatment. This allows for more patients to be seen sooner and can reduce the waiting list for Step 3. In addition, NELFT has a 'groups-first' policy where they offer group therapy in the first instance to eligible patients. This format allows the service to treat more patients at once and therefore to reduce the overall waiting list.

Overall, these methods for managing the waiting list and increasing the flow of patients through the service aim to reduce the time patients are waiting for therapy. This may contribute to reducing disengagement by ensuring that patients who have a need for

therapy can promptly start therapy at the appropriate level while they still have a need for it.

4.1.6 Staff training to improve patient engagement and adherence with therapy

Some services targeted their interventions at staff working in their services.

Devon has a preceptorship programme which is designed to support newly qualified therapists to build confidence and competence in delivering therapy. Part of this programme includes training about strengthening the therapeutic relationship using the COM-B framework with patients.[19] This enables the therapist to have a discussion with patients about their motivation to take part in therapy, and any barriers they may have to engaging with therapy.

> *"We always encourage our PWPs to conduct what we call a COM-B assessment. So it's something they're trained to do in their initial training. So they always assess at every appointment someone's… capability, their ability to engage at the moment, what's someone's opportunity to engage, you know, do they have the time? Do they have the resources? Is it the right time for them? Anything they need. Are they motivated to engage? That's… an assessment that we run with everyone, so we can problem-solve any barriers that might be there with them."*
>
> Service staff

Kent and Medway delivered training for therapists which focused on how to identify Step 2 patients who would be suitable for SilverCloud (computerised CBT), with the aim of increasing referrals of eligible patients. The training also focused on ways to increase patient engagement with SilverCloud, with the aim of reducing drop-outs. The training was informed by consultations with patients and staff from their service about SilverCloud.

North East Hampshire and Farnham delivered training for their administrative staff about reducing waiting lists and improving patient engagement. This was linked to a newly introduced service key performance indicator (KPI) which specifies that 90% of patients should be seen for their first treatment session within 90 days of being assessed. The

[19] The COM-B framework proposes that capability, opportunity, and motivation need to be present for behaviour change to occur. For more information, see Michie, S. et al., (2011) 'The Behaviour change wheel: a new method for characterising and designing behaviour change interventions', *Implementation Science*, 6(42), Available at: https://doi.org/10.1186/1748-5908-6-42 [Accessed 17th February 2026].

service encouraged staff to offer different ways of accessing treatment (such as phone-based treatment or video calls) for patients who may find face-to-face treatment less accessible.

For some services, adherence and engagement are topics which feature in the continuous development, management and supervision of staff. For example, participants from two of the services (Plymouth and Tower Hamlets) reported that adherence and disengagement and DNA rates are often discussed as part of supervision. This includes discussions with therapists about DNA rates and reasons for disengagement or non-attendance, to inform approaches to improve engagement.

Overall, focusing on adherence and engagement during training and development aims to improve adherence outcomes. For example, training for therapists aims to achieve better consistency across therapists in their practice and improve their own awareness about engagement and adherence in their clinical practice.

4.2 Enablers and challenges affecting implementation of interventions

This section summarises the enablers and challenges to implementation that were commonly reported across different services.

4.2.1 Enablers

4.2.1.1 Patient involvement

Hampshire, Cornwall and Isles of Scilly and Tower Hamlets reported that they gathered feedback from patients or patient participation groups about the interventions while they were being developed. This enabled the services to ensure that the information was appropriate and accessible for patients. The feedback was gathered in different ways, for example Tower Hamlets have a patient participation group who were involved in discussions about developing the workshops, and they also collected feedback from workshop attendees which they have taken into consideration when developing the workshop materials. Hampshire have gathered feedback from both patients and staff about the therapy agreement as part of a quality improvement process, The feedback was collected and used on a continuous basis to refine the agreement. Similarly, Cornwall reported that they have a continuous review process for their interventions (pre-course engagement calls, participant information materials, and online booking portal).

"It's been important to have that continuous… feedback from patients and from staff in terms of what potentially creates barriers to engagement within sessions and then integrating those themes into the therapy agreement as an ongoing process."

Service staff

Devon and Portsmouth reported that they would like to gather feedback and input from patients and involve them more when developing interventions in the future.

4.2.1.2 Shared learning and training

Several participants reported that they found it helpful to be able to access shared learning and work collaboratively within and across services when designing and delivering interventions. For example, participants from Hampshire reported that they were able to pilot the intervention with one team in the service, gather feedback, and then make amendments to the intervention before implementing it.

"We often use [staff name]'s team to advocate, so we'll usually implement with [their] team first and then we'll use them to get the feedback and then it means that… we have this really good advocacy and also if there's anything that's really wrong, we can check and adjust. So, they often get pilot stuff first and then it means that, when we come to embed it, we're clear on the process because obviously, we want it to be across service and I think implementation of these sorts of initiatives, it's really, really important that everybody's bought in as to the why. So doing that staff engagement piece, explaining… This is [for] the benefit of the patient, we're not doing this in any punitive way, we're doing this definitely to improve things and make sure we get [the] best patient outcomes."

Service staff

4.2.2 Challenges

4.2.2.1 Workload pressures

Cornwall and Isles of Scilly and NELFT highlighted therapist capacity as a potential barrier to implementing interventions, especially where clinical staff were delivering them. For example, in Cornwall and Isles of Scilly, although therapists had protected time for carrying out the pre-engagement calls, this did not always work in practice. As the calls were not pre-booked, it was common for patients not to answer, and this usually meant that therapists had to spend extra time following them up. In general, participants reported that time spent by clinical staff on adherence interventions needed to be balanced with time spent seeing patients. This may have an impact on adherence – if therapists have less time

to see patients, it may increase waiting times and therefore increase the likelihood of disengagement.

> *"If we're thinking about capacity… we have one of our clinicians that does run [the workshops]. So for them running it, it then means they're getting a little bit less clinical time to see patients for sessions."*
>
> Service staff

4.2.2.2 Inconsistency of intervention implementation

For interventions which required therapist input (such as the pre-engagement calls, therapy contract and readiness for therapy conversations), several participants reported that there were variations in how the interventions were used across the service by different therapists. This meant that there were difficulties with maintaining consistency in implementation, particularly for larger services with more staff. Services attempted to mitigate these challenges by engaging with therapists to help them understand the reasoning behind the interventions.

> *"I get it, that therapists want to ensure that the patients can have a chance at having therapy, but it's also then the issue around, if you are letting someone have one, two, three missed appointments for their first assessment, you could have had three other people potentially come in who actually enter treatment as well. So it's [about]… reviewing that and just helping therapists to understand that impact on other patients."*
>
> Service staff

4.3 Self-reported outcomes of adherence interventions

This section summarises the outcomes that participants from the NHS Talking Therapies services reported to the evaluation, based on their routine data monitoring, as well as outcomes expected in the future.

Many services take a data-driven approach, regularly monitoring routine data on attendance, non-attendance and outcomes, and using this information to inform the implementation of interventions focused on adherence and/or engagement.

All services measure and report on nationally mandated KPIs, which include the waiting time for the first session, appointment non-attendance (DNA) rates, and recovery rates. However, few services reported that they measure adherence specifically, and there does

not appear to be a consistent definition of this across different services. Although many services measure DNA or non-attendance, which potentially gives an indication of disengagement, it is not a precise measure of non-adherence, as patients may miss appointments sporadically and then reattend and eventually complete treatment.

Services commonly run many interventions concurrently. Most services also measure their outcomes as a whole and do not measure the impact of each intervention on service outcomes separately. This makes it challenging to attribute any change in outcomes to any particular intervention. These limitations should be considered when interpreting the outcomes reported by participants, which are summarised in section *4.3.1*.

4.3.1 Observed outcomes

4.3.1.1 Patients

- Tower Hamlets reported that their pre-therapy workshops had a positive impact on adherence: 8% more patients who attended a counselling pre-therapy workshop went on to complete treatment compared to those who did not attend a workshop
- Kent and Medway reported that, in their population aged 70 years and older, they observed a reduction in drop-out rates between assessment and the start of treatment, from 52% to 43%. This may indicate that their work with Age UK to provide support for older adults had a positive impact
- At the end of Kent and Medway's SilverCloud project, they observed an increase from 8% to 12% of eligible referrals into SilverCloud. They also noted a slight change in recovery rates for SilverCloud, which increased from 52% to 57%. They did not notice a change in the dropout rate, which remained at 43%, but this is a focus of ongoing work
- Devon reported that they had observed a reduction in DNA rates, which they interpreted as showing better rates of engagement, although it is not possible to attribute the changes to any one intervention as they implemented multiple interventions focused on adherence and engagement over several years
- Similarly, Hampshire reported a slight improvement in their attendance rates for Step 3 patients, who had received a therapy agreement, compared to Step 2 patients who had not been given one, although specific data about the pre and post figures was not available at the time of reporting. Further analysis is needed to understand the size of this effect

- By contrast, NELFT reported that since the introduction of their groups-first policy they had noticed an unintended increase in the DNA rate. Participants reported that this increase in non-attendance may be due to the policy not being well-received by patients due to a pre-conceived expectation or preference for one-to-one therapy.

4.3.1.2 Staff and service

- Devon and North East Hampshire and Farnham reported their observation that the adherence and engagement-focused interventions had led to less wasted clinical time from missed appointment slots
- Hampshire reported that after the therapy agreement had been implemented, and refined during the quality improvement process, service staff felt more confident in having conversations with patients about adherence and engagement.

4.3.2 Expected outcomes

Some participants reported expected future outcomes:

4.3.2.1 Patients

- Participants from some services (Cornwall and Isles of Scilly, Kent and Medway and Tower Hamlets) reported that they expected that, over time, their interventions would lead to an improvement in drop-out rates from therapy.

4.3.2.2 Staff

- Participants from Cornwall and Isles of Scilly expected that patients' use of the service's online booking system would reduce the workload burden on administrative staff by allowing patients to book appointments directly
- As the Portsmouth service is still in the early stages of delivering the Readiness for Therapy Questionnaire, it is expected that its continued use will allow them to gather more information about adherence which can be used to design or improve interventions focused on adherence.

5. Quantitative findings

Summary of Quantitative Findings

Overall effects

- Across both outcome measures, all four analytical approaches produced positive intervention effects, typically **increasing outcomes by 1-2 percentage points above the counterfactual per year**
- This consistent direction suggests the interventions may have improved service performance
- However, only some methods produced statistically significant results, indicating uncertainty around the precise effect size.

Heterogeneity patterns

- Matching-based methods showed **substantial or considerable variation** between services, indicating the intervention effect differed meaningfully from one service to another
- Both synthetic DiD approaches showed **low heterogeneity**, suggesting more consistent effects across services and a more stable and predictable impact
- The synthetic DiD method using matched donor pools was the only approach to produce statistically significant results for both outcomes.

Overall interpretation

- Taken together, the evidence offers **some support** for the effectiveness of the interventions
- Effects are **modest** and **uncertain**, so findings should be viewed as **indicative rather than conclusive**
- Further evaluation is recommended to confirm and refine these estimates.

Subgroup patterns

- Subgroup analyses showed clear differences in how interventions performed, though **results should be interpreted cautiously** because some subgroups were small
- **For attendance at five or more sessions:** interventions that combined changes to service processes together with improved patient information (multi-component approaches) were most effective; information-only interventions (informational) had little impact
- **For reliable recovery:** the pattern reversed: interventions focused solely on improving the information provided to patients (informational), as well as broader service-wide initiative (non-targeted or mixed), produced the strongest improvements
- **Overall**, interventions that adjust how services operate (multi-component) seem most important for improving session attendance, whereas interventions that enhance the information and guidance given to patients (informational) which are delivered across the whole service pathway (non-targeted or mixed) appear more effective for improving reliable recovery.

5.1 Introduction

The quantitative analyses examined two measures of the effectiveness of interventions introduced by participating services:

1. The proportion of discharged referrals in which the patient received at least five treatment sessions
2. The proportion of discharged referrals that achieved reliable recovery.

Further detail on the construction and rationale for these outcome measures is provided in *Annex 3: Outcome measures*.

Nine services were included in the quantitative analysis (see *Annex 6: Services identified*). Because each intervention was implemented within a single service, individual estimates were based on limited data and therefore had wide confidence intervals. To strengthen the precision and robustness of the estimated intervention effects, four parallel meta-analyses were conducted for each outcome, corresponding to four different approaches for constructing the counterfactual.

This section summarises the findings from these meta-analyses. For each outcome, we provide a narrative interpretation alongside an illustrative forest plot showing the individual service-level estimates and the pooled intervention effect.

How to interpret the meta-analysis results

Meta-analysis combines the results of multiple service-level evaluations to produce a single pooled estimate of the effect of interventions introduced by services. In this report, each service implemented its intervention independently, meaning that individual estimates were based on relatively small samples and therefore had wide confidence intervals. By pooling these estimates, the meta-analysis increases statistical precision and provides a clearer indication of the likely overall effect.

Two key concepts support interpretation:

- **Pooled intervention effect:** this represents the average estimated impact of the intervention across all services included in the analysis
- **Heterogeneity:** this describes how much the service-level effects differ from one another. High heterogeneity suggests that the intervention's impact varies across services or that contextual factors influence outcomes. Low heterogeneity indicates more consistent effects.

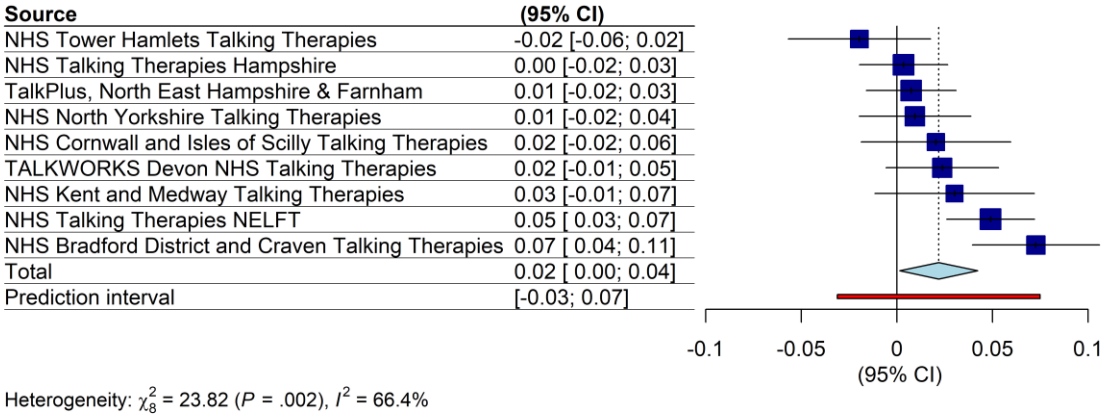
Because each outcome was analysed using four different approaches to constructing the counterfactual, consistency across methods provides an important indication of robustness. Where all methods point in the same direction, confidence in the overall pattern is strengthened, even if not all estimates reach statistical significance.

5.2 Outcome measure 1: Receiving at least five treatment sessions

Across all four analytical approaches, the estimated intervention effects were positive, ranging from 1.1 to 2.3 percentage points (pp) above the counterfactual per year. Two methods (PSM-DiD and synthetic DiD) produced statistically significant pooled effects, estimated at 2.2 and 2.3pp above the counterfactual per year respectively.

Substantial heterogeneity was observed in the PSM-DiD and CEM-DiD meta-analyses, indicating that the effectiveness of the interventions varied across services or that service-specific contextual factors influenced outcomes. In contrast, both synthetic DiD approaches showed low heterogeneity, suggesting more consistent effects across services and potentially more stable pooled estimates.

Figure 5.1 Example forest plot for Outcome 1 using PSM-DiD



Taken together, the four meta-analyses provide some evidence the interventions that services introduced increased the proportion of discharged referrals receiving at least five treatment contacts. The full set of forest plots and analytical summaries can be found in *Annex 8: Outcome 1 meta-analysis*.

5.3 Outcome measure 2: Achieving reliable recovery

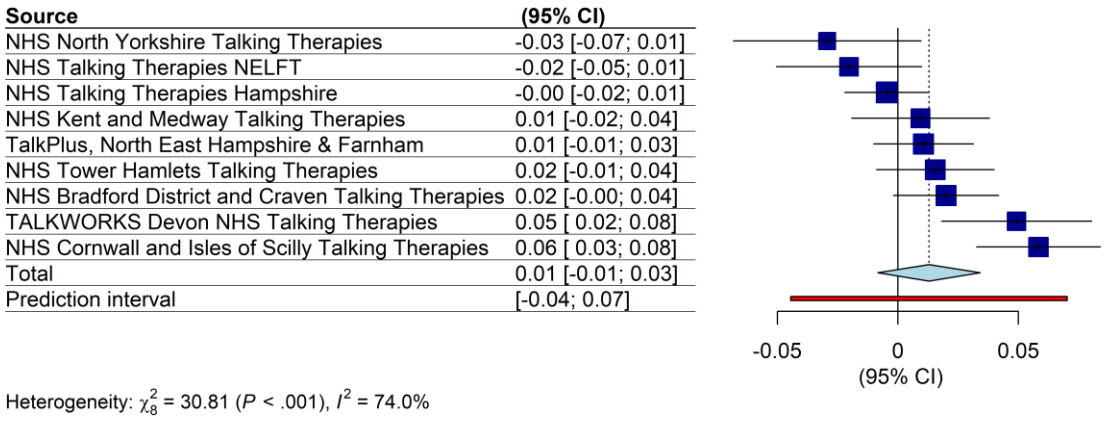
Across all four analytic approaches, the intervention was associated with small positive changes in the proportion of discharged referrals that achieved reliable recovery, with pooled annual effects ranging from 1.3 to 2.3 percentage points (pp) above the counterfactual per year.

However, only the synthetic DiD model using matched donor services produced a statistically significant estimate (2.3 percentage points per year). The remaining methods (PSM-DiD, CEM-DiD and the unrestricted synthetic DiD) had confidence intervals that crossed zero, indicating uncertainty about whether any true effect was present.

Patterns of heterogeneity also differed markedly across methods. PSM and CEM showed substantial and considerable between-service variability, suggesting that much of the observed variation reflects real differences across services. In contrast, both synthetic DiD approaches demonstrated low heterogeneity, implying more consistent effects and potentially more stable pooled estimates.

Overall, these findings provide limited but directionally positive evidence of improvement, with only one method (synthetic DiD using matched donor services) offering statistically robust support for an intervention effect.

Figure 5.2 Example forest plot for Outcome 2 using PSM-DiD



Taken together, the four meta-analyses provide some evidence that the interventions services introduced increase the proportion of discharged referrals in which the patient achieved reliable recovery. The full set of forest plots and analytical summaries can be found in *Annex 9: Outcome 2 meta-analysis*.

5.4 Cross-outcome comparison

Across both outcomes, four alternative counterfactual estimation methods were applied – PSM-DiD, CEM-DiD, synthetic DiD using all available services and synthetic DiD using

matched donor pools. Although the outcomes measure different aspects of service performance, several consistent patterns emerge.

5.4.1 Direction of events

For both outcomes, all four methods produced positive intervention effects, with point estimates generally in the range of 1-2 percentage points above the counterfactual per year. This consistency in direction suggests that, on average, the interventions are associated with small improvements relative to the counterfactual.

5.4.2 Statistical significance

- Outcome 1: Two methods (PSM and synthetic DiD with matched donor pools) produced statistically significant results
- Outcome 2: Only one method (synthetic DiD with matched donor pools) produced a statistically significant effect.

Across both outcomes, the synthetic DiD with matched donor pools is the only method that consistently yields a statistically significant positive effect.

5.4.3 Heterogeneity

A clear pattern emerges in heterogeneity:

- PSM-DiD and CEM-DiD show substantial to considerable heterogeneity for both outcomes, indicating that effects vary meaningfully across services
- Synthetic DiD approaches show low heterogeneity for both outcomes, suggesting more stable and consistent estimates across services.

This difference implies that methods relying on direct matching may be more sensitive to between-service variation, whereas synthetic control approaches may provide more stable pooled estimates.

5.4.4 Precision and uncertainty

For both outcomes:

- Confidence intervals for PSM-DiD, CEM-DiD and synthetic DiD (all services) include zero, meaning these estimates are not statistically distinguishable from no effect
- Only the matched-donor synthetic DiD method consistently produces confidence intervals that exclude zero.

This highlights that while point estimates are positive, uncertainty remains substantial, and conclusions should be drawn cautiously.

5.4.5 Overall interpretation

Taken together, the cross-outcome evidence suggests:

- The interventions are likely to have a small positive effect on both outcomes
- The magnitude of improvement is modest – typically around 1-2 percentage points per year
- Evidence of statistical significance is limited, appearing in only a subset of methods
- Variation across services is an important factor, particularly for matching-based methods
- Synthetic DiD using matched donor pools appears to provide the most consistent and precise estimates across outcomes.

5.5 Subgroup analyses

Random-effects subgroup meta-analyses were conducted using the matched-donor synthetic DiD estimates to examine whether intervention effects differed by (i) information-focused versus multi-component approaches and (ii) targeted versus non-targeted interventions. These subgroups are defined below.

5.5.1 **Informational** vs **multi-component** interventions:

- **Informational** interventions changed what patients were told – for example, providing clearer explanations of therapy, setting expectations about the therapeutic process or improving written and verbal communication
- **Multi-component** interventions combined these information improvements with operational or process changes, such as altering workflows, policies or referral processes. Because they act on several parts of the care pathway at once, they were expected to have larger or more wide-ranging effects.

5.5.2 **Targeted** vs **non-targeted or mixed** interventions:

- **Targeted** interventions were designed for a specific group of patients – for example, people receiving Step 2 therapy, adults aged 65+, those on counselling pathways, or (in one case) patients in a single London borough during an initial rollout
- **Non-targeted or mixed** interventions were aimed at the whole service or combined service-wide changes with some subgroup-specific elements. These broader interventions were expected to have a greater impact on overall service outcomes because they reach more patients.

For details on which services were assigned to each subgroup please refer to *Table 3.1 Description of adherence interventions included in the evaluation*.

5.5.3 Outcome 1

For outcome 1 (attendance of five or more treatment sessions), multi-component interventions produced significantly larger effects (3.4 percentage points) than informational approaches (-1.2 percentage points). In contrast, there was no evidence that targeted interventions differed meaningfully from non-targeted approaches at the whole-service level.

These findings suggest that improvements in treatment session attendance are most likely when interventions have multiple components, for example combining informational elements with operational or policy changes that act on multiple parts of the care pathway. However, the limited number of available studies means that the observed differences may not be stable and should be interpreted with caution.

5.5.4 Outcome 2

For outcome 2 (reliable recovery), the pattern differed. Informational interventions showed a larger pooled effect (3.4 percentage points) than multi-component approaches (0.7 percentage points). Non-targeted or mixed interventions (3.0 percentage points) also outperformed subgroup-specific approaches (0.9 percentage points) and this difference was statistically significant.

These results suggest that improvements in reliable recovery are more likely when patient-facing information and engagement activities are applied across the full care pathway, rather than directed only at specific sub-groups in insolation. However, with only nine

studies contributing to the subgroup analyses, the precision of these comparisons is limited and the findings should be viewed as provisional rather than definitive.

5.6 Implications

The findings indicate that the interventions are associated with small improvements in both outcome measures, typically around 1-2 percentage points above the counterfactual per year. While only a subset of methods produced statistically significant results, the consistent direction of effect across all approaches suggests that the interventions may have a modest positive impact.

Even so, the magnitude of improvement should be interpreted cautiously. A 1-2 percentage point increase can be meaningful when applied across a whole service, but its practical significance depends on the size on factors such as service size, baseline rates of each outcome and the cost and feasibility of implementing the intervention.

To illustrate the potential scale of impact, consider a service with around 5,000 people per year completing a course of therapy (defined as at least two treatment contacts). A 1-2 percentage point improvement in reliable recovery would translate to roughly 55 to 115 additional people achieving reliable recovery annually. This provides a sense of the real-world implications of what may initially appear to be small percentage-point changes.

The variation in heterogeneity across methods also highlights that the impact may differ between services, highlighting the importance of local context and implementation factors. Moreover, the meta-analyses draw on a relatively small number of studies which limits the precision of these findings, particularly for the subgroup analyses, which means these results should be regarded as provisional. See section *2.5.5 Limitations* for more detailed information on constraints affecting the quantitative analyses.

These findings support a balanced interpretation: the interventions show promise, but the evidence is not yet definitive. Additional evaluation, particularly with larger samples or more consistent implementation, would help strengthen confidence in the estimated effects.

6. Synthesis of qualitative and quantitative findings

Summary of synthesis

The synthesis of qualitative and quantitative evidence highlighted a consistent set of mechanisms associated with higher session completion and improved clinical outcomes across NHS Talking Therapies services that showed the most promising results from their interventions.

Characteristics of services demonstrating the strongest results

Quantitative counterfactual modelling identified services that repeatedly ranked in the top three for both session-completion and reliable-recovery outcomes. Qualitative analysis of these services revealed a shared emphasis on:

- Strengthening early engagement
- Clarifying expectations
- Improving accessibility through digital tools
- Tailoring pathways to specific needs and
- Building staff capability to support patient engagement.

Common mechanisms driving engagement and outcomes

Across both comparison sets, the same underlying themes emerged: interventions that reduce uncertainty, address misconceptions, increase flexibility and build readiness for change appear to create the conditions for patients to attend more consistently and participate more actively in therapy.

Integrated logic model development

To bring these insights together, the evaluation team developed an **integrated logic model** (see *Figure 6.1*). The model synthesises the common inputs, activities and mechanisms identified across services with consistently strong outcomes and maps the hypothesised pathways through which they contribute to improved engagement, increased likelihood of receiving at least five treatment sessions and ultimately better therapeutic outcomes, including reliable recovery.

Implications for service design and evaluation

The logic model provides a coherent framework for understanding how these interventions may work, offers a **basis for future evaluation** of mechanisms of change and can **guide services seeking to design or refine their own approaches** to improving patient engagement and outcomes.

To explore whether specific intervention features or contextual factors were associated with stronger performance, we conducted an exploratory analysis identifying services that

consistently ranked among the highest performers across the four alternative DiD specifications (PSM-DiD, CEM-DiD, restricted synthetic DiD and unrestricted synthetic DiD).

With only nine services in total, this approach allowed us to focus on those that demonstrated relatively robust positive effects regardless of how the counterfactual was constructed. By examining commonalities among services that repeatedly appeared in the top-tier across models, the evaluation team aimed to generate plausible hypotheses about the intervention components or implementation conditions that may underpin stronger outcomes, while recognising that these insights are indicative rather than definitive.

6.1 Outcome 1: at least five treatment session attendances

The services identified as consistently ranking in the top three across DiD specifications for outcome 1 (at least five treatment sessions) are presented in *Table 6.1*.

Table 6.1 Services identified as consistently high ranking for outcome 1

Service	Intervention type(s)
NHS Kent and Medway Talking Therapies	Staff training, targeted support and referral pathway for older adults, digital app for patients on the waiting list
NHS Bradford District and Craven Talking Therapies	Digital app to support care
NHS Talking Therapies NELFT	Welcome pack, groups first policy
NHS Cornwall and Isles of Scilly Talking Therapies	Pre-therapy engagement call, written information about therapy

Details on the rankings for each service in each outcome can be found in *Annex 13: Services selected for exploration of common features*. See *Annex 7: Service intervention summaries* for a more detailed description of each intervention.

6.1.2 Improving engagement before therapy starts

The strongest shared theme is that each service implemented changes designed to reduce drop-off between referral/assessment and the first therapeutic contact:

- Bradford: chatbot check-ins and guided support
- Cornwall and Isles of Scilly: pre-course engagement call and refined information sheets

- Kent and Medway: check-in calls, clearer eligibility information, digital app (Limbic Care)
- NELFT: welcome pack explaining what to expect.

6.1.3 Expanding digital support and self-management tools

All four services used digital tools to improve access, for better monitoring or to enhance patient understanding of what to expect:

- Bradford: Limbic Care app integrated with Step 2 referrals
- Cornwall and Isles of Scilly: online booking and digital information
- Kent and Medway: SilverCloud and Limbic Access/Care
- NELFT: not a dedicated app, but structured digital information and outreach.

The digital layer varies in sophistication, but the overall direction is consistent: each service moved toward greater use of digital support to improve access and engagement.

6.1.4 Improving clarity, expectations and patient understanding

Each service introduced materials or processes that help patients understand what therapy involves, what happens next or how to prepare or engage with their therapy.

- Bradford and Kent and Medway: psychoeducational resources within the app
- Cornwall and Isles of Scilly: refined course leaflets
- NELFT: miniature welcome pack.

These approaches can help to reduce anxiety and misconceptions, which could be major contributors to disengagement.

6.1.5 Creating targeted pathways or tailored support

Each service introduced features that tailored access or support to specific groups or needs:

- Bradford: optional digital augmentation for Step 2 therapy
- Cornwall and Isles of Scilly: tailored engagement for those awaiting treatment, where there is a risk of dropping out

- Kent and Medway: dedicated referral and therapy pathway for older adults, informed by NHS Talking Therapies positive practice guidance for older adults[20]
- NELFT: groups-first model for most patients, but other forms of therapy available as clinically appropriate.

These are all forms of segmentation: matching people to the right format of care.

[20] British Association for Behavioural and Cognitive Psychotherapies, Age UK, Mental Health Foundation and NHS Talking Therapies (2021) *NHS Talking Therapies Positive Practice Guide*. Available at: https://babcp.com/guidelines-and-policies/older-adults-positive-practice-guide/ [Accessed 17th February 2026].

Box 1: Kent and Medway: Older Adult Referral Pathway

Kent and Medway introduced a dedicated referral pathway designed to improve access to, and engagement with, NHS Talking Therapies among older adults. Key components included:

- A dedicated referral route for older adults via Age UK services
- Mental health community outreach workers specialising in support for older adults
- A partnership with Age UK involving: delivery of therapy appointments at Age UK premises; weekly befriending calls from Age UK staff for older adults on the therapy waiting list; and provision of a dedicated laptop for patients to access online tools.

6.1.6 Reducing barriers to access

All four services implemented approaches aimed at reducing barriers to access for patients who might otherwise disengage or never enter treatment.

Each took a different approach:

- Bradford: digital tools for patients who are waiting for therapy, to introduce CBT-based therapy concepts and strategies. These tools may reduce friction by being readily available and help maintain continuity of care between in-person sessions
- Cornwall and Isles of Scilly: leaflets and information sheets designed to provide information about therapy and address common misconceptions about NHS Talking Therapies early in the therapeutic journey
- Kent and Medway: partnership with Age UK for outreach to older adults, aiming to reduce barriers to access for this demographic group and to support engagement
- NELFT: providing information about therapy via a welcome pack, and meeting with communities within NELFT boroughs who may be less likely to access therapy, to explore their understanding of therapy and any barriers.

6.1.7 Supporting staff through training and process refinement

Two services explicitly mentioned staff training and the others imply it through new processes:

- Bradford: formal staff training on the use of the Limbic care app
- Kent and Medway: staff and patient feedback used to design training to refine new processes
- NELFT and Cornwall and Isles of Scilly: new pathways and engagement processes that require staff adoption.

This reflects a broader theme: implementation is as much about workforce readiness as technology.

6.1.8 Summary

Across all four services the common elements are:

- Early engagement and dropout prevention

- Digital tools to support access, monitoring and self-management
- Clear, accessible information to set expectations
- Tailored pathways for specific groups or needs
- Outreach to reduce barriers and misconceptions
- Staff training and process refinement to support implementation.

6.2 Outcome 2: reliable recovery

The services identified as consistently ranking in the top 3 for each DiD specification for outcome 2 (reliable recovery) are presented in *Table 6.2*.

Table 6.2 Services identified as consistently high ranking for outcome 2

Service	Intervention type(s)
NHS Cornwall and Isles of Scilly Talking Therapies	Pre-therapy engagement call, written information
NHS Tower Hamlets Talking Therapies	Pre-therapy workshops
TALKWORKS Devon NHS Talking Therapies	Written information, informational videos, online booking system, therapist preceptorship

Details on the rankings for each service in each outcome can be found in *Annex 13: Services selected for exploration of common features*, and detailed summary descriptions of each intervention are given in *Annex 7: Service intervention summaries*.

6.2.2 Enhancing early engagement to prevent pre-treatment dropout

Reliable recovery depends on patients starting treatment and attending consistently. All three services introduced interventions that strengthen engagement before the first session, reducing the biggest point of attrition:

- Cornwall and Isles of Scilly: pre-course engagement calls
- Devon: expectation-setting videos, FAQs, assessment explainer
- Tower Hamlets: pre-therapy workshops.

Patients who attend their first session promptly, with reasonable expectations, could be more likely to complete a full course of treatment, which is believed to be associated with recovery.

6.2.3 Improving understanding of therapy to increase treatment adherence

Each service invested heavily in helping patients to understand what therapy involves, what their role is, how change happens and what commitment is required.

- Cornwall and Isles of Scilly: refined information sheets
- Devon: therapy expectations guide and videos
- Tower Hamlets: structured workshops and workbooks.

Clear expectations of the offered therapy can reduce anxiety, increase motivation and improve adherence to therapeutic tasks (for example, homework), all of which are thought to be predictors of better outcomes.

Box 2: Devon: Informational video

Devon produced several videos, available from their service website and YouTube channel, that aim to increase patient understanding and confidence, for example, by explaining what the service provides, and what to expect from a first appointment. Patients are signposted to the videos on the service website and in communications sent to them before starting therapy.

6.2.4 Reducing misconceptions and anxiety that undermine treatment

All three services explicitly targeted psychological barriers that stop people engaging fully:

- Fear of the unknown
- Uncertainty about therapy
- Doubts about suitability
- Worries about expectations.

Lower anxiety and clearer understanding can improve early therapeutic alliance and reduce avoidance, enabling patients to engage more deeply in the treatment.

6.2.5 Increasing accessibility and flexibility through digital tools

Digital components were included across all interventions:

- Cornwall and Isles of Scilly: online booking and rescheduling
- Devon: online booking
- Tower Hamlets: workshops that can be accessed remotely.

Flexible access could result in fewer missed appointments and increased continuity, which is thought to be important for achieving a sufficient treatment dose and maintaining therapeutic momentum.

6.2.6 Supporting motivation and readiness for change

Each service included elements that help patients reflect, prepare and commit to therapy:

- Cornwall and Isles of Scilly: personalised engagement call
- Devon: testimonials and expectation-setting materials
- Tower Hamlets: goal-setting workbook.

Higher readiness for change may lead to better engagement, stronger alliance and improved outcomes across psychological therapies.

6.2.7 Strengthening staff capability to foster engagement and alliance

Two services explicitly included staff-focussed components:

- Cornwall and Isles of Scilly: guidance provided to staff about how to deliver personalised engagement calls
- Devon: preceptorship programme with engagement training.

Staff who are confident in engagement techniques and expectation-setting can build early alliance which is thought to promote recovery.

6.2.8 Summary

Across the three services the common themes, when viewed through the lens of reliable recovery, are:

- Early engagement to reduce pre-treatment dropout
- Clear expectations that improve adherence and therapeutic alliance

- Accessible, high-quality information that reduces therapy-related anxiety and misconceptions
- Digital tools that increase treatment flexibility and continuity
- Motivation-building interventions that enhance readiness for change
- Staff capability to support patient engagement and alliance.

Together, these mechanisms create the conditions for patients to attend consistently, engage meaningfully and complete therapeutic tasks with the aim to promote reliable recovery.

6.3 Summary

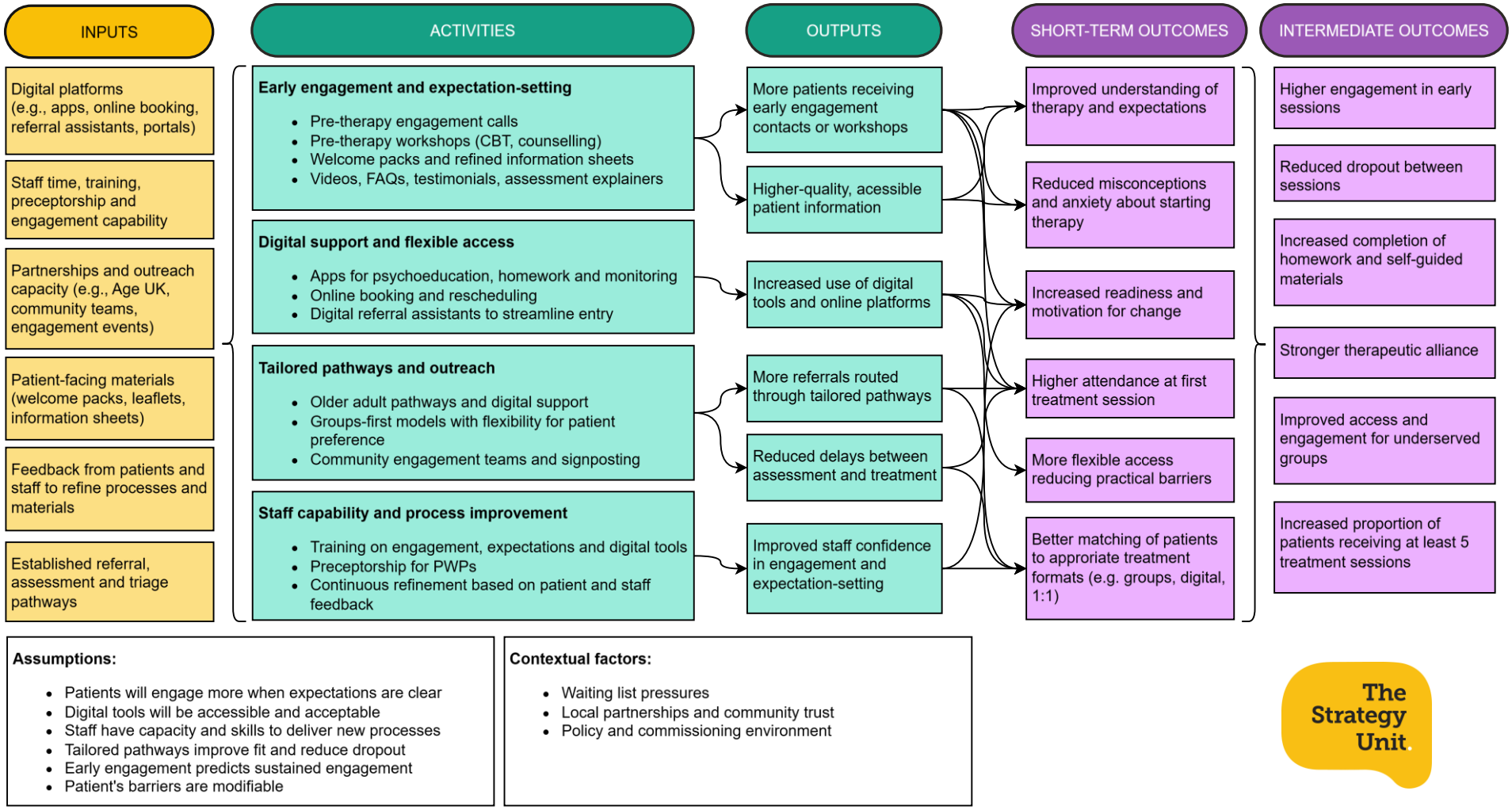
This synthesis of quantitative modelling and qualitative case analysis revealed a common set of mechanisms used by high-performing NHS Talking Therapies services. Services that consistently achieved strong session-completion and reliable-recovery outcomes shared an emphasis on:

- Early engagement
- Clear expectation-setting
- Accessible digital support
- Tailored pathways
- Staff capability.

These themes suggest that interventions reducing uncertainty, increasing flexibility and strengthening readiness for change could help patients attend more consistently and engage more fully in therapy.

These themes and assumptions have been synthesised into an integrated logic model (see *Figure 6.1*) that summarises these pathways, showing how shared inputs and activities are expected to improve engagement, increase the likelihood of receiving at least five treatment sessions and ultimately support reliable recovery.

Figure 6.1 Logic model based on themes from high-performing service interventions



7. Conclusions and recommendations

The following section summarises the key conclusions from the qualitative, quantitative and integrated analyses, and sets out the recommendations that arise from them.

7.1 Conclusions

The following draws together the overarching insights from the evaluation, highlighting what the combined evidence suggests about the effectiveness and implementation of the interventions.

7.1.1 Conclusions from the qualitative evaluation

- **Services implemented a wide range of interventions focused on adherence and engagement:**

  Interventions included information-giving, operational changes and staff training to improve patient engagement. Specifically, interventions can be categorised according to the following themes: clarifying expectations; exploring readiness and commitment to therapy; increasing flexibility and choice of access to appointments; supporting patients on waiting lists and equipping staff with skills to enhance engagement. While some themes echo findings from the previous NHSE BSU survey (see section *1.1.1*), several additional themes emerged uniquely from this evaluation.

- **Patient feedback played a crucial enabling role:**

  Services used insights from patients to refine and improve their materials, helping ensure that information was accessible, relevant and appropriate for their populations.

- **Staff capacity remains a significant challenge:**

  Delivering adherence-focused interventions requires time and resource and services highlighted the need to balance this work against clinical activity. Increasing the time staff spend on engagement activities which require clinical time may reduce available clinical capacity, which could lengthen waiting times and inadvertently contribute to disengagement.

7.1.2 Conclusions from the quantitative evaluation

- **The interventions show signs of being beneficial, but the effects are small:**

  Across both outcome measures, all analytical approaches produced positive effects of roughly 1-2 percentage points per year. This consistent direction of effect suggests a

genuine potential benefit, but the modest size and wide confidence intervals mean the true impact remains uncertain. Even so, incremental gains of this size could still support more people in achieving reliable recovery over the course of their referral, particularly given that the interventions require relatively little resource to deliver.

- **Overall evidence is indicative rather than definitive:**

  While the balance of evidence points towards a positive impact, the modest effect sizes and methodological uncertainty mean the findings should be interpreted cautiously. Further evaluation would be needed to confirm and refine these estimates.

- **Different types of interventions work for different outcomes:**
  - **Increasing attendance (five or more sessions):** multi-component interventions were most effective
  - **Improving reliable recovery:** informational and whole-service approaches performed best.

7.1.3 Conclusions from the integrated quantitative and qualitative synthesis

Synthesis of high-performing services revealed:

- **High-performing services tend to do the same things well:**

  Services with the best outcomes consistently focused on: engaging people early; setting clear expectations; making access easier (including through digital tools) and tailoring support to individual needs.

- **These approaches could help people stay in therapy and get better results:**

  Interventions that reduce uncertainty, increase flexibility and help people feel ready for therapy appear to encourage more consistent attendance and more active participation.

- **A logic model now explains how these elements work together:**

  This model brings together the common features of high-performing services and shows how they are thought to lead to better engagement and improved clinical outcomes (see *Figure 6.1*). It can guide future service improvement and evaluation.

7.2 Recommendations

Table 7.1 and Table 7.2 present the key findings and associated recommendations from the evaluation.

Table 7.1 Key findings and recommendations from the evaluation for local NHS Talking Therapies services

Finding	Data type	Recommendation
Services that provided printed information ensured this was short and concise to make it more accessible to patients	Qualitative	If written information is provided, it should be written concisely and using accessible language, as this makes it more likely to be read. Services should consider providing materials in alternative formats (for example, audio or braille) to increase accessibility
Patient involvement and feedback was seen as an enabler to the development of informational resources for patients	Qualitative	Patient involvement and feedback on intervention materials should continue, to ensure that the materials are appropriate for patients. This should include the perspectives of both patients who have engaged and those who have disengaged from NHS Talking Therapies. In addition to involving patients, interventions targeted at particular underrepresented groups should involve consideration of guidance provided in NHS Talking Therapies positive practice guides in order to promote equity of access, experience and outcomes for underrepresented groups
The logic model, produced from a synthesis of quantitative and qualitative data, provides a clear framework for understanding how interventions may lead to improved outcomes	Mixed	The logic model could be used to guide service improvement. Services could use it to design, refine and evaluate their own approaches to improving adherence and recovery
Services highlighted capacity challenges which led to a tension between time spent delivering adherence interventions and time spent seeing patients	Qualitative	There is a need for staff to have protected time to deliver interventions which allows contingency for non-response (which is likely if some patients disengage early on)

Table 7.2 Key findings and recommendations from the evaluation for the national team

Finding	Data type	Recommendation
Participants reported that there is no national KPI for adherence in NHS Talking Therapies services. As a result, adherence is not defined or measured consistently, making comparison across services difficult	Qualitative	Develop a national KPI for adherence, or a specific outcome measure that can be used consistently across services, with support for services in measuring and monitoring this outcome
Services reported that the time spent delivering adherence interventions needs to be balanced against time to see patients for therapy	Qualitative	There is a need for central coordination of interventions, given the limited time that services have in developing and implementing them
The current evidence is drawn largely from services in the South of England. Further evaluation should test whether the same mechanisms and interventions work similarly in different regions and their different patient populations	Mixed	Assess the scalability and transferability of effective approaches
Several service-level quantitative analyses were inconclusive because only a single unit received the intervention, resulting in wide confidence intervals and limited ability to detect meaningful effects	Quantitative	Scale-up the evaluation to increase statistical power. To strengthen the evidence base, future evaluations should be scaled up to include a larger number of participating services implementing comparable interventions. Expanding the sample would increase statistical power, reduce uncertainty around effect estimates

The logic model, developed from a synthesis of the qualitative and quantitative evaluation findings, assumes certain pathways relating to patient understanding, motivation and readiness	Mixed	Incorporate patient perspectives into future evaluations. Future research should include patient interviews or surveys to validate these assumptions and understand how interventions are experienced from the service-user perspective

Annexes

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Annex 1: Participant information sheet

About the evaluation
The Strategy Unit is an independent NHS Research and analysis consultancy which has been commissioned by the Behavioural Science Unit at NHS England (NHSE) to deliver a mixed-methods evaluation about NHS Talking Therapies interventions in England. The qualitative part of the study will include interviews with staff to provide an in-depth account of how various interventions have been used to improve engagement with Talking Therapies. The findings from the evaluation will be written up in an end-of-evaluation report. This report will share learning relating to progress to date and inform future work in this area.
Your participation
You have been identified as a key stakeholder in an NHS Talking Therapies service which has been implementing an intervention to improve engagement with treatment. We wish to speak with you to understand your experience in the implementation and delivery of this intervention or policy. The interview will broadly cover topics including: • Your role in the NHS Talking Therapies service • Your experience of designing and/or delivering the intervention • Any other reflections about factors affecting engagement with or access to Talking Therapies Interviews will last 45-60 minutes (depending on your role and availability) and will be conducted over Microsoft Teams. The interview will be arranged for a time that is convenient for you, and your participation is voluntary.
How your information will be used
• Before we start the interview, the researcher will check you understand the purpose of your involvement and ask for your consent to record the discussion. However, if you prefer, they will take written notes. Recordings will be transcribed verbatim to provide an accurate record. • The recording and the information you provide will be stored securely in line with data protection legislation and will only be accessed by the research team and transcription service; they will not be shared with the NHSE Behavioural Science Unit. Recordings and transcripts will be securely destroyed six months

after the end of the project.

- During the course of the project we will abide by the agreed data protection processes, applying the highest practical standards of handling identifiable information in accordance with the 8 Caldicott principles and 7 GDPR principles.
- Details from the discussions will be reported in an anonymised way. If direct quotes are used in outputs, they will not be attributed to individuals nor include any identifiable details.
- You can change your mind about taking part and withdraw from the research at any point, without giving a reason. However, as information from the interviews will be anonymised, it will not be possible to withdraw statements once analysis has taken place.
- NHS England is the data controller for the personal data processed by Midlands and Lancashire CSU (NHS England's representative). Data is being processed in line with NHS England's functions under the Health and Social Care Act 2012, Part 1, Section 23 "duty as to improve quality of services", satisfying Article 6, 1(e) of the UK GDPR.
- To enact your rights as a data subject and for details on the NHS England Data Protection Officer please visit https://www.england.nhs.uk/privacy-policy/. You have the right to lodge a complaint with the Information Commissioner about any aspect of the processing of personal data.

For further information

If you have any questions or comments about the interviews, please contact:

Name: Sheila Ali | Consultant (Qualitative Lead)

Email: sheila.ali@nhs.net

Name: Mike Woodall (Project Director)

Email: m.woodall@nhs.net

Website: https://www.strategyunitwm.nhs.uk/

For more information on how your data will be handled NHS England's Privacy Notice (https://www.england.nhs.uk/contact-us/privacy-notice/) describes how we use personal data and explains how you can contact us and invoke your rights as a data subject. We will process your information in accordance with the requirements of the Data Protection Act 2018.

Thank you for your participation

Annex 2: Topic guide

NHSE Behavioural Science Unit – Talking Therapies Evaluation

Interview Topic Guide – Practice staff

Background information for interviewers

The Strategy Unit is an independent NHS Research and analysis consultancy which has been commissioned by the Behavioural Science Unit at NHS England (NHSE) to deliver a mixed-methods evaluation about NHS Talking Therapies interventions in England.

The qualitative part of the study will include interviews with staff to provide an in-depth account of how various interventions have been used to improve engagement with Talking Therapies and to reduce drop-outs from therapy. We wish to understand their experience of the implementation and delivery of this intervention or policy.

The findings from the evaluation will be written up in an end of evaluation report that will provide learning relating to progress to date and inform future work in this area.

The interview will broadly cover topics including:

- The participant's role in the NHS Talking Therapies service
- The participant's experience of designing and/or delivering the intervention
- Any other reflections about factors affecting engagement with or access to Talking Therapies

Interviews will last 45-60 minutes (depending on your role and availability) and will be conducted over Microsoft Teams. The interview will be arranged for a time that is convenient for the participant, and their participation is voluntary.

Conversations should be adapted to the individual and their responses – the questions listed below are a guide, and prompts should be used as appropriate.

INTRODUCTION
Briefly explain purpose of the conversation The aim of this interview is to explore your views about your service's intervention to improve engagement with Talking Therapies. The interview will broadly cover topics including: • Your role in the Talking Therapies service • Your experience of designing and/or delivering the intervention (including challenges and enablers)

- Any other reflections about factors affecting engagement with or access to Talking Therapies, and any learning from delivering the intervention

The discussion should take between 45 and 60 minutes.

Check participant is happy to take part.

Confidentiality

- Ensure they have received a link to the participant information sheet which explains what the research is about and that if they change their mind about participation, they have the contact details to request that their comments are not used.
- Remind them that the interview is voluntary, and if there are any questions they would prefer not to answer, they can indicate this and that you will move on.
- Ask for consent to record the interview. Recordings will only be accessed by the evaluation team and transcription service and will be stored securely.
- Remind them that nothing they say will be linked to them. We may use quotes in our report but they will not be linked to any individual. No individuals will be identified in the report.

SECTION A: BACKGROUND

1. **Can you tell me about your role in the NHS Talking Therapies service?**
- *What are your main duties and responsibilities?*

2. **Can you tell me a bit about the NHS Talking Therapies service?**
- *What are the main therapy types offered by your service?*
- What is the treatment adherence rate like for your service?
  - *How is this measured? For example, we are looking at the following outcome measures:*
    a) the proportion of discharged referrals per month where the patient has attended 5 or more treatment sessions
    b) the proportion of discharged referrals per month where the patient has completed a course of treatment but attended fewer than five treatment sessions (i.e. 2-4 sessions)
  - Has this changed over time?
- *What is the did not attend (DNA) or drop-out rate like for your service?* Has this changed over time?

SECTION B: ABOUT THE INTERVENTION

- I am interested in hearing about the intervention that the service has carried out to improve patients' engagement with the service.

3. **What was the aim of the intervention?**
- Was it targeted specifically at improving adherence to treatment, or was the focus broader than this?

4. **Can you briefly describe the intervention and what it involved?** If there was more than one intervention please describe these.

Prompts:

a. How were you involved in the intervention?

b. Did the intervention(s) build on any pre-existing intervention or policy?

c. Who were the key stakeholders involved in setting up the intervention?

d. When did the intervention(s) take place?

e. How long did the intervention run for? (in weeks or months)

f. Were there any challenges? How did you resolve/overcome them?

g. Was there anything that was particularly helpful or anything which facilitated the delivery of the intervention?

h. Is the intervention now embedded in routine practice?

SECTION C: OUTCOMES AND SUSTAINMENT

5. **How have outcomes from the intervention been measured and monitored?**

6. **What outcomes have you seen from the intervention?**

- *Have there been any benefits for:*
  - *patients?*
  - *staff?*
  - *the service? (e.g. changes in treatment adherence rates)*
  - *the wider healthcare system?*

7. **Have you faced any challenges with measuring outcomes?**

If yes, what were they?

- Have there been any mitigations?
- **Have there been any confounding variables to be aware of which may affect the interpretation of any findings?**
  - E.g. any other interventions or pilots taking place at the same time

8. **Is there anything you would change about the intervention?**

9. **Do you or your colleagues plan to continue using the intervention in the future?**

10. **Do you anticipate any risks to continuing the intervention?**

SECTION D: WRAP-UP AND CLOSE

11. **Is there anything else you wanted to mention that I haven't asked you about?**

Thank you very much for your participation.

Annex 3: Outcome measures

Two outcome measures were used in this evaluation:

1. The proportion of discharged referrals where the patient attended five or more treatment sessions.
2. The proportion of discharged referrals that achieved reliable recovery.

These measures followed the numerator and denominator definitions below:

Table 7.3 Outcome measure one

Item	Definition
Measure	The proportion of discharged referrals each month in which the patient attended five or more treatment sessions.
Numerator	Patients within the denominator group who attended five or more treatment care contacts during their referral.[21]
Denominator	Referrals discharged each month where the patient received at least two treatment contacts.[21]
Rationale	The denominator represents monthly discharges for referrals that began a course of therapy. The numerator identifies the subset who attended at least five treatment contacts. Evidence suggests that attending five or more treatment sessions is associated with a greater likelihood of achieving reliable recovery.[9] This measure therefore captures discharged referrals that demonstrated sufficient adherence to therapy, corresponding to approximately 50% likelihood of reliable recovery.
Expected variation	This measure was expected to increase following interventions designed to improve patient adherence with therapy.

[21] Obtained from the field "TreatmentCareContact_Count" (object I101D29) from the table "IDS101Referral"

Table 7.4 Outcome measure two

Item	Definition
Measure	The proportion of discharged referrals each month in which the patient achieved reliable recovery.
Numerator	Patients within the denominator group who achieved reliable recovery by the end of their referral.[22]
Denominator	Referrals discharged each month where the patient received at least two treatment contacts.[21]
Rationale	This measure identifies referrals that attained the target outcome of reliable recovery. It enables evaluation of whether changes in recovery outcomes correspond with shifts observed in the process measure (outcome measure 1). Evidence indicates that reliable recovery is a key indicator of treatment effectiveness, making this measure central to assessing overall impact.
Expected variation	This measure was expected to increase following interventions designed to improve patient adherence with therapy.

[22] Defined as both `ReliableImprovement_Flag` = `True` **and** `Recovery_Flag` = `True`. Obtained using the fields "ReliableImprovement_Flag" (object I101D108) and "Recovery_Flag" (object I101D107) from the table "IDS101Referral"

Annex 4: Matching variables and methods

Matching variables

Matching is used to reduce selection bias by ensuring that intervention and comparison services are similar across observed characteristics. In observational evaluations, services are not randomly assigned to interventions, which means systematic differences can exist between groups. These differences can confound estimates of intervention effect if not properly addressed.

By matching on a carefully selected and optimised set of covariates, the evaluation creates comparison groups that are statistically comparable to intervention services. This reduces the likelihood that differences in outcomes are driven by pre-existing characteristics rather than the intervention itself. Matching therefore strengthens causal inference by approximating the conditions of a randomised experiment, while still working within the constraints of real-world data.

Since no consensus exists on predictors of therapy adherence, a literature search was conducted to identify plausible variables.[23] These were shortlisted based on feasibility of measurement within the IAPT dataset.

Databases searched included PubMed, Cochrane Library and Europe PMC, using the following strategies:

("talking therapies" OR psychotherapy OR counselling OR "psychological therapies" OR "behavioural therapies" OR "cognitive-behavioural therapy" OR "interpersonal therapy") AND (adherence OR compliance OR engagement OR attendance OR dropout OR "treatment completion") AND ("treatment sessions" OR sessions OR appointments OR visits OR "therapy sessions") AND (predictors OR correlates OR "associated factors" OR determinants OR influences)

[23] See the collated results from this literature search, available at: https://github.com/The-Strategy-Unit/talking_therapies/blob/main/data/reference/lit_search.xlsx [Accessed 5th September 2025].

((talking therapies) OR (psychological therapies) OR (iapt) OR (behaviour therapies)) AND ((adherence) OR (dropout) OR (compliance) OR (attendance)) AND ((predictors) OR (factors) OR (correlates))

((talking therapies) OR (psychological therapies) OR (iapt) OR (behaviour therapies)) AND ((adherence) OR (dropout) OR (compliance) OR (attendance)) AND ((duration) OR (frequency) OR (accessibility) OR (convenience))

The selected factors, listed below, were expressed primarily as proportions of either referrals or care contacts. Aggregating patient-level data into proportions allowed representation of overall talking therapies service characteristics and improved suitability for matching processes.

Demographic characteristics:

- Proportion of referrals for people aged 25 years and younger at referral
- Proportion of referrals for people aged 60 years and older at referral
- Proportion of referrals for people whose gender identity is female
- Proportion of referrals for people whose lower super output area (LSOA) of residence is among the 20% most deprived in England
- Proportion of referrals for people whose LSOA of residence is among the 20% least deprived in England
- Proportion of referrals for people whose broad ethnic background is White.

Therapist and service characteristics:

- Proportion of care contacts where the therapist has attained an NHS Talking Therapies qualification
- Proportion of care contacts conducted on hospital premises
- Proportion of care contacts conducted face-to-face
- Proportion of care contacts outside of weekdays, 9am to 5pm
- Proportion of care contacts delivered as internet enabled therapy
- Proportion of care contacts delivered to an individual patient
- Proportion of referrals where the referral-to-treatment wait time was within six weeks

- Proportion of referrals where there was step-up to high-intensity therapy.

Language and accessibility:

- Proportion of care contacts conducted in English
- Proportion of care contacts conducted with an interpreter present.

A draft version of these matching variables was shared by email with members of the NHS TT and IPS National Programme Delivery Group in July 2025. The list was subsequently refined based on feedback.

Covariate balance optimisation

Before applying matching methods, the set of matching variables was refined through a covariate balance optimisation process. This step was essential because both matching processes – PSM and CEM – rely on the assumption that intervention and comparison services are sufficiently similar on observed characteristics for the counterfactual to be credible. The optimisation process involved:

- Covariate balance:

  Iteratively adjusting the set of variables until intervention and comparison services achieved acceptable balance, assessed using the standardised mean difference (see *Figure 7.1* for an example). This step was necessary because including too many variables, or poorly distributed variables can worsen balance and reduce the quality of matches. Ensuring good balance helps reduce bias from observed confounders and improves the comparability of matched groups

- Overlap separation:

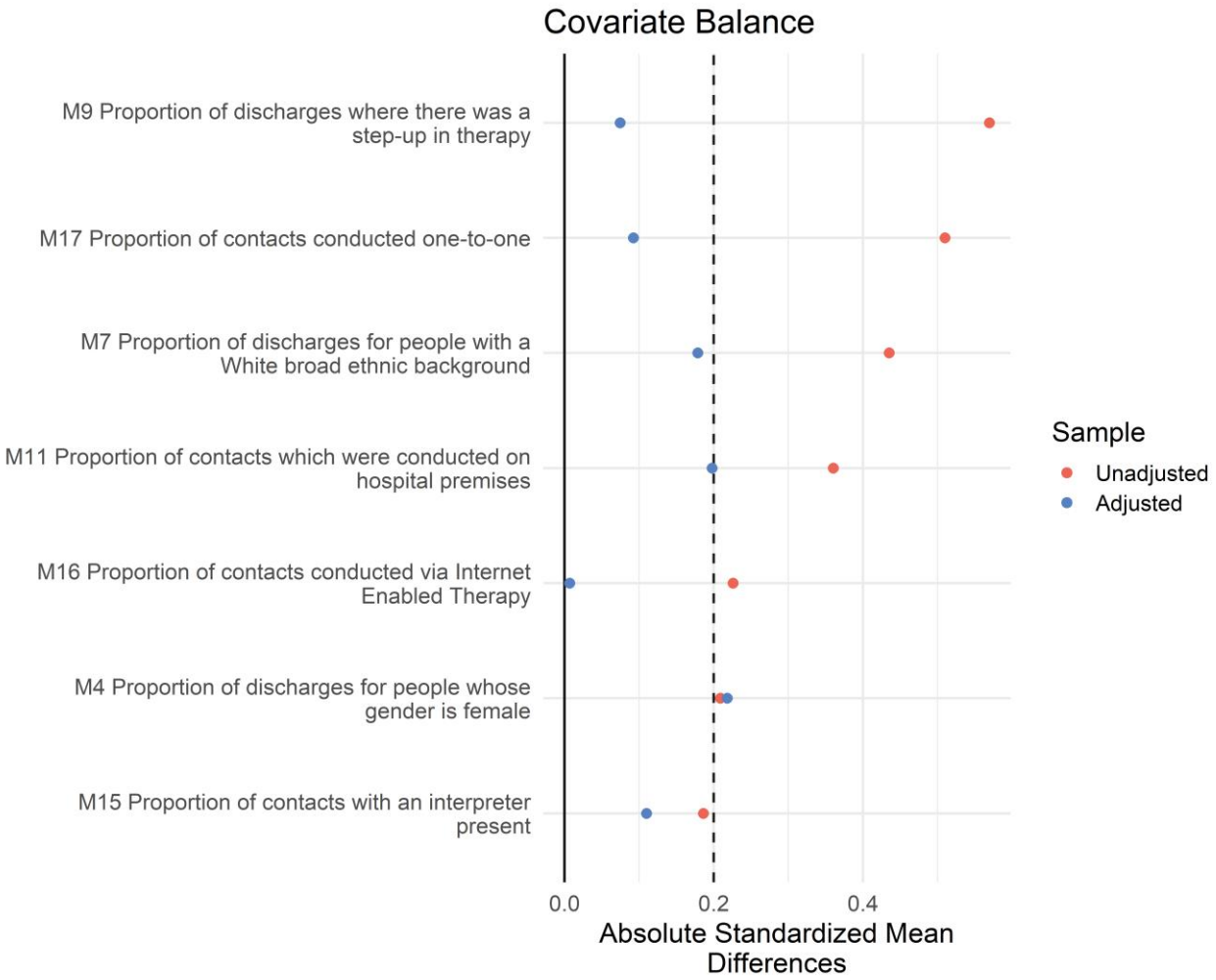
  Checking that intervention and comparison services had overlapping ranges of propensity scores (for PSM) or shared strata (for CEM). Without sufficient common support, matching becomes unreliable: intervention services may have no plausible comparators, or matches may be forced between fundamentally different services. Ensuring overlap prevents complete separation and supports the core assumption that a valid counterfactual exists within the data

- Multicollinearity:

Assessing correlations among covariates to avoid unstable or distorted propensity score estimates. Highly collinear variables can inflate variance, produce extreme propensity scores and undermine the matching process.

Together, these steps ensured that each service's final set of matching variables met the conditions required for valid estimation of intervention effects and avoided common pitfalls, such as poor balance, lack of overlap, multicollinearity and overfitting, that can undermine quasi-experimental analyses.

Figure 7.1 Example covariate balance plot (or 'Love plot')



Matching implementation

The evaluation team used matching to identify control services similar to each intervention service, based on an optimised set of matching variables. To ensure sufficient data quality, only services with a Data Quality Maturity Index (DQMI)[24] score of at least 80% were considered. The DQMI is a composite measure that summarises an organisation's data collection, completeness, accuracy and data use practice, and reflects the quality of information submitted to national datasets by NHS-funded care providers.

Analyses were conducted in R (version 4.5.2) using:

- *MatchIt* (v4.7.2): for matching procedures[25]
- *cobalt* (v4.6.1): for covariate balance diagnostics[26]
- *car* (v3.1.3): for multicollinearity checks[27]

To estimate the counterfactual, the evaluation team applied four complementary methods: PSM; CEM; synthetic controls restricted to services identified through both matching procedures and synthetic controls with an unrestricted donor pool.

Several considerations motivated the use of multiple approaches:

- The estimated intervention effect for any single NHS Talking Therapies service was small (typically 1-2 percentage points) and subject to substantial uncertainty because each analysis involved only one intervention site (see section *2.5.5* for further discussion of uncertainty)
- Each counterfactual method relies on different assumptions and is sensitive to different sources of bias. No single approach can be assumed to be universally reliable in

[24] See: NHS England (2021) *Data Quality Maturity Index (DQMI) methodology*. Available at: https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/data-quality/data-quality-maturity-index-methodology [Accessed 5th September 2025].
[25] See Ho, D., et al., (2025) *MatchIt package CRAN registration*. Available at: https://CRAN.R-project.org/package=MatchIt [Accessed 2nd December 2025].
[26] See Greifer, N. (2026) *cobalt package CRAN registration.* Available at: https://CRAN.R-project.org/package=cobalt [Accessed 17th February 2026].
[27] See Fox, J. et al., (2026) *car package CRAN registration*. Available at: https://CRAN.R-project.org/package=car [Accessed 17th February 2026].

observational service-level evaluations, particularly when interventions vary in scope, timing and implementation quality

- Matching-based and synthetic-control approaches capture different dimensions of comparability. Matching prioritises similarity on observed covariates, while synthetic controls emphasise similarity in pre-intervention outcome trajectories. Using both helps mitigate the risk that results are driven by method-specific artefacts
- The retrospective, real-world nature of the evaluation limited opportunities to improve internal validity through design. With no ability to randomise or standardise implementation, methodological triangulation provided an alternative route to strengthen inference.
- Using multiple quasi-experimental methods (QED) is increasingly recommended as best practice in applied evaluation research. Guidance from leading methodological bodies emphasise triangulation across designs to assess robustness,[28, 29] reduce reliance on any single set of assumptions and improve the credibility of causal claims in non-experimental settings.

Even with the increased precision afforded by the meta-analyses, results were often inconclusive due to these constraints and the relatively small number of comparable studies. However, applying four counterfactual methods in parallel and examining the consistency of findings across them offered an important robustness check. Convergence in the direction and magnitude of pooled effects across methods increases confidence that the observed patterns reflect genuine intervention impacts rather than artefacts of any single modelling strategy.

Although triangulating findings across several quasi-experimental methods strengthens the credibility of the evaluation, this approach has its own limitations. All methods draw on the same underlying dataset, meaning that unmeasured confounding, data quality issues or structural biases can affect them in similar ways. Different QEDs also share overlapping

[28] HM Treasury & Evaluation Task Force (2025) *The Magenta Book: Central Government Guidance on Evaluation. London: HM Treasury.* Available at: https://www.gov.uk/government/publications/the-magenta-book [Accessed 5th January 2026].
[29] Gertler, P.J. et al., (2016). *Impact Evaluation in Practice*, 2nd edn. World Bank. Available at: http://hdl.handle.net/10986/25030 [Accessed 5th January 2026].

assumptions, so agreement between methods does not guarantee validity and may reflect correlated sources of bias. In addition, when interventions occur at only one site, all approaches remain sensitive to local shocks and have limited statistical power. Finally, using multiple methods can introduce complexity and, when results diverge, does not always provide a clear basis for determining which estimate is most reliable.

The next sections discuss each counterfactual approach, outlining what the method involves and the key assumptions it relies on.

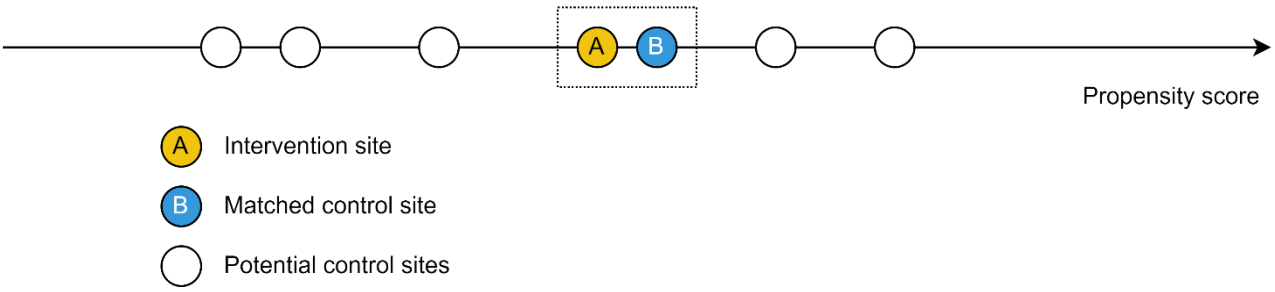
Propensity Score Matching (PSM)

PSM involves estimating the likelihood that a service would receive the intervention based on observed characteristics, using logistic regression models. Each intervention was matched to eight comparison services with similar propensity scores using a nearest neighbour specification, creating groups that were comparable on measured covariates. Balance diagnostics confirmed that matching substantially reduced observed differences between intervention and comparison services.

Key assumptions:

- All factors influencing both intervention assignment and outcomes are captured in the observed covariates used to estimate the propensity score
- Intervention and comparison services share a sufficient range of propensity scores to allow meaningful matches
- The intervention at one service does not affect outcomes at another and the intervention is consistently defined across sites.

Figure 7.2 Illustration of Propensity Score Matching (PSM) design



Coarsened Exact Matching (CEM)

CEM works by temporarily grouping services into broader categories (or "coarsened" bins) based on the values of the matching variables. Intervention services are then matched only to comparison services that fall into the same bin for every variable, ensuring that matched services are directly comparable on all coarsened characteristics. Because imbalance is reduced through the design of the matching process rather than through modelling, CEM offers strong protection against model misspecification and helps create more stable matched samples.

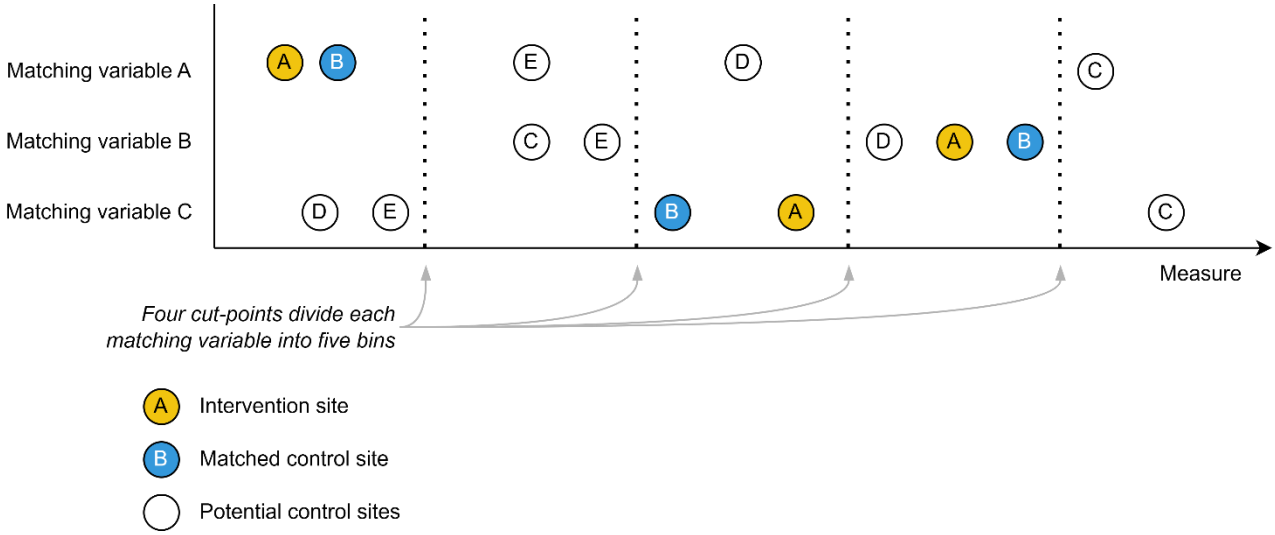
To achieve a suitable number of comparison services for each intervention service, the number of cut-points used to create the bins was adjusted for each intervention service so that matching typically produced around five to ten comparable services.

In practice, each matching variable is divided into a set of predefined cut-points (four shown in *Figure 7.3*). Control services that fall into the same bin as the intervention service across all matching variables are identified as suitable matches. In *Figure 7.3*, control site B is selected because its coarsened values align with the intervention site on every matching variable.

Key assumptions:

- Coarsening the data does not introduce additional imbalance. Instead, it reduces imbalance by construction
- Intervention and comparison services must share at least one stratum for matching to be possible
- The intervention at one service does not influence outcomes at another and the intervention is consistently defined across sites
- The cut-points used to create bins meaningfully group services without masking important differences.

Figure 7.3 Illustration of Coarsened Exact Matching (CEM) design



Synthetic Control

Synthetic control methods were applied at the service level, constructing a weighted combination of non-intervention services that best reproduced each intervention service's pre-intervention outcome trajectory. This weighted "synthetic" service acts as the counterfactual, providing an estimate of what would have happened in the absence of the intervention.

Two variants of the synthetic DiD approach were implemented to balance flexibility with comparability:

- Unrestricted donor pool:

  The first approach allowed the algorithm to draw on all available non-intervention services. This maximised the range of potential comparators and gave the method the greatest opportunity to identify a close pre-intervention match, particularly for services with unusual baseline patterns

- Restricted donor pool (PSM / CEM-aligned):

  The second approach limited the donor pool to services identified through the PSM and CEM matching processes. This ensured that only services already shown to be highly comparable on observed characteristics contributed to the synthetic control. Using this restricted pool provided a more conservative test of robustness by reducing

the risk that the synthetic control relied on services that were similar in outcomes but dissimilar in underlying structure or context.

Using both variants allowed the evaluation team to assess whether estimated effects were sensitive to the breadth of the donor pool. Consistency across the two approaches increases confidence that results reflect genuine intervention impacts rather than artefacts of donor-pool composition.

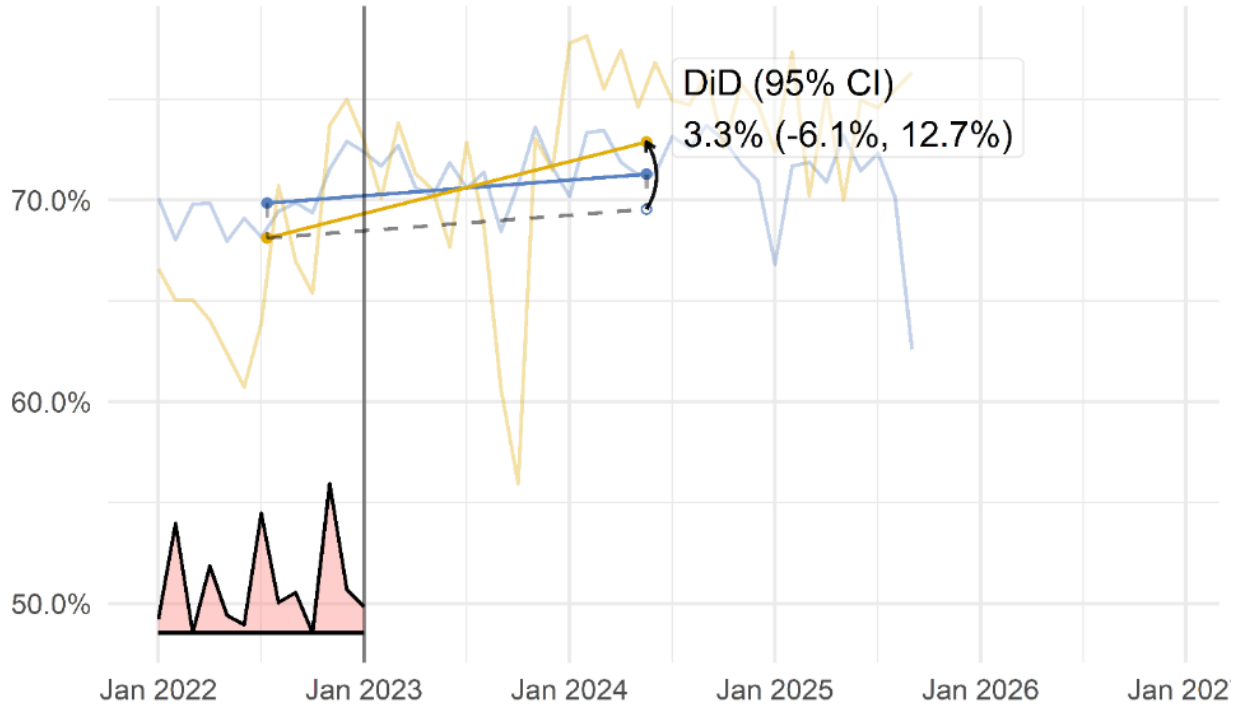
In both implementations, weights were chosen to minimise differences in pre-intervention trends, producing a synthetic trajectory that closely approximated the counterfactual for each outcome. Synthetic controls were produced using the *SynthDiD* package[30] (version 0.0.9), which integrates synthetic-control weighting with the traditional DiD framework.

Key assumptions:

- After constructing the synthetic control, the intervention and synthetic trajectories would have followed similar trends in the absence of the intervention
- The intervention's pre-intervention trajectory can be approximated by a weighted combination of the available donor services
- Outcomes at one service are unaffected by interventions at another
- Outcomes are measured in the same way across all services and over time.

[30] See Arkhangelsky, D. et al., (2019) *synthdid package CRAN registration*. Available at: https://github.com/synth-inference/synthdid [Accessed 2nd December 2025].

Figure 7.4 Example synthetic-control difference-in-differences plot



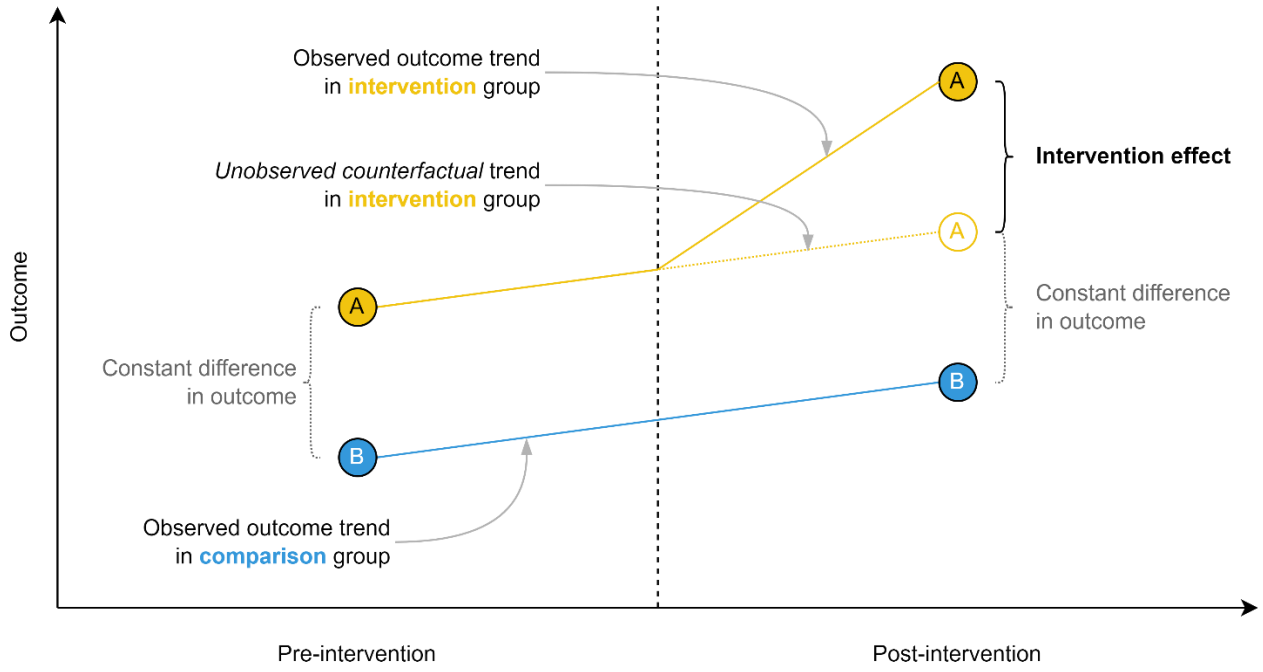
Example monthly time-series plot and synthetic DiD analysis for Outcome 1 (Proportion of discharged referrals where the patient received at least five treatment contacts). The intervention service is shown in orange, and the synthetic control in blue. The solid blue bar indicates the observed change in the control series, while the dotted grey line represents the expected counterfactual change for the intervention service under parallel trends. The solid orange bar shows the actual post-intervention change in the intervention service. Pink markers denote the pre-intervention weights, reflecting the relative contribution of each pre-intervention month to the construction of the synthetic control.

Annex 5: Analytical techniques

Difference-in-Differences (DiD)

The DiD approach estimates the causal effect of an intervention by comparing changes in outcomes over time between services that implemented an intervention and matched services that did not (see *Figure 7.5*). In this analysis, the two outcomes of interest were adherence to Talking Therapy, as measured by attendance at five or more treatment sessions, and reliable recovery.

Figure 7.5 Illustration of a DiD design



Each intervention service was assessed separately. For each, at least one comparison service with no adherence-related intervention was identified from the IAPT dataset. Matching was based on service characteristics such as patient demographics and service provision (see *Annex 4: Matching variables and methods* for details).

Time-series data were visually inspected and tested for outliers using the *timetk* package (version 2.9.1).[31] Outliers, which have the potential to distort DiD estimates, were removed prior to analysis.

Outcomes were modelled using a linear regression framework, with intervention status, time-period and their interaction term as predictors. The interaction term represents the DiD estimate of the intervention effect. Sensitivity analyses were conducted by:

- Including all matched comparison services regardless of parallel trends; and
- Retaining outlier data points.

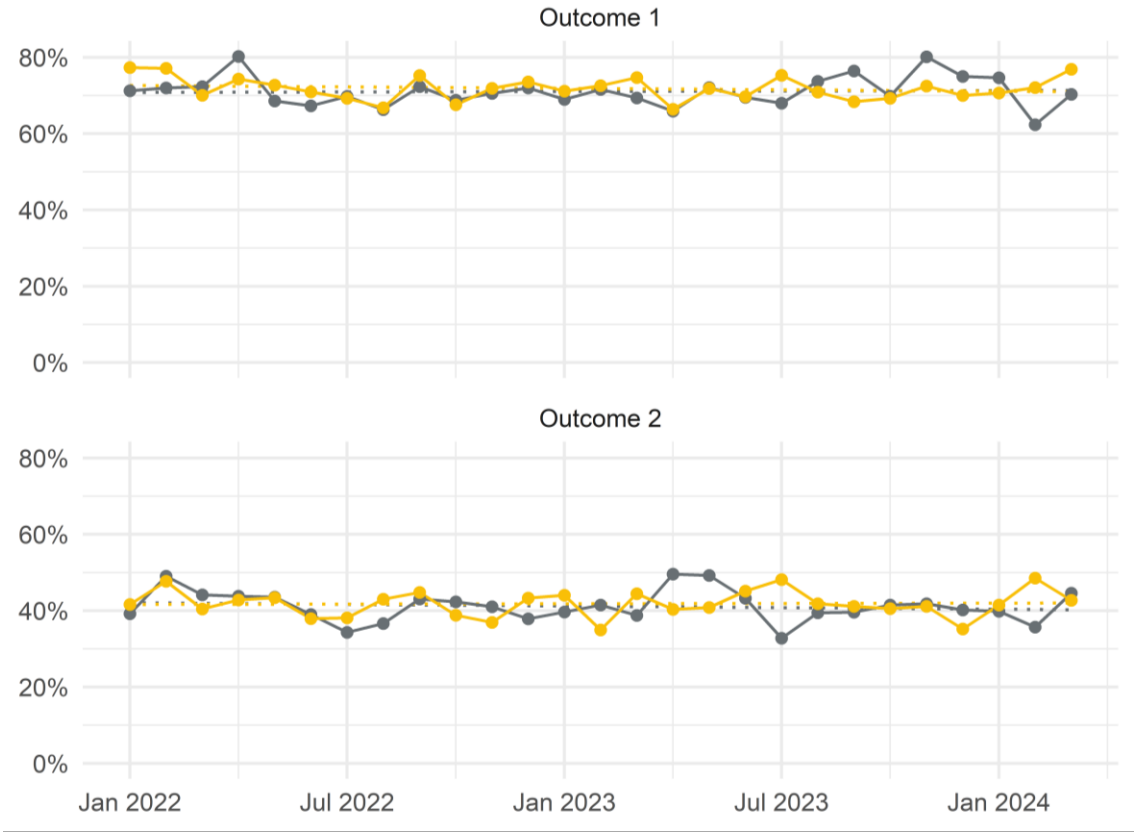
These tests assessed the robustness of the main model results to changes in model specification.

The key assumption is that intervention and comparison services would have followed parallel trends in adherence in the absence of the intervention. The evaluation team also assumed no spillover effects between services, in which outcomes in the comparison group are affected by the activities in the intervention group, for example, through shared staff, patient referrals or regional policy changes.

[31] See Dancho, M. (2025) *timetk package CRAN registration*. Available at: https://CRAN.R-project.org/package=timetk [Accessed 3rd December 2025].

Parallel trends checks

Figure 7.6 Example pre-intervention time-series checks for parallel trends



Example assessment of the parallel trends assumption. The intervention service (orange) is compared with a matched control service (grey). Trendlines for both groups are shown as dotted lines. Visual inspection suggests that this control satisfies the parallel trends assumption for both outcomes.

Pre-intervention time-series graphs comparing outcomes between the intervention and each matched control service were visually inspected. Controls were retained only if both outcomes appeared to satisfy the parallel trends assumption; otherwise, the control was excluded (see *Figure 7.6* for an example). This process provided evidence on whether the parallel trends assumption was reasonable for each analysis.

Charts were produced using *ggplot2* (version 4.0.1).[32]

[32] See Wickham, H. (2026) *ggplot2 package CRAN registration*. Available at: https://CRAN.R-project.org/package=ggplot2 [Accessed 17th February 2026].

Meta-analysis

Meta-analysis is a statistical technique that combines results from multiple analyses (here referred to as 'studies') to generate a more precise and reliable estimate of intervention effects. By pooling evidence, it increases statistical power, reduces the influence of random variation and helps to identify consistent patterns across different analyses.

A random-effects model was selected to account for differences across services. This approach assumes that intervention effects may vary between studies and incorporates that variation into the analysis, producing an average effect that reflects both the overall evidence and study-specific differences.

Multiple parallel meta-analyses were conducted, each aligned to a different method for constructing the counterfactual: PSM; CEM; synthetic control using all non-intervention services and synthetic control restricted to donor pools identified through the PSM and CEM matching processes. Effect sizes were weighted by precision (inverse variance), ensuring that studies with greater statistical reliability contributed more heavily to the pooled estimate.

Conducting multiple parallel meta-analyses allowed the results to be compared across different counterfactual construction methods, providing a check on the stability of the estimated effects. Consistency in the direction and magnitude of effects across these approaches increases confidence that the findings are not driven by the assumptions of any single matching or synthetic control method.

Heterogeneity was assessed using:

- Cochran's Q: tests for the presence of heterogeneity ($p \leq 0.05$ suggests heterogeneity)
- Higgins & Thompson's I^2: quantifies the proportion of total variation due to heterogeneity
- Tau-squared (τ^2): estimates the variance of the true effect sizes underlying the data.

Where heterogeneity was found, the results were described using the following scale based on the value of I^2:

- Below 25%: "Low"
- Between 25% to 50%: "Moderate"

- Between 50% and 75%: "Substantial"
- Above 75%: "Considerable".

To improve the reliability of inference with a small number of studies, a Knapp-Hartung (KH)[33] adjustment was applied to the calculation of the pooled intervention effect's standard error, reducing the risk of false positives.

Results from these meta-analyses are presented as forest plots, which display each study's intervention effect and confidence interval alongside the pooled estimate. For details, please see *Annex 8: Outcome 1 meta-analysis* and *Annex 9: Outcome 2 meta-analysis*.

Analyses were performed in *R* (version 4.5.2) using the *meta* package (version 8.2.1)[34] for meta-analysis and forest plot generation.

Subgroup meta-analyses

Subgroup analyses were conducted to examine whether different types of interventions produced different effects on outcomes. For a definition for each subgroup please see section *5.5*. The subgroup classifications were based on theoretical distinctions that offer plausible mechanisms through which interventions might influence service performance:

- **Informational** vs **Multi-component (information and operational)** interventions:

  Multi-component interventions were expected to have larger effects because they act on multiple parts of the care pathway, potentially generating additive improvements in the measured outcomes

- **Targeted (subgroup-specific)** vs **Non-targeted or Mixed** interventions:

  Interventions applied across all patient cohorts were hypothesised to exert a greater influence on service-level outcomes than those focused on specific subgroups, which may have more limited reach.

[33] See Harrer, M., et al (2021). 'Knapp-Hartun Adjustments', in *Doing Meta-Analysis in R:* A hands-on guide. Boca Raton, Florida and London: Chapman & Hall/CRC Press. Available at: https://doing-meta.guide/pooling-es.html?q=hartung#knapp-hartung [Accessed 6th January 2026].
[34] See Schwarzer, G. (2025) *meta package CRAN registration.* Available at: https://CRAN.R-project.org/package=meta [Accessed 3rd December 2025].

The matched-donor synthetic DiD approach was selected as the basis for subgroup meta-analyses because it produced the most internally consistent and stable estimates across services. Unlike the PSM-DiD and CEM-DiD models, which showed substantial between-service heterogeneity, the matched-donor synthetic DiD results exhibited low heterogeneity, suggesting the underlying effects were more coherent and less influenced by unexplained variation. This stability, combined with the conceptual strength of constructing counterfactuals from closely matched donor services, provided a more reliable foundation for exploring whether intervention effects differed across subgroups.

However, because only nine studies were available for inclusion, the subgroup findings should be viewed as indicative rather than definitive. This methodological choice does not imply that other counterfactual methods were dismissed; rather, it reflects a pragmatic decision to use the most consistent and theoretically appropriate estimates for exploratory analysis.

Open codebase

The full set of analytical code used in the quantitative analyses is available in a dedicated, publicly accessible GitHub repository.[35] It contains the Python scripts used to process the IAPT dataset and generate monthly aggregated outcome and matching variables, as well as the R code used for the service-level analyses, including all four counterfactual approaches (PSM-DiD, CEM-DiD and two synthetic DiD variants). The repository also includes the reporting materials used for the meta-analyses and a range of supporting analytical documents. No data are stored in the repository.

[35] See the GitHub repository for this analysis, The Strategy Unit. Available at: https://github.com/The-Strategy-Unit/talking_therapies [Accessed 17th December 2025].

Annex 6: Services identified

Eighteen services contacted the evaluation team, either to express interest in the evaluation or to confirm they had implemented adherence-improving changes.

Table 7.5 Services identified

NHS Talking Therapies Service (or subcontractor)	Qual	Quant	Notes (see key)
Bedfordshire Talking Therapies			⚠
Dr Julian	✓*		🔍
Hammersmith and Fulham Talking Therapies			⌛
Impact on Teesside (Alliance Psychological Services Ltd.)			⌛
NHS Bradford District and Craven Talking Therapies		✓	
NHS Cornwall and Isles of Scilly Talking Therapies	✓	✓	
NHS Kent and Medway Talking Therapies	✓	✓	
NHS North Yorkshire Talking Therapies		✓	
NHS Plymouth Talking Therapies	✓		
NHS Talking Therapies Hampshire	✓	✓	
NHS Talking Therapies NELFT	✓	✓	
NHS Talking Therapies Portsmouth	✓		⚠
NHS Tower Hamlets Talking Therapies	✓	✓	
Steps2Wellbeing Southampton & Dorset	✓		⚠
TalkPlus, North East Hampshire & Farnham	✓	✓	
TALKWORKS Devon NHS Talking Therapies	✓	✓	
Turning Point, Wakefield Services			⌛
WithYou			⌛

Key

✓ Included in the evaluation, ✓* included as a case study only

⚠ Intervention not fully implemented or used with too few patients to measure impact

⌛ Intervention identified too late or the service was unable to participate

🔍 Service could not be identified from the IAPT dataset due to subcontracting

Annex 7: Service intervention summaries

The following section provides a summary of the interventions introduced by each service in this evaluation, presented in alphabetical order.

Dr Julian

Dr Julian is a non-NHS supplier which can be subcontracted by NHS Talking Therapies services or commissioners to deliver NHS Talking Therapies for example when a service required additional capacity. It uses an online platform that allows patients to book virtual therapy appointments and access supplementary resources such as written materials and videos. Its features include therapist-matching tools, self-booking, automated appointment notifications and a resource library. The service works with multiple NHS Talking Therapies providers in England under varying contractual arrangements, with some services allocating a set number of patients each month and others using the platform more flexibly depending on need.

NHS Bradford District and Craven Talking Therapies

The service introduced Limbic Care, a smartphone and tablet app used alongside Step 2 therapy, offering a chatbot for check-ins and basic guidance, plus access to course materials, homework and psychoeducational resources that therapists can monitor. It can also support one-to-one work by providing condition-specific workbooks and allowing therapists to see what patients have completed. Staff training began in January 2025, use is optional and uptake has been gradual as processes and training continue to be refined.

NHS Cornwall and Isles of Scilly Talking Therapies

Since the COVID-19 pandemic, remote delivery has become routine, with most disengagement occurring between assessment and the start of treatment. To improve engagement and adherence, the service introduced several measures: a pre-course engagement call to address misconceptions and answer questions; course leaflets and information sheets refined through patient feedback and an online portal enabling patients to book and reschedule appointments.

NHS Kent and Medway Talking Therapies

The service ran a 100-day project to increase the use of the SilverCloud online platform, informed by staff and patient feedback to improve understanding of eligibility and reduce dropout. It also established a partnership with Age UK to increase access for older adults through signposting, outreach, dedicated referral pathways, face-to-face appointments, check-in calls and support with digital tools. In addition, the service introduced the Limbic Access digital referral assistant and Limbic Care app.

NHS North Yorkshire Talking Therapies

The service took part in a 100-day project to increase digital engagement, particularly among older adults, introducing video screenings and improving communication to help patients feel more comfortable with digital therapy options such as SilverCloud. The service also has patient-experience processes and is preparing a quality-improvement project focused on non-attendance to review procedures and identify ways to improve engagement and flow.

NHS Plymouth Talking Therapies

The service introduced a therapy contract to clarify expectations for patients and therapists, covering attendance, homework, outcome measures and confidentiality and is used at the start of therapy to support informed engagement. The contract links to an existing attendance policy that includes review conversations after missed sessions, with flexibility for patients who need to pause or reschedule due to personal circumstances. The service also piloted a waiting list coordinator role to improve appointment allocation by monitoring availability, matching patients to suitable slots and identifying any circumstances that may delay treatment with plans to reinstate the waiting list coordinator role at full capacity.

NHS Talking Therapies Hampshire

To improve engagement, the service introduced a therapy agreement for Step 3 patients, outlining expectations, therapy structure, confidentiality and contact details. Staff and patient feedback led to refinements, including standardised distribution, clearer language, shorter length and a section on barriers to engagement. Adapted versions were also created for younger patients, group therapy participants and those with long-term conditions.

NHS Talking Therapies NELFT

The service introduced several interventions to improve outreach and reduce delays. A community engagement team was established in 2024 to work across North East London, attending local events and community venues to understand barriers to access and address misconceptions about the service. In 2025, a groups-first policy was introduced to prioritise group therapy where appropriate, enabling more patients to be seen and helping to reduce the waiting list. The service also developed a miniature welcome pack, first launched in Havering and later rolled out across all boroughs, providing a concise overview of what patients can expect from the service and from group therapy, with the aim of improving understanding and engagement.

NHS Talking Therapies Portsmouth

The service uses the validated 12-item Readiness for Therapy Questionnaire (RTQ) to help identify and address issues with engagement, applying it selectively when patients appear unsure, disengaged or are transitioning between therapy types, and using the results to guide conversations about readiness and expectations. Alongside this, the team closely monitors drop-outs each month and contacts patients who discontinue therapy to understand their reasons, gather feedback and, where appropriate, support re-referral or identify alternative treatment options.

NHS Tower Hamlets Talking Therapies

The service introduced interactive pre-therapy workshops to improve engagement while patients wait for treatment, offering fortnightly sessions that explain what counselling or CBT involves, clarify expectations and reduce anxiety about starting therapy. The counselling workshop, launched in April 2025, covers what counselling entails, what is expected of patients and how to prepare and includes a workbook to support reflection and goal-setting. A CBT version, introduced in September 2025, follows the same structure but focusses on the CBT model and the patient's active role in treatment.

Steps2Wellbeing Southampton & Dorset

The service identified disengagement as a priority area and developed an exploratory online survey to understand reasons for drop-out across the pathway. The survey is sent to patients who do not attend assessment, do not take up offered treatment or disengage after starting therapy. It asks about the point at which they dropped out and their reasons, using both closed- and open-ended questions. The service is in the process of adapting

their services in response to the feedback received, addressing issues around flexibility of appointments, expectations around therapy, reducing waiting times, clearer communication and reducing barriers to accessing the service.

TalkPlus, North East Hampshire & Farnham

Although DNA rates have been low and gradually declining, the service introduced several interventions between 2024 and 2025 to further improve engagement and manage waiting lists. These include training for administrative staff on patient engagement and timely booking, a waiting list video to set expectations, 'one-at-a-time' sessions for self-referred patients who may not need full treatment and an updated DNA and discharge process to enable quicker reallocation of appointments and more consistent follow-up with patients who miss appointments.

TALKWORKS Devon NHS Talking Therapies

In response to rising non-attendance rates, the service introduced a series of interventions to improve access and reduce disengagement. These include a website frequently asked questions page with patient testimonials, short videos explaining what to expect from appointments, a detailed assessment video, a therapy expectations guide, updated patient letters, an online booking system to increase flexibility and a preceptorship programme for PWPs that includes training on engagement.

WithYou

The service created a digital Talking Therapies Pathway tool to support PWPs in their treatment decisions and to assist discussions in supervision about the most clinically suitable treatment pathway. It does not make decisions automatically; instead, it highlights key clinical factors to consider while leaving final judgement to the PWP in collaboration with their supervisor. By standardising how presentations are understood at assessment, the tool aims to improve pathway adherence, support clearer and more consistent treatment decisions and strengthen understanding of demand and complexity. Ultimately, it is intended to help reduce waiting times, improve outcomes and give services greater confidence that waiting lists reflect clinical need.

Annex 8: Outcome 1 meta-analysis

Outcome definition

The proportion of discharged referrals in which the patient attended five or more treatment sessions, measured monthly.

Analytic approaches

This outcome was estimated using four alternative methods for constructing the counterfactual:

1. PSM-DiD
2. CEM-DiD
3. Synthetic DiD using all available services in the donor pool
4. Synthetic DiD restricted to donor pools defined by PSM and CEM matches.

This outcome was measured using four techniques which are presented in detail in this section and summarised in *Table 7.6,* below.

Table 7.6 Summary of meta-analyses

Method	Pooled intervention effect	95% Confidence Interval	Heterogeneity
PSM	**2.2pp per year**	**0.1 to 4.2pp**	Substantial
CEM	1.4pp per year	-0.8 to 3.6pp	Substantial
Synthetic DiD (all services)	1.1pp per year	-2.4 to 4.6pp	Low
Synthetic DiD (matched services)	**2.3pp per year**	**0.0 to 4.6pp**	Low

*Statistically significant results are shown in **bold,** pp = percentage point*

Interpretation

- All four methods produce positive intervention effects, ranging from 1.1 to 2.3pp above the counterfactual per year
- Two methods (PSM and synthetic DiD using matched donor pools) yielded statistically significant results, with estimated effects of 2.2 and 2.3pp respectively

- Heterogeneity varied by method:
  - PSM-DiD and CEM-DiD show substantial heterogeneity, indicating considerable variation in effect sizes across individual services
  - Both Synthetic DiD approaches show low heterogeneity, suggesting more consistent effects across services
- The confidence intervals for CEM-DiD and Synthetic DiD (all services) include zero, meaning those estimates are not statistically distinguishable from no effect.

Overall summary

Taken together, the four analyses provide some evidence that the interventions introduced increase the proportion of discharged referrals receiving at least five treatment contacts. The estimated effect is consistently positive across all methods – typically around 1-2pp per year – and statistically significant in two of the four approaches. Variation in heterogeneity across methods highlights the importance of considering service-level differences.

Each analysis is presented separately below.

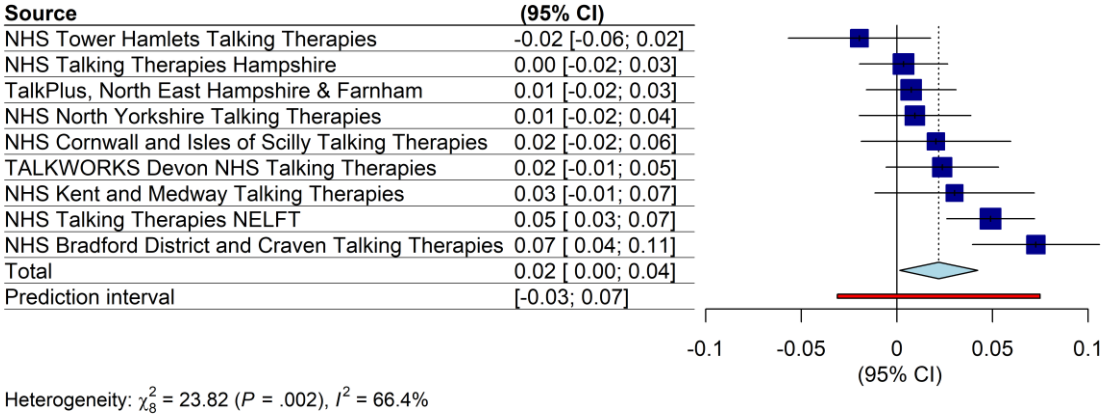
PSM DiD

A random effects meta-analysis was conducted on **nine** sets of results to estimate the overall effect of the intervention on **outcome one: proportion of patients attending five or more treatment sessions** using a control produced by **PSM** process. The pooled effect size was **2.2pp** change per year compared with the counterfactual (95% CI: **0.1** to **4.2pp**). The prediction interval ranged from **-3.1** to **7.5pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **substantial**, with τ2 = **0.0005**, Q = **23.825**, p = **0.0025** and I2 = **66.4%**. These statistics suggest that **approximately two-thirds of the variability in observed effects was due to real differences between services rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **positive** impact on **outcome one**, with **heterogeneity indicating that service-specific factors influenced effectiveness**.

Figure 7.7 Forest plot for outcome 1 using PSM matching



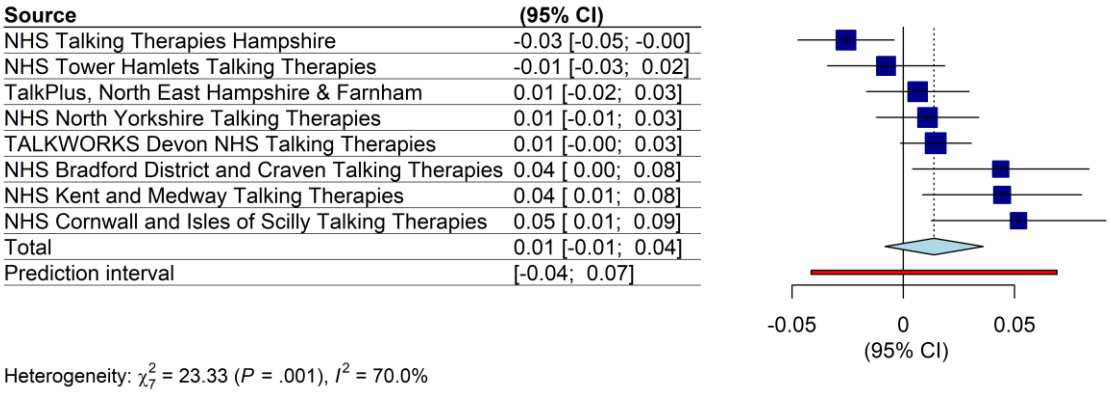
CEM DiD

A random effects meta-analysis was conducted on **eight** sets of results to estimate the overall effect of the intervention on **outcome one: proportion of patients attending five or more treatment sessions** using a control produced by **CEM** process. The pooled effect size was **1.4pp** change per year compared with the counterfactual (95% CI: **-0.8** to **3.6pp**). The prediction interval ranged from **-4.1** to **6.9pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **substantial**, with τ^2 = **0.0005**, Q = **23.332**, p = **0.0015** and I^2 = **70.0%**. These statistics suggest that **approximately two-thirds of the variability in observed effects was due to real differences between services rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **non-significant** impact on **outcome one**, with **heterogeneity indicating that service-specific factors influenced effectiveness**.

Figure 7.8 Forest plot for outcome 1 using CEM matching



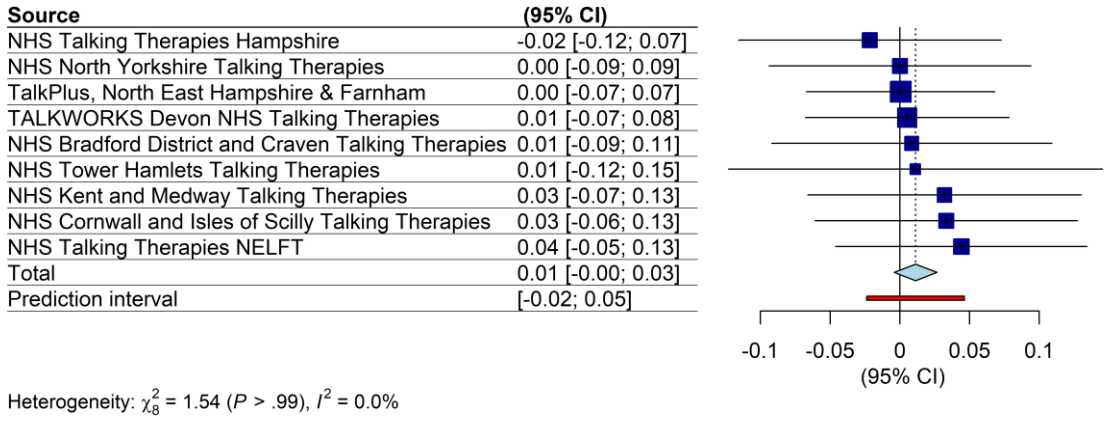
Synthetic DiD (all services in the donor pool)

A random effects meta-analysis was conducted on **nine** sets of results to estimate the overall effect of the intervention on **outcome one: proportion of patients attending five or more treatment sessions** using a control produced by **synthetic control** process. The pooled effect size was **1.1pp** change per year compared with the counterfactual (95% CI: **-0.4** to **2.7pp**). The prediction interval ranged from **-2.4** to **4.6pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **1.538**, p = **0.9921** and I^2 = **0.0%**. These statistics suggest that **approximately none of the variability in observed effects was due to real differences between service rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **non-significant** impact on **outcome one**, with **little heterogeneity indicating that this is a measure of a common intervention effect**.

Figure 7.9 Forest plot for outcome 1 using synthetic DiD (all services in the donor pool)



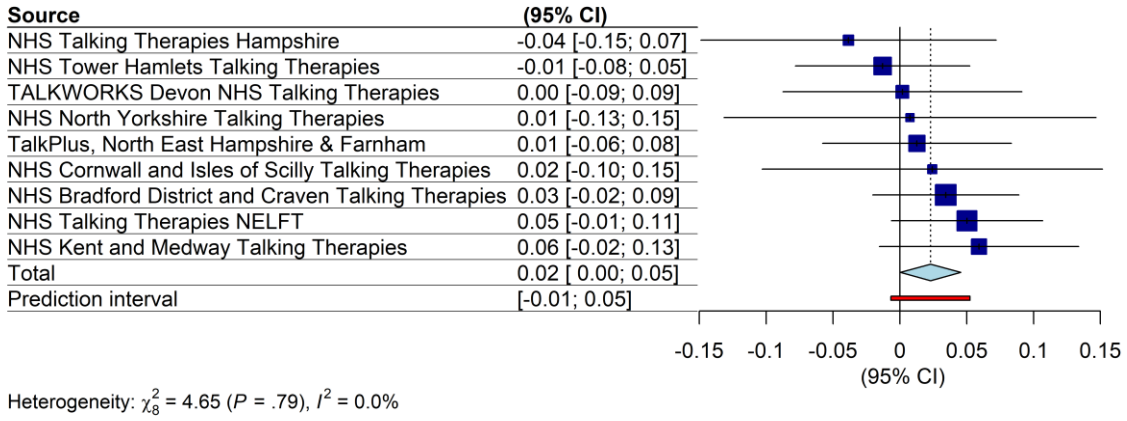
Synthetic DiD (PSM and CEM matched services in the donor pool)

A random effects meta-analysis was conducted on **nine** sets of results to estimate the overall effect of the intervention on **outcome one: proportion of patients attending five or more treatment sessions** using a control produced by **synthetic control** process. The pooled effect size was **2.3pp** change per year compared with the counterfactual (95% CI: **0.0** to **4.6pp**). The prediction interval ranged from **-0.7** to **5.3pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **4.652**, p = **0.7940** and I^2 = **0.0%**. These statistics suggest that **approximately none of the variability in observed effects was due to real differences between services rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **positive** impact on **outcome one**, with **little heterogeneity indicating that this is a measure of a common intervention effect**.

Figure 7.10 Forest plot for outcome one using synthetic DiD (matched services in the donor pool)



Annex 9: Outcome 2 meta-analysis

Outcome definition

The proportion of discharged referrals in which the patient the patient achieved reliable recovery.

Analytic approaches

This outcome was estimated using four alternative methods for constructing the counterfactual:

1. PSM-DiD
2. CEM-DiD
3. Synthetic DiD using all available services in the donor pool
4. Synthetic DiD restricted to donor pools defined by PSM and CEM matches.

This outcome was measured using four techniques which are presented in detail in this section and summarised below.

Table 7.7 Summary of meta-analyses

Method	Pooled intervention effect	95% Confidence Interval	Heterogeneity
PSM	1.3pp per year	-0.8 to 3.4pp	Substantial
CEM	2.1pp per year	-0.5 to 4.7pp	Considerable
Synthetic DiD (all services)	1.8pp per year	-0.6 to 4.1pp	Low
Synthetic DiD (matched services)	**2.3pp per year**	**0.6 to 4.0pp**	Low

*Statistically significant results are shown in **bold**, pp = percentage point*

Interpretation

- All four methods produce positive intervention effects, ranging from 1.3 to 2.3pp above the counterfactual per year
- Only one method (synthetic DID using matched donor pools) produced a statistically significant effect of 2.3pp per year

- Heterogeneity varies by method:
  - PSM showed substantial heterogeneity suggesting approximately three-quarters of the observed variability reflects genuine differences between services
  - CEM showed considerable heterogeneity, indicating that around four-fifths of the variability is attributable to real between-service differences
  - Both Synthetic DiD approaches show low heterogeneity, implying more consistent effects across services and potentially more stable pooled estimates
- The confidence intervals for PSM, CEM and Synthetic DiD (all services) include zero, meaning those estimates are not statistically distinguishable from no effect.

Overall summary

Taken together, the four analyses provide limited evidence that the interventions services introduced increased the proportion of discharged referrals achieving reliable recovery. Although all methods produced positive point estimates (typically around 1-2pp per year), only one approach yielded a statistically significant effect. The variation in heterogeneity across methods highlights the importance of considering service-level differences.

Each analysis is presented separately below.

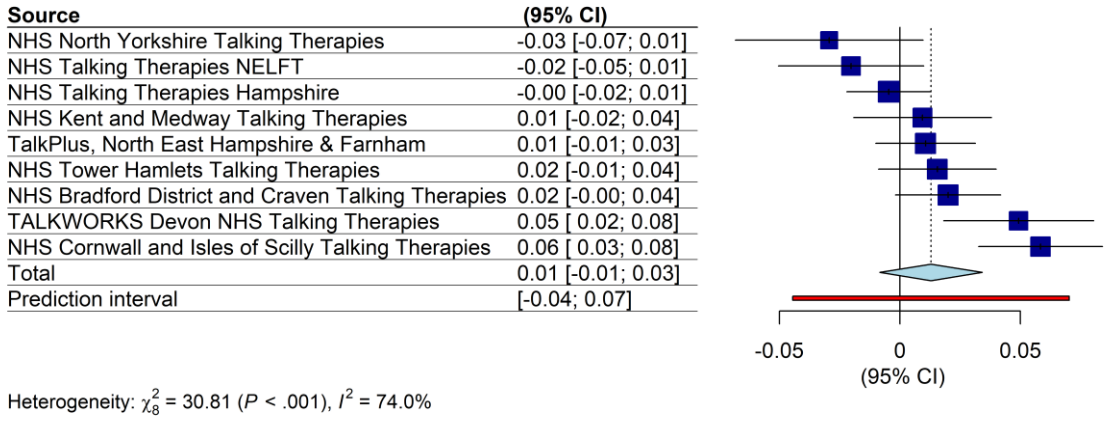
PSM-DiD

A random effects meta-analysis was conducted on **nine** sets of results to estimate the overall effect of the intervention on **outcome two: proportion of patients achieving reliable recovery** using a control produced by **PSM** process. The pooled effect size was **1.3pp** change per year compared with the counterfactual (95% CI: **-0.8** to **3.4pp**). The prediction interval ranged from **-4.4** to **7.0pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **substantial**, with τ^2 = **0.0005**, Q = **30.810**, p = **0.0002** and I^2 = **74.0%**. These statistics suggest that **approximately three-quarters of the variability in observed effects was due to real differences between services rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **non-significant** impact on **outcome two**, with **heterogeneity indicating that service-specific factors influenced effectiveness**.

Figure 7.11 Forest plot for outcome 2 using PSM matching



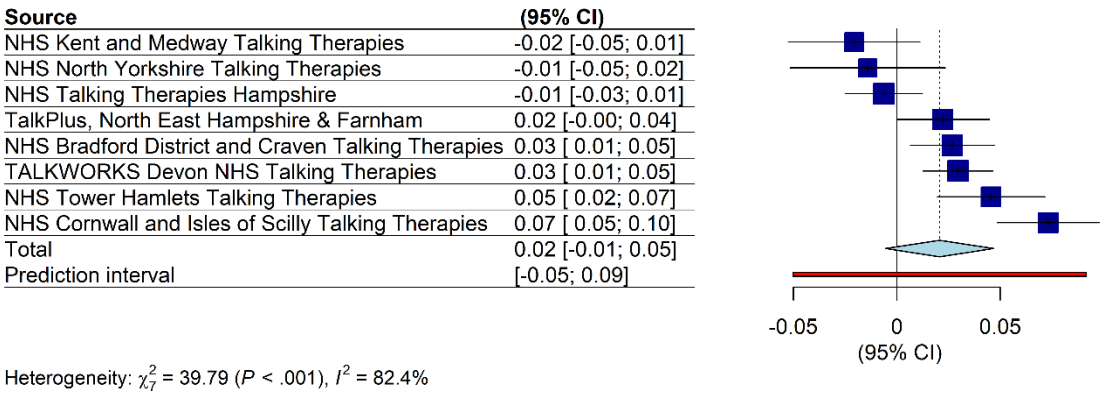
CEM-DiD

A random effects meta-analysis was conducted on **eight** sets of results to estimate the overall effect of the intervention on **outcome two: proportion of patients achieving reliable recovery** using a control produced by **CEM** process. The pooled effect size was **2.1pp** change per year compared with the counterfactual (95% CI: **-0.5** to **4.7pp**). The prediction interval ranged from **-5.0** to **9.2pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **considerable**, with τ^2 = **0.0008**, Q = **39.789**, p = **<0.0001** and I^2 = **82.4%**. These statistics suggest that **approximately four-fifths of the variability in observed effects was due to real differences between services rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **non-significant** impact on **outcome two**, with **heterogeneity indicating that service-specific factors influenced effectiveness**.

Figure 7.12 Forest plot for outcome 2 using CEM matching



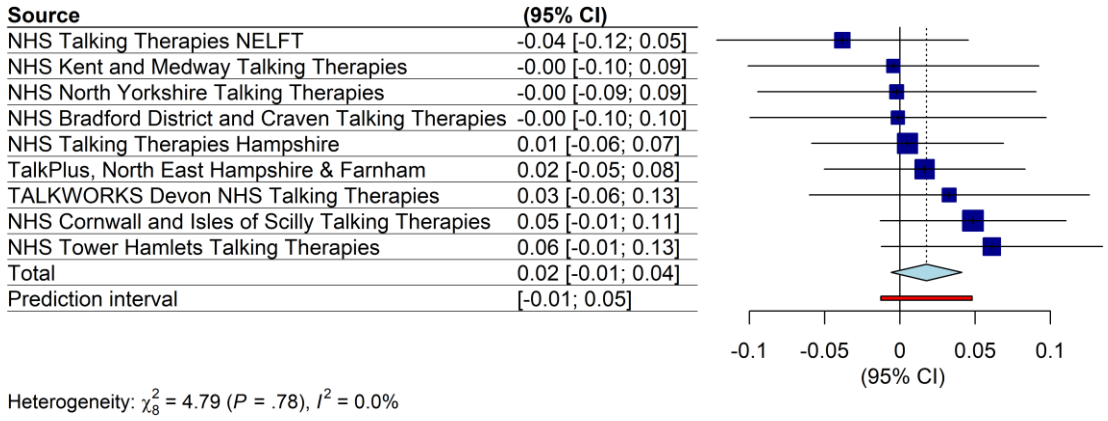
Synthetic DiD (all services in the donor pool)

A random effects meta-analysis was conducted on **nine** sets of results to estimate the overall effect of the intervention on **outcome two: proportion of patients achieving reliable recovery** using a control produced by **synthetic control** process. The pooled effect size was **1.8pp** change per year compared with the counterfactual (95% CI: **-0.6** to **4.1pp**). The prediction interval ranged from **-1.3** to **4.8pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **4.791**, p = **0.7796** and I^2 = **0.0%**. These statistics suggest that **approximately none of the variability in observed effects was due to real differences between services rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **non-significant** impact on **outcome two**, with **little heterogeneity indicating that this is a measure of a common intervention effect**.

Figure 7.13 Forest plot for outcome 2 using synthetic DiD (all services in the donor pool)



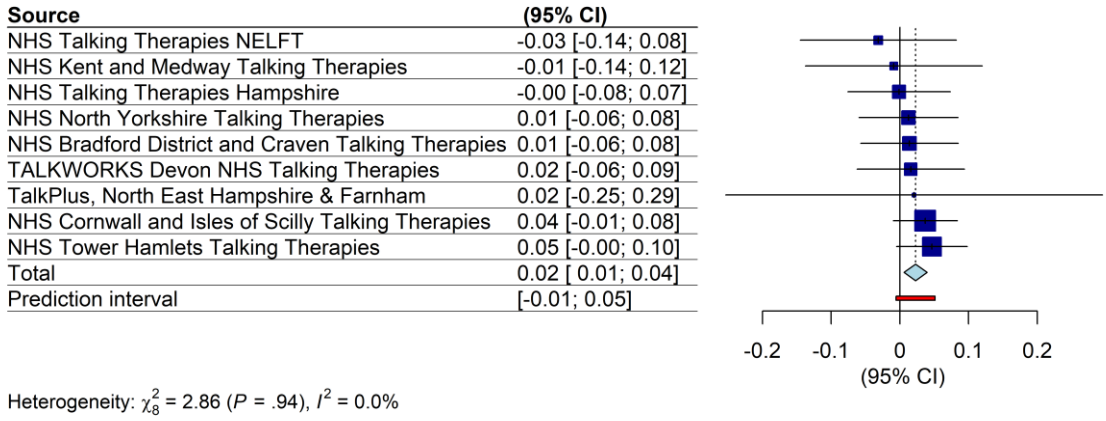
Synthetic DiD (PSM and CEM matched services in the donor pool)

A random effects meta-analysis was conducted on **nine** sets of results to estimate the overall effect of the intervention on **outcome two: proportion of patients achieving reliable recovery** using a control produced by **synthetic control** process. The pooled effect size was **2.3pp** change per year compared with the counterfactual (95% CI: **0.6** to **4.0pp**). The prediction interval ranged from **-0.5** to **5.1pp**, indicating the expected range of effects in future implementations.

Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **2.858**, p = **0.9430** and I^2 = **0.0%**. These statistics suggest that **approximately none of the variability in observed effects was due to real differences between services rather than chance**.

Overall, the meta-analysis suggests that the intervention had a **positive** impact on **outcome two**, with **little heterogeneity indicating that this is a measure of a common intervention effect**.

Figure 7.14 Forest plot for outcome 2 using synthetic DiD (matched services in the donor pool)



Annex 10: Quantitative DiD data table

Table 7.8 presents the full set of quantitative DiD estimates, including results from CEM, PSM and synthetic variants for each outcome measure.

Table 7.8 Summary results of quantitative DiD analyses

Talking Therapies Service	Method (DiD variant)	Outcome measure	Effect estimate	95pp Confidence Interval	p-value
NHS Bradford District and Craven Talking Therapies	CEM-DiD	Outcome 1	**4.38pp**	**0.41 to 8.34pp**	**0.031**
	PSM-DiD	Outcome 1	**7.27pp**	**3.95 to 10.59pp**	**<0.001**
	Synth DiD 1	Outcome 1	0.85pp	−9.20 to 10.90pp	0.868
	Synth DiD 2	Outcome 1	3.44pp	−2.04 to 8.91pp	0.218
	CEM-DiD	Outcome 2	**2.69pp**	**0.65 to 4.72pp**	**0.010**
	PSM-DiD	Outcome 2	2.00pp	−0.18 to 4.19pp	0.072
	Synth DiD 1	Outcome 2	−0.13pp	−9.97 to 9.72pp	0.980
	Synth DiD 2	Outcome 2	1.39pp	−5.70 to 8.48pp	0.701
NHS Cornwall and Isles of Scilly Talking Therapies	CEM-DiD	Outcome 1	**5.18pp**	**1.25 to 9.10pp**	**0.010**
	PSM-DiD	Outcome 1	2.04pp	−1.87 to 5.96pp	0.307
	Synth DiD 1	Outcome 1	3.33pp	−6.08 to 12.74pp	0.488
	Synth DiD 2	Outcome 1	2.42pp	−10.30 to 15.15pp	0.709
	CEM-DiD	Outcome 2	**7.32pp**	**4.84 to 9.80pp**	**<0.001**
	PSM-DiD	Outcome 2	**5.84pp**	**3.27 to 8.41pp**	**<0.001**
	Synth DiD 1	Outcome 2	4.87pp	−1.31 to 11.04pp	0.122
	Synth DiD 2	Outcome 2	3.70pp	−0.97 to 8.37pp	0.120
NHS Kent and Medway Talking Therapies	CEM-DiD	Outcome 1	**4.43pp**	**0.86 to 8.00pp**	**0.015**
	PSM-DiD	Outcome 1	3.02pp	−1.15 to 7.19pp	0.156
	Synth DiD 1	Outcome 1	3.21pp	−6.60 to 13.02pp	0.522
	Synth DiD 2	Outcome 1	5.92pp	−1.53 to 13.37pp	0.119
	CEM-DiD	Outcome 2	−2.07pp	−5.25 to 1.12pp	0.203
	PSM-DiD	Outcome 2	0.94pp	−1.92 to 3.80pp	0.519
	Synth DiD 1	Outcome 2	−0.43pp	−10.10 to 9.24pp	0.931
	Synth DiD 2	Outcome 2	−0.89pp	−13.76 to 11.97pp	0.892
	CEM-DiD	Outcome 1	1.08pp	−1.22 to 3.38pp	0.356

Talking Therapies Service	Method (DiD variant)	Outcome measure	Effect estimate	95pp Confidence Interval	p-value
NHS North Yorkshire Talking Therapies	PSM-DiD	Outcome 1	0.95pp	−1.97 to 3.87pp	0.525
	Synth DiD 1	Outcome 1	0.01pp	−9.39 to 9.40pp	0.999
	Synth DiD 2	Outcome 1	0.76pp	−13.16 to 14.67pp	0.915
	CEM-DiD	Outcome 2	−1.41pp	−5.17 to 2.35pp	0.461
	PSM-DiD	Outcome 2	−2.93pp	−6.83 to 0.97pp	0.141
	Synth DiD 1	Outcome 2	−0.21pp	−9.46 to 9.05pp	0.965
	Synth DiD 2	Outcome 2	1.25pp	−5.95 to 8.45pp	0.733
NHS Talking Therapies Hampshire	CEM-DiD	Outcome 1	**−2.58pp**	**−4.74 to −0.42pp**	**0.019**
	PSM-DiD	Outcome 1	0.35pp	−1.96 to 2.66pp	0.766
	Synth DiD 1	Outcome 1	−2.16pp	−11.57 to 7.26pp	0.653
	Synth DiD 2	Outcome 1	−3.84pp	−14.89 to 7.21pp	0.496
	CEM-DiD	Outcome 2	−0.64pp	−2.51 to 1.24pp	0.506
	PSM-DiD	Outcome 2	−0.46pp	−2.20 to 1.29pp	0.608
	Synth DiD 1	Outcome 2	0.51pp	−5.86 to 6.88pp	0.876
	Synth DiD 2	Outcome 2	−0.11pp	−7.56 to 7.33pp	0.976
NHS Talking Therapies NELFT[36]	PSM-DiD	Outcome 1	**4.90pp**	**2.60 to 7.20pp**	**<0.001**
	Synth DiD 1	Outcome 1	4.41pp	−4.61 to 13.44pp	0.338
	Synth DiD 2	Outcome 1	5.02pp	−0.64 to 10.69pp	0.082
	PSM-DiD	Outcome 2	−2.03pp	−5.04 to 0.99pp	0.188
	Synth DiD 1	Outcome 2	−3.81pp	−12.18 to 4.55pp	0.371
	Synth DiD 2	Outcome 2	−3.15pp	−14.50 to 8.20pp	0.587
NHS Tower Hamlets Talking Therapies	CEM-DiD	Outcome 1	−0.77pp	−3.41 to 1.86pp	0.565
	PSM-DiD	Outcome 1	−1.96pp	−5.68 to 1.77pp	0.303
	Synth DiD 1	Outcome 1	1.11pp	−12.30 to 14.53pp	0.871
	Synth DiD 2	Outcome 1	−1.29pp	−7.81 to 5.23pp	0.698
	CEM-DiD	Outcome 2	**4.56pp**	**1.96 to 7.16pp**	**<0.001**
	PSM-DiD	Outcome 2	1.55pp	−0.89 to 3.99pp	0.212

[36] No CEM-DiD analysis could be conducted for NELFT because none of the matched non-intervention services satisfied the pre-intervention parallel-trends requirement.

Talking Therapies Service	Method (DiD variant)	Outcome measure	Effect estimate	95pp Confidence Interval	p-value
	Synth DiD 1	Outcome 2	6.11pp	−1.23 to 13.46pp	0.103
	Synth DiD 2	Outcome 2	4.66pp	−0.48 to 9.81pp	0.076
TALKWORKS Devon NHS Talking Therapies	CEM-DiD	Outcome 1	1.45pp	−0.14 to 3.05pp	0.073
	PSM-DiD	Outcome 1	2.37pp	−0.57 to 5.31pp	0.113
	Synth DiD 1	Outcome 1	0.53pp	−6.78 to 7.83pp	0.887
	Synth DiD 2	Outcome 1	0.19pp	−8.74 to 9.12pp	0.967
	CEM-DiD	Outcome 2	**2.95pp**	**1.27 to 4.63pp**	**<0.001**
	PSM-DiD	Outcome 2	**4.93pp**	**1.81 to 8.04pp**	**0.002**
	Synth DiD 1	Outcome 2	3.28pp	−6.03 to 12.59pp	0.490
	Synth DiD 2	Outcome 2	1.59pp	−6.22 to 9.40pp	0.690
	CEM-DiD	Outcome 1	1.45pp	−0.14 to 3.05pp	0.073
TalkPlus, North East Hampshire & Farnham	CEM-DiD	Outcome 1	0.65pp	−1.66 to 2.96pp	0.583
	PSM-DiD	Outcome 1	0.75pp	−1.60 to 3.10pp	0.531
	Synth DiD 1	Outcome 1	0.06pp	−6.69 to 6.82pp	0.985
	Synth DiD 2	Outcome 1	1.28pp	−5.79 to 8.34pp	0.723
	CEM-DiD	Outcome 2	2.23pp	−0.02 to 4.48pp	0.052
	PSM-DiD	Outcome 2	1.07pp	−1.00 to 3.14pp	0.313
	Synth DiD 1	Outcome 2	1.65pp	−5.02 to 8.32pp	0.628
	Synth DiD 2	Outcome 2	2.07pp	−25.34 to 29.48pp	0.883

Notes:

pp = percentage point (difference between observed and counterfactual performance)

*Statistically significant findings are shown in **bold***

Synth DiD 1 = synthetic DiD using all available services in the donor pool

Synth DiD 2 = synthetic (DiD restricted to donor pools defined by PSM and CEM matches)

Annex 11: Outcome 1 subgroup meta-analysis

Informational vs **Multi-component (information and operational)**

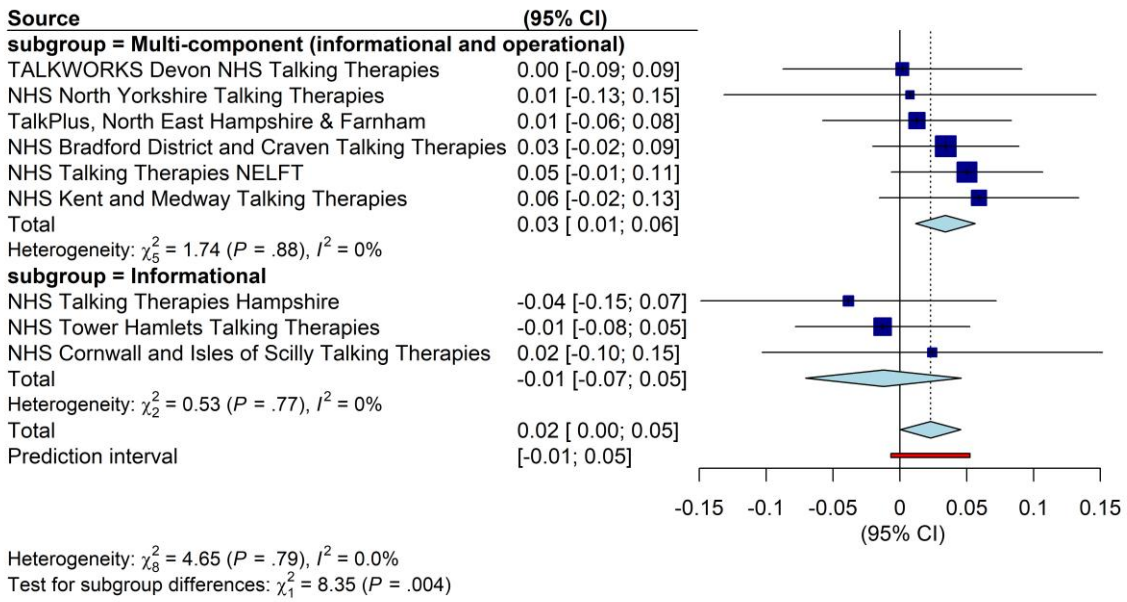
The combined effect size across all studies was **2.3pp** change per year compared with the counterfactual (95% CI: **0.0** to **4.6pp**). The expected range of effects in future implementations is **-0.7** to **5.3pp**. Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **4.652**, p = **0.7940**, and I^2 = **(0.000)**.

Subgroup analyses:

- Subgroup 1 **Multi-component (informational and operational):** Pooled effect size = **3.4pp** (95% CI: **1.2** to **5.6pp**); heterogeneity = **0.0%**
- Subgroup 2 **Informational:** Pooled effect size = **-1.2pp** (95% CI: **-7.1** to **4.6pp**); heterogeneity = **0.0%.**

Tests for subgroup differences indicated **significant variation by intervention type**.

Figure 7.15 Forest plot: subgroup (informational vs multi-component) meta-analysis for outcome 1



A random-effects subgroup meta-analysis using the matched-donor synthetic DiD estimates found an overall annual effect of 2.3pp (95% CI: 0.0 to 4.6pp) with very low heterogeneity. Subgroup comparisons showed significantly larger effects for multi-component interventions (3.4pp) than for information-only approaches (-1.2pp). These results suggest that intervention type meaningfully influences outcomes, although the expected range of effects remains wide.

Targeted (subgroup-specific) vs **Non-targeted or Mixed**

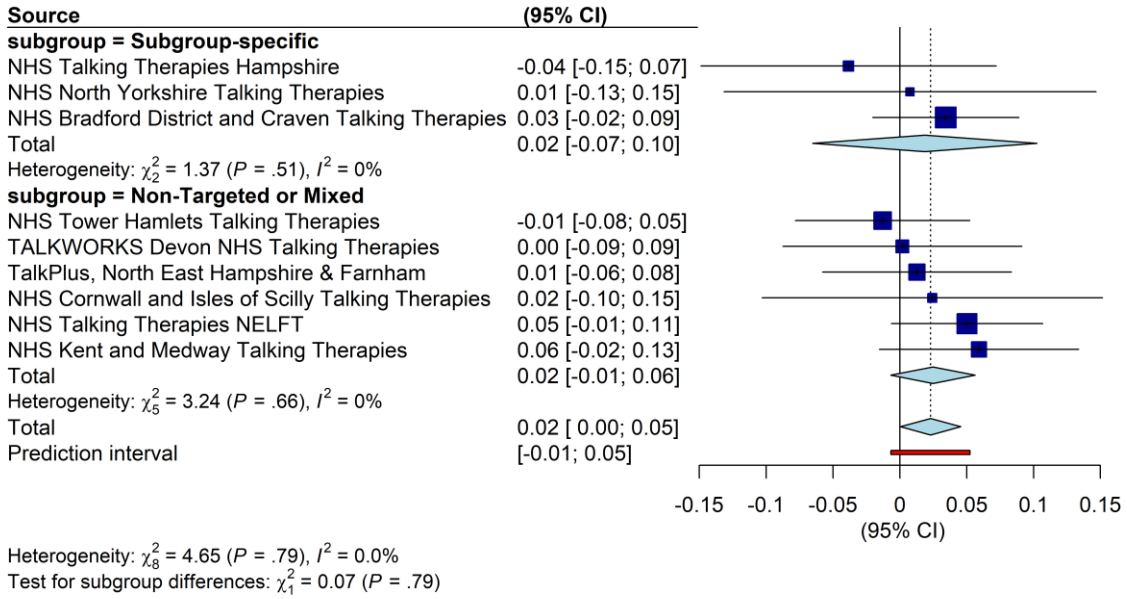
The combined effect size across all studies was **2.3pp** change per year compared with the counterfactual (95% CI: **0.0** to **4.6pp**). The expected range of effects in future implementations is **-0.7** to **5.3pp**. Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **4.652**, p = **0.7940**, and I^2 = **(0.000)**.

Subgroup analyses:

- Subgroup 1 **Subgroup-specific:** Pooled effect size = **1.9pp** (95% CI: **-6.5** to **10.3pp**); heterogeneity = **0.0%**
- Subgroup 2 **Non-Targeted or Mixed:** Pooled effect size = **2.5pp** (95% CI: **-0.7** to **5.6pp**); heterogeneity = **0.0%.**

Tests for subgroup differences indicated **no evidence of differential effects across subgroups**.

Figure 7.16 Forest plot: subgroup (targeted vs non-targeted) meta-analysis for outcome 1



The subgroup meta-analysis showed very low heterogeneity, indicating the variation in effect sizes was largely attributable to chance rather than real differences between services. Both subgroup-specific and non-targeted or mixed interventions produced small, imprecise effects and statistical tests found no evidence that intervention type influenced outcomes.

Annex 12: Outcome 2 subgroup meta-analysis

Informational vs **Multi-component (information and operational)**

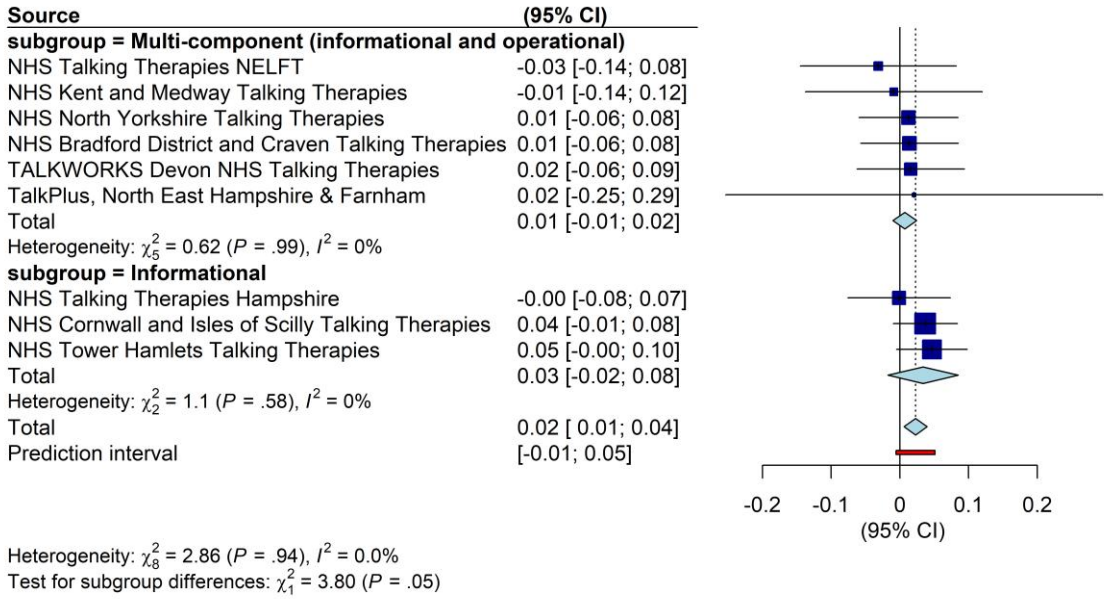
The combined effect size across all studies was a **2.3pp** change per year compared with the counterfactual (95% CI: **0.6** to **4.0pp**). The expected range of effects in future implementations is **-0.5** to **5.1pp**. Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **2.858**, p = **0.9430**, and I^2 = **(0.000)**.

Subgroup analyses:

- Subgroup 1 **Multi-component (informational and operational):** Pooled effect size = **0.7pp** (95% CI: **-1.0** to **2.5pp**); heterogeneity = **0.0%**
- Subgroup 2 **Informational:** Pooled effect size = **3.4pp** (95% CI: **-1.7** to **8.5pp**); heterogeneity = **0.0%.**

Tests for subgroup differences indicated **no evidence of differential effects across subgroups**.

Figure 7.17 Forest plot: sub-group (informational vs multi-component) meta-analysis for outcome 2



The meta-analysis showed an overall annual effect of 2.3pp (95% CI: 0.6 to 4.0pp) with very low heterogeneity, indicating highly consistent findings across studies. Subgroup analyses found similarly small and imprecise effects for both multi-component and information interventions and statistical tests showed no evidence that outcomes differed by intervention type.

Targeted (subgroup-specific) vs **Non-targeted or Mixed**

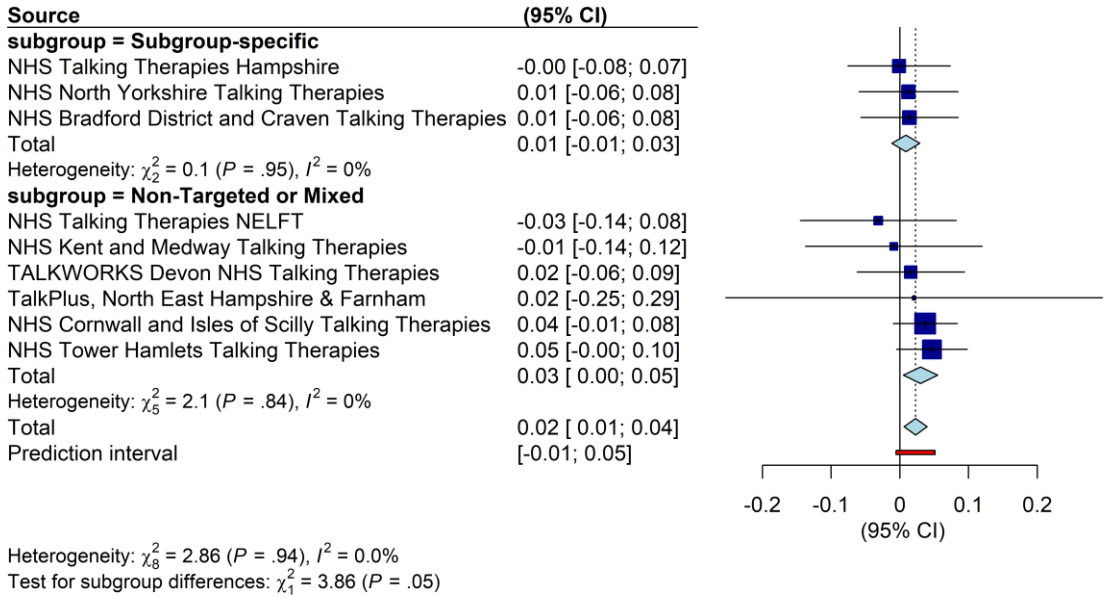
The combined effect size across all studies was **2.3pp** change per year compared with the counterfactual (95% CI: **0.6** to **4.0pp**). The expected range of effects in future is **-0.5** to **5.1pp**. Between-study heterogeneity was **low**, with τ^2 = **0.0000**, Q = **2.858**, p = **0.9430**, and I^2 = **(0.000)**.

Subgroup analyses:

- Subgroup 1 **Subgroup-specific:** Pooled effect size = **0.9pp** (95% CI: **-1.2** to **2.9pp**); heterogeneity = **0.0%**
- Subgroup 2 **Non-Targeted or Mixed:** Pooled effect size = **3.0pp** (95% CI: **0.5** to **5.5pp**); heterogeneity = **0.0%.**

Tests for subgroup differences indicated **significant variation by intervention type**.

Figure 7.18 Forest plot: subgroup (targeted vs non-targeted) meta-analysis for outcome 2



The meta-analysis showed an overall annual effect of 2.3pp (95% CI: 0.6 to 4.0pp) with very low heterogeneity, indicating highly consistent findings across studies. Subgroup comparisons revealed significant different effects by intervention type, with non-targeted or mixed interventions showing a larger pooled effect (3.0pp) than subgroup-specific approaches (0.9pp).

Annex 13: Services selected for exploration of common features

This annex ranks services by their point-estimate intervention effects across four counterfactual methods, CEM-DiD, PSM-DiD, synthetic DiD 1 (unrestricted) and synthetic DiD 2 (restricted donor pool to matched services). It highlights those that appear in the top three for at least two of the methods, identifying high-performing services that may share common success factors.

Table 7.9 Outcome 1: rank of each Talking Therapies service's point estimate in each of the four counterfactual methods

Talking Therapies Service	CEM DiD	PSM DiD	Synthetic DiD 1	Synthetic DiD 2	Times in top 3
NHS Kent and Medway Talking Therapies	2	3	3	1	**4**
NHS Bradford District and Craven Talking Therapies	3	1	5	3	**3**
NHS Talking Therapies NELFT	—	2	1	2	**3**
NHS Cornwall and Isles of Scilly Talking Therapies	1	5	2	4	**2**
TALKWORKS Devon NHS Talking Therapies	4	4	6	7	0
NHS North Yorkshire Talking Therapies	5	6	8	6	0
TalkPlus, North East Hampshire & Farnham	6	7	7	5	0
NHS Tower Hamlets Talking Therapies	7	9	4	8	0
NHS Talking Therapies Hampshire	8	8	9	9	0

*Services that rank in the top three in at least two counterfactual methods are shown in **bold**.*

Table 7.10 Outcome 2: rank of each Talking Therapies service's point estimate in each of the four counterfactual methods

Talking Therapies Service	CEM DiD	PSM DiD	Synthetic DiD 1	Synthetic DiD 2	Times in top 3
NHS Cornwall and Isles of Scilly Talking Therapies	1	1	2	2	**4**
NHS Tower Hamlets Talking Therapies	2	4	1	1	**3**
TALKWORKS Devon NHS Talking Therapies	3	2	3	4	**3**
NHS Bradford District and Craven Talking Therapies	4	3	6	5	1
TalkPlus, North East Hampshire & Farnham	5	5	4	3	1
NHS Talking Therapies Hampshire	6	7	5	7	0
NHS North Yorkshire Talking Therapies	7	9	7	6	0
NHS Kent and Medway Talking Therapies	8	6	8	8	0
NHS Talking Therapies NELFT	—	8	9	9	0

*Services that rank in the top three in at least two counterfactual methods are shown in **bold**.*

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