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Pilot RCT of Let's Connect - Fostering Communities

Intervention developer	The Copeland Center and Barnardo's
Delivery organisations	Barnardo's
Evaluator	Coram
Principal Investigator	Max Stanford, Head of Impact and Evaluation, Coram
Protocol author(s)	Emily Blackshaw, Lizzie Gilbert, Sarah Taylor, Hannah Lawrence, Lisa Kunwar Deer, Daniel Stern and Lucas Jones
Type of trial	Pilot randomised controlled trial (RCT) with 50:50 randomisation at family level to two arms: intervention and control
Age or status of participants	Foster families (foster children, foster carers, and birth children of foster carers), kinship carers, and their birth and kinship children
Number of participating sites	3 local authorities – Hull City Council, North Lincolnshire Council, North East Lincolnshire Council
Number of children and families	Target for randomisation: 178 fostering households with 311 foster carers, 544 foster children, 25 other adults, 59 birth children (plus kinship households, numbers unknown)
Primary outcome	1. Foster/kinship carer wellbeing (Warwick Edinburgh Mental Wellbeing Scale)
Secondary outcome(s)	2. Foster/kinship carer perceived peer support (self-reported number of 'other local foster or kinship carers you could ask for help if you needed' (0+)) 3. Foster child, kinship child and birth child mental health and wellbeing (Brief Assessment Checklists for Children and Adolescents;

	Strengths and Difficulties Questionnaire – available for foster children only) 4. Foster/kinship family relationships (SCORE-15) 5. Foster placement stability (number of placement changes)
Exploratory outcome(s)	6. Foster carer turnover 7. Mental health referrals (referral of foster/kinship children to CAMHS)
Contextual factors	Receipt of other mental health and emotional wellbeing support and services Extent of existing community connections and networks among foster and kinship families

Summary

This protocol summarises plans for a pilot randomised controlled trial, plus process and cost evaluation, of an intervention to be delivered to foster and kinship families by Barnardo's in Hull and Lincolnshire in 2023-2024. The intervention, 'Let's Connect', introduces Wellness Recovery Action Plans (WRAP) to groups of foster carers, kinship carers and their foster children, kinship children and birth children. The evaluation aims to provide useful evidence for policy makers and commissioners interested in improving the mental health and wellbeing of families containing care experienced children or children that cannot live with their birth parent(s).

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Acknowledgements

We gratefully acknowledge the advice of Andrew Thomson with regards to the analysis plan for the impact evaluation. We would also like to thank Michael Norton for his advice in the early stages of the literature review. We would like to thank our advisors Hanna Al-Najjar, Emma Fincham, Nazeema Gill, Cara Jones, Derek Kirton, and Nick Midgley. However, this document reflects the views of the authors only.

Intervention overview

Background on Wellness Recovery Action Planning

Wellness Recovery Action Planning is a structured recovery education programme, that was developed to support adults with experience of mental health problems. The programme was created by Mary Ellen Copeland and Jane Winterling in 1997 and the Copeland Center, in the USA, was established in 2003. Since then the WRAP intervention has been used in formal and informal recovery programmes in various settings across the globe (Copeland Center, 2020) and has been adapted for use with children and young people.

Central to the model is the fact that WRAP is delivered by peers with their own experience of WRAP and recovery, and the principles of self-management and recovery-oriented care. A typical WRAP programme comprises eight to 10 weekly sessions of group education (Cannacott *et al.*, 2019). The five key concepts of WRAP are hope, personal responsibility, education, self-advocacy, and support (https://www.wellnessrecoveryactionplan.com/what-is-wrap/). The aim is to help individuals stay as well as possible by keeping track of difficult feelings and behaviours, and making action plans to help manage their wellbeing. These action plans involve identifying supporters, and individuals may share their plans with their supporters to help them to stay well.

WRAP groups are not 'issue specific' but allow people to focus on individual issues and challenges whatever their nature. A person's application of learning from WRAP can be transferred to support future challenges and enable life-long change in their management and responses to issues including anxiety, low mood, relationships, stress and grief.

As part of creating their WRAP, individuals develop a wellness toolbox, a collection of personalised wellness strategies, and a daily maintenance plan. They also identify triggers and build plans to manage responses to them. WRAPs for adults will also include crisis and post-crisis plans, so they can maintain control over their care and support if they become seriously unwell (Cook *et al.*, 2015). By creating a WRAP, the aim is for individuals to become empowered to understand and look after their wellbeing, and to involve their supporters in this as and when they choose.

Let's Connect

The Let's Connect intervention is a support programme developed by Barnardo's, based on the Copeland Center's WRAP model. The Let's Connect programme encompasses the

delivery of WRAP through peer support groups ('Level 1 WRAP'), the training of facilitators in the fostering and kinship community ('Level 2 WRAP'), and the facilitation of 'Keeping Connected' groups. The Copeland Center is licensed by the non-profit organisation Advocates for Human Potential (owners of the WRAP model) to oversee WRAP co-facilitator training and certification. The Barnardo's delivery team are on course to become a Copeland accredited WRAP Centre of Excellence. The focus of this RCT is the evaluation of Level 1 WRAP, as this is the main basis of the intervention. While Level 2 WRAP and Keeping Connected groups are part of the approach, designed to support and sustain the programme, they will be delivered later in the intervention timeline and are optional. We do not yet have a good idea of how many people will take up these offers, however they will be explored in the IPE if the participant has taken part.

Level 1 WRAP delivery

The Level 1 WRAP intervention will take place in youth and community settings across Hull, North Lincolnshire and North East Lincolnshire, for example, in town halls and council buildings. The intervention will be delivered to foster children, kinship children, birth children, foster carers, kinship carers, other adults in the household (such as partners and relatives), and social workers.

Phase 1 delivery will focus on foster carers, kinship carers and social workers to equip them with resources to understand and support their own wellness, so they are better placed to support foster and kinship families. Barnardo's aim to support 240 adults and 240 children through Level 1 WRAP. WRAP groups for social workers will not be randomised as part of the current impact evaluation. Barnardo's have invited all social workers in the three local authorities to take part in the WRAP intervention ahead of the trial, to aid programme buy-in and referrals.

Wellness Recovery Action Plan (WRAP) will be delivered to participants in the following group sizes:

- Adults: maximum of 16 participants per programme
- Foster and kinship children: maximum of eight participants per programme
- Birth children: maximum of 12 participants per programme.

Adults will attend three WRAP sessions over three short days (adults will be mostly foster carers but potentially some kinship carers and other adult household members). In couples, both adults will be able to attend. **Children will attend a target of 10 weekly two hour sessions of WRAP over 10 weeks**. Separate groups will be delivered for birth children and foster/kinship children.

Barnardo's aims to facilitate 40 WRAP Level 1 courses over the project period. The Barnardo's team (11 staff are trained to deliver train the trainer programmes) will deliver the initial groups. Later groups will involve peer co-facilitation after interested attendees have attended Level 2 WRAP training.

Level 2 WRAP delivery

Sustainability of the model requires Barnardo's to step back over time. Coordinators of peer support groups (post-Level 1 programmes) will not be required to attend train the trainer programmes. Different carers could take a coordination role on a rolling basis. The focus of the peer support sessions is determined by the participants. The coordinator role is concerned with venue bookings and sending reminders of the sessions, rather than leading sessions. All WRAP (Level 1) courses will be delivered by two accredited WRAP facilitators (Level 2 trained). Barnardo's staff are Advanced Level WRAP Facilitators and will deliver two WRAP Level 2 programmes, enabling fostering and kinship community members to be trained as accredited WRAP facilitators and to co-facilitate WRAP Level 1 courses to their peers. Level 2 courses will be delivered by two Advanced Level facilitators over five days.

Barnardo's anticipates that co-delivery of the WRAP programmes beyond this project will include foster and kinship carers and social workers, especially fostering social workers (FSWs). The inclusion of social workers in the training pool will limit the numbers of carers delivering WRAP at any one time. There will be 16 adults trained to co-deliver WRAP to their peers which allows flexibility in who is delivering and how often. Co-facilitating WRAP offers an opportunity for those delivering the training to extend their support networks.

Barnardo's will make the three local authorities aware of ongoing support available should this be needed, including access to mentoring support until the end of the programme for WRAP facilitators, access to WRAP-related resources for all fostering and kinship community members and peer support groups for WRAP facilitators. The local authorities will have access to further WRAP Level 2 training courses to extend the pool of trained facilitators as well as Barnardo's workers for future WRAP courses where needed to support any facilitation gaps. Future train the trainer courses and peer-led meetings could also include training some short break carers.

Keeping Connected Groups

Barnardo's staff will support facilitation of Keeping Connected groups which provide participants with opportunities to maintain connections, provide peer support to one another, and promote the continued use of WRAP plans after the WRAP groups have finished.

Barnardo's anticipate the Keeping Connected groups will run monthly for 90 minutes and different groups will be encouraged to mix with other groups to broaden connections and peer-support options. These groups provide participants with opportunities to maintain connections once the Level 1 sessions have ended, and to promote the continued use of WRAP plans. Involvement of Barnardo's staff in facilitation of these groups will reduce gradually over the project period with the aim that the groups will continue without Barnardo's input once the project has ended.

Evidence base

The impact of the Wellness Recovery Action Plan (WRAP) intervention has been widely researched. There have been two systematic syntheses of the international WRAP evidence

base: a 2019 systematic review and meta-analysis of WRAP (Canacott, Moghaddam, & Tickle, 2019[1]); and an accompanying systematic review of qualitative data from service users (Canacott, Tickle, & Moghaddam, 2020[2]). The first review included experimental and quasi-experimental studies of WRAP as delivered to adults with mental health difficulties, published in the English language with a focus on quantitative outcomes. Inclusion criteria for the second review were similar, but instead focused on studies that explored the experience of WRAP from the perspective of those using it. A further systematic literature review and meta-analysis is currently underway, to explore the international evidence base as well as the delivery and evaluation of WRAP in an Irish context (protocol published by Norton & Flynn, 2021[3]). To illustrate the volume of literature available, Canacott, Moghaddam, & Tickle (2019) identified 253 studies, five of which were reported as having a controlled trial design. Two of these five studies were from the USA, two from the Republic of Ireland, and one from China. This will be the first UK RCT of WRAP.

The systematic review and meta-analysis (Canacott, Moghaddam, & Tickle, 2019) found a small (standardised mean difference of 0.24 (95% CI 0.06-0.42)) but significant effect of WRAP on self-perceived recovery outcomes compared to an inactive control (treatment as usual or waiting list) when summarising the five controlled design studies (overall effect for all five controlled studies p=0.01, and when limited two RCTs p=0.03). Three studies assessed overall clinical symptoms and the combined results showed no significant effect (p=0.94). However, the one RCT did demonstrate a small, significant effect of WRAP compared to treatment as usual on overall clinical symptoms (standardised mean difference -0.19; 95% CI -0.38 - -0.01, p = 0.04). Similarly, no significant effect of the intervention was found for specific symptoms of depression (three studies, p=0.34), or anxiety (three studies, p=0.36). The authors recommend focusing on broader measures of wellbeing and recovery in future research, as opposed to measures of clinical symptoms. They also recommend using long follow-up periods to reflect the gradual and long-term nature of mental health recovery, and to use and report measures of fidelity.

The systematic review of qualitative evidence also found positive perceived effects of WRAP, such as increased understanding and self-management of mental health (Canacott, Tickle, & Moghaddam, 2020). The 12 articles included in the review used a range of qualitative methods including focus groups, individual interviews, telephone interviews and questionnaires. Across these studies, the following elements of WRAP were identified by participants as supporting change: the development and use of action plans and tool boxes; the group process providing relational support, positive feedback, and reduced isolation; and the role of peer facilitators. Participant-identified outcomes included changes in how individuals relate to mental health problems such as gaining a better understanding of

[1] Canacott, L., Moghaddam, N., & Tickle, A. (2019). Is the Wellness Recovery Action Plan (WRAP) efficacious for improving personal and clinical recovery outcomes? A systematic review and meta-analysis. *Psychiatric rehabilitation journal*, *42*(4), 372.

[2] Canacott, L., Tickle, A., & Moghaddam, N. (2020). Perceptions of wellness recovery action plan (WRAP) training: A systematic review and metasynthesis. *Mental Health Review Journal, 25*(4), 345–366. https://doi.org/10.1108/MHRJ-10-2019-0037

[3] Norton, M. J., & Flynn, C. (2021). The Evidence Base for Wellness Recovery Action Planning (WRAP): A Protocol for a Systematic Literature Review and Meta-Analysis. *International Journal of Environmental Research and Public Health*, *18*(24), 13365.

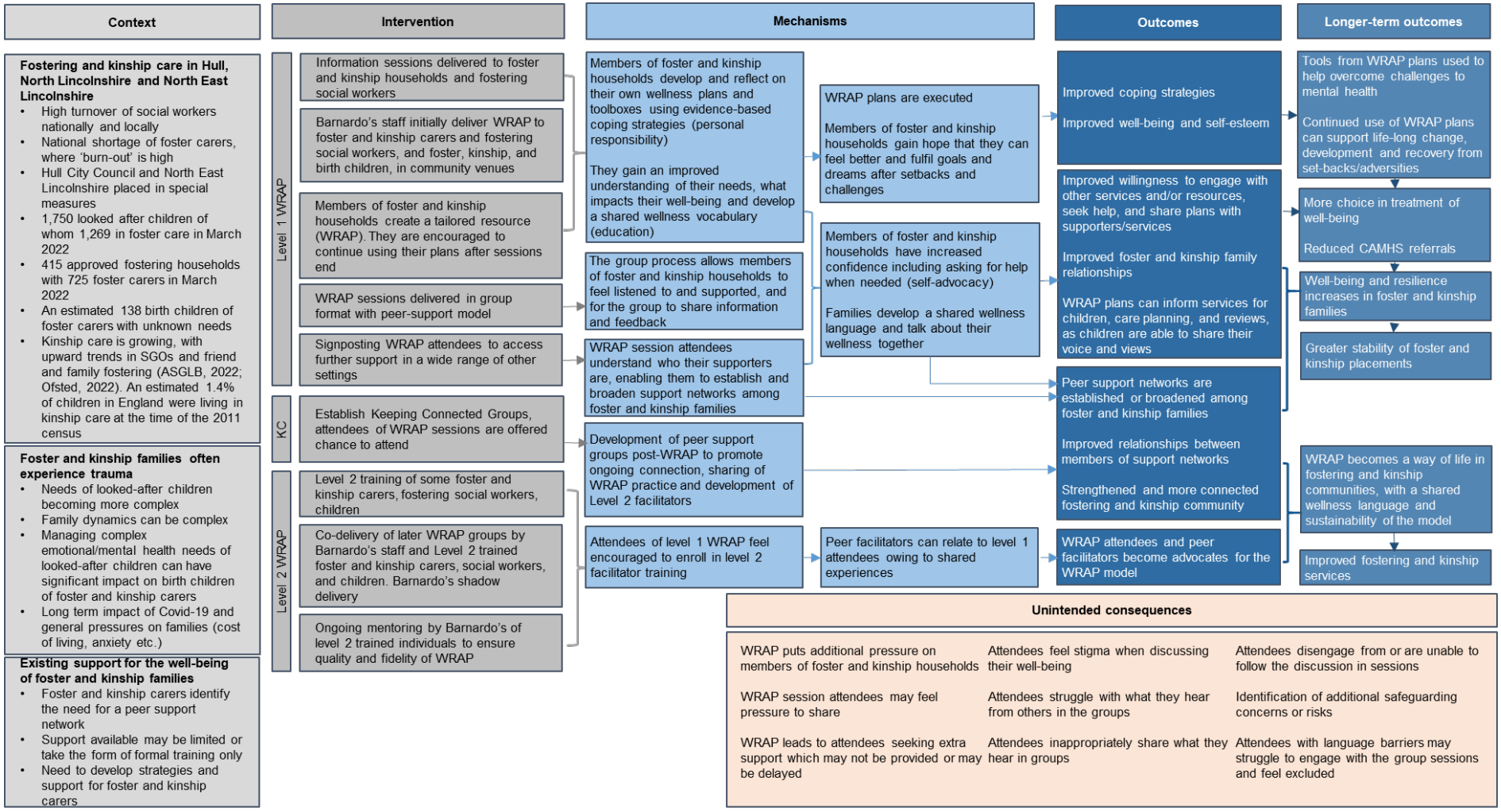
recovery, and more open and honest communication. The authors suggest further research exploring whether WRAP reduces mental health service use.

Despite the high volume of evidence and previous applications of a randomised design, to our knowledge no studies exist that address the delivery and impact of the WRAP intervention with the foster or kinship care community. To our knowledge, the WRAP intervention is not associated with any substantial harms or serious adverse events as a by-product of delivery. However, the following issues were identified in qualitative evaluations of WRAP with adults with mental health difficulties (Canacott, Tickle, & Moghaddam, 2020): not using the plan after WRAP sessions; the plan being an unwelcome reminder of challenging times; the need for follow-up support to revise or support plans; dislike of the group delivery format; and cultural differences in relation to preferences for aspects of WRAP and its delivery.

Logic model

A logic model for the Barnardo's Let's Connect – Fostering Communities (WRAP) programme was developed by Barnardo's, Coram and WWCSC (Figure 1). It sets out the context, intervention, mechanisms and outcomes of the model.

Figure 1. Logic model of the Barnardo's Let's Connect – Fostering Communities (WRAP) model



Evaluation questions

Generic questions	Specific questions	Study
Does the intervention work? [4]	What impact does referring a family to WRAP, relative to usual support for the mental health and wellbeing of fostering and kinship care families, have on : 1. … carers' **wellbeing** ?	Impact evaluation
	2. … carers' **perceived peer support** as measured by the number of other foster or kinship carers a carer could ask for help if needed?	Impact evaluation
	3. …the **mental health of children** in fostering and kinship households, as reported by their carers?	Impact evaluation
	4. … carers' **family relationships**?	Impact evaluation
	5. … the rate of **placement changes**?	Impact evaluation
Does the intervention work as expected? Does the intervention work differently for some groups? Does the intervention work differently in some places? To what extent was the intervention implemented as intended? What have we learned?	1. To what extent was the intervention **implemented as intended** compared to the activities detailed in the theory of change and logic model?	Process evaluation
	2. What is the **experience of taking part** in WRAP for (birth/foster/kinship) children and their carers?	Process evaluation
	3. What is the learning from introducing WRAP in the new context of the fostering and kinship community?	Process evaluation
Is the intervention a good use of resources?	4. How much does it cost Barnardo's and local authorities to introduce WRAP in the first year?	Cost evaluation

[4] Dependent on sample sizes, we may also be able to address generic questions 'Does the intervention work differently for some groups?' and 'Does the intervention work differently in some places?' with these quantitative outcome measures.

Impact evaluation

Specific evaluation questions

Our impact evaluation will seek to answer whether the intervention works through a series of primary, secondary and exploratory evaluation questions.

Primary outcome

1. What impact does referring a family to WRAP, relative to usual support for the mental health and wellbeing of fostering and kinship care families, have on **carers' wellbeing**?

Secondary outcomes

What impact does referring a family to WRAP, relative to usual support for the mental health and wellbeing of fostering and kinship care families, have on:

2. …**carers' perceived peer support** as measured by the number of other foster or kinship carers a carer could ask for help if needed?
3. …the **mental health of children** in fostering and kinship households, as reported by their carers?
4. …**carers' family relationships**?
5. …the rate of **placement changes**?

Exploratory outcomes

6. What impact does referring a family to WRAP, relative to usual support for the mental health and wellbeing of fostering and kinship care families, have on **carer turnover**?
7. What impact does referring a family to WRAP, relative to usual support for the mental health and wellbeing of fostering and kinship care families, have on whether **children are referred to Child and Adolescent Mental Health Services** (CAMHS)?

There may also be scope to answer two further questions through sub-group analysis, dependent on sample sizes: does the intervention work differently for some groups (e.g. kinship carers, foster carers, other adults etc.); and does the intervention work differently in some places? However, given the expected sample size, these issues will most likely be explored solely through the process evaluation.

Design **Trial type and number of arms**	**Pilot randomised controlled trial (RCT) with 50:50 randomisation to two arms: intervention and control**
Unit of randomisation	Family (fostering or kinship household)
Stratification variables (if applicable)	By local authority (Hull, North Lincolnshire, North East Lincolnshire)

Primary outcome	Variable	1. Carer wellbeing
	Measure (instrument, scale)	1. Carer self-reported wellbeing using the Warwick Edinburgh Mental Wellbeing Scale (Tennant et al., 2007) within an online survey
Secondary outcome(s)	Variables	2. Perceived peer support 3. Mental health of children in fostering and kinship households 4. Family relationships 5. Placement stability
	Measure(s) (instrument, scale)	2. Self-reported number of other local carers a foster carer or kinship carer reports they are able to contact for help if needed (0+) (self-reported perceived peer support) asked within an online survey 3a. Carer-reported child wellbeing using the Brief Assessment Checklist for Children and Adolescents (20 item) (Tarren-Sweeney, 2013) in an online survey 3b. Foster child wellbeing using the Strengths and Difficulties Questionnaire total difficulties score (Goodman, 2001) from a local authority administrative data return 4. Carer self-reported family relationships using the SCORE-15 (15 item) (Stratton *et al.*, 2010) in an online survey 5. Number of placements, dates of placement changes, reasons for placement changes (child-level) from a local authority administrative data return
Exploratory outcome(s)	Variables	6. Carer turnover 7. The rate of referrals of children to Child and Adolescent Mental Health Services (CAMHS)
	Measure(s) (instrument, scale)	6. Carer turnover, reason for carer ceasing to be a carer (carer level) 7. Whether a child has been referred to CAMHS between randomisation and end of reporting period

There are a number of outcome measures we could use. We have consulted our advisory committee (four foster carers, two academics and one Fostering Consultant) in finalising our choice of measures for primary data gathering directly from foster families. In line with WRAP's emphasis on wellbeing, we selected the Warwick Edinburgh Mental Wellbeing Scale as our primary outcome measure .

After consulting with local authorities on our data request, we have selected variables that are accessible for local authorities. Referrals to CAMHS may prove challenging due to data availability but local authorities have until March 2024 to address any challenges with sharing this. It is reasonable to assume that placement changes and foster carer turnover are likely to be correlated with poor wellbeing (Rubin et al., 2007;[5] Adams et al., 2018[6]).

Randomisation

Families who express an interest in taking part in the WRAP programme and its evaluation will be randomised to either a referral, or usual support for mental health and wellbeing, which includes providing information about existing services (50:50 split).

Randomisation will be at the family level. This means all household members in the intervention group will be referred. Barnardo's aims to reach as many of the members of each target family as wish to take part. We believe this choice of unit will help address ethical and logistical concerns around randomisation (such as sibling dynamics). Having taken advice on terminology from advisors, we will avoid the use of 'intervention group' and 'control group' in communications with families.

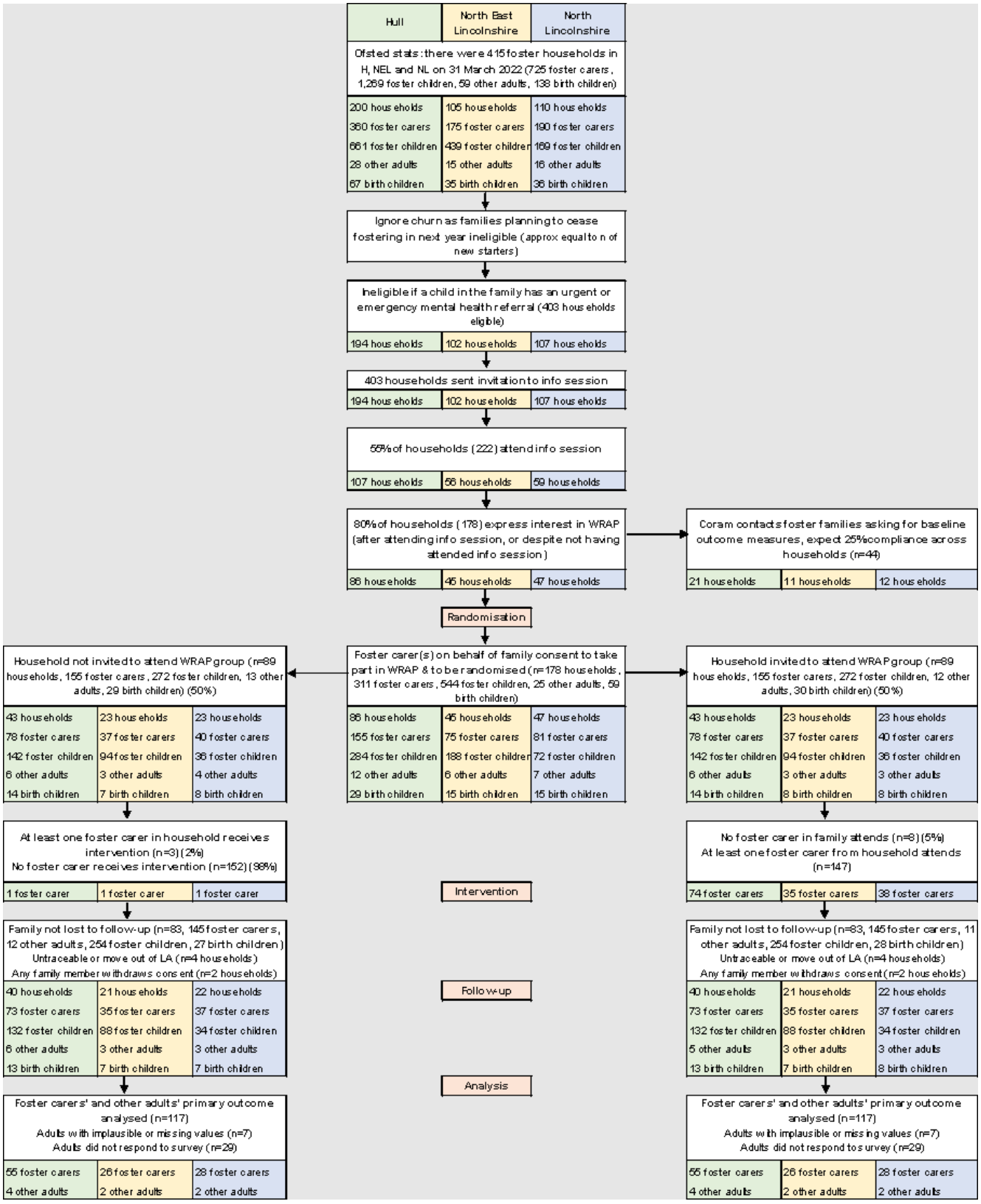
We have outlined participants' journey through the trial in the CONSORT diagram in Figure 2. This is based on the sample of participants available across the three local authorities. Foster families are more numerous than kinship families and will be prioritised by Barnardo's, so our numbers below cover foster families and represent minima. We have included a separate CONSORT diagram with our estimation of kinship households in Annex 1, but do not want to rely on this given the lack of available data on the number of kinship carers. We have built the following assumptions into our estimations:

- 3% of households will be ineligible on the basis that there is at least one child in the household with an urgent or emergency mental health referral. This is an estimation based on the proportion of under-18s with an emergency referral, and an elevated level of mental health need in foster children[7].

[5] Rubin, D. M., O'Reilly, A. L. R., Luan, X., and Localio, R. (2007) 'The Impact of Placement Stability on Behavioral Well-being for Children in Foster Care,' *Paediatrics*, 119(2): 336-344.
[6] Adams, E., Hassett, A. R., and Lumsden, V. (2018) 'What do we know about the impact of stress on foster carers and contributing factors?' *Adoption & Fostering*, 42(4): 338-353.
[7] Looked-after children and young people, NICE guideline (2021): www.nice.org.uk/guidance/ng205/chapter/Context

- 55% of invited households attend info session. This is a conservative estimate based on engagement experience of previous interventions in foster communities, i.e. foster carers being busy, having many commitments etc.
- 2% of control group households will receive WRAP despite being allocated to the ‘do not receive intervention’ trial arm. This is based on trial arm non-compliance from previous children’s social care RCT experience.
- 95% of intervention group receive intervention. This is estimated to be high, given that all households have expressed interest in the intervention.
- Upon administration of the endline survey, 5% of carers are untraceable. This is based on previous children’s social care RCT experience.
- By the point of the endline survey, 2% of households withdraw consent. This is based on previous children’s social care RCT experience.
- For the primary outcome, 5% have implausible or missing values. We anticipate this being low, as we will primarily rely on an online survey for our primary outcome with set response options.
- 20% of carers do not respond to the endline survey. We anticipate that this will be low due to the use of an incentive voucher, social worker engagement in advance of survey distribution, and a schedule of reminder text messages.

Figure 2. Consort diagram showing participants' journey through the pilot RCT of Barnardo's WRAP programme



To randomise we will set up a system where local authorities provide to Coram by email a unique family ID for each family expressing interest (consenting to participate in the

programme and study). Randomisation will be stratified by local authority. This will include fields to enable us to check whether local authorities have applied the eligibility criteria correctly, before we undertake randomisations (box 1).

We anticipate randomising around 178 households using a securely stored spreadsheet pre-populated with randomisation outcomes, and return the outcomes back to local authorities and Barnardo's within 24 hours. We will do this for the stock of families in March 2023, and then on demand as needed for the in-flow of newly eligible families thereafter until early 2024.

We can expect that some children and young people will move to a randomised household during the observation period of the study, and that a proportion of these will move to a household randomised to a different trial arm. The Children's Commissioner (2020) found that, among children in care on 31 March 2019, most children (68%) had remained in their placement throughout the previous year, but 32% experienced one or more placement moves, 10% had experienced two or more placement moves, and 4.1% had experienced three or more. Teenagers and older children had the highest rates of placement instability. We have planned our administrative data returns to capture child and family ID codes, in order to trace the movement of children between households. We will report on the proportion of children that move between randomised households, in order to estimate the degree of trial arm 'contamination' in the current study and to predict this for a future full-scale RCT. We will also explore this in a compliance analysis (see Analysis plan).

Participants

The intervention and trial takes an inclusive approach to recruitment within households. The sample will therefore be made up of:

- Foster carers
- Kinship carers
- Foster children
- Kinship children
- Birth children, including children by blood, marriage, or legal adoption
- Other adults and children in fostering and kinship households, such as relatives and partners

Social workers also form part of fostering and kinship communities. Barnardo's will deliver services to FSWs as part of this programme, but social workers will not be randomised. Barnardo's have invited all FSWs in the three local authorities to take part in the WRAP intervention ahead of the trial, to aid programme buy-in and referrals.

Three local authorities volunteered to take part in the trial: Hull City Council; North East Lincolnshire Council; and North Lincolnshire Council.

Table 1. Information about participating local authorities

Local authority	Region	Type	Ofsted rating
Kingston Upon Hull City Council	Yorkshire and the Humber	Unitary	Requires improvement to be good (2023)
North East Lincolnshire Council	Yorkshire and the Humber	Unitary	Inadequate (2021)
North Lincolnshire Council	Yorkshire and the Humber	Unitary	Outstanding (2022)

We will explore business as usual support at the three local authorities as part of our process evaluation, but to provide an illustrative example of the context in which this trial will be operating, business as usual support in North Lincolnshire is described as: monthly visits from FSW; fortnightly coffee mornings; 'Come and Join Us' support group and activities for children; tiered fostering meetings with CAMHS, education staff, FSW, SW; membership of the Fostering Network; access to confidential counselling; bi-monthly meeting with managers and team members; regular fun activities for the whole fostering family; and buddy/mentor scheme for new foster carers.

Foster families are more numerous than kinship families and will be prioritised by Barnardo's, so our numbers below cover foster families and represent minima. Kinship care is a growing but not well understood form of care for children who cannot live with birth parents. Based on the 2011 census an estimated 152,910 (1.4% of children) children in England were living in kinship care (Wijedasa, 2015[8]). As another indication, in 2021-22 the number of Special Guardianship Orders granted continued to rise by 6% to 4,010 (ASGLB, 2022[9]). There is an upward trend in the proportion of local authority foster care placements made up by family and friend households with 7,855 in March 2022 (Ofsted, 2022[10]). Of these kinship carers, 10% are from minority ethnic groups.

Hull is the largest of the three participating local authorities in terms of fostering population, with almost half of the total number of fostering households (Table 2). On 31 March 2022, in Hull, North Lincolnshire and North East Lincolnshire, there were 415 fostering households, with 725 approved foster carers[7] and 1,269 looked-after children in foster placements[8].

[8] Wijedasa, D. (2015). *The prevalence and characteristics of children growing up with relatives in the UK*. Bristol: Hadley Centre for Adoption and Foster Care Studies, University of Bristol.

[9] ASGLB (Adoption and Special Guardianship Leadership Board) (2022) Data on Adoption and Special Guardianship. Coram-i Available from: https://coram-i.org.uk/asglb/data/

[10] Ofsted (2022) Fostering in England 1 April 2021 to 31 March 2022. National Statistics, November 2022.

Table 2. Numbers of fostering households for each participating local authorities and in total

Local authority	Kingston Upon Hull	North East Lincolnshire	North Lincolnshire	Total
Total approved fostering households[11]	200	105	110	415
Number of foster carers in approved fostering households[7]	360	175	190	725
Number of looked-after children in foster placements[12]	661	439	169	1,269

There is no available data on the number of non-foster carer adults or birth children in fostering households. Data leads at the three local authorities informed us that this data is not systematically collected and stored, and is only available through social worker notes. We have assumed one non-foster carer adult per seven fostering households (n=59 other adults), and one birth child per three fostering households (n=138 birth children). The overall pool of fostering households in the three local authorities is therefore 784 adults and 1,407 children.

Following the CONSORT diagram assumptions outlined above, if 95% of all adults and children in intervention trial arm households take part in Level 1 WRAP, this equates to 159 adults and 287 children. As outlined above, kinship carers will be recruited to supplement these numbers and to meet Barnardo's desired delivery of 240 adults and 240 children. We have outlined an approach to mitigate against low uptake rates below.

Inclusion criteria

The trial will include:

- Fostering and kinship households in Hull City Council; North East Lincolnshire Council; and North Lincolnshire Council.
- Fostering and kinship households where at least one adult expresses an interest in taking part in the WRAP programme and its evaluation.
- Fostering households will be prioritised where foster carers are caring for one or more foster children at the time of randomisation.
- Children must be aged nine and over[13] in order to attend WRAP sessions, but

[11] National statistics: Fostering in England 1 April 2021 to 31 March 2022 (2022). Ofsted. www.gov.uk/government/statistics/fostering-in-england-1-april-2021-to-31-march-2022/fostering-in-england-1-april-2021-to-31-march-2022#contacts

[12] National statistics: Children looked after in England including adoptions (2022). Department for Education. https://explore-education-statistics.service.gov.uk/find-statistics/children-looked-after-in-england-including-adoptions/2022

[13] Barnardo's tell us their experience of delivery of WRAP has largely focused on supporting young people in secondary school, with recent delivery extended to year five and six pupils in Hull. Delivering WRAP to children younger than nine years would require specific permission from the founders and licence holders of WRAP to change aspects of the programme, such as the language used. Barnardo's wants to deliver WRAP to younger children as part of a smaller project before including it in an RCT.

families with younger children can still be randomised (the adult(s) can attend WRAP).

Exclusion criteria

Local authorities will first exclude ineligible families, who:

- Plan to cease fostering in the next year
- Contain at least one child referred for crisis care from CAMHS (urgent or emergency)
- Foster families in crisis and on the verge of placement breakdown

Based on local statistics published by Ofsted we estimate the first criterion would exclude around 25% of families if local authorities had perfect information, but will be approximately replaced by families which start fostering over the same time period. Based on NHS Digital, ONS and DfE data, we assume 19 families will be ineligible due to crisis referrals.[14] Based on March 2021 local Ofsted data, we can expect 1.7 foster carers per foster family and 1.88 foster children per foster family.

Procedures

Local authorities will provide carer contact information to Barnardo's, and Barnardo's will send eligible families an invitation to an information session. Barnardo's will facilitate information sessions, with the aim of giving prospective participants clear information about the programme and evaluation to inform their decision whether to express interest. Delivery of information sessions will be ongoing throughout the programme, and a minimum delivery of two per week is anticipated, with more at certain points e.g. in the start-up period. They will include co-delivery with some fostering and kinship community members after their completion of WRAP Level 1 groups.

After attending an information session, interested participants will complete an Expression of Interest form. Barnardo's will collate these and send the details of these households to Coram for randomisation. We will randomise the stock of families in February 2023, and then on demand as needed for the in-flow of newly eligible families thereafter until early 2024.

Mitigations in case of low uptake

Barnardo's will give priority to mainstream foster carers and kinship carers, but will consider extending to short break carers if numbers expressing interest are lower than anticipated. Barnardo's are confident that these carers can be included in the intervention and that WRAP will be suitable. We will seek to recruit a short break carer to better understand their experience of WRAP sessions in our process evaluation if they are included in the sample.

[14] ONS mid-year population estimate for 2020: 127,722 under 18s in H, NL and NEL. This is 1.1% of all under-18s in England. NHS Digital: 3.8% of referrals to CYP's MH services in England in March 2022 were emergency or urgent referrals (3,453). Multiply by 12 months = 41,436. Assume 456 (1.1% of) referrals were from HCC/NL/NEL. Children in foster placements make up 1.02% of the population of under-18s in the three LAs. Looked after children are four times more likely to experience mental health issues than their peers. 1.02% x 4 = 4%, and 4% of 456 is 19. Assume all 19 are in different families.

The evaluation questions and outcome measures will be appropriate for kinship households. We have provided response options in the survey to indicate how each child in the family is related to the carer, including options for foster and kinship care. The theory of change for the intervention was designed with fostering households in mind, but as specified in the intervention protocol WRAP should also be suitable for kinship carers, a point we will explore in the process evaluation.

Sample Size / Minimum Detectable Effect Size Calculations

MDES (Proportion of a Standard Deviation)		**0.37 (95% CI 0.11-0.63)**
Proportion of variance in outcome explained by covariates[15] (R^2)	Foster or kinship carer	0.6
	Foster or kinship family	0
	Local authority	0
Intracluster Correlations Coefficient (ICCs)	Foster or kinship carer	n/a
	Foster or kinship family	0.4
	Local authority	n/a
Alpha		0.05
Power		0.8
One-sided or two-sided?		Two-sided
Level of intervention clustering		Household
Average cluster size (if cluster-randomised)		1.9
Expected randomised sample size	Intervention	89 households (167 adults)
	Control	89 households (168 adults)
	Total	178 households (336 adults)
Expected final sample size for analysis	Intervention	62 households (117 adults)
	Control	62 households (117 adults)
	Total	124 households (234 adults)

We have calculated the Minimum Detectable Effect Size (MDES) as 0.37 for our primary outcome. As shown in the table above, we anticipate 50:50 randomisation of 178 households, or 335 adults. Following dropout etc., we expect an analysable sample of 234 adults in 124 households. We have calculated this with a power of 0.8.

The calculations above assume a 75% response rate to the endline survey as noted in our CONSORT assumption. If we were to have a 65% endline survey response rate (202 adults) the MDES would be 0.40 (0.12-0.68) and for a 55% response rate (172 adults) this would be 0.43 (0.13-0.74).

We have used the following assumptions in our power calculation:

[15] This includes, and will most likely be most influenced by, a baseline measure of the outcome.

- We have used a two-level clustered design to account for household level clustering of adult survey responses. As we are only stratifying for local authority, not randomising at local authority level, we have not used a three-level approach and will instead include local authority as a fixed effect in our models.
- We have assumed an average of 1.9 adults per foster family, including foster carers and other adults in the household. At this ratio, we expect 240 foster carers in 142 foster families. We have assumed a low to moderate ICC of 0.4 . We anticipate that scores between adults in the same household will be similar in that households are exposed to some shared risk and protective factors related to wellbeing, such as socioeconomic status. However, wellbeing is subjective and influenced by individual circumstances. Our chosen ICC attempts to address this theoretical basis. Our trial's reported ICCs will be useful to inform power calculations for a future full-scale trial.
- We have assumed a considerable amount of variance as explained by covariates such as a baseline measure of the outcome, as baseline wellbeing scores are likely to be highly correlated with endline scores at an individual level.
- This is our primary outcome and therefore not subject to adjustments for multiple comparisons, so we have used an alpha of 0.05.

The MDES was calculated in R using the PowerUpR package[16]. The code used is provided in Annex 2.

Outcome measures

We have made pragmatic choices, aiming to investigate the outcomes set out in the logic model while minimising burden on local authorities and participants, and maximising data quality and completeness. We have chosen to contact families using an online survey at baseline and endline, with carers without valid email addresses sent a copy by post, and reminders sent by email, post and text message as appropriate. The survey will be sent to all carers in the trial. As shown in the table below, we have scheduled prompt text messages for the baseline and endline survey, and reminder text messages for non-responders to the endline survey. We plan to keep the survey open for one month, but may extend this deadline depending on the response rate.

The baseline survey will be sent to carers shortly after families have been randomised. We therefore anticipate that most surveys will be sent in March 2023 as this is when most families will enter the programme i.e. when local authorities share contact details with Barnardo's to invite families to information sessions. However, where families become eligible or interested throughout the trial period, the survey will be sent on a rolling basis following randomisation. The endline survey will be sent in July 2024, once all WRAP Level 1 delivery has ended. This is so that the endline survey can theoretically capture any change, or lack of change, that has occurred by both adults and children/young people attending Level 1 WRAP. We anticipate that capturing outcomes at endline will pose challenges for retention and have therefore made the following plans to boost the response rate:

[16] Bulus M, Dong N, Kelcey B, Spybrook J (2021). *PowerUpR: Power Analysis Tools for Multilevel Randomized Experiments*. R package version 1.1.0, https://CRAN.R-project.org/package=PowerUpR.

1. Foster carers and kinship carers will receive a £10 voucher upon completion of the survey at baseline and another £10 voucher at endline.
2. We will send a reminder text and email ahead of the endline survey (June 2024) to remind foster and kinship carers that they will receive the survey in July 2024.
3. We will consider phoning all randomised foster carers and kinship carers at midpoint as a courtesy to check on engagement and remind them of the endline survey. However, we will weigh this up against whether this will be too much contact and considered a nuisance.
4. We will work with Barnardo's to explore mechanisms for reminding participants of the endline survey, including social media, via fostering social workers, and at the Keeping Connected groups.
5. We will check whether contact details for participants are up-to-date with local authority records.

In order to minimise data storage and use the most up-to-date contact details, we will obtain contact details for all randomised carers from the Barnardo's Expression of Interest form.

Table 3. Milestones for outcome measure collection

Task	Date
Referrals of families sent by Barnardo's to Coram	March-April 2023
Eligible referred families randomised by Coram, then randomisation outcomes shared with local authorities and Barnardo's	March – April 2023
Coram emails/posts baseline survey to carers (with prompt text message, if mobile phone number available)	March – April 2023
Coram randomises eligible referred families, then emails/posts baseline surveys to carers (with prompt text message, if possible)	March 2023 – March 2024
Coram sends endline survey by email/post to carers (with prompt text message, if mobile phone number available)	1st July 2024
Coram requests administrative data from local authorities	1st July 2024
Coram sends reminder email/text message/post to non-respondent carers	July 2024
Deadline for local authorities to send Coram administrative data request Deadline for carers to complete endline survey	31st July 2024

The online baseline and endline surveys are hosted on Smart Survey. The prompt text message will read:

‘Hi, we’re Coram. You may remember agreeing to take part in our study of families in Hull and Lincolnshire. Today we emailed you a survey about your experiences as a carer: [link]. Please complete by 30th April. We will send you a £10 voucher if you complete this survey, and we will also send you another £10 voucher if you complete an additional survey in July 2024 .’

The reminder text for the endline survey will read:

‘Last chance to have your say! We have emailed you a survey about your experiences as a carer. Your response will help Barnardo’s and local authorities to offer the best possible wellbeing support to the fostering community. We will send you a £10 voucher if you complete this survey by 31st July. The link to the survey is [link]’

We will also consider including an additional prize draw in a reminder text, dependent on the response rate.

Type	Outcome	Outcome measure	Collected from	Baseline	Endline
Primary outcome	Carer wellbeing	Warwick Edinburgh Mental Wellbeing Scale (WEMWBS, Tennant *et al.*, 2007)	Carer via online survey	✓	✓
Secondary outcome(s)	Perceived peer support networks	‘How many other local foster carers or kinship carers could you ask for help if you needed it?’	Carer via online survey	✓	✓
	Child mental health	Brief Assessment Checklists for Children and Adolescents (Tarren-Sweeney, 2013)	Foster carer or kinship carer, reporting on all children currently in the household via online survey	✓	✓
	Foster child mental health	Strengths and Difficulties Questionnaire (Goodman, 2001)	Various informants, may be foster carer, social worker or young person via administration data request	✓	✓

	Family relationships	SCORE-15 (Stratton *et al.*, 2010)	Foster carer or kinship carer via online survey	✓	✓
	Placement changes	Administrative data: number of placements, dates of placement changes, reasons for placement changes.	Local authority data request		✓
Exploratory outcome(s)	Foster carer turnover	Administrative data: foster carer turnover, reason for foster carer ceasing to be a foster carer.	Local authority data request		✓
	Service use/help seeking	Administrative data: referrals to CAMHS of foster children, dates of referrals, reasons for referrals (presenting issues).	Local authority data request		✓

For the online survey, we have consulted our advisors in finalising our choice of measures for primary data gathering directly from families. Each foster carer completing the survey will be sent a £10 incentive voucher, and we have timed the survey at around 15 minutes to complete. On the final page of the survey, participants will be asked which voucher they want to receive from a choice of two options (we anticipate using Amazon and Love2Shop). Measures will be completed by carers, but the survey will ask carers to answer questions about themselves, their foster children, their kinship children, and their birth children. The online survey includes:

- Questions referring to **foster and kinship carer demographic** information. This includes date of birth, initials, mobile phone number, and email address. We will not ask any further details, as we want to minimise burden and intend to match this data with local authority data using these fields.
- Questions referring to **demographics of children** currently in the household. This includes birth, foster, kinship, adoptive, and step children. We will request the child's date of birth and initials to allow data matching.
- A measure of **peer support**: the number of other local foster carers or kinship carers the foster carer could ask for help. The survey will prompt for a numerical answer, and the question will read 'How many other local foster carers or kinship carers could you ask for help if you needed it?'
- A measure of **carer self-reported wellbeing**: the Warwick Edinburgh Mental Wellbeing questionnaire (Tennant *et al.*, 2007). This is a 14-item self-report scale of positively worded wellbeing items and has been validated for use with individuals aged 13 years and above. The psychometric properties of the measure are well-

established, and it has demonstrated sensitivity to change (Collins *et al.*, 2012[17]; Maheswaran *et al.*, 2012[18]).

- A measure of **carer-reported child wellbeing**: the Brief Assessment Checklist for Children and Adolescents (BAC-A; Tarren-Sweeney, 2013). The BAC-A is a 20-item caregiver-reported measure of mental health difficulties in children and adolescents aged 4-17 years. The measure was developed specifically for children and young people in foster, kinship, and residential care, and children who are adopted. We will ask for a BAC-C or BAC-A (dependent on child age) for every child in the household aged four and above. These outcome measures were developed for use with looked-after children and children with experience of trauma. From our consultations with foster carer advisors, we heard that foster carers see the use of equivalent measures for foster and non-foster children as a positive as foster children are not made to feel different. We have reviewed the items in the BAC-A and BAC-C and none of them seem inappropriate for non-foster children. We anticipate that non-foster children may score differently on these.
- A measure of **carer self-reported family relationships**: the SCORE-15 (Stratton *et al.*, 2010). The Systemic Clinical Outcome and Routine Evaluation-15 (SCORE-15) is a self-report measure of family processes and relationships. While the 15-item version is a relatively new measure, there is evidence to support its psychometric properties.[19]

We will request administrative data from local authorities in March 2024. We will follow DfE SSDA903 requirements to the greatest extent possible, to minimise burden. Some data will have the foster child as the unit of analysis, and some will have the carer as the unit of analysis. We will use an Excel template for the data request that will be partially completed with demographic information about carers and children provided at randomisation. This entails routinely collected data on the care status and living arrangements of children, numbers and dates of placement changes, foster carer turnover management information (unique ID of the foster carer and step-down dates), and Strengths and Difficulties Questionnaire (SDQ) total difficulties scores for foster children (and date of the score and the unique ID of the child). We will gather SDQ scores from local authorities in March 2024, which according to published figures should be available for around 84% of looked-after children. A full breakdown of variables is provided in the spreadsheet template in Appendix 2.

For our secondary outcome of **placement changes**, we will seek data on the following variables for each foster child:

1. Number of placements since randomisation

[17] Collins, J., Gibson, A., Parkin, S., Parkinson, R., Shave, D., & Dyer, C. (2012). Counselling in the workplace: How time-limited counselling can effect change in well-being. *Counselling and Psychotherapy Research*, *12*(2), 84-92.
[18] Maheswaran, H., Weich, S., Powell, J., & Stewart-Brown, S. (2012). Evaluating the responsiveness of the Warwick Edinburgh Mental Well-Being Scale (WEMWBS): Group and individual level analysis. *Health and Quality of Life Outcomes*, *10*(1), 1-8.
[19] Hamilton, E., Carr, A., Cahill, P., Cassells, C., & Hartnett, D. (2015). Psychometric properties and responsiveness to change of 15-and 28-item versions of the SCORE: A family assessment questionnaire. *Family process*, *54*(3), 454-463.

2. Date of first placement change since randomisation (if applicable)
3. Nature of second placement (if applicable)
4. Reason for first placement change (if applicable)
5. Other reason for first placement change (if applicable)
6. Date of second placement change since randomisation (if applicable)
7. Nature of third placement (if applicable)
8. Reason for second placement change (if applicable)
9. Other reason for second placement change (if applicable)
10. Date of third placement change since randomisation (if applicable)
11. Nature of fourth placement (if applicable)
12. Reason for third placement change (if applicable)
13. Other reason for third placement change (if applicable)

In the guidance provided with the data return, we will ask local authorities to provide reasons for placement changes experienced by foster children in randomised households, according to the following categories (taken from the SSDA903 return, DfE, 2022[20]):

1. Change to/Implementation of Care Plan for child e.g. a planned change of placement which is a part of the child's care plan on a temporary or permanent basis
2. Allegation (s47) – child is removed from placement due to an allegation which is being investigated under s47
3. Standards of care concern – child is removed from placement by authority or provider due to concerns about standards of care
4. Carer(s) requests placement end due to child's behaviour – placement has broken down or been disrupted due to the child's behaviour
5. Carer(s) requests placement end other than due to child's behaviour – intended placement was a short or long-term arrangement but has been broken down or disrupted and carer has asked for the child to be moved
6. Child requests placement end – intended placement was a short or long-term arrangement but has been broken down or disrupted and child has requested to be moved
7. Responsible/area authority requests placement end – intended placement was a short or long-term arrangement but responsible authority has decided the placement no longer meets the needs of the child.
8. Custody arrangement – where child has been admitted into custody
9. Resignation/ closure of provision - child had to be moved because foster carer resigns or setting closers
10. Change in the status of placement only – change in status of placement but the child remains with same carer and there is no change to the care plan
11. Approval removed – a setting is no longer approved/registered with the appropriate statutory body (e.g. Ofsted)
12. Other reasons
13. Unknown reasons

[20] Department for Education (2022). Children looked-after by local authorities in England Guide to the SSDA903 collection 1 April 2021 to 31 March 2022 – Version 1.3. Crown Copyright: London.

If any 'other' reason is provided for multiple children, we will create a category code for this response.

For the exploratory outcome of **foster carer turnover** we will ask local authorities to provide the following data in their data return:

1. Has the foster carer ceased fostering? (yes, no)
2. Why has the foster carer ceased fostering? (resignation, uncontested termination of approval, contested termination of approval, other, unknown)
3. Other reason (if applicable)
4. Contributing factors (e.g. illness)

We will also seek data on referrals to Child and Adolescent Mental Health Services - **CAMHS referrals** - for foster children in the fostering household. From discussions with local authority data leads, it is likely that where this information is centrally stored, it will only be available for foster children in the household and not other children. This analysis will be exploratory only.
While not an outcome variable, we also intend to request data from Barnardo's on **engagement** with the intervention. This will include attendance at information sessions, the number of WRAP sessions attended and the dates of WRAP sessions. The intervention is designed to be self-sustaining, so we will also gather and match in data from Barnardo's on who leads the ongoing Keeping Connected groups. This will allow us to describe the delivery of the intervention in the final report and will be used in the compliance analysis.

Analysis plan

Does the intervention work?

Q1 Analysis

The trial will take an RCT design. The primary outcome will be collected at baseline (for most families, March 2023) and endline (for all families, July 2024). All outcomes will be analysed on an intention to treat basis in that all participants will be analysed according to the trial arm to which they were assigned, as opposed to the service they received.

Families are the unit of randomisation, but data will be analysed at the individual level e.g. individual foster child placement breakdown, individual foster carer turnover, and individual SDQ outcomes for foster children. We will need to account for clustering within our analysis. We may receive two responses from couples. In this case, we will use clustered standard errors to account for this.

We know from prior experience of analysing routinely collected Strengths and Difficulties scores for looked-after children that local authorities do not generally know or collect data on the version of the SDQ used and who completed it (carer, child, or social worker). We therefore anticipate it will be challenging to standardise scores on the SDQ by informant, but will do so if data allows.

Data cleaning

We may exclude some foster placement changes and foster carer turnover according to the reasons for these. This will be agreed in due course and informed by consultation with local authority data leads and our advisors. We anticipate using the following categorisations for analysis:

Include in or exclude from analysis	Reason for placement change	Reason for foster carer turnover
Include	Change to/Implementation of Care Plan for child e.g. a planned change of placement which is a part of the child's care plan on a temporary or permanent basis	Resignation
	Allegation (s47) – child is removed from placement due to an allegation which is being investigated under s47	Uncontested termination of approval
	Standards of care concern – child is removed from placement by authority or provider due to concerns about standards of care	Other reasons
	Carer(s) requests placement end due to child's behaviour – placement has broken down or been disrupted due to the child's behaviour	
	Carer(s) requests placement end other than due to child's behaviour – intended placement was a short or long-term arrangement but has been broken down or disrupted and carer has asked for the child to be moved	
	Child requests placement end – intended placement was a short or long-term arrangement but has been broken down or disrupted and child has requested to be moved	
	Responsible/area authority requests placement end – intended placement was a short or long-term arrangement but responsible authority has decided the placement no longer meets the needs of the child.	
	Custody arrangement – where child has been admitted into custody	
	Other reasons	
Exclude	Resignation/ closure of provision - child had to be moved because foster carer resigns or setting closers	Contested termination of approval
	Change in the status of placement only – change in status of placement but the child remains with same carer and there is no change to the care plan	

	Approval removed – a setting is no longer approved/registered with the appropriate statutory body (e.g. Ofsted)	

Treatment of missing data

For outcome data, we will compute missingness indicators for each of our outcomes and regress these indicators on covariates. If these are significant, then the data is not missing completely at random. We will also check whether the data is experimentally missing at random by regressing the missingness indicator on a treatment dummy. If this is not significant, we will use listwise deletion of observations without outcome data, but if this is significant we will use a last observation carried forward (LOCF) approach. For questionnaires such as the SDQ and the WEMWBS, we will prioritise the approach to missing data as specified in the measure guidance. For example, the user guide for the WEMWBS advises against imputing missing data for participants where more than three items are missing[21].

We will use multiple imputation for our covariates and conduct our analyses and compare this with our analysis for only complete cases. We will then assess both outputs to determine how similar the treatment estimates are in terms of their significance and direction (20% range as rule of thumb). If these coefficients are not similar, we can reasonably conclude that these data are missing not at random. For these data, we will carry out multiple imputation for our main analysis, with accompanying sensitivity analysis to evaluate the assumptions used. If these coefficients are similar and covariate coefficients are not significant when regressed onto missingness indicators, we can conclude that these data are missing completely at random. If the coefficients are similar, but the covariate coefficients are significant we can assume that these data are missing at random. For missing covariates (unknown), we will use mean average imputation and report how this affects the results.

Criteria	**Treatment estimates are similar for complete cases analysis and multiply imputed analysis**	**Treatment estimates are not similar for complete cases analysis and multiply imputed analysis**
Covariates significant when regressed onto missingness indicators	Missing at random (MAR) Multiple imputation with accompanying sensitivity analysis Impute missing data to fix bias and for power	Missing not at random (MNAR) Multiple imputation with accompanying sensitivity analysis
Covariates not significant when regressed onto missingness indicators	Missing completely at random (MCAR)	Missing not at random (MNAR)

[21] Stewart-Brown, S., & Janmohamed, K. (2008). Warwick-Edinburgh mental well-being scale. User guide. Version, 1(10.1037).

	Impute missing data to fix standard errors and for power	Multiple imputation with accompanying sensitivity analysis

Descriptives

We will calculate and report descriptive statistics, including the characteristics of the intervention and control groups on each key variable collected. We will carry out balance checks to report on how balanced the characteristics of respondents are across treatment and control groups. If any characteristics are significantly unbalanced between trial arms, we will adjust these in our outcomes analysis.

We will report full baseline characteristics of the sample, the characteristics of those lost to follow-up, and the characteristics of the analysable sample. We will compare demographic characteristics of our recruited sample (those who consent) and analysable sample (those who complete the endline survey) in terms of representativeness of the population in the three local authorities. Where appropriate, we will report ICCs to describe the clustered nature of the data (e.g., SDQ scores for foster children in a family).

Primary outcome analysis

Our primary outcome is a numeric variable. We will use linear regression to estimate the average effect of the treatment allocation on this variable using a Huber-White (HW) robust error procedure to account for heteroscedasticity and clustering. We will include fixed effects for local authority. The coefficient will be an estimate of the size and direction of the treatment effect and its significance will be tested with a two-tailed 5% Type I error threshold. Following What Works for Children's Social Care statistical analysis guidance, we will report our effect sizes as Glass' delta using unconditional (unadjusted) standard deviations.

Our primary model will only include predictors that are significantly unbalanced between trial arms. We will consider the following variables for possible inclusion in the model in sensitivity analyses, and compare impact estimates of this model to the first model to assess the extent to which the further controls have increased or decreased the impact effect. This may give us further insights into relationships which can help to inform future work. We will decide whether to include them or not based on whether or not they significantly predict the primary outcome:

- dummy variable for gender of foster carer or kinship carer (female, male, neither, unknown);
- dummy variables for ethnic group of foster carer or kinship carer (Asian, Black, Mixed, Other, White, unknown);
- dummy variable for age of foster carer or kinship carer (21-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, 85 and over, unknown);
- dummy variable for whether a single carer or couple (single, partner, unknown);
- deprivation indicator (derived from postcode district);
- baseline WEMWBS score;
- time from randomisation (in months).

If any of the cells defined as above have fewer than 10% of cases, we will merge them with another cell.

We may also include time from first session of intervention in our analysis to explore whether the time between participation and survey completion is associated with outcomes.

Secondary outcomes analysis

Regression models will be used to analyse secondary outcomes. For the majority of outcomes, these will also be linear regression models. We will also run a Poisson regression, and zero-inflated Poisson regression as sensitivity tests in the event that the data contains a substantial number of zeroes. Our approach to reporting on baseline characteristics and adjusting for missing data will be the same as those outlined above. The models used for each secondary outcome are outlined below:

- Carers' perceived peer support: Linear regression (with zero-inflated Poisson regression)
- Mental health of children in household: Linear regression
- Carers' family relationships: Linear regression

For our placement changes outcome, we will analyse this according to our pre-specified reason categories but for robustness will also explore the impact on point estimates and effect sizes when alternative categories are used. For example, we may run a logistic regression where any placement change is included as a placement change regardless of the reason for the change.

The mental health of children will be analysed separately as measured by the BAC and the SDQ. As the SDQ is only available for foster children, this sample size will be smaller i.e. no kinship or birth children. Following What Works for Children's Social Care statistical analysis guidance, our secondary outcomes will be adjusted for multiple tests using the Hochberg's step-up procedure for all secondary analyses.

Other evaluation questions

Exploratory analysis

We will estimate regression models to analyse the two exploratory outcomes. We will use logistic models given the nature of the data; whether or not a foster/kinship child has been referred to CAMHS since randomisation; and whether or not a foster/kinship carer has ceased fostering since randomisation. We will analyse these outcomes according to our pre-specified reason categories but for robustness will also explore the impact on point estimates and effect sizes when alternative categories are used. Relative risk ratios and percentage point changes will be used to express effect sizes.

We expect that some foster children may move, after randomisation, to a household randomised to a different trial arm. We will report on the proportion of children that move between randomised households, in order to estimate the degree of trial arm 'contamination'.

If data allows we will carry out exploratory analysis with sub-groups or include other variables of interest as predictors in regression analyses e.g. whether facilitator was Barnardo's staff member, or trained carer etc. We intend to include whether adults are foster carers, kinship carers, or other adults in the household, and whether children are birth children, kinship children, and foster children. We will also include time from randomisation in months as an interaction with trial arm (included in main regression model as a fixed effect) in order to explore the relationship of time between baseline and endline surveys with outcome differences between intervention and control groups.

In order to understand how well scores on the Strengths and Difficulties Questionnaire recorded by local authorities and scores on the foster-carer reported Brief Assessment Checklist align, we will use a correlation analysis (Spearman's rho and illustrative plots) to explore this.

Compliance

We will explore the influence of trial arm allocation compliance (i.e. whether individuals in the intervention arm receive WRAP, and how many sessions), by including the number of sessions attended in an instrumental variable analysis. Our compliance analysis will look at carer attendance of at least one WRAP session versus non-attendance in terms of change in the primary outcome at individual carer level.

We will also look at attendance as a proportion of household members (e.g., two out of four household members attending means 0.5 attendance) as an instrumental variable in outcomes, as well as the attendance of children at WRAP sessions in relation to their scores on the SDQ and BAC. We may conduct an exploratory dosage analysis with the number of sessions as the instrumental variable, as opposed to binary non-/attendance.

Analysis of harms

We will analyse the proportion of foster children that demonstrate reliable and clinically significant deterioration between their 'pre' and 'post' SDQ scores. For a clinically significant deterioration we will report the proportion of foster children that move from a pre score of below 17 to above at post-test i.e. the clinical threshold for the SDQ (Goodman, 2001[22]; Goodman, Ford, Simmons *et al*., 2000[23]). For reliable deterioration, we will report the proportion of foster children that show an increase in SDQ score from pre to post test that is greater than the reliable change index (Jacobson and Truax, 1991[24]).

Process evaluation

Evaluation questions

[22] Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(11), pp.1337-1345.

[23] Goodman, R., Ford, T., Simmons, H., Gatward, R., & Meltzer, H. (2000). Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *British Journal of Psychiatry*, 177, pp.534-539.

[24] Jacobson, N. S., & Truax, P. (1991). Clinical significance: a statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59(1), pp.12-19.

The process evaluation consists of three summative questions under three themes: delivery of the intervention; participant experiences and learning for future delivery:

Delivery of the intervention

A. To what extent was the intervention implemented as intended compared to the activities detailed in the theory of change and logic model?
   - This will consider:
     - What are the core elements of the intervention that was delivered?
     - How does the delivered intervention vary across groups?
     - How is it different to usual support provided to the foster and kinship community?
     - What are the barriers and enablers to successful implementation of WRAP?

Participant experiences

B. What is the experience of taking part in WRAP for (birth/foster/kinship) children and their carers?
   - This will consider:
     - What are the perceived impacts of WRAP for (birth/foster/kinship) children and their carers?
     - What aspects of the programme do participants attribute to these impacts?
     - Did the intervention work differently in some places?
     - Did the intervention work differently for some groups?
     - Were there differences in how foster and kinship families experienced the intervention and what were these? Were there differences in how birth and foster/kinship children experienced the intervention?

Learning for future delivery and evaluation

C. What is the learning from introducing WRAP in the new context of the fostering and kinship community?
   - This will consider:
     - Delivery staff's perceptions of introducing WRAP to the fostering and kinship communities in comparison with other groups of people[25]
     - Challenges and successes experienced in introducing WRAP to the fostering and kinship community, including what was attendance like? What helped carers and children to attend and access groups?
     - Challenges and successes to delivery with local authority staff to draw out lessons for future service provision and potential scale up
     - Participant views and experiences of completing the outcome measures required as part of the evaluation; in particular, how the Strengths and Difficulties Questionnaire can or should be used in this context

[25] Barnardo's has delivered WRAP to 2,200 children and young people and 120 adults over the last four years in Hull. We will encourage staff to draw out similarities and differences between these experiences in interviews

Design

To answer our process evaluation questions we will:

- **review evidence** from the research and practice literature on the effectiveness and experiences of similar programmes
- **observe** at least one to two adult group session and one to two child group session
- **interview** foster and kinship carers, foster children, kinship children, birth children, social workers and Barnardo's staff
- **survey practitioners** working with families in the three local authorities.

Process evaluation design table

Indicators	Method and time point
Delivery of the intervention: **1. To what extent was the intervention implemented as intended compared to the activities detailed in the theory of change and logic model (core elements, variations, differences to usual support, barriers and enablers)**	
a) Identify core elements of WRAP in practice and research literature b) Core elements of WRAP identified by professionals, kinship/foster carers and (birth/foster/kinship) children c) Variation across groups identified by professionals d) Professionals' descriptions of usual support offered to the kinship/fostering community e) Professionals' descriptions of the ways in which usual support is similar or different to WRAP f) Foster and kinship carers' descriptions of usual support g) Core elements of WRAP observed by researchers at sessions h) Variation across groups observed by researchers at sessions i) Barriers and enablers identified by professionals, children and carers j) Barriers and enablers observed by researchers at sessions	Literature review, Oct-Dec 2022; updated in Oct 2023 and May-Jun 2024 Interviews with kinship/foster carers kinship/ foster children and birth children, Jul-Sep 2023; Mar-May 2024 Survey of practitioners, Apr-Jun 2024 Observations of groups: May 2023, Sep 2023, Jan 2024
Participant experiences: **2. What is the experience of taking part in WRAP for (birth/foster) children and carers? (perceived impacts, if it worked differently across groups and places)**	
a) Children and carers' qualitative reported experience of WRAP b) Professionals' perceptions of children and carers' experience of WRAP c) Researchers' observations of children and carers' experience of WRAP	Interviews with carers, kinship/foster children, and birth children, Jul-Sep 2023; Mar-May 2024

	Interviews with social workers, Jul-Sep 2023; Mar-May 2024 Survey of practitioners, Apr-Jun 2024
Learning for the future **3. What is the learning from introducing WRAP in the new context of the fostering community?**	
a) Delivery staff's experiences and perceptions of introducing WRAP to the kinship/fostering community in comparison to experience of other populations b) Professionals' descriptions of challenges encountered in introducing WRAP to the kinship/fostering community c) Challenges and successes experienced in introducing WRAP to the kinship/fostering community d) Challenges and successes to delivery with local authority staff to draw out lessons for future service provision and scale up e) Children and carers' qualitative reported experience of WRAP f) Professionals' perceptions of children and carers' experience of WRAP g) Children and carers experiences and views of outcome measures in the evaluation (BAC, SDQ) and children's views on how self-reported outcome measures can or should be used in a future evaluation	Interviews with social workers and Barnardo's delivery staff (Jul-Sep 2023; Mar-May 2024) Survey of practitioners, Apr-Jun 2024 Interviews with carers, kinship/foster children, and birth children, Jul-Sep 2023; Mar-May 2024

Methods

Sample, recruitment and data collection

We will use the following methods to collect data. In each case we will keep our tools and approaches under review and make revisions as needed as fieldwork progresses considering early evidence.

Evidence review

We will review evidence from the research and practice literature on the design and effectiveness of similar programmes, including tools, measures and materials used as part of previous WRAP implementation, which will inform the process evaluation.

Observation

To aid our understanding and description of the intervention a researcher will observe at least one to two adult group sessions and one to two child group sessions in person. This observation will be unobtrusive, without active engagement of the researcher(s) in the session. This will be discussed with the facilitator ahead of the session to agree

confidentiality practices. We will develop a semi-structured observational framework to guide the researcher's observations and reporting of these. This will ensure we have a rigorous approach to observations and that we link findings with the programme's logic model. We anticipate the observational framework will cover:

- An account of attendees and delivery context
- A description of the core elements of the intervention
- The dynamics of participant engagement
- Participants' understanding of WRAP concepts and ideas
- The development of individuals' own WRAPs
- Group ways of working and processes.

Interviews

We will interview:

- 10 to 15 foster carers and kinship carers
- Five to 10 foster children and kinship children
- Five to 10 birth children
- Three to five social workers
- Three to five Barnardo's staff

We are using sample ranges rather than specific targets. This will allow for us to be flexible as the fieldwork progresses, and seek to match the balance between foster and kinship family members we interview to their relative participation in the programme. We may find that we have reached data saturation with a smaller sample, or that more interviews are required to explore certain topics. Saturation will be reached once interviews provide little or no information that has not been discussed in previous interviews.

Interviews will be flexibly arranged in two tranches. Tranche one will take place between July and September 2023 and will recruit a smaller sample of foster carers, children and staff to understand the early experiences of the groups. The second tranche of interviews will take place between March and May 2024. This will target a larger sample and will allow for more time for the intervention to establish itself. We will consider the differences between the two sets of interviews and how the intervention has developed over time. We will also consider carrying out follow up interviews with a selection of participants from Tranche one during Tranche two fieldwork. This more longitudinal approach may provide insights into how attending WRAP has affected carers, children and families longer term.
Interviews will be at times to suit interviewees (including weekday evenings). Family members will be offered a £20 supermarket voucher to thank them for their time; we will offer them a choice of retailer. Participants will be recruited through the local authorities rather than through Barnardo's to represent a range of experiences. We will aim to cover all of the local authorities in qualitative fieldwork, that is, design geography into our sample frame, which will also take account of WRAP Level 1 vs Level 2 participation, and seek to represent diversity among those we speak to. We will seek to interview no more than one family member per family, to help us maintain the confidentiality of stories we hear about how WRAP works within families.

Surveys

We will contact approximately 120 practitioners working with families in the three local authorities with a link to an online survey about their extent of involvement, views and experiences of WRAP.

We will survey practitioners working with families in the three local authorities, which is likely to include FSWs, and may include others such as the children's social workers, family support workers and other stakeholders. We will test the draft questionnaire to ensure it takes under 10 minutes to complete. We will ask respondents for their job title, extent of involvement in the programme, and their views and experiences of the programme.

Method	Sample size	Time points
Evidence review	N/A	Oct-Dec 2022 (to be updated throughout project)
Observation	1/2 adult sessions, 1/2 child sessions One Keeping Connected group	May 2023, Sep 2023, Jan 2024
Interviews	10 to 15 carers, 5 to 10 foster/kinship children, 5 to 10 birth children, 3 to 5 social workers, and 3 to 5 Barnardo's staff	Jul-Sep 2023; Mar-May 2024
Survey of practitioners	A sample of the 120 practitioners sent the link to the online survey working with foster and kinship families across the 3 local authorities	Apr-Jun 2024

Analysis

Our interview recordings will be transcribed verbatim (in-house) and then analysed using reflexive thematic analysis (Braun and Clarke, 2019[26]) using NVivo software. Each transcript will be coded inductively in two rounds. Following coding, themes will be constructed. These will be discussed by at least two researchers. The report will describe the themes and use verbatim quotes from transcripts illustratively.

Cost analysis

Specific evaluation questions

How much does it cost Barnardo's and local authorities to introduce WRAP in the first year?

Methods

We will collect cost information from Barnardo's and local authorities in July 2024 covering the first year of programme delivery, and draw on planned process evaluation interviews. We will ask for the costs of taking part in WRAP over the course of the year, broken down into

[26] Braun, V. & Clarke, V. (2019). Reflecting on reflective thematic analysis. *Qualitative Research in Sport, Exercise and Health.* Vol 4 (11) pp. 589-597.

staff time, and any direct costs such as training, facilities or equipment. To better understand and triangulate, we will use part of our interviews with social workers and Barnardo's staff to explore the programme's actual cost and budgeted costs, and whether activities displaced other work or were additional. We will estimate a per-family and per-child unit cost, as well as the per-local authority total, broken down to include and exclude start-up costs. The impact evaluation will report on service-level outcomes that may be used to infer net benefits or costs (such as remaining as a foster carer), though we do not intend to monetise any estimated benefits.

Project management

Personnel

Table 4. Barnardo's delivery team roles and responsibilities

Team details	Roles and responsibilities within the project
Kerry Mitchell, Assistant Director Children's Services	Overall management responsibility/oversight of programme delivery
Paula Dawson, Children's Service Manager	Operational oversight of WRAP delivery, including phased delivery model, performance monitoring, reporting, budget, staff management
Alison Silvers, Business Development Manager	Operational support and liaison with Coram
Bev Moriarty, Team Manager	Daily operational staff management (including supervision/PDR) supporting development/training of staff; Collation of data/impact/outcomes ;Reporting on impact/outcomes Delivery – WRAP Programmes and Information sessions
Dean Summerton, Senior Practitioner	Contributing to outcomes/impact data collation Delivery – WRAP Programmes and information sessions
Sarah Wherton, Project Worker Level 2	Supervises Sessional Project Workers; Contributing to outcomes/impact data collation; Delivery – WRAP Programmes and information sessions
Martine King, Data Protection Officer	

Table 5: Coram evaluation team roles and responsibilities

Team details	Roles and responsibilities within the evaluation
Max Stanford, Group Head of Impact and Evaluation	Principal Investigator
Dr Emily Blackshaw, Lead Quantitative Analyst	Quantitative lead and day-to-day contact Responsible for overseeing the gathering and analysis of outcome measures and admin data
Hannah Lawrence, Research Manager	Qualitative lead

	Responsible for process evaluation, including devising topic guides, and overseeing the carrying out of interviews and observations
Lisa Kunwar Deer, Research Manager	Survey lead
Lizzie Gilbert, Senior Research and Evaluation Officer	Fieldwork and analysis
Dr Daniel Stern, Research Assistant	Administrative research support, such as carrying out randomisation and sending text messages
Dr Anna Ludvigsen, Research Associate	Freelance qualitative planning and analysis input as needed, as a senior researcher

Timeline

Table 6. Project timeline

Dates	Activity	Staff responsible/ leading
September - February 2023	Research ethics application and approval, protocol drafting and revisions, discussion with experts and advisers, What Works for Children's Social Care review draft protocol, drafting and finalising data sharing agreements and memorandums of understanding	Coram
March 2023	Protocol publication	Coram
March 2023	Request carer contact details from local authorities, hold information sessions	Barnardo's
March - April 2023	First batch of randomisations	Coram
March 2023 -- March 2024	Randomisation: subsequent waves (on demand)	Coram
20th March 2023	Baseline survey sent to carers	Emily Blackshaw
31st April 2023	Deadline for baseline survey	Emily Blackshaw
April-June 2023	WRAP phase 1 delivery (see intervention protocol)	Barnardo's
May 2023	Observation of WRAP groups	Hannah Lawrence
Aug-Oct 2023	WRAP phase 2 delivery (see intervention protocol)	Barnardo's
July-Sept 2023	First batch of interviews with participants, social workers, and Barnardo's staff	Hannah Lawrence
September 2023	Observation of WRAP groups	Hannah Lawrence
July – September 2023	Interviews with children, carers and professionals	Hannah Lawrence
October 2023	Midpoint meeting with evaluation advisors	Coram

November 2023	Interim report	Coram
Dec 2023-Feb 2024	WRAP phase 3 delivery (see intervention protocol)	Barnardo's
January 2024	Observation of WRAP groups	Hannah Lawrence
March-May 2024	Second batch of interviews with participants, social workers, and Barnardo's staff	Hannah Lawrence
April-June 2024	WRAP phase 4 delivery (see intervention protocol for details)	Barnardo's
April-June 2024	Survey of professionals	Lisa Kunwar Deer
1st July 2024	Endline survey sent to carers	Emily Blackshaw
1st July 2024	Request admin data from local authorities, request costs from local authorities and Barnardo's	Emily Blackshaw
31st July 2024	Deadline for endline carer survey	Emily Blackshaw
31st July 2024	Deadline for administrative data return and costs from local authorities and Barnardo's	Emily Blackshaw
June – September 2024	Analysis, drafting, revisions, meeting of evaluation advisors	Coram
November 2024	Send final draft of final report to What Works for Children's Social Care	Emily Blackshaw

Risks

Table 7. Project risks and mitigations

Risk	Likelihood	Impact	Mitigation
Recruitment and retention of families in WRAP falls short of expectations	High	High	Barnardo's propose to give presentations to prospective participants and deliver to, and train, adults first to gain buy-in. All FSWs in the three local authorities will be offered WRAP so they can encourage buy-in using their own experiences. The £10 gift voucher for all participants was designed to retain participants for the baseline and endline surveys in both trial arms. We will also consider including an additional prize draw in a reminder text, dependent on the response rate.
Recruitment to the evaluation falls short of expectations	High	High	A single stage expression of interest for both the intervention and evaluation following an information session provided by Barnardo's (starting in February 2023) should reduce any initial opt-out of consent to evaluation data collection. We have provided a briefing document and a FAQs document regarding the evaluation to support Barnardo's with recruitment. We will be available to respond to queries participants may have about the evaluation via phone or email.
Data access – Hull and North East Lincolnshire in special measures and North Lincolnshire is small (156 children in foster care and 221 fostering households), so data teams may struggle with evaluation data requirements	Medium	High	Discuss feasibility of plans with local authorities before finalising Senior leaders to sign Memorandum Of Understanding / data sharing agreement Reminders and support (such as data drop-ins) Providing advance warnings of any data requests
Data collection – too few families respond to our requests for completion of outcome measures, surveys and interviews	High	High	Incentive vouchers Flexibility – family members can text, email or post us their answers; interviews will take place at a time and location convenient to participants

			Reminders Work with local authorities to ensure the message gets out to social workers
Temporary or permanent loss of evaluation team members	Medium	Medium	Evaluation staffed by experienced, well-motivated team Good record keeping Drawing if needed on Associates/Sessional/wider Coram research community
Children in a family randomised to one trial arm are moved to a family randomised to the other trial arm	Low	Low	Data returns will enable any such children to be identified and steps taken as set out in analysis plan
Children in families randomised into the trial have already taken part in WRAP in previous delivery in Hull	Low	Low	Explore in process evaluation Hull fieldwork, set out any perceived impact in analysis and reporting

Compliance

Registration

In line with What Works for Children's Social Care requirements we will register this trial with the Open Science Framework (OSF) and update this trial registry with results at the end of the project.

Ethics

Process for obtaining ethical approval

Coram research and evaluation projects adhere to widely accepted frameworks for conducting work ethically to minimise the risk of harm to participants or wider society (Coram 2022). We obtained ethical approval from Barnardo's Research Ethics Committee on 19 December 2022.

Ethical considerations

The randomised controlled trial design

Previous research has found WRAP to have positive impacts in the USA, Ireland, China, New Zealand and Scotland, but there have been no previous evaluations, to our knowledge, of the WRAP intervention in fostering or kinship communities. We are in 'equipoise' meaning we do not know whether WRAP is effective or not in this context, making an RCT the logical next step, taking the evidence to the next level.

Well-planned and executed RCTs can establish that programmes lead to particular benefits for families, rather than other factors explaining changes. This evaluation therefore has the potential to provide the highest quality evidence to help inform future commissioning and practice.

As WRAP is not a part of usual support offered to the fostering and kinship community, those randomised into the control arm of the trial will not be denied a service that they would have otherwise received. We will ensure that information on business-as-usual support for the mental health and wellbeing of families will be made available to both the intervention and control groups, and we will ask about this in interviews and our survey of social workers.

Families in the control group will not be deprived of a benefit. The WRAP programme is funded by What Works for Children's Social Care and delivered by Barnardo's, so local authorities will not need to redeploy staff from usual support in order to provide WRAP. The quantity and quality of business-as-usual support should not decline in the control group relative to the pre-trial situation.

Randomisation at the family level will help address ethical and logistical concerns around randomisation (such as sibling dynamics). We will take advice on terminology from advisors,

avoiding the use of terms such as ‘intervention group’ and ‘control group’ in communications with families.

Consent

Local authorities will provide contact information to Barnardo’s, and eligible families will be sent an invitation to an information session run by the Barnardo’s programme delivery team. Through Barnardo’s, we will ensure participants receive good quality, accessible information about our research to support informed consent. We will provide and support the use of accessible evaluation materials such as information sheets, FAQs, and consent forms, using plain, simple language and pictures where appropriate.

We will share drafts of evaluation tools with our advisors, and with the Barnardo’s programme facilitators, providing the opportunity for input before they distribute them. We will reactively translate information sheets and consent forms into different languages for potential interviewees who require this, and will also make adaptations for disabilities, such as easy read formats where appropriate.

Information for carers will make it clear that participation in the programme and it evaluation is voluntary, and that participation or non-participation will not impact any other services they receive from Barnardo’s, their local authority, or any other organisations. The privacy notice will also include contact details so families can get in touch if they want more information, and information about how to opt out of evaluation data collection after expressing interest. We will provide a date by which participants can withdraw their consent to evaluation data collection even after they have expressed interest. We will provide an email address, phone number and postal address to participants and will encourage them to contact us if they have any questions or concerns.

After attending an information session run by Barnardo’s delivery staff, interested carers will be able to express interest in (consent to) their family’s participation in the programme and evaluation. It will also be possible for carers to express interest without attending an information session. One or both (in couples) carers consenting will be taken as the whole family consenting to take part in the programme and evaluation (including Coram gathering administrative data on the family), though actual participation in WRAP is voluntary, as is our primary data gathering.

We will seek consent (paper, electronic or verbal, based on talking through the consent form) from participants ahead of or at the start of interviews and observations. After receiving contact details from local authorities, we will provide a copy of our information sheet and consent form to potential interviewees, or describe the content of these verbally. Where we are seeking an interview with a child/young person, we will provide or describe the child/young person versions of these documents. As we believe that consent should be ongoing, we will check that they have understood information sheets and will verbally check consent at the start of interviews and observations. During fieldwork the researcher will also be mindful of any signs or nonverbal cues that the participant is not comfortable or non-consensual. The participant will be reminded that they can take a break or withdraw from the research at any point without giving a reason. Consent will also be sought for any recording

of interviews. In the case of interviews with children below the age of 16, we will check for the consent of the carer in addition to their own.

We will send an online survey link by email to social workers working with families in the three local authorities, and to carers by email, post or text message. We will make clear in the front page of the survey that participation is voluntary. We will ask survey responders for consent at the start of the survey. If they do not provide their consent to participate at the start of the survey, the survey will redirect away from the questions, so they will not be asked to complete the questions and no data will be collected.

Avoiding harm

Previous research has not found serious harmful impacts of WRAP among other groups, so we do not anticipate the fostering and kinship community will experience harm as a result of participation in the intervention.

We will gather information through regular communication with Barnardo's and the three local authorities about any emerging risks and harms. If evidence emerges of serious and substantial harms being caused to families in either the control or intervention group, we will consult Coram's research ethics committee and consider ending the trial early.

Any safeguarding issues that arise will be escalated in accordance with Barnardo's' and Coram's safeguarding policies.

We will work with Barnardo's and local authorities to accommodate participants' needs and preferences. In terms of recruitment for interviews, we plan to work with local authorities to decide which individuals to approach to ask for interviews. This would exclude families known to be currently in crisis and for whom WRAP has proved upsetting. This will bias our process evaluation evidence base towards members of the fostering and kinship community who have had a positive experience, a limitation we will include and explain in our reporting. We still expect to hear a range of experiences as this will only exclude any families who had a particularly negative experience from interviews. We expect to capture experiences of these families in our interviews and survey of professionals.

We know foster and kinship families are busy, so we plan to be flexible. We will make adjustments to remove barriers to participation, for example, by being flexible in our timings and fieldwork locations, identifying safe, accessible culturally appropriate and easy to reach venues using public transport for any in person interviews, and using creative methods in qualitative data generation for those that find these approaches more accessible.

Interviews will focus on the WRAP received and the perceived effects of this. This will be made clear to participants in information sheets and communications before interviews take place. Given WRAP's focus on mental health and wellbeing, some interview topics may be sensitive for some participants and may trigger difficult feelings. We will make it clear to participants that they do not have to answer any questions they do not want to, and that they can stop the interview at any time without providing a reason. We will also have a list of resources to hand if participants become upset. We will pass these on to participants if we feel appropriate, including suitable helpline numbers they can ring after the interview to

discuss any difficult issues that may have come up for them and which they wish to discuss further.

Equality, diversity and inclusion

We will put equality, diversity and inclusion on the standing agenda of meetings. Through our administrative data request and interviewing we will collect and analyse data on some of the protected characteristics of carers, other adult household members, and children, and analyse and communicate any trends along protected characteristic lines. We will stay up-to-date with Coram's suite of mandatory and optional equality and diversity training. We will budget extra time to reach underrepresented members of fostering communities. In terms of specific strategies, this includes:

- Taking an inclusive approach to recruitment, such as focusing on the readability of our information sheet and consent forms, and offering for the surveys to be posted to participants to avoid digital exclusion.
- Including an analysis of demographic characteristics of our recruited sample (those who consent) and analysable sample (those who complete the endline survey) in terms of representativeness of the fostering population in the three local authorities.
- Our recruitment approach for interviews strives for diversity, as opposed to taking a convenience sample approach to recruit participants who are the 'easiest to reach'.

Privacy

We consider individual interviews suitable due to the personal nature of mental health and wellbeing. We will encourage participants to pick a suitable private location, such as the home or non-shared office, and our topic guides prompt interviewers to check before we start interviews that interviewees are in a suitable location. We will inform participants that they can have a trusted person with them during the interview if they would like to.

Special considerations for child interviewees

We believe it is important for children and young people to feel that they are taking an active role in the research process. Conducting interviews with children and young people will allow their experiences of receiving support for their mental health and wellbeing, including WRAP, to be captured and be an accurate reflection of the impact this work has had on them and their environment. We will tailor the topic guide to the age of the child (including using child-friendly language), and their level of maturity, as gauged by working with local authorities at interviewee selection stage. We will consider only positively framed questions for particular age groups.

During interviews we will be flexible and use open questions and take a friendly and encouraging approach. We will be willing to take breaks and explore topics of interest to the child rather than being bound by the topic guide. To build rapport, following Parson *et al*. (2016), we will use questions to check understanding; combining verbal and non-verbal communication to facilitate understanding; and allow plenty of time and tailored support for a child to make a decision about participation.

We will be alert to any influence of parents/carers or others present during the interview and take this into account as appropriate in the analysis. We will proceed with an interview if a parent/carer wishes to be present, because we require consent from both the child and

parent/carer. We will be led by the child or young person's preference as to whether or not a parent/carer or other supporter or adults should be present for the interview.

Any safeguarding issues that arise will be escalated in accordance with Coram and Barnardo's safeguarding policy.

Confidentiality and anonymity

The study will comply with the General Data Protection Regulation (GDPR) and Data Protection Act 2018. All data will be stored securely and only accessible by members of Coram's Impact & Evaluation team.

Confidentiality will only be broken if an interviewee is considered at risk or harm to themselves and/or others. This will be explained to participants in information sheets and at the start of interviews in clear, simple language. They will be asked to confirm that they agree to this before they participate in the research.

Under no circumstances will we break confidentiality in respect of answers to our online survey of carers. We have been advised that foster carers may be reluctant to honesty answer our questions about their wellbeing if there is a possibility the answers may be shared with their social worker or the local authority.

Participants will be anonymous in all outputs. We will not include any identifiable data, such as names. We will explore with advisors how best to report on the characteristics of interviewees (such as whether to specify their ethnic group), taking into consideration the small population group in only three local authorities. Anonymity will be explained clearly in information sheets to all participants. In interviews, the researcher will explain anonymity at the start and will check that the participant understands before proceeding with the interview. We will seek to interview no more than one family member per family, to help us maintain the confidentiality of stories we hear about how WRAP works within families.

Fieldwork with professionals

We will offer to interview professionals at a time which suits them, which may be a lunch break or before or after the working day. However, in at least some cases we are likely to take up the time of local authority professionals which could be used instead to provide services to children and young people. Accordingly, we have designed a survey and a topic guide to gather the minimum amount of data required to answer our research questions. We will test the draft questionnaire to ensure it takes under 10 minutes to complete, to lessen time as a barrier to participation. We will be flexible and offer to interview staff at the most convenient time for them to minimise disruption to services. Similarly, we will allow a whole month for staff to respond to the online survey.

The staff we approach may feel pressure to consent to take part in our evaluation or to give a positive account of progress in implementing WRAP. While we will encourage staff to take part in our survey and interviews, we will make clear (in information sheets and on the survey front page and/or invitation emails) that participation is voluntary, and answers will be treated confidentiality, and they will not be identifiable in any reporting. We will make clear

that we are interested in their personal views and experiences, and ensure privacy by checking before interviews that interviewees are in a suitable private location.

Complaints
If a family member or professional wishes to raise a complaint with Coram, we will direct them to Coram's complaints policy and procedure: www.coram.org.uk/complaints-policy-and-procedure. We will also provide this information on privacy/information sheets.

Risks to researchers
Fieldwork will involve travel to venues where WRAP is being delivered for observations, and may involve travelling to meet participants for in-person interviews, to participants' homes for example. Researchers will assess the risk of fieldwork in advance. Researchers will adhere to relevant Health and Safety procedures when travelling and on location. Where possible, researchers will conduct fieldwork in pairs. Researchers will ensure colleagues know their exact location and will check-in and out with a team member when arriving and departing.

We will assess risks in relation to COVID-19 and ethical implications of travel and data collection, including risks of transmission, mental health and wellbeing of participants and researchers, and any impact on data quality. We will amend our approach/timelines as needed to minimise risk and adhere to government guidelines.

There is a possibility for emotional distress for researchers, given the mental health and wellbeing theme of the intervention, and especially in the event that sensitive disclosures are made by participants. We will hold debrief discussions as part of daily team catch-ups and signpost to Coram's employee assistance programme as appropriate. Throughout the period of the project, 1:1s with line managers will be in place and researchers will be encouraged to discuss any concerns or stresses.

Conflicts of interest
The principal investigator is not aware of any conflicts of interest, actual or perceived, that could have a bearing on their impartiality, or that of any member of the evaluation team. If any changes occur they will make these known to the chair of Coram's research ethics committee.

Data protection
What Works for Children's Social Care publishes an overarching 'Research Data Protection Statement' on their website (here), and Coram's overall privacy policy is available at https://www.coram.org.uk/privacy-policy. The below is specifically relevant to this evaluation. Any questions about this section can be submitted to dpo@theevidencequarter.com with a reference to the Data Protection Identifier (DPID) in the table below.

This section summarises the content of a full Data Protection Impact Assessment (DPIA) Coram has completed in collaboration with WWCSC. We sought advice on the DPIA from Coram's data protection expert and WWCSC's Data Protection Officer.

The data protection considerations differ for the RCT, process evaluation, and costs analysis. The costs analysis will only process personal data of the individuals we are requesting further information from, this further information is not personal data. For the RCT and process evaluation Coram and What Works for Children's Social Care will act as joint data controllers.

Regulatory framework	
Relevant legislation	UK Data Protection Act 2018 (DPA) UK General Data Protection Regulation (GDPR)
Data Protection Identifier (DPID)	#3041
DPIA outcome/ risk level	Low
Type of data processing	• To conduct the evaluation • To send foster families and staff invitations to complete surveys as part of the evaluation • To contact foster carers and staff to ask them to take part in an interview as part of the evaluation • To request informed consent from participants as part of ethical practices • To gather and analyse administrative records held by local authorities about foster families • To conduct an interview, which would be recorded with permission • To transcribe the audio captured from any recorded interviews • To identify personal data and take relevant action upon submission of a data subject rights request • To allow for possible future research using an anonymous copy of personal data held on What Works for Children's Social Care's behalf in a data archive at the Office for National Statistics • For children only - to use children's personal data to allow for the discovery of their record in the Department for Education's National Pupil Database. At the end of Let's Connect a copy of children's evaluation data will be anonymised and sent to the What Works for Children's Social Care Data Archive held at the Office for National Statistics. This data will be sent to the Department for Education so they can create an alpha-numeric code they can share with Office for National Statistics to allow matching of

	the evaluation data to the National Pupil Database for possible future research. Further information on how children's data will be protected by the Office for National Statistics in the What Works for Children's Social Care Data Archive is available at: https://www.ons.gov.uk/aboutus/whatwedo/statistics/requestingstatistics/secureresearchservice/aboutthesecureresearchservice
Categories of data subjects	Foster carers, kinship carers, other adults in carers' households, foster children, kinship children, birth children, social workers, Barnardo's staff
Privacy notices (information sheets)	Annex 3
	Personal data
Lawful basis	Public Task
Justification for the lawful basis	Ethical practices within research require informed consent to be gathered for the data subject's participation in the evaluation of the effectiveness of the Intervention and for research to be conducted using their personal data. For the avoidance of doubt, informed ethical consent shall be regarded as a sufficient safeguard for the processing of personal data including the capture and storage of personal data up to the point analysis of the data is being conducted. Once analysis is being conducted, depending on the dataset in use, a data subject is unable to withdraw consent insomuch as this would detrimentally affect the analysis process intrinsic to the research being conducted therefore reliance on consent as the legal basis for personal data processing is not appropriate. Where ethical consent has been withdrawn by a data subject, where possible and dependent on the stage of the research process, each party agrees to discontinue the processing of the data subject's personal data and either fully delete, partially delete, pseudonymise or anonymise all identifiers associated to the data. All processing activities for purposes of research, including use of personal data to capture more

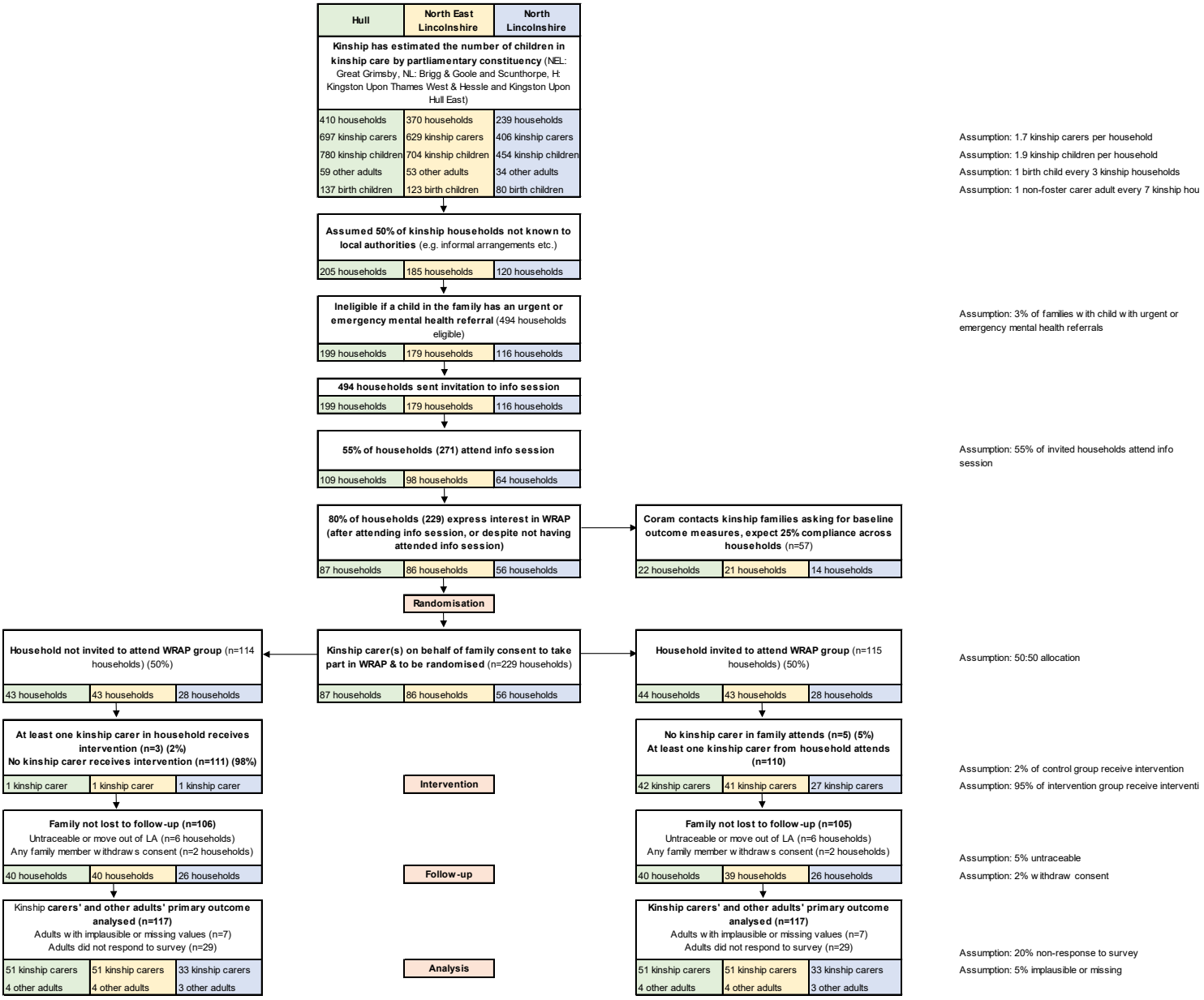
	personal data which will be analysed as part of the research, the lawful basis for all parties processing personal data shall be in accordance with GDPR Article 6.1(e), and GDPR Article 9.2(j) and DPA18 Schedule 1 Part 1.4(a),(b)&(c) for special category data including data considered to be a protected characteristic under the UK Equality Act 2010. What Works for Children's Social Care (WWCSC) is acting upon the instructions from the DfE in accordance with Annex K of the Grant Offer Letter to WWCSC, where it is stated that WWCSC acting as a Processor on behalf of the DfE as Data Controller, and the subject matter of the processing "is needed in order that the Processor [WWCSC] can effectively deliver the grant to provide a service to the Children's Social Care sector". WWCSC is therefore acting under the authority vested upon it by the DfE as its funder which appropriately corresponds to WWCSC conducting its research under Article 6.1(e) of the UK GDPR: "Processing is necessary for the performance of a task carried out in the public interest." Upon completion of the evaluation and associated research the lawful basis WWCSC, as sole independent controller, shall rely on, for the purpose of archiving and any subsequent secondary analysis of the data, GDPR Article 6.1(e), and GDPR Article 9.2(j) and DPA18 Schedule 1 Part 1.4(a),(b)&(c) for special category data including data considered to be a protected characteristic under the UK Equality Act 2010. Data archived within the WWCSC instance of the Office for National Statistics Secure Research Service ("ONS SRS") for the purposes of secondary research on the data within this evaluation shall be non-identifiable data and governed under the UK Digital Economy Act 2017 and the UK Statistics and Registration Service Act 2007.
	Special category data
Lawful basis	Archiving, research and statistics

Justification for the lawful basis	Special categories of personal data used for research purposes only.
	Roles
Data controller(s)	Coram and What Works for Children's Social Care
Data processor(s)	n/a
Data sharing mode(s)	• A secure portal • Encrypted email • Secure access to other organisations' technical systems
	Archiving
Archiving	Yes
Archive used for this project	What Works for Children's Social Care based in the Office for National Statistics Secure Research Service.
	Linking to National Pupil Database and use of Secure Research Service
Name of the organisation(s) submitting data to the NPD team	What Works for Children's Social Care
	Retention and Destruction
Expected date of report publication	August 2024
Expected date of data destruction	October 2024

If you are looking for further clarification regarding our data protection notification requirements they will either be found in the project specific Data Privacy Notice and/or our Privacy Policy on our website. If you have any further questions around either of these please submit them to dpo@theevidencequarter.com with a reference to the Data Protection Identifier (DPID) found in the above table.

Annexes

Annex 1: CONSORT diagram with numbers of kinship carers[27]



[27]Numbers taken from Kinship's constituency estimates at Constituency map (kinship.org.uk) accessed 10/02/23

Annex 2: Code used to calculate Minimum Detectable Effect Size

```
install.packages("PowerUpR")
library("PowerUpR")

#Primary outcome: Foster carer perceived peer support
#Two-Level Blocked (Fixed) Cluster-level Random Assignment Design
#Level 2 = Family, Level 1 = Adult
#Treatment and randomisation at Level 2

mdes.bcra3f2(power=.80, alpha=.05, two.tailed=TRUE,
             rho2=.4, p=.50, g2=0, r21=0.6, r22=0,
             n=1.9, J=41.3, K=3)
```

Annex 3: Administrative data request fields

At randomisation:

- Plans to cease fostering in the next year (yes/no/unknown)
- Whether family contains at least one child currently referred for crisis (urgent or emergency) care from CAMHS (yes/no/unknown)
- Whether foster family in crisis and on the verge of placement breakdown (yes/no/unknown)
- Expressed interest in WRAP (programme and evaluation consent given) (yes/no)
- Date data provided
- Local authority
- Family ID
- Postal address
- Kinship carers, unrelated foster carers, or friends and family foster carers, or unknown
- Name of fostering agency (or name of this local authority)
- First name of carer 1
- Surname of carer 1
- Unique ID of carer 1
- First name of carer 2
- Surname of carer 2
- Unique ID of carer 2
- Mobile phone number of carer 1, or ‘not available’
- Mobile phone number of carer 2, or ‘single carer’, or ‘not available’
- Email address of carer 1, or ‘not available’
- Email address of carer 2, or ‘single carer’, or ‘not available’
- Ethnic group of carer 1
- Ethnic group of carer 2
- Gender of carer 1
- Gender of carer 2
- Other adult household member – first name

- Other adult household member – surname
- Other adult household member – unique ID
- Other adult household member – mobile phone number
- Other adult household member – email address
- Other adult household member – ethnic group
- Other adult household member – gender
- Number of foster children currently placed in this foster family? (0+)
- First name of foster child 1
- Surname of foster child 1
- First name of foster child 2
- Surname of foster child 2
- First name of foster child 3
- Surname of foster child 3
- First name of foster child 4
- Surname of foster child 4
- First name of foster child 5
- Surname of foster child 5
- Unique ID of foster child 1
- Unique ID of foster child 2
- Unique ID of foster child 3
- Unique ID of foster child 4
- Unique ID of foster child 5
- DOB of foster child 1
- DOB of foster child 2
- DOB of foster child 3
- DOB of foster child 4
- DOB of foster child 5
- Ethnic group of foster child 1
- Ethnic group of foster child 2
- Ethnic group of foster child 3
- Ethnic group of foster child 4
- Ethnic group of foster child 5
- Gender of foster child 1
- Gender of foster child 2
- Gender of foster child 3
- Gender of foster child 4
- Gender of foster child 5
- Most recent Strengths and Difficulties Questionnaire total difficulties score for foster child 1
- Most recent Strengths and Difficulties Questionnaire total difficulties score for foster child 2
- Most recent Strengths and Difficulties Questionnaire total difficulties score for foster child 3
- Most recent Strengths and Difficulties Questionnaire total difficulties score for foster child 4
- Most recent Strengths and Difficulties Questionnaire total difficulties score for foster child 5

- Date of most recent SDQ score for foster child 1
- Date of most recent SDQ score for foster child 2
- Date of most recent SDQ score for foster child 3
- Date of most recent SDQ score for foster child 4
- Date of most recent SDQ score for foster child 5
- First name of other (non-foster) child 1
- Surname of other (non-foster) child 1
- First name of other (non-foster) child 2
- Surname of other (non-foster) child 2
- First name of other (non-foster) child 3
- Surname of other (non-foster) child 3
- First name of other (non-foster) child 4
- Surname of other (non-foster) child 4
- First name of other (non-foster) child 5
- Surname of other (non-foster) child 5
- Unique ID of other (non-foster) child 1
- Unique ID of other (non-foster) child 2
- Unique ID of other (non-foster) child 3
- Unique ID of other (non-foster) child 4
- Unique ID of other (non-foster) child 5
- DOB of other (non-foster) child 1
- DOB of other (non-foster) child 2
- DOB of other (non-foster) child 3
- DOB of other (non-foster) child 4
- DOB of other (non-foster) child 5
- Ethnic group of other (non-foster) child 1
- Ethnic group of other (non-foster) child 2
- Ethnic group of other (non-foster) child 3
- Ethnic group of other (non-foster) child 4
- Ethnic group of other (non-foster) child 5
- Gender of other (non-foster) child 1
- Gender of other (non-foster) child 2
- Gender of other (non-foster) child 3
- Gender of other (non-foster) child 4
- Gender of other (non-foster) child 5
- First name of fostering social worker
- Surname of fostering social worker
- Email address of fostering social worker

Final data return – child-level data:

- Local authority name [provided by Coram]
- Family ID [provided by Coram]
- Child ID [provided by Coram]
- Randomisation outcome ‘refer for WRAP’ (intervention) group or ‘do not refer for WRAP (control) group [provided by Coram]
- Date of randomisation [provided by Coram]

- Date of birth of child [provided by Coram]
- Gender of child
- Ethnic group of child
- Child's postcode
- Child's legal status
- Child's care status
- Did the child receive WRAP?
- Date of first WRAP session attended
- Number of WRAP sessions attended
- Whether WRAP was received by other members of the household, which members
- Why WRAP did not take place ('refer for WRAP group') of why WRAP did take place ('do not refer' group)? (if applicable)
- SDQ score at randomisation [provided by Coram]
- Date of SDQ at randomisation [provided by Coram
- Second SDQ score
- Date of second SDQ score
- Version used for second SDQ score
- Number of placements since randomisation (if applicable)
- Nature of second placement (if applicable)
- Reason for first placement change (if applicable)
- Date of second placement change since randomisation (if applicable)
- Nature of third placement change since randomisation (if applicable)
- Reason for second placement change (if applicable)
- Date of third placement change since randomisation (if applicable)
- Nature of fourth placement change since randomisation (if applicable)
- Reason for third placement change (if applicable)
- Referral(s) made to CAMHS since randomisation
- Date of referral(s) to CAMHS (if applicable)
- Reasons for referrals to CAMHS (presenting issues) (if applicable)
- Comments on data (optional)

Final data return – carer-level data:

- Local authority name [provided by Coram]
- Family ID [provided by Coram]
- Child ID [provided by Coram]
- Randomisation outcome 'refer for WRAP' (intervention) group or 'do not refer for WRAP (control) group [provided by Coram]
- Date of randomisation [provided by Coram]
- Number of foster/kinship children in household at randomisation [provided by Coram]
- Number of other (birth) children in household at randomisation [provided by Coram]
- Number of foster/kinship children currently in household
- Number of other (birth) children currently in household
- Reason for changes in number of children in household (if applicable)
- Did the carer receive WRAP?
- Date of first WRAP session attended
- Number of WRAP sessions attended
- Whether WRAP was received by other members of the household, which members

- Why WRAP did not take place (if in ‘refer for WRAP group’) or why did WRAP take place (if in ‘do not refer’)
- Has the foster carer ceased fostering? (yes/no/unknown)
- Plans to cease fostering in the next year? (yes/no/unknown)
- Reasons foster carer has cased fostering/plans to (if applicable)
- Contributing factors
- Comments on data (optional)