Research Protocol
Assessing the feasibility of a supplementary health assessment measure for young people in residential and foster care.
Evaluator (institution): University of Oxford
Principal investigator(s): Dr Áine Rose Kelly

Template Version: 1.1
Template last updated: October 2022

Assessing the feasibility of a supplementary health assessment measure for young people in residential and foster care

Evaluator	University of Oxford
Protocol Author(s)	Dr Áine Rose Kelly
Study Design	Co-produced mixed methods feasibility study
Age or Status of Participants	Young people in the advisory **workshops** will be aged 18-25 years. Carers in the advisory **workshops** will be adults. Young people completing the pilot **questionnaire** and **interviews** will be aged 10-17 years. Carers completing the pilot **questionnaire** and **interviews** will be adults. Stakeholders in the **Theory of Change workshops** and **interviews** will be adults.
Number of Participating Sites	The study will work with 3 local authorities and their associated clinical commissioning groups.
Measures	The co-production of an online health assessment measure for young people in care and caregivers, appropriately tailored for young people in residential versus foster care; a theory of change for the intervention that is agreed with key stakeholders; the identification of an appropriate method for a larger efficacy trial.

Summary

Background

Young people in care are more likely to have poor physical and mental health than those living with their parents. Young people living in residential care are at the greatest risk of poor health as they are more likely to adopt risky behaviours such as drinking alcohol, smoking, and using drugs. In order to promote the health of young people in care the government created an initiative that requires all young people in care to be offered a health assessment each year. This is done by a specialist nurse which suggests that not everyone understands the health needs of young people in care. During these assessments, the nurse will complete a non-standardised form outlining the young person's health needs. These should only be shared in full within health services and are saved to the young person's electronic health records. Historically, paper records were held for seven years before being destroyed. One part of the assessment form is a summary, and another is an action plan which identifies who is responsible for each individual action. The summary and action plan should be reviewed at the Child Looked After review and saved to the young person's social care files. However, the information collected during health assessments is not routinely collected as a way for local authorities and clinical commissioning groups to understand the health needs of young people in care and ensure that the right services are being commissioned to meet these needs.

As young people become older, they are more likely to begin disengaging with their health assessments because they do not want to feel different from their friends. Young people can also struggle to understand how to navigate normative health assessments such as when to seek help and advice from the general practitioner versus emergency services. Current information collected by social services for the Department of Education statistical return only looks at whether young people are up to date with their health assessment, dental checks, and immunisations that year and does not look at young people's health needs or the support they need. An additional health assessment measure would give young people in care and their caregivers a greater voice in ensuring that any health concerns are addressed and would empower young people to understand and take control of their own health.

Aims

The aim of this research is to find out whether a supplementary health assessment measure would be useful and acceptable for young people in care, their caregivers, and other professionals, and whether the measure needs to include different questions for young people who are living in residential care. The study will also explore how we can measure whether the questionnaire improves outcomes for young people in care.

Method

The project will run from April 2023 to February 2024. Working with three advisory groups, we will co-develop a questionnaire for young people (aged 10 and over) in residential or foster care, and their caregivers that looks at their health and access to health services. The questionnaire will be piloted with 30 young people in residential care, 30 young people in foster care, and their caregivers across three local authorities. Six young people and six

caregivers who have completed the questionnaire will then be interviewed about how easy it was to answer the questions, whether all of the questions made sense, and whether the questions were appropriate for young people of this age. The young people and caregivers who help design the questionnaire will then meet again to see if any changes need to be made. Workshops and interviews will also be held with health and social care professionals to look at how the questionnaire might promote positive outcomes for young people in care, what outcomes these might be, and how we can measure them to see if the questionnaire can make a difference.

Outcomes

The outcomes for this study include the co-production of an online supplementary health assessment measure for young people in care and their caregivers, appropriately tailored for young people in residential versus foster care; a theory of change for the intervention that agrees with key stakeholders; the identification of an appropriate method for a larger efficacy trial. Interview and workshop data will be thematically analysed. Question completion rates and missingness will be assessed within the supplementary health assessment measure.

Table of Contents

Background and problem statement

The health of young people in care

Research suggests that children and young people in the care system have exceptional physical and mental health needs. Before entering the care system, they are likely to have experienced a number of adverse childhood experiences such as childhood poverty, child abuse and/or neglect, and domestic violence; these have been shown to link to poorer health outcomes including poor mental health and higher levels of risk taking (Kelly, 2022). Evidence shows that children who have been raised in suboptimal environments (where their needs have not been met) live in a constant state of fear. According to Howe (2005), this can result in children developing disorganised attachments with their parents which can lead to them becoming self-reliant, controlling, destructive, aggressive, impulsive, dissociative, hyperactive or showing a disregard for their own safety.

There is a growing body of literature that recognises the importance of physical health on the life outcomes of children and young people in care, and the greater incidence of their health problems has been substantiated (Carbone et al., 2007). Previous studies have established a high prevalence of both acute and chronic health conditions among children and young people in local authority care. For instance, in a descriptive analysis of 1551 medical charts, 86.7% of children in care were found to have a recognised health problem. Health problems included dermatological, respiratory, dental, haematological, auditory, visual, musculoskeletal, neurological, cardiac, genital/urinary, and gastrointestinal problems. Moreover, only 31% of these children had just one health issue, while 30%had at least two health issues, and 25 per cent had three or more (Leslie et al., 2005). Although a direct comparison could not be found, Hagell and Shah (2019) report that only 23% of young people in the general population aged 11 to 15 have a chronic health condition or disability. Children and young people in care appear to have exceptional physical health needs in comparison to their peers in the general population. However, data on the number of young people in care with chronic health conditions are not routinely collected.

As well as worse physical health, research suggests that young people in care are more likely to experience poor mental health and well-being. The increased risk of mental health difficulties following childhood abuse or neglect is well documented (e.g., Arsenault et al., 2011), and reviews cite the prevalence of mental ill health at up to 45% of those in care (Ford et al., 2007). In terms of subjective well-being, the initial 'Bright Spots' survey of 611 children and young people in care (Selwyn & Briheim-Crookall, 2017) found that although 83% felt that their life was getting better now that they were in the care system, children and young people in care were more likely to have low well-being than those in the general population. Low well-being was found to be associated with children and young people in care not feeling settled, not trusting their caregivers, worrying about their feelings and/or behaviour, not understanding why they were in care, and not feeling content with the frequency of contact with their biological families. This suggests that despite children and young people in care feeling that their lives are getting better, they still have exceptional mental health needs related not only to their pre-care experiences but also to their experiences of the care system itself.

Furthermore, there is an emerging body of literature outlining the increased prevalence of risk-taking behaviour among the care population and an abundance of literature outlining the

link between mental health problems and risk-taking behaviour (Chartier et al., 2009). Such risky behaviours might include smoking, substance misuse, self-harm, suicidal thoughts, criminal activity, risky sexualised behaviour, and teenage pregnancy (Brook & et, 2015; Havlicek, 2013; Hayatbakhsh et al., 2013; Narendorf, 2010; Taha, 2014; Thompson Jr & Auslander, 2007). For example, Leslie et al. (2010) found that among 993 adolescents aged 11-15, 45% reported at least one risky behaviour. Some research suggests that mental health problems play a mediating role between pre-care experiences such as childhood abuse and childhood poverty and risk-taking behaviour (Chartier et al., 2009).

Although the care system is somewhat of a protective factor for the physical and mental health of children and young people in need of local authority care, some care experiences have been found to have a detrimental effect on their health. For example, Mekonnen et al. (2009) found that instability in the care system (multiple placement changes) had a deleterious effect on the health outcomes of children and young people. Crucially for this project, children and young people placed in residential care have been found to be at greater risk of being overweight or obese than those placed in other types of care. Research also suggests that children and young people placed in residential care are more likely to have mental health problems and to adopt risky behaviours such as smoking, drug use and criminal activity, and they are less likely to be registered with a GP (Fridrich & et, 2005; Hjern & Vinnerljung, 2002; Hunter, 2008; McCool & Stevens, 2011).

For my DPhil I conducted mixed-methods research to explore the factors associated with the ability of the care system to meet the physical and mental health needs of young people looked after in England (Kelly, 2022)**.** My research included an analysis of national administrative data to identify predictors of health and dental assessments and immunisations being up to date, as well as predictors of scores on the Strengths and Difficulties Questionnaire, substance misuse problems and convictions. This was interwoven with rich qualitative data from young people in care, gathered using creative methods, which explored concepts of 'health' and experiences of health services. The interviews with young people in care showed that their pre-care experiences affected their health development in a number of ways. They had developed insecure attachments with their parents and due to a lack of routine and nurturing relationships, they had entered the care system with significant dental neglect, they did not know how and when to brush to their teeth, they had issues with food such as overeating and hiding food because they were worried that they might not be given food again, they did not know how and when to sleep, and they were not used to having routines or clear boundaries.

Health services for young people in care

Access to health services plays a critical role in promoting the health of young people in local authority care. Young people in care have been found to perform fewer health promoting behaviours (such as brushing their teeth daily) than children living with their parents (Kim et al., 2009). Health services therefore play a key role in educating these vulnerable young people about the benefits of healthy behaviours. By way of intervention, children and young people in care in England are required by law to attend an initial health assessment within 20 working days of entering care, and review health assessments annually thereafter; children under the age of five are required to have bi-annual review health assessments with a developmental element (DfE & DH, 2015). Yet compared to their peers in the general population, young people in local authority care are more likely to have experienced at least one change of GP, have incomplete immunisations and receive less health education

(Barnes et al., 2005; Köhler, 2015; Lewis, 2000; Yassaee et al., 2017). Some research also suggests that young people in care are reluctant to engage appropriately with the health care services provided to them (Rodrigues, 2004). For instance, Rodrigues (2004) discovered that only 68% of his sample of children and young people in care were registered with a general practitioner, an issue of considerable concern.

There is room for improvement on the current health assessment offer for young people in care. At the level of individual practice, there is a lack of research on whether young people's health needs are being identified through their health assessments. It has also not yet been determined how effective review health assessments are in ensuring that the ongoing health needs of young people continue to be met by the care system (Hill & Thompson, 2003; Nathanson et al., 2009).

At the aggregate level, local authorities suffer from a lack of clear data on the health needs of their local cohorts. Young people in care have multiple records regarding their health and social care needs and often these records do not correlate. Lorek (2013) found disparities in the information held about children's immunisation histories between the GP records and the Child Health Computer Records (CHCR), and only 36% of the records corresponded accurately. Moreover, current data collected for the Children Looked After Database (SSAD903) has limited information in relation to the health of young people in care and does not document their physical and mental health needs or whether they gain access to other specialist services once their health needs have been identified. This means that local authorities and Clinical Commissioning Groups (CCGs) do not currently have access to information on the health needs of the young people they are responsible for. Creating a tool that works in a similar way to the Bright Spots project, where local authorities meet to reflect on the results of survey responses and consider how they can promote the well-being of the children in their care, would bring together the different agencies to reflect on how well they are meeting the health needs of the young people in their area, and where they might target interventions (for example, ensuring that training needs are identified and the appropriate services are commissioned). An additional tool would also give the young people themselves, as well as their caregivers, a greater voice in ensuring any health concerns are addressed and would help young people to better understand their health.

Aims and objectives

The aim of the research is to co-develop and refine a health assessment measure for young people in residential and foster care, and their caregivers and to assess the feasibility of different methods for an efficacy trial of the measure.

Research questions

The research questions are:

1. Does a questionnaire to identify the health status of young people in care and their access to health services need to include different content for young people in residential versus foster care?
2. What are the views of young people, caregivers and health professional on the questionnaire's acceptability and usefulness?

3. What are the most appropriate and acceptable measures of the outcomes identified in the theory of change?
4. What methods would be appropriate for a larger efficacy trial?

Table 1: Key indicators and methods of data collection

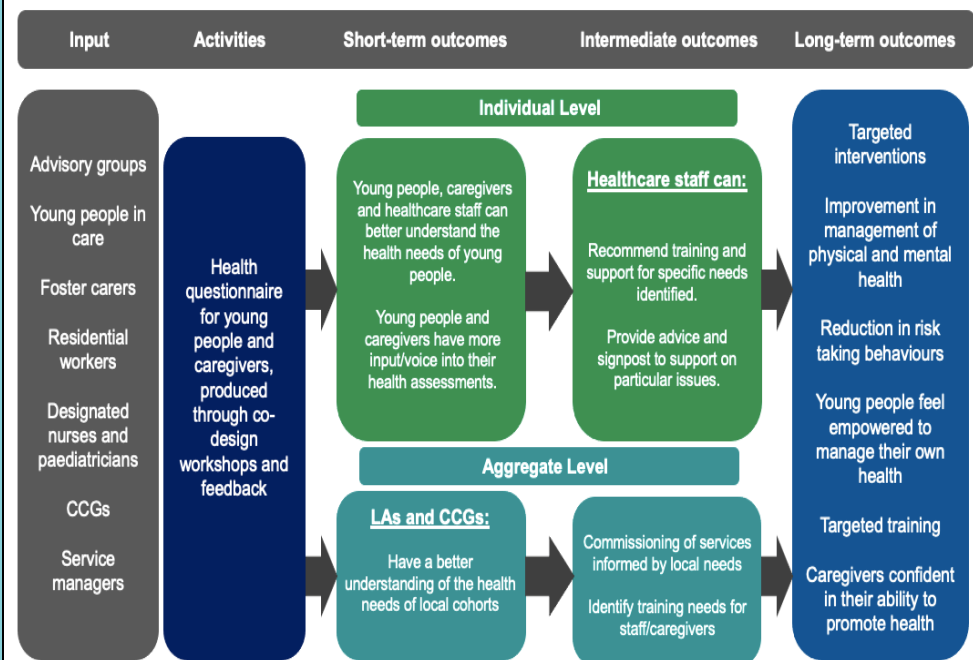| Research Question	Indicator(s)	Method of data collection
1. Does a questionnaire to identify the health status of young people in care and their access to health services need to include different content for young people in residential versus foster care?	• List of suggested domains for young people in foster and residential care. • Completion rates and descriptive statistics of pilot. • Number or proportion of stakeholders/ advisory group members agreeing that there should be some differentiation in context.	• Advisory workshops with care experienced young people, foster carers and residential caregivers. • Pilot of survey.
2. What are the views of young people, caregivers, and health professionals on the questionnaires acceptability and usefulness?	• Themes from interviews about their experience of completing the survey. • Themes from interviews about how the measure could support health assessments, or assessing health needs when young people begin to disengage. • Number of young people, foster carers, residential caregivers who say they would complete the measure.	• Interviews with care experienced young people, foster carers, and residential caregivers. • Interviews with stakeholders.
3. What are the most appropriate and acceptable measures of the outcomes identified in the theory of change?	• List of suggested measures from advisory workshops, theory of change workshops and stakeholder interviews.	• Advisory workshops. • Theory of change workshops.
4. What methods would be appropriate for a larger efficacy trial?	• Themes from interviews with stakeholders about the feasibility of various methods, to include potential facilitators and barriers.	• Interviews with stakeholders.

Research design and methods

Methodology

Table 2: Research design

Study Design	Co-produced mixed methods feasibility study
Designing the health measure	The supplementary health measures (one for young people and one for caregivers) will be co-designed by the three advisory groups through online workshops. We will use existing measures of health to consider what questions may be relevant to young people in care, while also considering what additional questions may be needed given the unique experiences of those in the care system. Furthermore, the advisory groups will also consider whether young people in residential care require different content to those living in foster care. This health measure will then be piloted with young people in residential and foster care from three local authorities. A subgroup from the pilot will be interviewed about their experience of completing the measure, to ensure that the questions and content make sense, are appropriate and relevant to them. Themes from the interviews and anonymised questionnaires will taken back to the advisory groups so that the health measures can be refined.
Population	**Workshops** will consist of five care experienced young people aged 18-25 years who have left care within the last two years, five foster caregivers who are currently registered and five residential caregivers who are currently employed and working in a residential care home.
	The **survey** will be piloted with 30 young people aged 10-17 years in residential care, 30 young people aged 10-17 years in foster, 30 foster carers and 30 residential caregivers across three local authorities.
	Interviews will be conducted with three young people in residential care, three young people in foster care, three foster carers and three residential caregivers (across three local authorities).
	Stakeholder **Theory of Change workshops** will be conducted with 15-30 professionals across three local authorities.
	Stakeholder Interviews will be conducted with 15 professionals across three local authorities.
Measures	The co-production of an online health assessment measure for young people in care and caregivers, appropriately tailored for young people in residential versus foster care; a theory of change for the intervention that is agreed with key stakeholders; the identification of an appropriate method for a larger efficacy trial.
	Any subsequent trial would use the outcomes as specified in the theory of change; a draft version appears below and would be refined during this project with input from key stakeholders. It identifies the pathways to impact from using the questionnaire both at the individual level (where young people and caregivers choose to use their questionnaire responses in meetings with healthcare professionals) and at an anonymised, aggregate level for the local authority or CCG. A full trial would determine whether use of the questionnaire was linked to

improvements in the management of young people's physical and mental health, reduction in risk taking behaviours (likely to be especially relevant for young people in residential care), and increased empowerment and confidence for young people and caregivers.

Input	Activities	Short-term outcomes	Intermediate outcomes	Long-term outcomes

Individual Level

Advisory groups

Young people in care

Foster carers

Residential workers

Designated nurses and paediatricians

CCGs

Service managers

Health questionnaire for young people and caregivers, produced through co-design workshops and feedback

Young people, caregivers and healthcare staff can better understand the health needs of young people.

Young people and caregivers have more input/voice into their health assessments.

Healthcare staff can:

Recommend training and support for specific needs identified.

Provide advice and signpost to support on particular issues.

Aggregate Level

LAs and CCGs:

Have a better understanding of the health needs of local cohorts

Commissioning of services informed by local needs

Identify training needs for staff/caregivers

Targeted interventions

Improvement in management of physical and mental health

Reduction in risk taking behaviours

Young people feel empowered to manage their own health

Targeted training

Caregivers confident in their ability to promote health

Analytical strategy

- Thematic analysis
- Missingness
- Question completion rates.
- Feedback to advisory groups and refine the supplementary health assessment measures.
- Theory of Change will be refined with advisory groups and then stakeholders.

Sampling and recruitment

Participants for the study will be recruited in one of two ways. Firstly, participants for the advisory workshops will be recruited using our existing connections on social media. Participants for all other elements of the study will be recruited through their local authority. Summary information about the advisory workshops will be advertised on social media using existing networks. Care experienced young people and caregivers who are interested in taking part will be invited to contact the research team. A link to the full information sheet will be provided via the advert.

Local authorities will initially be contacted by email, followed up by a phone call and Teams meeting to discuss the research. Participating local authorities will be asked to approach the professionals working with all eligible looked after young people for inclusion in the study. These professionals will then distribute the link to the online questionnaire where those who consent can complete the questionnaire online anonymously. Young people and caregivers who complete the survey, who are happy to be interviewed about the survey will be able to click on a link which will take them to a new survey where they can fill in their preferred contact details. This is to ensure that the young people's personal details cannot be linked to

their health data. Once they have submitted their contact details the researcher will contact them directly to arrange the interview.

Participating local authorities will be asked to approach the professionals who meet the eligibility criteria for the Theory of Change workshops and interviews. Those who wish to take part can then contact the research team directly.

Table 3: Inclusion and exclusion criteria

	Inclusion criteria	Exclusion criteria
Children and young people		
Advisory workshops	• Spent time in foster/kinship/residential care prior to their 18th birthday. • Were subject to a full care order or were in care subject to Section 20 of the Children's Act 1989. • Fluent in English • Available to participate in 5 workshops over the course of 8 months. • Aged 18-25 at the time of recruitment.	
Pilot questionnaire/ interviews	• Are in foster/kinship or residential care • Are subject to a full care order (i.e., excluding those in care under Section 20 of the Children Act). • Have sufficient communication and literacy skills to complete the survey with adult supervision (if needed). • Are aged 10-17.	In line with the inclusion criteria, children will be excluded from the study if they are in other types of care placement; are under a Voluntary Care arrangement (Section 20); are outside of our target year groups; or are judged by their carers or social workers as unable to complete the questionnaire with adult
Caregivers		
Advisory workshops	• Are currently registered as a foster/kinship or residential caregiver. • Have been a caregiver for a minimum of 1 year.	

	• Available to participate in 4 workshops over 8 months. • Fluent in English.	
Pilot questionnaire/ interviews	• Are currently approved foster or residential caregivers for a young person who meets the above criteria.	
Professionals and stakeholders		
Theory of change workshops and interviews	• Currently employed by the participating local authority or associated health trust. • Are responsible for the promoting, monitoring and/or meeting the health and well-being needs of looked after children.	

Data collection

The study involves five phases of data collection starting with the co-production of a new survey to capture the health needs of young people in care, and their access to health services to meet these needs. Once the survey has been designed the study will move to phase two where the survey will be piloted with young people and caregivers in residential and foster care. Phase three will involve interviewing a subsample of the pilot to understand their experience of completing the survey, and exploring whether any edits need to be made. During phase 4 we will undertake Theory of Change workshops with stakeholders to refine our model, with a particular focus on short- and long-term outcomes we might measure to see if the survey could help services meet the health needs of young people in care. Finally, phase five will consist of interviews with stakeholders to explore the methods we might use in a larger efficacy trial. The advisory groups will design and contribute to all phases of the study.

Phase one: Producing the survey
Co-production workshops will be held with care-experienced young people, foster caregivers, and residential caregivers to develop and refine a questionnaire that captures the health needs of young people in residential and foster care, and their access to health services. The researcher will meet with young people six times, foster caregivers four times, and residential caregivers four times for 1.5 hours each time (a total of 14 workshops). The aim of each session is outlined below:

Session One: aims to review examples of health questionnaires designed for young people in the general population and consider whether any additional domains/themes are needed to capture the unique characteristics and experiences of young people in care. The first session will also be used to get to know each other and to see what skills/knowledge young people would like to get out of their participation. This session aims to answer research question one - *Does a questionnaire to identify the health status of young people in care and their access to health services need to include different content for young people in residential versus foster care?*

Session Two: aims to design the questions for each of the domains/themes identified in workshop one and consider whether different questions are needed for young people in residential care and review the interview schedules for the pilot interviews in phase three. This session aims to answer research question one - *Does a questionnaire to identify the health status of young people in care and their access to health services need to include different content for young people in residential versus foster care?*

Phase two: Survey pilot
The survey for young people and another for caregivers (produced by the advisory groups) will be piloted by a small sample across three local authorities We will use Qualtrics to set up the online questionnaire and we will ensure that it does not collect IP addresses so that young people's health data cannot be linked to any personal details left in a separate survey (for those wishing to participate in an interview). The link to the survey will be distributed to young people who meet the inclusion criteria by local authorities. Interview schedules will be reviewed by the advisory panel during session two. Interviews will be recorded using an encrypted external audio recording device. The researcher will connect the recorder into their computer via a USB to record online discussion. Online interviews will be transcribed using the auto/live transcription function in MS Teams.

Phase three: Pilot interviews
Semi-structured interviews with a subsample from the pilot will be conducted by the researcher virtually (interviews will be held in person for any young people who does not feel comfortable taking part in an interview virtually). Interviewees will be asked to comment on the ease of use and clarity of individual items on the questionnaire, and to comment on their comprehensiveness and whether the items are age appropriate (both chronologically and developmentally). Participants will receive a gift voucher for their time.

Advisory Group Session Three: aims to look at the themes that emerged from interviews with young people and their caregivers about the acceptability and usefulness of the questionnaire and consider whether any changes need to be made to the questionnaire. Session three aims to answer research question two - *What are the views of young people, caregivers and health professionals on the questionnaire's acceptability and usefulness?*

Phase four: Theory of Change workshops
Theory of Change workshops with stakeholders from across the three Local Authorities (managers – aggregate level pathway; practitioners – individual level pathway) will be held to discuss and refine the existing theory of change, identify underlying assumptions, and to explore potential ways of measuring the outcomes. We will explore what the Theory of

Change theory, how the Theory of Change can be used in practice, and then what the model for this study looks like. We will work through each section of the model to explore whether there is anything missing, or whether other edits need to be made. Stakeholders will be asked to consider what the outcomes of implementing a supplementary health assessment measure might be, and we might measure these.

Advisory Group Session Four: aims to review the Theory of Change, consider the most appropriate measures of the outcomes and review findings from the Theory of Change workshops with stakeholders. Session four aims to answer research question three - *What are the most appropriate and acceptable measures of the outcomes identified in the theory of change?*

Phase five: Stakeholder Interview

Finally, interviews with key stakeholders will be conducted about the acceptability of different methods for a full efficacy trial. These will explore the potential facilitators and barriers to different approaches, with a particular focus on the feasibility and acceptability of randomisation in the context of health and social care.

Advisory Group Session Five: aims to explore stakeholders views on the feasibility and acceptability of the questionnaire and consider how the questionnaire might evaluated in a larger trial. Session five aims to answer research question four - *What methods would be appropriate for a larger efficacy trial?*

Table 4: Project activity schedule and sample

Method	Sample size	Time point
Advisory workshops	• Group 1) 5 care experienced young people. • Group 2) 5 foster carers • Group 3) 5 residential caregivers	August 2023 – January 2024
Survey pilot	• 30 young people in foster care (10 from each local authority). • 30 young people in residential care (10 from each local authority. • 30 foster carers (10 from each local authority. • 30 residential caregivers (10 from each local authority).	October 2023
Pilot interviews	• 3 young people in foster care (1 from each local authority). • 3 young people in residential care (1 from each local authority). • 3 foster carers (1 from each local authority)	October 2023

	• 3 residential caregivers (1 from each local authority).	
Theory of change workshops	• Up to 10 health or social care practitioners within in each local authority (*n*=30).	November 2023
Stakeholder interviews	• Up to 5 health or social care practitioners within each local authority (*n*=15).	December 2023

Analysis

Theory of change workshops and all interviews will be transcribed verbatim by the principal investigator. Following the procedure identified by Ziebland and McPherson (2006), all transcripts will be anonymised and thematically analysed through a series of stages which will include an initial analysis by the principal investigator using NVivo software. Firstly, the researcher will read through the transcripts adding any initial thoughts or comments in MS word. These initial thoughts/themes will be taken to the advisory groups for feedback. Following this, the researcher will go back through the transcripts using NVivo to code the transcripts into themes. A subsample of transcripts will be checked by another researcher to check whether any themes should be edited or added. These themes will then be taken to the advisory groups who will provide their feedback including which themes are most important to them. Missingness analysis will be undertaken on survey responses using SPSS.

Reflexivity and addressing potential bias

The benefits of user-led research are becoming better recognised within health research. These benefits may include research providing a greater focus on the issues that are important to those who experience them, researchers being better positioned to represent the voices of participants, the ability build rapport, reducing any power struggles, allowing participants to feel in control over the information they provide and focusing on what the benefits of any research may be for participants and the wider group (Torronen & Vormanen, 2014).

However, it is also necessary to recognise how the principal investigators personal experience of the care system could bring potential bias in the design of a new survey and other aspects of the study including interpretation of the findings. In order to reduce any such bias, three advisory groups will be set up at the start of the project. Advisors will include care experienced young people, foster carers and residential caregivers and their voices will feed into all aspects of the study. In order to recognise the importance of their contribution, the researcher will discuss potential tasks and explore whether there are certain aspects that they feel would be useful to their development and/or curriculum vitae to help them meet their future goals. Advisors will also receive a gift voucher for each session that they attend.

Project management

The project will be led by Dr Áine Rose Kelly, a Care Experienced Research Officer at the Rees Centre, University of Oxford, who will be project manager and Principal Investigator. Áine will be responsible for running of the project, data analysis and writing up the findings. Áine will work under the supervision of Dr Nikki Luke.

Risks

Table 5: Mitigation of risks

Risk	Mitigation
Difficulties recruiting local authorities.	In the unlikely event that recruitment fails via the local authorities with whom we have existing relationships, we can approach new LAs via the Directors of Children's Services and the National Association of Virtual School Headteachers (we have existing contact with these in all LAs). The NIHR Clinical Research Network can also be approached for recruitment of healthcare professionals and has an existing link with the Rees Centre.
Delays in Health Research Authority approval for involvement of healthcare professionals	Research activities can be rearranged so that all activities with health professionals are scheduled in the final months of the project.
Delayed deliverables against milestones	Reduce other workload by re-allocation. Review timeline with funder.

Registration

This study will be registered with the Open Science Framework (OSF).

Ethics

Ethical approval will be sought from the University of Oxford, Health Research Authority before commencing the data collection. This is important to ensure that the research is conducted in an ethical and responsible manner and that the rights and welfare of participants are protected.

The research project will be conducted according to the principles outlined in the British Psychological Society Code of Ethics and Conduct [www.bps.org.uk/what-we-do/ethics-standards/ethics-standards] and the Economic and Social Research Council's research ethics framework. An application has been made to the Departmental Research Ethics Committee (DREC) at the university of Oxford in accordance with the procedures laid down by the University of Oxford for ethical approval of all research involving participants. This will enable work with young people, foster and residential caregivers and all non-healthcare professionals to commence. At the same time, the researcher will also apply to the Health Research Authority (HRA) for approval to work with and interview NHS staff (within specialist health teams); this activity has been scheduled during the second half of the timeline to allow time for approval. The research project will also go through any local authority research governance requirements.

The questionnaire, information sheets and consent forms will be co-designed with young people in care, foster caregivers, and residential caregivers. This will help to ensure that they

are written in an accessible way. Participants will be recruited via local authorities. The person with parental responsibility for young people who are looked after will give consent for the young people who wish to participate, as well as the young person themselves, and their caregiver. Caregivers and other professionals will give consent for their own participation. In order to give their informed consent, participants will be given information about the project including what they will be asked to do, how their data will be used, the risks and benefits of taking part and their right to withdraw. Participants will be informed that while every attempt will be made to ensure their confidentiality and anonymity, the researcher would need to speak with a social care worker should they revealed any information that would suggest they are at risk of harm. The questionnaire will not raise any sensitive issues relating to young people's pre-care experiences or the reasons why they entered care.

The researcher has enhanced clearance from the Disclosure and Barring Service and has received training on interviewing young people and recognising early signs of distress. Data including audio recordings will be stored on a secure university server and all sensitive documents containing personal information will be password protected. Participants will be told that if the risk of serious harm to a young person emerges through what has been disclosed, the safeguarding leads and local authority manager (if the young person is still in contact with their local authority) will be informed. We will also provide contact details for relevant organisations (e.g., Become, Samaritans) and encourage those who still have a PA to discuss the study with them in case they become upset.

A risk assessment will be carried out prior to interviews taking place. Although it is anticipated that most participating adults and young people will opt for telephone interviews, some young people may opt for face-to-face interviews at home. In this case, the PI will: inform their line manager of the date, time, and location of the interview ahead of time; phone or text their line manager prior to entering the home and arrange a time for the next contact; phone or text their line manager after leaving the interview; leave the home if at any point feeling unsafe. The line manager will phone the PI if they have not heard back from them by the agreed time. All workshops will take place online.

The researchers may also hear about distressing situations (e.g., from young people talking about their prior history of abuse or neglect in relation to their mental health). There will be an opportunity to discuss these (in confidence) in our regular supervision meetings. If appropriate, researchers can also be directed to the University's counselling service and to their sessions on secondary trauma.

Data protection

All data management processes in this study will comply with the requirements of the General Data Protection Regulation (GDPR) and the Data Protection Act 2018, as set out in the University of Oxford's Guidance on Data Protection and Research. The University of Oxford's Information Use policy (available on request) is aligned with ISO27002.

Data will be stored on a secure server, attached to a corporate network, which is backed up remotely to a server at University IT Services. All anonymised data stored in the secure server will be retained for three years after publication of the final report. The server is automatically patched and is monitored by IT staff who ensure security patches are

installed as soon they become available. The server is accessible over the internet via remote access, which is provided by IT Services, and requires two levels of password authentication. Data will be stored in a password-protected folder accessible only by the named researchers and Departmental IT Services. Data usage is on password-protected laptops, on an external hard drive encrypted with AES-256 which is FIPS approved. The project will be subject to a Data Protection Impact Assessment at Oxford; as part of this, a specific data protection notice will be created.

All data collected for this research study will be gathered through interviews, workshops and surveys as discussed in the methodology section above. All participants will be provided with information sheets and written consent will be obtained prior to any data being collected. All data will be anonymised and stored securely, either within our secure server or in locked filing cabinets in a lockable room for hard-copy consent forms or workshop notes. Data will only be accessible to the research team. The data will be used solely for the purposes of this research project and will not be shared with any third parties. All anonymised data stored will be retained for three years after the publication of the final report, and then deleted.

Survey data will be collected using Qualtrics as this provides secure and GDPR-compliant data processing. IP addresses will not be collected on Qualtrics to prevent health data being linked to contact details. A number of non-identifiable security questions will be asked at the start of the survey to allow the identification of individual surveys participants should a participant wish to withdraw. To ensure anonymity and the right to withdrawal for interviews and workshops, participants will be allocated identification codes on receipt of signed consent forms. These codes will be used on all data files. A 'match key' on the Rees Centre server (held in a separate folder to the data) will show the link between participant names and ID codes for the workshops and interviews. This enables withdrawal of consent throughout the project without identifying any individuals.

The University of Oxford will be an Independent Data Controller and WWEICSC will not be a data controller or processor for any data in relation to this project.

Timeline

Dates	Activity	Staff Responsible/ Leading
Apr-July 2023	Set up phase – Ethical Approval, Data Protection Impact Assessment, Health Research Authority, Local Authority Recruitment and Research Governance.	ÁK
Aug-Sept 2023	Research Question 1 – Co-production of the supplementary health assessment measure.	ÁK
Oct-Nov 2023	Research Question 2 – Pilot the supplementary health assessment measure and refine if needed.	ÁK
Oct-Dec 2023	Research Question 3 – Refine Theory of Change Model	ÁK
Nov-Dec 2023	Research Question 4 – Identification of an appropriate method for a larger efficacy trial.	ÁK

References

Arseneault, L., Cannon, M., Fisher, H. L., Polanczyk, G., Moffitt, T. E., & Caspi, A. (2011). Childhood trauma and children's emerging psychotic symptoms: A genetically sensitive longitudinal cohort study. *Am J Psychiatry, 168*(1), 65-72. https://doi.org/10.1176/appi.ajp.2010.10040567

Barnes, P., Price, L., Maddocks, A., Cheung, W. Y., Williams, J., Jackson, S., & Mason, B. (2005). Immunisation status in the public care system: A comparative study. *Vaccine, 23*(21), 2820-2823. https://doi.org/10.1016/j.vaccine.2004.12.001

Brook, J., & et, a. (2015). Risk and protective factors for drug use among youth living in foster care. *Child and Adolescent Social Work Journal, 32*(2), 155-165. http://www.springer.com/psychology/personality+%26+social+psychology/journal/10560

Carbone, J. A., Sawyer, M. G., Searle, A. K., & Robinson, P. J. (2007). The health-related quality of life of children and adolescents in home-based foster care. *Qual Life Res, 16*(7), 1157-1166. https://doi.org/10.1007/s11136-007-9227-z

Chartier, M. J., Walker, J. R., & Naimark, B. (2009). Health risk behaviors and mental health problems as mediators of the relationship between childhood abuse and adult health. *American journal of public health, 99*(5), 847-854. https://doi.org/10.2105/AJPH.2007.122408

Promoting the health and well-being of looked after children: Statutory guidance for local authorities, clinical commissioning groups and NHS England., (2015).

Ford, T., Vostanis, P., Meltzer, H., & Goodman, R. (2007). Psychiatric disorder among British children looked after by local authorities: comparison with children living in private households. *Br J Psychiatry, 190*, 319-325. https://doi.org/10.1192/bjp.bp.106.025023

Fridrich, W. N., & et, a. (2005). Youth with problematic sexualized behaviors in the child welfare system: a one-year longitudinal study. *Sexual Abuse a Journal of Research and Treatment, 17*(4), 391-406. http://www.sagepub.co.uk/journalsProdDesc.nav?prodId=Journal201888

Hagell, A., & Shah, R. (2019). *Key Data on Young People 2019*. A. f. Y. P. s. Health.

Havlicek, J., Garcia, A., Smith, D. C. (2013). Mental health and substance use disorders among foster youth transitioning to adulthood: past research and future directions. *Child Youth Serv Rev, 35*(1), 194-203. https://doi.org/10.1016/j.childyouth.2012.10.003

Hayatbakhsh, R., Mamun, A. A., Williams, G. M., O'Callaghan, M. J., & Najman, J. M. (2013). Early childhood predictors of early onset of smoking: A birth prospective study. *Addictive behaviors, 38*(10), 2513-2519. https://doi.org/10.1016/j.addbeh.2013.05.009

Hill, C., & Thompson, M. (2003). Mental and Physical Health Co-Morbidity in Looked after Children. *Clinical Child Psychology and Psychiatry, 8*(3), 315-321. https://doi.org/10.1177/1359104503008003003

Hjern, A., & Vinnerljung, B. (2002). Healthcare for children in foster and residential care. *Acta Paediatr*, *91*(11), 1153-1154. http://onlinelibrary.wiley.com/store/10.1111/j.1651-2227.2002.tb00120.x/asset/j.1651-2227.2002.tb00120.x.pdf?v=1&t=i903zjff&s=4e8fff5cf754b5c1f320cecb115f00630f99f410

Howe, D. (2005). *Child abuse and neglect: attachment, development and intervention*. Bloomsbury Publishing PLC

Hunter, D., McCartney, G., Fleming, S., Guy, F. (2008). The views of residential care workers on the promotion of health and well-being of the children they care for. *Adoption & Fostering*, *32*(4), 57-63.

Kelly, A. (2022). *Factors associated with the ability of care system to meet the physical and mental health needs of young people looked after in England: a mixed-methods study.* University of Oxford]. Oxford. https://ora.ox.ac.uk/objects/uuid:92452d35-3b50-440a-a041-92f8c78e2d88

Kim, H. S., Ham, O. K., Lee, C. Y., & Lee, T. W. (2009). Health problems and health behaviors of Korean preschoolers living with parents and under guardianship. *Public Health Nurs*, *26*(3), 207-217. https://doi.org/10.1111/j.1525-1446.2009.00773.x

Köhler, M., Emmelin, M., Hjern, A., Rosvall, M. (2015). Children in family foster care have greater health risks and less involvement in child health services. *Acta Paediatrica 104*, 508-513.

Leslie, L. K., Gordon, J. N., Meneken, L., Premji, K., Michelmore, K. L., & Ganger, W. (2005). The physical, developmental, and mental health needs of young children in child welfare by initial placement type. *J Dev Behav Pediatr*, *26*(3), 177-185. http://graphics.tx.ovid.com/ovftpdfs/FPDDNCLBNFEBED00/fs047/ovft/live/gv024/00004703/00004703-200506000-00003.pdf

Leslie, L. K., James, S., Monn, A., Kauten, M. C., Zhang, J., & Aarons, G. (2010). Health-risk behaviors in young adolescents in the child welfare system. *The Journal of adolescent health : official publication of the Society for Adolescent Medicine*, *47*(1), 26-34. https://doi.org/10.1016/j.jadohealth.2009.12.032

Lewis, H. (2000). Improving health care and health education: for looked after young people. *Childrens Residential Care Unit Newsletter*(13), 5-6.

Lorek, A. (2013). Is this looked after child fully immunised? A comparison of records and the development of an immunisation look-up tool. *Adoption & Fostering*, *37*(2), 212-219. https://doi.org/10.1177/0308575913490858

McCool, S., & Stevens, I. C. (2011). Identifying speech, language and communication needs among children and young people in residential care. *International Journal of Language and Communication Disorders*, *46*(6), 665-674. https://doi.org/10.1111/j.1460-6984.2011.00037.x

Mekonnen, R., Noonan, K., & Rubin, D. (2009). Achieving Better Health Care Outcomes for Children in Foster Care. *Pediatric Clinics of North America*, *56*(2), 405-+. https://doi.org/10.1016/j.pcl.2009.01.005

Narendorf, S. C., McMillen, J. C. (2010). Substance use and substance use disorders as foster youth transition to adulthood. *Child Youth Serv Rev*, *32*(1), 113-119. https://doi.org/10.1016/j.childyouth.2009.07.021

Nathanson, D., Lee, G., & Tzioumi, D. (2009). Children in out-of-home care: does routine health screening improve outcomes? *Journal of paediatrics and child health*, *45*(11), 665-669. https://doi.org/http://dx.doi.org/10.1111/j.1440-1754.2009.01592.x

Rodrigues, V. C. (2004). Health of children looked after by the local authorities. *Public Health*, *118*(5), 370-376. https://doi.org/10.1016/j.puhe.2003.10.009

Selwyn, J., & Briheim-Crookall, L. (2017). Our lives our care: Looked after children's view on their well-being. In U. o. B. a. C. Voice (Ed.).

Taha, F., Galea, S., Hien, D., Goodwin, R. D. (2014). Childhood maltreatment and the persistence of smoking: a longitudinal study among adults in the US. *Child Abuse & Neglect*, *38*, 1995-2006. https://doi.org/10.1016/j.chiabu.2014.10.022

Thompson Jr, R. G., & Auslander, W. F. (2007). Risk factors for alcohol and marijuana use among adolescents in foster care. *Journal of substance abuse treatment*, *32*(1), 61-69. https://doi.org/http://dx.doi.org/10.1016/j.jsat.2006.06.010

Torronen, M. L., & Vormanen, R. H. (2014). Young people leaving care: participatory research to improve child welfare practices and the rights of children and young people. *Australian Social Work*, *67*(1), 135-150. http://www.tandf.co.uk/journals/titles/0312407X.asp

Yassaee, A. A., Hargreaves, D. S., Chester, K., Lamb, S., Hagell, A., & Brooks, F. M. (2017). Experience of Primary Care Services Among Early Adolescents in England and Association With Health Outcomes. *Journal of Adolescent Health*, *60*(4), 388-394. https://doi.org/https://doi.org/10.1016/j.jadohealth.2016.09.022

Ziebland, S., & McPherson, A. (2006). Making sense of qualitative data analysis: an introduction with illustrations from DIPEx (personal experiences of health and illness). *Med Educ*, *40*(5), 405-414. https://doi.org/10.1111/j.1365-2929.2006.02467.x