Supplementary Material File 2: Key outputs from Work Package 3

Document A

This note began the process of identifying what needed to be included in the Phase 2 evaluation, the difficulties likely to be encountered and some potential options.

Children and young people's mental health Trailblazer programme evaluation

Design and requirements for Phase 2 impact and economic evaluation

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Preferred design

Mixed method quasi-experimental comparison of activity, cost and outcomes for children and young people, and possibly staff and parents, over at least two years (ideally three years), comparing first and second wave Trailblazer with non-Trailblazer populations, 2019-23.

Requirements for Phase 2

The new services will operate at multiple levels and so too ideally should the assessment of impacts in the Phase 2 evaluation

The three key functions of the MHSTs will see them operating at micro, meso and macro levels in the Trailblazer areas:

1. Delivering evidence-based interventions to children and young people with mild to moderate mental health issues (micro)
2. Supporting the senior mental health lead in each education setting to introduce or develop their whole school or college approach to mental health and wellbeing (meso)
3. Giving timely advice to education setting staff, and liaising with external specialist services, to help children and young people to get the right support and stay in education (macro).

Comparison of activity (e.g. services delivered), costs and outcomes between Trailblazer areas, education settings and students, and non-Trailblazer areas, settings and students will require recruitment of comparison areas, education settings and students

This will require access to information and the development of criteria for selecting comparator areas and settings within areas that are sufficiently similar in their features and student populations to provide a robust assessment of the differences in inputs, outcomes and costs between Trailblazers and those parts of the country not exposed to the Trailblazer programme.

This will also require work in due course to encourage participation from non-Trailblazer areas and recruit these areas and their settings. Ideally, these would be 'most similar' but not in the Trailblazer

programme during the evaluation period. However, in order to facilitate their involvement, some studies recruit comparators from sites that are scheduled or interested in taking part in later waves of an initiative. The limitations of this approach are that such sites may be strongly influenced by 'intervention' areas, sites may start implementing the 'intervention' and the timetable of the roll-out of the intervention may be shortened such that a comparator becomes an intervention site before outcomes and costs can be properly evaluated. On the other hand, sites that are not scheduled to take part or not interested in the programme have no incentives to take part and may be positively resistant to being involved in an evaluation.

Comparison will require resources to devote to maximising and maintaining participation and response rates, especially in non-Trailblazer areas and settings

This has significant implications for the staffing and budget of the phase 2 evaluation, depending on scale.

Selection of a set of outcome measurement instruments that can be used in student surveys to compare the impact of the Trailblazer programme

One of the goals of the Trailblazer programme is to improve students' long-term wellbeing which is not currently measured routinely. A comprehensive evaluation would include longitudinal student surveys (both of samples of the overall student population in settings and the sub-set of students referred to the MHSTs). Sample size calculations will need to be done to determine how many students would be needed in these two groups to identify significant differences in the selected outcome measures. In turn, this will determine how many non-Trailblazer areas and settings will need to be recruited and retained in this part of the Phase 2 study. The period over which the outcomes will need to be measured will need to be identified, ideally from previous longitudinal research using these instruments to see how rapidly they are able to identify changes.

In addition, there are likely to be changes in the non-Trailblazer areas/settings (e.g. we understand that SLMH training will be offered to all education settings in England) that reduce the differences between intervention and comparator areas/settings.

Another approach would be to use the Millennium Cohort Study and *Our Future* cohort study both of which collect rich, nationally representative information on about 20,000 young people including measures of mental health and school support. It may be possible to use cohorts from these studies as a comparison population as long as we could remove young people in Trailblazer areas.

Selection of a set of activity and outcome indicators from routine NHS and DfE datasets that could be used to compare all the Trailblazers with matched non-Trailblazer areas and settings

The key requirement here will be the ability to access and then organise linkage of individual patient/student data between NHS routine data related to the activities of the MHSTs and data from the National Pupil Database system.

There are plans to establish data linkage between the National Pupil Database and MHDS in order to support monitoring of the Trailblazer programme. This needs to be investigated in detail since at a minimum an outcome evaluation should be set up to collect education and mental health outcome-related data over time comparing Trailblazer and non-Trailblazer student populations.

Collection of cost data

This would need to cover the total cost of MHST services as well as pre-existing services funded from local sources (i.e. in places that have already invested in similar services for mild to moderate mental health needs)

Work Package 3: Scoping and developing an evaluation protocol for Phase 2

One of the main purposes of the early evaluation is to inform the design and development of the Phase 2 impact and economic evaluation. Using the data gathered in Phase 1, we need to:

- assess the quality, completeness, relevance and likely future availability of the routine data, including financial and resource use information for costing and educational outcome data. For example, the data available on Public Health England's Fingertips portal (www.fingertips.phe.org.uk) on the expenditure on Local Authority children and young people's services (excluding education), and the data on admissions of children and young people in CAMHS Tier 4 wards.
- refine the research questions for the longer-term study and identify the most practical ways to collect data that will not be available routinely
- identify a range of appropriate comparators at the level of geographic areas (for example, CCG, county and unitary authority), mental health services and education settings so that the added value of the trailblazer investment can be robustly assessed.

Our work will include development of a theory of change for the programme, specifying the programme's desired outcomes, and describing the activities and mechanisms by which these outcomes are expected to be achieved and the contextual conditions which may be integral to success. We will test out the draft theory of change with key stakeholders, including the programme team and policy leads. We will also consult children and young people and subject area experts as to the most appropriate instruments to use to measure outcomes and about the timescales over which desired outcomes will be expected to appear.

Options for the phase 2 evaluation

The early experience of the phase 1 evaluation has shown that all aspects of the research such as accessing documents, obtaining monitoring reports, collating routine activity data, requesting contact details of key managers and staff, etc. have been more complex and much more protracted than we had been led to believe. In light of this, any design for phase 2, needs to be feasibility-tested and there need to be elements of the evaluation that are relatively immune to data governance, data linkage, student access and other issues. Given these considerations, it would be prudent to try to design the phase 2 evaluation in stages, starting with the most straightforward and least risky forms of data collection before moving to more elaborate forms of data collection. For example, the initial Trailblazer versus non-Trailblazer comparison could be based simply on aggregate routine data from education settings in the areas concerned. After this initial ecological analysis and further research on the types of cases being managed by the MHSTs, their referrals, etc., it might be possible to start collecting individual level matched comparative data on Trailblazer and non-Trailblazer students. However, matching would only be possible in the knowledge of the diagnoses being made among the Trailblazer students.

There have been some discussions about design options already when thinking about WP3 in the current evaluation but there is much further work to do, especially in selecting outcome measures, sample size estimates, etc. (see below).

One design issue is whether the outcome evaluation is confined to the first wave of Trailblazers or the first two waves. The advantage of the former is the longer period of follow up though we are

told that the first wave will be atypical, including in the nature of its funding and the flexibility of its service delivery model. Given the likely lag in availability of MHSSDS data, the alternative is to try to run the phase 2 study beyond December 2023 when the current PIRU contract ends.

1. *Routine outcome data plus comparative cost and resource use of Trailblazer and non-Trailblazer populations*

This option would rely on service use and outcome data from the MHSDS and National Pupil Database with no primary outcome data collection. Though this would mean that outcomes related to wellbeing would not be included, this approach would potentially enable all 25 Trailblazers and their children and young people to be included. It would also have the advantage of not requiring the active cooperation of either Trailblazer or non-Trailblazer education settings or mental health services. It would require the student populations to be clearly identified over time and for a third party to link these populations' MHSDS and National Pupil Database records and provide anonymous datasets to the research team. This is a sensitive topic but since there is a plan to develop a record linkage system between DfE and NHSE/NHSD, there may be grounds for optimism that this is feasible. Because of the different focus of the two routine datasets, some education service process and outcome data would be available for all students whereas the MHSDS data would only relate to the sub-set of students referred either to the MHST or other NHS mental health services. The comparison group will, of course, have access to a more restricted range of services.

Key decisions would be the variables on which to select the non-Trailblazer areas and the education settings within each area, since some variables such as spending levels on mental health services or pastoral care in schools would need careful assembling. We should have fairly good profiles of wave 1 Trailblazer areas and education settings from the phase 1 evaluation.

The numbers of students should be large enough to allow a more focused analysis to be undertaken based on individual level matching of sub-samples of Trailblazer and non-Trailblazer students assuming that health and education data can be linked at the individual level.

There are substantial quality issues with the current NHS MHMDS so there are no guarantees that the new datasets will be of sufficient quality to bear the full weight of the outcome evaluation.

In parallel with the outcome data analysis, this option would still require some collection of financial and resource information from Trailblazers and matched non-Trailblazers. Other costs could be estimated from service use recorded in MHSDS. This design would also require collection of some qualitative and descriptive data on how Trailblazers were continuing to implement MHSTs over time.

2. *As above plus surveys of samples of student and parent populations*

This option would add primary outcome data collection in the form of periodic panel surveys of samples of students and their parents in a sample of Trailblazer education settings, with a comparison group of non-Trailblazer students and parents. Survey data would need to be linked to the routine data in option 1 but this would only need to be undertaken in a sample of Trailblazers and comparator areas/settings.

Given that this approach would require the close cooperation of education settings, the main practical decision would be the scale of the study and whether to collect original 'control group' (non-Trailblazer) data or to rely on an existing national survey such as the Millennium Cohort Study

or the "Our Future" cohort study both of which collect rich, nationally representative information on about 20,000 young people including measures of mental health and school support. These surveys could also provide some pre-Trailblazer baseline information. Could analyses of these data provide a resource for nationally representative baseline analysis or could survey questions be used from these sources allowing the cohorts to be used as a "control" group?

This approach would allow a detailed assessment of students' mental health, wellbeing, confidence, etc. over time.

3. *Option 1 and/or option 2, plus a quasi-experimental comparison of students' outcomes comparing outcomes of students referred to MHSTs versus matched non-Trailblazer controls in a small number of sites*

In this option, a focused, more intensive quasi-experimental study would be nested within the much larger, ecological routine data study. This could include student, parent and staff surveys over time, as well as detailed description of the functioning and activity of the MHSTs in each site. The focus here would be on internal validity since this kind of study cannot be undertaken across a large number of areas/settings. Inevitably, we would be working with settings willing to take part in quite intensive research.

Work required to enable preparation of a detailed proposal for phase 2

Routine data

Keep track of development of plans for DfE-NHSE's plans for student level data linkage between NPD and MHSDS

Identify how to access individual level NPD for independent research (e.g. data sharing agreements)

Identify how to access data from Trailblazer quarterly returns (likely to be the only data source until at least April 2021) and eventually individual level data from MHSDS via NHS Digital for independent research

Assessment of whether phase 2 evaluation can be done without access to linked education and mental health services data at the individual student/patient level

Identification of routinely available financial data by area and/or by education setting that could be used to estimate resource availability in Trailblazer and non-Trailblazer settings

Outcome measures requiring original data collection

Review of relevant recent evaluations of similar initiatives to identify the outcomes and related instruments used, their relevant to a very diverse range of children and young people, their ease of administration to children and young people in education settings, the likely interval of time before which any effects might be visible, sensitivity to change, etc.

Compare the research instruments with those routinely used by education settings themselves. The DfE's baseline survey identified a wide range with the following the main tools used: Strengths and Difficulties Questionnaire (47%), Boxall Profile (39%), Pupils' Attitudes to School and Self (20%), Revised Children's Anxiety and Depression Scale (5%), etc.

Identification of the best way(s) to undertake repeat measure surveys in different types of education setting, especially the feasibility in non-Trailblazer education settings – consultation with subject area experts such as the Education Endowment Foundation

Check which outcomes are likely to be captured in routine data and those not (reference DfE-NHSE's Green Paper data strategy – success measures, February 2020 slide set).

Determine the length of time that students, staff or settings need to be followed up for change to be measured reliably

Potential primary outcomes include wellbeing, mental health (especially some way to assess the rate of progression to more severe problems over time), health-related quality of life, aggression, behaviour, etc.

Potential secondary outcomes include educational achievement, absences, exclusion, users' experiences of MHST services, referrals to CAMHS, etc.

Review the DfE/DHSC Impact Assessment of the Mental Health Green Paper initiatives to identify the principal outcomes expected by Government

Identification of which parental and staff outcomes are potential candidates for inclusion in a longer term evaluation

Review of how 'school level' effects are assessed in previous evaluations

Identify how to approach individual education settings to obtain their agreement to include them in original data collection

Other data sources

Investigation of the feasibility of using existing national mental health surveys to construct a non-Trailblazer 'control group'

Potential designs

Review of the strengths and weaknesses and feasibility of the designs of relevant recent evaluations of similar initiatives (e.g. evaluations of IAPT programmes)

Consideration of the scope for using a stepped wedge approach to the routine data analysis as successive waves of sites join the Trailblazer programme

Consideration of the scope to develop a typology of Trailblazers to enable a within Trailblazer comparison of different sites' performance, including the dimensions on which sites might vary and how data on these might best be collected – identify the range of variation between education settings in order to estimate the number of Trailblazer and non-Trailblazer education settings of different types that would be needed for a representative sample of Trailblazer and non-Trailblazer education settings to be achieved. Another approach would be to try to estimate a 'dose' of Trailblazer activity and investment

Provide a working definition of when a Trailblazer and/or its constituent education settings should be regarded as 'active' for the purposes of baseline measurement of outcomes, etc. – is this when dedicated spending starts, when MHST staff come into post, when MHSTs start to deliver particular services, etc.?

Qualitative data collection

Identification of the focus for ongoing qualitative data collection focused on how each Trailblazer is interpreting and implementing MHSTs

Identification of suitable expert advisers

Candidates on the CYP MH side include Stephen Scott, King's College London; Tamsin Ford, Cambridge University; and Cathy Creswell, Oxford University

Document B

This report reviewed the approach and design of recent evaluations, assessed their feasibility, and identified their advantages and disadvantages to contribute to the development of a specification for the Phase 2 Green Paper programme evaluation.

Children and young people's mental health Trailblazer programme evaluation

Review of recent national evaluations of similar schemes and implications for Phase 2 impact and economic evaluation

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1. Summary

1.1. Context

There have been a number of national initiatives or pilot programmes with national evaluations that seem to be particularily relevant to the development of the phase 2 impact and economic evaluation of the Trailblazer programme, as follows:

- Me and My School: Targeted Mental Health in Schools (TaMHS) Programme, 2008-2011[1]
- The Troubled Families Programme, 2012-15[2-4]
- Mental Health Services and School's Link Pilot Programme, 2015-16[5]
- An evaluation of a new service model: Improving Access to Psychological Therapies (IAPT) demonstration sites 2006-2009[6]

The aim of this review is to summarise the design and approach of the evaluations and to extract information on the outcomes assessed, their advantages and disadvantages. Especially, how these were undertaken taking into account the pressures and constraints affecting research in different types of educational settings.

1.2. Issues encountered in the evaluations

Recruitment of comparison areas and/or education settings

There is clearly an issue related to the recruitment of comparison group areas (LAs) and/or schools in that those with poor provision are more likely to be more reluctant to agree to be in a comparison group since they are likely to want to be in any intervention/pilot group. If areas/schools are to be randomised or allocated to intervention and comparison groups after recruitment, areas/schools with better provision may be willing to take the chance of ending up in the comparison group since they have less to gain from being in the intervention group. If recruitment is voluntary and direct to the comparison group, then areas/schools with better existing provision may be more willing to be recruited to a comparison group (assuming that they are willing to take on any extra work that may be involved) than those with poorer provision. If this is the case, then, as in the TaHMS evaluation[1], it may become difficult to distinguish either in provision or outcomes between intervention and comparison group schools. In the TaHMS evaluation, the evaluators eventually decided to merge the two groups.

In the Troubled Families evaluation[2, 3], the evaluators avoided the issue of finding a comparison group by undertaking a contemporaneous comparison with a group of similar families about to enter the Programme (see below for more on this approach).

Sufficient length of evaluation for outcome differences to become apparent

It appears to be generally understood that the sorts of interventions represented in the Trailblazer programme require at least three years of follow up to obtain meaningful outcome data. Designing and sustaining a comparison over this period of time is challenging, particularly in the case of a RCT. The RCT element of the TaHMS evaluation was a waiting list trial in which areas already identified as eligible to enter the scheme were randomised to start either in 2009 or 2010. While such a design clearly boosts the willingness of areas/schools to take part in a RCT, it allows only a brief interval during which comparative outcome data can be collected from 'cases' and 'controls'.

The quasi-experimental element in the Troubled Families evaluation took a different approach to estimating the impact of the Programme by undertaking a cross-sectional comparison between families that had been engaged on the Programme for approximately 9 months and a matched

group of those about to or just entering the Programme, the assumption being that any difference observed could be attributed to the impact of the Programme. Apart from the question as to whether the two groups are sufficiently similar to be comparable (the results of the propensity score matching were reasonable), such an approach, though imaginative and practical, means that outcomes can only be assessed for as long as the interval between waves of the Programme. These are typically no more than 12 months apart and sometimes as little as 6 months apart. In practice, the comparison in this evaluation was essentially a before-and-after study but with before and after data collected from different families. Thus it was neither a waiting list quasi-experiment (which would have included contemporaneous baseline pre-intervention data collection) nor a regression discontinuity design.

Risk of 'contamination'

While the waiting list RCT design used in the TaHMS evaluation is strong in terms of ensuring a high level of comparability between intervention and comparison sites and increases the willingness of sites to be randomised, it is susceptible to 'contamination' between intervention group sites and comparison sites in that both sets of sites will have been through a similar application and recruitment process, and the comparison sites will be preparing to enter the scheme while remaining technically outside it. The likelihood is that such designs will either not be able to identify any or the full range of outcome advantages conferred by the intervention or understate their scale.

Lack of a consistent operational definition of the intervention

So called pilot programmes tend to give local implementers considerable freedom to interpret the goals of the programme quite widely and to determine what will they will put in place based on factors such as the pre-existing pattern of services, geography, etc. This was shown in the TaHMS and Troubled Families Programmes. While this variation may allow evaluators to compare different 'types' within the intervention sites, it makes it much more difficult to identify which aspects of the intervention are likely to have been responsible for the effects identified even with an experimental evaluation design. The comparison between 'types' may also suffer from limited statistical power compared with a simpler 'A versus B' comparison. Finally, with a variety of interpretations of the intervention, if the intervention group is shown to have performed no better than the comparison group, this may be because too many of the intervention areas/schools made poor decisions in terms of their local interpretation of how to implement the programme.

On the other hand, if comparisons between different 'types' within the intervention group are seen as a priority when the evaluation is being designed and there is some prior knowledge of the different 'types' and their frequency of occurrence (e.g. from an 'early' process evaluation), it may be possible to design the evaluation to capture any differences between different ways of implementing the same basic concept underlying a programme.

Ability of routine data systems to support evaluation designs

The Schools' Link Pilots evaluation[5] showed the limitations of the education and MHS sectors' data systems. In the absence of a system of data linkage, it was not possible to relate CYP referred to the MHS to specific education settings since the NHS routine data did not include information on the education setting of CYP referred. Recent plans for developing a method for linking CYP's education and MHS data that could be used for monitoring and research have been suspended as a result of the COVID-19 pandemic response. It is unclear when, or even whether, they will be resumed.

1.3 Implications for the phase 2 trailblazer evaluation

The overriding implication of this review of three recent evaluations of pilot programmes with some similarities with the CYP MH Trailblazers is that robust outcome evaluation at scale is likely to be difficult to undertake. Including an economic dimension further increases the practical challenge. The design and approach to the evaluation is likely to be constrained significantly by the way in which the Trailblazer programme is structured and implemented. Other implications include the likelihood that the comparison between different 'types' (interpretations) of Trailblazer will be as important, if not more so, than the comparison between Trailblazer and non-Trailblazer areas and education settings. Such a comparison is also likely to be more feasible than comparing Trailblazers with non-Trailblazers since many of the elements that comprise the Trailblazer programme have already been tried out elsewhere both in previous pilots and outside specific pilot programmes.

2. Me and My School: Targeted Mental Health in Schools (TaMHS) Programme, 2008-2011

2.1. Programme

The TaMHS pilot was a £60 million programme, which was launched in 2008 to develop local interventions and targeted support for children aged 5 to 13 years and their families. The interventions were varied according to local need and aimed to prevent or provide early intervention for the most common mental health problems[1].

Participating schools were chosen by LAs. Of the 25 initial programs, 14 were located in the most deprived English neighbourhoods. The initiative did not stipulate how the funds were to be allocated, as long as local programmes were in line with two core principles: choosing interventions informed by evidence, and promoting strategic integration across agencies[7].

The categories of school based mental health interventions included: 1) Social and emotional skills development of pupils; 2) Creative and physical activity for pupils; 3) Information for pupils; 4) Peer support for pupils; 5) Behaviour for learning and structural support for pupils; 6) Individual therapy for pupils; 7) Group therapy for pupils; 8) Information for parents; 9) Training for parents; 10) Counselling/support for parents; 11) Training for staff; 12) Supervision and consultation for staff; 13) Counselling/support for staff.

2.2. Aims

The aim of the research was to answer 5 key research questions:

1. What is the impact of TaMHS provision relative to provision as usual when evaluated using random assignment of areas to TaMHS vs. provision as usual?

2. Does the additional provision of support materials when randomly assigned enhance the effect of TaMHS provision on pupil mental health?

3. What different approaches and resources are used to provide targeted mental health in schools?

4. What factors are associated with changes in pupil mental health for schools implementing targeted mental health during the course of a three year longitudinal study?

5. How is targeted mental health provision (and the support materials designed to enhance the impact of such provision) experienced by project workers, school staff, parents and pupils and what lessons are there for future implementation?

Study 1: Longitudinal study

-**Quantitative component:** LAs, schools, teachers, children and parents belonging to the 25 LAs who began their TaMHS projects in 2008.

-**Qualitative component:** An exploratory study carried out in the first year of the longitudinal study involving policy advisors, TaMHS project leads, TaMHS staff, school staff and parents, multi-case studies and a selection of in-depth case studies.

Pseudo control group

-LAs selected schools who were not implementing TaMHS

-9 primary and 3 secondary schools provided data every year.

-Comparisons between the TaMHS group and this group of schools revealed no differences in the extent of mental health support, or in the outcomes attained so these schools were included in the overall longitudinal sample.

2008 2009 2010 2011

Study 2: RCT[3]

- LAs, schools, teachers, children and parents belonging to the 75 LAs who were randomly allocated to begin their TaMHS projects either in 2009 or in 2010, although two areas declined to participate, leaving 73.

-Conditions: 1) whether schools belonged to the TaMHS or no-TaMHS group 2) whether the LA received booklets or not

3) whether the LAs participated in Action Learning Sets or not and 4) whether schools were given evidence based self-help booklets or not.

2.3 Main elements

Figure 1. TaMHS main elements

Two studies were undertaken: (1) a 3-year longitudinal study involving 3346 8–10 year olds and 2647 11–13 year olds (2008-2011) and (2) a 1-year RCT involving 8658 8–10 year olds and 6583 11–13 year olds (2009-2011) (Figure 1)[1, 8].

The longitudinal study included 1) an exploratory study examining how the TaMHS initiative was understood, practised and experienced (including challenges) by designers, implementers and beneficiaries, 2) a study of alternative schools such as pupil referral units to determine if challenges faced by these schools were significantly different to mainstream schools and, 3) in-depth case studies of four schools selected based on changes to pupil scores (aggregated), aiming to explore theories of change and emerging themes[1].

Longitudinal study sample:

2,687 primary school pupils across 137 schools and 2,311 secondary pupils across 37 secondary schools provided self-reports on their mental health in all three years (2008, 2009 and 2010). 41 primary schools and 13 secondary schools provided information on mental health provision in their schools across these three years. Between 780 and 1,842 parents reported on their children's mental health each year. Teachers reported on between 3,671 and 6,971 of their pupils' mental health each year. Qualitative interviews were conducted with 11 policy makers, 26 TaMHS staff, 31 school staff 15 parents and around 50-60 pupils about their views and experience of mental health in schools[1].

Randomised Control Trial sample:

7,330 primary school pupils across 270 schools and 5,907 secondary pupils across 82 secondary schools provided online self-reports of their mental health in 2009 and 2010. 2,857 and 1,606 parents reported on their children's mental health in 2009 and 2010 respectively. Teachers reported on 15,980 and 9,322 of their pupils' mental health in 2009 and 2010 respectively.

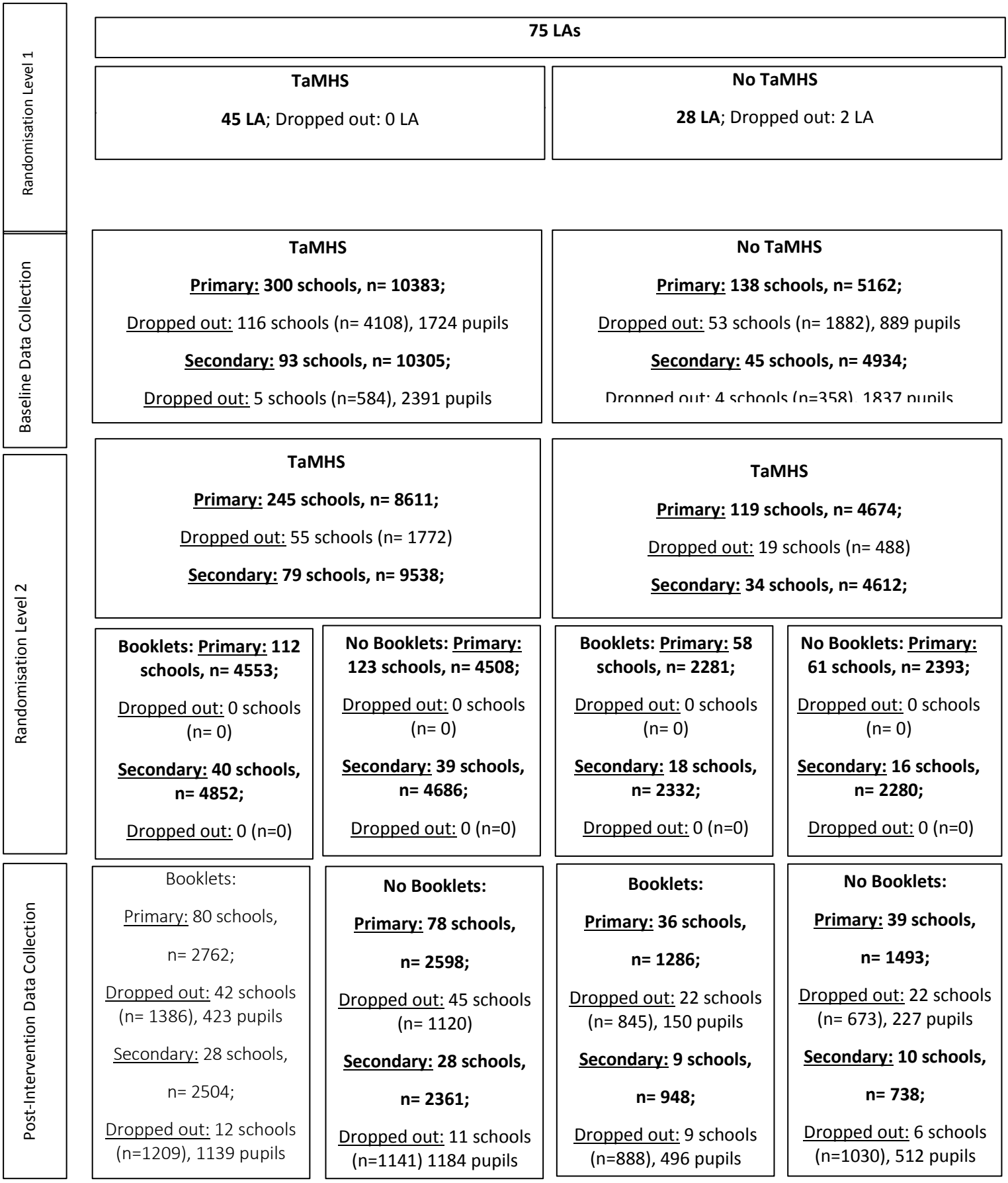


Figure 2. TaMHS RCT design8

The RCT was a hierarchical cluster randomised control trial with a 2 × 2 factorial design. Participants were clustered within schools and then within LAs (Figure 2)[8]. Randomisation occurred in two stages: first, LAs were randomised in a 1.5:1 allocation to receive or not to receive TaMHS funding; second, schools within those LAs were randomized in a 1:1 allocation to receive or not to receive booklets.

Randomisation by random number generator was conducted independently from the research team that enrolled participants and carried out the analysis. Assessments were completed by students at baseline (prior to school level randomization) and post-intervention (1 year later). At all assessment points, students were blind to their condition. Parental consent (opt out) and student assent (opt in) were sought prior to each data collection point. Students completed assessments using a secure online system during their usual school day. Teachers facilitated the completion of the survey by reading a standardised information sheet to participating children outlining what the questionnaire was about, the confidentiality of their answers and their right to decline participation.

Participants were students from primary to secondary schools in England. Students were eligible to participate if they attended year 4 (age 8–9) or year 7 (age 11–12) in a participating school, had parental consent and provided assent. Participating schools were selected by the 75 LAs taking part in the TaMHS initiative (i.e. not by the evaluation team). The only inclusion criterion was that schools be state funded.

Of the 75 LAs involved, 45 were allocated to receive TaMHS funding, with the remaining 30 forming a one year wait-list control group. Two LAs from the wait-list control arm dropped out of the trial at this point. After baseline assessment in 2009, participating schools could then opt out from school-level randomisation to further conditions. Hence, 486 schools were randomly allocated to one of the two booklets conditions. This resulted in four arms of the current evaluation, with schools receiving

(1) both TaMHS and booklets (TaMHS + booklets, 162 schools), (2) just TaMHS (TaMHS only, 162 schools), (3) just booklets (Booklets only, 76 schools) and (4) neither TaMHS nor booklets (No intervention, 77 schools) (Figure 2).

TaMHS provision consisted of funding and support to enhance the existing provision for mental health support in schools. The funding could be used in different ways (e.g. to fund training, recruitment of staff), as determined by local agreement, and in accordance with principles of evidence-based practice (though this was not monitored) and organisational collaboration.

Booklets were sent to an identified pastoral lead in those schools assigned to the booklet condition, along with general advice on how they could be used and the age group for which they were relevant. An electronic version of the booklets was also provided to schools in order to facilitate use in classrooms. Confirmation was received from schools on receiving the booklets. The schools were

issued guidance to distribute and use the booklets as they deemed best, including placement in the school library, distribution in class or incorporation into relevant lessons such as personal, social and health education.

2.4. Results

The evaluation found that more children with significant mental health problems received help and schools reported that they valued having an 'expert' to contact about children who were having problems. There was also a reduced stigma with parents and children which was recognised as being very important. However, unsustainability of the initiative and due to uncertainty of funding was raised as a concern. There were also issues of communication between the NHS CYMPHS lead contacts and the school lead contacts, contributed to by different uses of language, philosophy and ways of working[1, 7, 8].

The RCT[8] demonstrated that TaMHS led to reductions in behaviour problems but not emotional problems for 8–10 year olds. No impact was found for 11–13 year olds. The effects on behaviour problems in primary school were enhanced by the provision of evidence based self-help materials, but not by other area level support. The longitudinal study found information giving and good inter-agency working correlated with more positive outcomes for behavioural problems in secondary schools. The qualitative findings indicated that TaMHS was well received by all groups, though challenges to its implementation were noted. Overall, findings indicate the utility of targeted mental health provision in schools, particularly in primary settings.

Other findings of note:

1. Overall the self-reported mental health of children taking part in the study improved (except for behaviour problems in secondary school pupils).
2. TaMHS was well received by workers, teachers, parents and pupils
3. Schools reported not using manualised approaches to guide their mental health work in schools.
4. Parents reported schools as the key point of first contact for advice about their child's mental health needs.
5. Schools indicated that it was rare they referred children with significant emotional and behavioural problems direct to specialist CAMHS, but did make use of educational psychology services.
6. Some of those involved in the qualitative studies raised issues about differences in philosophy and language across mental health and education services, and also the concern that new provision such as TaMHS could sometimes substitute rather than supplement existing services and support. The association of mental health with academic attainment for all groups is to be assessed in 2012 when academic records for the pupils involved in this study will be available.

<u>Evidence based practice</u>

Manualised approaches may be too strenuous for schools to implement. Although, these have been found in the literature to have the greatest impact[1,7,8].

Future implementation of policy

Future roll out of mental health provision in schools should ensure a common language and full integration of services in schools. Interventions on a large scale may benefit from determining beforehand how best to avoid displacing existing support and how it can be sustained.

3. The Troubled Families Programme, 2012-15; 2015-2020

3.1. Programme

The Troubled Families Programme (2012 – 2015; 2015-2020) was a £920m of government investment and is aiming to achieve significant and sustained progress with up to 400,000 families with multiple, high-cost problems by 2020. This programme was run from the Ministry of Housing, Communities and Local Government (MHCLG) and managed by upper tier local authorities in England and their partners[2,3].

The programme is delivered by local early help teams and is branded differently across the country. The programme is geared toward reducing demand and dependency of these complex families on costly reactive public services and delivering better value for the taxpayer[2,3].

The first version of the programme ran between 2012 and 2015. The version of the programme from 2015-2020 is an expanded version of the programme taking on lessons learned from the design of the first programme and its evaluation (2012-2015). The expanded evaluation measures outcomes for up to five years after intervention rather than just at 18 months, as was the case for the first evaluation (4, 5). The programme was delivered differently in different local authority areas. However, all programmes are required to follow core principles based on a high-level theory of change that whole family working, multiagency working, intervening earlier and focussing on outcomes and data are more effective in getting families the right interventions at the right time[2,3].

Whole family working

Whole family working means helping all members of the family and supplying a dedicated keyworker to co-ordinate services and build resilience. The programme operates on the premise that public services have previously failed families who have multiple problems because those services operate in silos and mostly in a reactive fashion. Services have tended to respond to a problem that individual family members exhibit rather than understanding and tackling underlying root causes or inter-connectedness of other family members' problems.

The keyworker agrees on a single plan with the family and across local services. The keyworker adopts a strengths-based approach by recognising and building on existing strengths in the family.

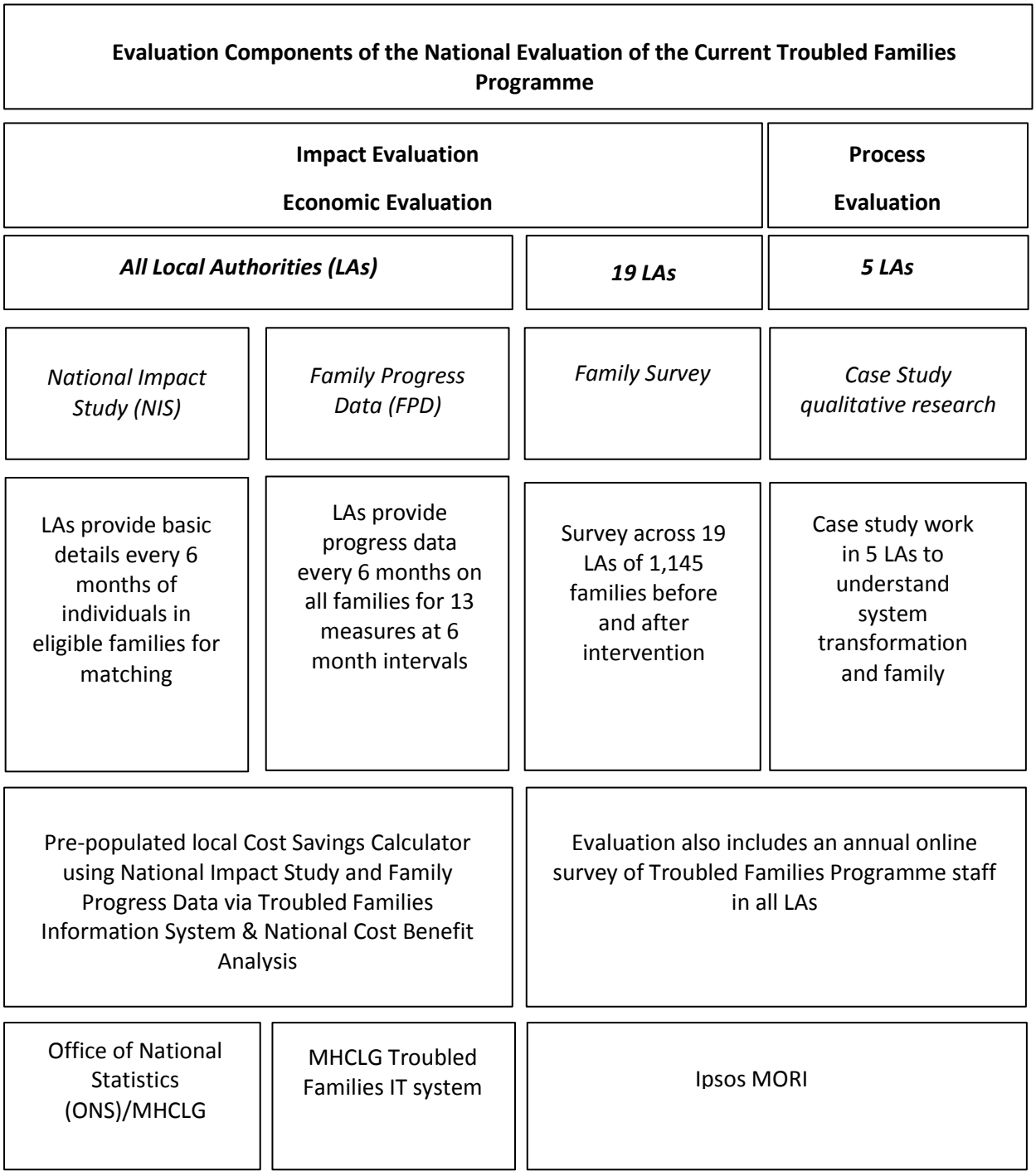
They increase resilience by supporting with parenting, mental health issues, household budgeting, interparental relationships and any other significant issues that should be addressed.

3.2. Aim

The programme was working with families to address the following six headline problems: 1. worklessness 2. poor school attendance 3. mental and physical health problems 4. crime and anti-social behaviour 5. domestic violence and abuse 6. children who are classified as in need of help and protection.

3.3. Main elements

Figure 3. Troubled Families Programme main elements



The evaluation is based on a process evaluation, impact evaluation and economic evaluation. The data is from different sources and a varying number of local authorities are involved in the different

elements of the evaluation. Research strands include analysis of national and local datasets, cost benefit analysis, case study research, staff surveys and a longitudinal family survey (Figure 3)[2,3].

An independent study of the TF Programme is being undertaken by Ipsos MORI from 2015 to 2020 which incorporates three main elements:

1. The Family Survey a quantitative longitudinal survey of families in receipt of help from the programme in nineteen local authorities
2. Annual staff surveys, online quantitative surveys of delivery staff (Troubled Family Co-ordinators, keyworkers/local practitioners and Troubled Family Employment Advisors (TFEAs))
3. Qualitative research involving in-depth interviews with staff delivering the programme and families receiving services.

The survey data is looking at the characteristics of families and their reception of the Programme; staff impressions of the effectiveness of the Programme; and evidence regarding its impact on service delivery at a local level.

Impact Evaluation

1. The National Impact Study with datasets providing information on crime (police national computer), educational & child safeguarding (national pupil database), health (hospital episodes statistics), employment & benefits (work and pensions longitudinal study). With the help of a Technical Advisory Group, the Government is conducting a 'National Impact Study' where data regarding individuals in the Programme will be matched to data held by other Government departments. This will be used to track outcomes and conduct comparisons with a quasi-control group of families outside the Programme[3,4].

2. Family Progress Data: Local authority provides data that nationally held administrative datasets cannot provide. LAs submit data with an IT system set up for the evaluation. Data is collected in a way to allow MHCLG analysts to match Family Progress Data with National Impact Study Data at the individual level. Data collected from LAs is with varying quality and completeness and includes:
   -"Crime and ASB"

   -"Education and school attendance"

   -"Children who need help"

   -"Financial exclusion and work"

   -"Health"

   -"Domestic abuse and violence"

3. The Family Survey[1]: is carried out face-to-face by Ipsos MORI with longitudinal design, which allows family assessments at two points in time. Just before families start receiving support and once they have been stepped down by the programme to examine how families have changed as a result of the programme.

   The survey aims to capture information on some outcomes that cannot be monitored through national administrative data or collected by local authorities e.g. family relationships and wellbeing. If families give their consent, the data from the Family Survey is matched to National Impact Study and Family Progress Data information.

   Families have been interviewed in a sample of 19 local authorities, the baseline wave of fieldwork ran between November 2015 and July 2016. Interviews were conducted with 1,145 main carers and 596 young people (aged 11-21). These interviews were repeated with 654 main carers and 307 young people at the follow-up stage (2017/18) (Figure 3).

The Process Evaluation

1. Case study research uses a qualitative approach and is also undertaken by Ipsos MORI. The aim of this research is to better understand the delivery of the programme and to provide descriptive accounts of how the programme is being received by 28 families and delivered by staff[3,4].

   In Phase one, baseline in-depth interviews with staff and families were carried out across a sample of nine local authorities. The fieldwork was conducted between October 2015 and March 2016 with 48 families as they started on the programme and 60 staff delivering the programme. Follow-up interviews were conducted with the families and staff one year later, and the report of the findings was published in December 2017.

   Phase two, this phase includes a sample of five local authorities[2], two of which were included in Phase one. Ipsos MORI are conducting baseline and follow-up in-depth interviews with practitioners and families, as well as conducting online practitioner forums and gathering data through keyworker diaries.

[1] Family survey - follow up surve presents findings from a cohort of 654 main carers and 307 young people who were interviewed in 2015/16 as they were starting on the Programme and again around two years later, in 2017/8, looking at how their attitudes and circumstances may have changed over this time. There was an attempt to compare findings to families in the UK Household Longitudinal Survey in order to understand the impact of the Troubled Families Programme. Ipsos Mori was unable to form a sufficiently robust comparison group.

[2] The findings from five local authority case study areas (including 27 family and keyworker studies and 40 stakeholder interviews). Researchers prioritised families that were relatively new to the Programme. This research also uses the results from six online forums involving 62 participants: these staff were also asked to complete digital diaries.

2. The Staff Survey is an online, annual survey sent out to all current staff (until 2020) undertaken by Ipsos MORI. Three key groups of staff Troubled Families Coordinators, keyworkers and Troubled Families Employment Advisors are invited to take part. The aim of this research is to track how the programme is being delivered, how services are transforming, workforce training and development, multi-agency working, working with families and views of the programme from the perspective of staff delivering the programme in all local authorities[3,4].

The Economic Evaluation

The economic evaluation is informed by a cost benefit analysis framework for local partnerships developed by Greater Manchester Combined Authority. The cost benefit analysis uses the findings from the impact analysis and a unit cost database to calculate the benefits for taxpayers. This is then compared with the costs of the programme to assess whether it has produced savings. The analysis is conducted in accordance with HM Treasury's Green Book which sets out guidance on how to appraise and evaluate policies, projects and programmes.

3.4. Results

Data suggested that the Programme reduced the number of Looked After Children, custodial sentences and juvenile convictions amongst participant families (4, 5). A cost-benefit analysis also found both fiscal and economic benefits as a result of the Programme, chiefly from reduced numbers of Looked After Children and youth offending.

Survey data, as emphasised in earlier reports form 2017 and 2018, have consistently suggested approval for the TF Programme from both participating families and staff. It has also found evidence of wider systemic change, whilst identifying barriers to implementation and reform.

4. Mental Health Services and School's Link Pilot Programme, 2015-16

4.1. Programme

In summer 2015, NHS England and the Department for Education (DfE) jointly launched the Mental Health Services and Schools Link Pilots. The pilot programme was developed in response to the 2015 report of the Children and Young People's Mental Health Taskforce, Future in Mind, which outlined a number of recommendations to improve access to mental health support for children and young people[5].

The schools link pilots aimed to increase joint working being schools and the NHS Children and Young People's Mental Health Service (NHS CYPMHS) through the nomination of a lead person within each school to become a single point of contact and similarly a lead person within the NHS CYMPHS. Clinical Commissioning Groups (CCGs) were awarded £50,000 funding to support children and Adolescent Mental Health Services (CAMHS) in developing links and working with pilot schools. Participating CCGs were expected to fund- match this amount. A two day training programme was developed for training CAMHS staff appointed as lead contact to work with schools in 22 pilot areas. Schools were expected to commit to the collaborative working and participate in the evaluation requirements. There was expected to be variation of how the pilot was implemented at different sites, taking into account local circumstances. The pilot ran from 2015-16 and the evaluation was published in 2017[5].

Overview of the pilots

The pilot programme was implemented in 3 phases:

Phase 1: forming partnerships – workshop 1 (September to December 2015)

Phase 2: embedding and building sustainability – workshop 2 (January to March 2016)

Phase 3: supporting ongoing learning through 2 national events (May 2016).

NHS England made funding of £50,000 available per CCG, to cover NHS capacity to release specialist staff to take part. CCGs were expected to match-fund this amount. Funding of £3,500 was made available per school to backfill staff time (7). A total of 22 areas, incorporating 27 CCGs and 255 schools, were funded to establish named lead contacts within NHS CYPMHS and schools. They also participated in 2 joint planning workshops, involving other professionals (school nurses, educational psychologists, counsellors and voluntary and community sector organisations (VCSOs)) from their local CYPMHS network (7). The local pilots were led by CCGs, often with active involvement from local authorities. The joint planning workshops were facilitated by a consortium led by the Anna Freud National Centre for Children and Families (AFNCCF), using a framework developed specifically for the pilot programme (CASCADE) and involving a combination of reflection, action planning and review to benchmark local collaborative working. In September 2015, Ecorys (UK) was commissioned by the DfE to undertake an independent evaluation of the pilot programme[5].

Joint working

Local referral routes and develop the role of 'lead contact' in both education settings and CYPMHS to improve joint working. The joint training and workshops used the CASCADE framework for collaborative working which covers: clarity of roles; agreed points of contact; structure to support joint planning and working; common outcome measures; evidence-based approach to interventions, etc.

4.2. Aims

To test whether, and, if so, how joint professional training and development workshops between education setting staff and NHS Children and Young People's Mental Health Services (CYPMHS) specialist staff could improve joint working between the two sectors, develop and maintain effective

local referral routes and develop the role of 'lead contact' in both education settings and CYPMHS to improve joint working. The joint training and workshops used the CASCADE framework for collaborative working which covers: clarity of roles; agreed points of contact; structure to support joint planning and working; common outcome measures; evidence-based approach to interventions, etc.

4.3. Main elements

Figure 4. School Link evaluation elements

Mixed Methods Approach

Pre/post online surveys

-Single Point of Contact (SPOC) in schools: School lead contact survey, baseline n = 166 schools, follow-up n = 49 schools,

-Other school staff: Administered within a sub-set of 48 pilot schools, baseline n = 552 individuals, follow-up n = 95 individuals

-NHS CYPMHS: NHS CYPMHS lead contact survey, baseline n = 18 respondents, follow-up n = 2 respondents (baseline prior to the initial workshops and follow-up at +10 months)

A snapshot 'exit' survey of other local key stakeholders

-Administered at a single point in autumn 2016, achieved sample = 68 respondents

In-depth qualitative telephone interviews with NHS CYPMHS lead contacts

Workshop observations

10 local area case studies

-The qualitative research covered 15 of the 22 pilot areas, with a total of n = 124 respondents through the combined telephone interviews and case-study interviews.

-The 10 case studies were sampled purposively on the basis of socio-demographic characteristics, types of schools, baseline position for joint professional working (high/mixed/low) and areas of potential good practice.

-Each case study comprised interviews with the CCG strategic lead, NHS CYPMHS strategic and operational staff, school lead contacts and teaching staff, and partner organisations from CYPMHS

Quantitative survey research

Four sets of online surveys were designed, piloted and implemented within the 22 pilot areas:

1. Pre and post surveys of the SPOC in schools and NHS CYPMHS for the pilot programme, to measure changes over time in levels of knowledge and awareness and joint professional working, using Likert-scale classifications and data on numbers of consultations and referrals.
   The baseline survey took place in autumn 2015 (n = 166 schools, and n = 18 NHS CYPMHS), with follow-up at +10 months (n = 49 schools, and n = 2 NHS CYPMHS).
2. Pre and post online survey with a sub-sample of pilot schools, to establish the extent to which 'whole school effects' were measurable. Lead contacts assisted with sampling staff across different grades within each school, from 23 senior managers, to teachers and support staff. The baseline survey was conducted within 1 month of the first workshop (n = 552 individuals, from n = 48 schools), with follow-up at +10 months (n = 95 individuals, from n = 8 schools).
3. Snapshot survey of other local stakeholders within the pilot sites, to test levels of awareness of the pilot programme, levels and scope of involvement, and views on the effectiveness and outcomes from the local pilots. The survey took place in autumn 2016 (n = 68) alongside the follow-up surveys with schools and NHS CYPMHS lead contacts. The sample was sourced from updated contact details provided to NHS England by CCGs in May 2016 (Figure 4).

Qualitative telephone interviews with NHS CYPMHS lead contacts

In-depth interviews were conducted with NHS CYPMHS lead contacts (n = 15) in autumn 2015, exploring early lessons learned from setting up the pilot; historical arrangements for working with schools and other organisations within local CYPMHS networks, and expectations for the pilot. The interviews were also used to scope the availability of relevant administrative data held on consultations, referrals and other key metrics.

Structured research observations

A sample of (n = 8) workshops were observed in autumn 2015 and spring 2016 to gain a deeper understanding of the context for joint professional working in those areas and to explore the challenges and successes from planning and delivering the workshops. The AFNCCF also provided data from assessments made using the CASCADE framework for all 22 pilot areas.

Case-study visits to 10 x pilot sites

Conducted in summer and autumn 2016, to explore lessons learned from implementation, successes, challenges and how these were overcome, and plans for wider roll-out. Comprised qualitative interviews and focus groups with key strategic and operational stakeholders from the selected pilot sites, including CCGs, NHS CYPMHS, schools and partner organisations, and the collection of documentary evidence and data. Sampled according to four main criteria: socio-demographic characteristics, pilot schools mix (type), baseline position for joint professional working

(high/mixed/low) and areas of potential good practice.

4.4. Results

Broadly the evaluation showed a positive impact of the pilot: most schools valued having regular contact with CAMHS specialist services. CCG lead buy in from the outset was seen to be critical to the successfulness of the joint working, as well as understanding the common pathways and criteria for specialist support.

Three main models of working were developed:

1) Expanded school liaison service

2) City-wide model of tiered support to schools (Bronze, Silver and Gold)

3) Mainstreaming via multi-agency hub teams

Overall, the evaluation found that the pilots had considerable success in strengthening communication and joint working arrangements between schools and NHS CYPMHS. This was often the case even where relationships were said to have been weak at the start of the pilot programme, although the extent of change varied between pilot areas.

NHS CYPMHS commonly reported challenges relating to the lack of visibility of mental health provision within some schools and a propensity to refer indirectly via GP surgeries where in many localities it was not necessary to do so. Schools and NHS CYPMHS often had a shared concern about the frequent handoffs between services, with young people passed backwards and forwards, resulting in delays to receiving a specialist assessment and treatment where this was needed. School lead contacts were often less confident in managing risk around the identification and referral of young people with mental health issues, and discussing these issues with parents and carers. Awareness of schools' procedures and protocols was also mixed.

Schools appreciated having the regular and routine contact with the specialist services, and it was highlighted that having a lead CCG who had strategic buy in from the outset was crucial, but there were still a number of challenges relating to culture differences between health services and education services. Schools had overestimated how big the service for CYP was, and NHS CYMPH leads had not always appreciated the anxiety and stress for school staff and how emotive the subject is within schools. The evaluation team also commented that it was difficult to assess the impact of the intervention because more time was required to truly embed the changes into the system. Interestingly there were far fewer SPOCs in place in the NHS CYMPHS after the intervention, compared to schools at the same time point, and this was in part noted as being due to the very demanding timelines of the project and not enough time allocated for backfilling posts. Limitations to the comparability and availability of administrative data held on statutory NHS CYPMHS entailed that it was not possible to undertake a quasi-experimental impact evaluation as part of the study.

5. Improved Access to Psychological Therapies (IAPT) – an evaluation of demonstration sites 2006 – 2009

5.1. Programme

Improving Access to Psychological Therapies (IAPT) is a National Health Service (England) initiative to provide more psychotherapy to the general population[6].

5.2. Aim

The evaluation aimed to conduct a "whole-system" evaluation of the new service model IAPT for people with common mental health problems, in two demonstration sites: Newham and Doncaster. Whilst IAPT and the evaluation was not focused on children and young people's mental health, the development of the IAPT initiative has since been rolled out nationwide with the children's CAMHS service in operation for children and young people. The relevance for the Trailblazer's programme is that the Educational Health Practitioners (EHP) are planned to be modelled on the IAPT system and the Psychological Wellbeing Practitioners (PWP)[6].

5.3. Main elements

The IAPT service is a stepped service which took the following approach:

1) Monitoring

2) Guided self-help (telephone, computerised Cognitive Behavioural Therapy (CBT),

signposting)

3) CBT (group-based or individual).

The exact services offered at each step varied by location (Table 2). Impact of the service was measured through referral rates (although this did not include re-referrals to the service), as well as the numbers in employment, numbers receiving benefits, and patient outcomes (IAPT-based recovery rates). The target of 50% recovery rate was set in terms of patient scores before and after treatment on the PHQ-9 (Patient Health Questionnaire), and the GAD-7 (Generalised Anxiety Disorder).

Table 1. IAPT stepped approach at two demonstration sites evaluated[6]

	Doncaster	Newham
Step 1	Monitoring	Monitoring
Step 2	Guided self-help, providing information, medication support signposting to other services	Guided self-help, computerised CBT ('Beating the Blues'), individual and group psycho-education, exercise, social support, counselling
Step 3	Group or one to one Cognitive Behavioural Therapy (CBT) and/or counselling	Brief CBT (max 8 hours), individual CBT (max 20 hours), Group CBT and medication

5.4. Results

There was little difference found in outcome between the two IAPT evaluation sites and the comparator sites, but the evaluation notes that a poor response rate to the questionnaire means this finding should be interpreted with caution. In terms of the benefits or facilitators to the service, it was noted that having a GP championing the services was seen as vital and using GP forums to engage the practices was also a helpful resource. The importance of ongoing discussion, and negotiation was noted, despite the resource implications this raises. Challenges identified included having a very demanding timeline in the context of 'grafting' a new service onto existing services, funding uncertainties and how these impacted on staff recruitment and retention, and the effect on the lack of continuity felt by patients through changes in therapists. There was also evidence that waiting times increased over time but that these were still lower in comparison to pre-IAPT levels. There were also unintended consequences acknowledged although these were both positive (examples given included: GPs screening for depression/anxiety; Case Managers doing outreach work such as postnatal depression sessions, and engaging new families to psychological therapies) and negative such ambiguity of referral pathways and tensions between staff in new and existing services).

Appendix

Table 1. Overview of evaluations

Programme evaluation	Aims	Main elements in the evaluation	Quantitative methods	Qualitative methods	Facilitators	Challenges
Me and My School: Targeted Mental Health in Schools (TaMHS) Programme, 2008-11 (data collection 2008-10)[1]	To develop innovative, locally determined models to provide early intervention and targeted support for children (aged 5 to 13) at risk of developing mental health problems and their families; helping schools to deliver timely interventions with a key emphasis on enabling integration and evidence-based practice	(1)Longitudinal pupil surveys in TaHMS & comparator schools selected by LAs; (2) provision surveys over time; qualitative interviews; (3) multi-arm RCT in TaHMS & non-TaHMS schools No economic evaluation	MH self-report survey in 25 LAs over 3 years (2008-10) of pupils in 137 primary (n=2687) & 37 secondary (n=2311) schools; survey of MH provision in 41 primary & 13 secondary schools over 3 years; eligible schools in 73 LAs randomised to begin TaHMS in 2009 or 2010 with further randomisation between action learning sets, pupil information and not (students, parents & staff	Semi-structured interviews with 11 policymakers, 26 TaHMS staff, 31 school staff, 5—60 pupils & 15 parents on experiences & views of TaHMS	13 categories of school based mental health intervention: 1. Social and emotional skills development of pupils; 2. Creative and physical activity or pupils; 3. Information for pupils; 4. Peer support for pupils; 5. Behaviour for learning and structural support for	Analysis of provision showed that TaHMS & non-TaHMS schools in 3-year longitudinal survey element had very similar MH support & similar outcomes; control schools were included in the TaHMS group as a result. RCT was large but could only collect data for 12 months as control group entered TaHMS 12 months after intervention group. Time between implementation and evaluation was short,

reported on pupils' MH in 2009 & 2010)

pupils;

6. Individual therapy for pupils;

7. Group therapy for pupils;

8. Information for parents;

9. Training for parents;

10.Counselling/

support for parents;

11. Training for staff;

12. Supervision and consultation for staff;

13. Counselling/ support for staff.

Impact measured through change in mental health over time.

so difficult to measure impact meaningfully.

Troubled Families Programme, 2012-15[2]	To shift public spending on 'troubled families' from reactive to proactive, earlier interventions with a view to reducing the cost to the public purse of meeting the needs of these families. 'Troubled families' were defined as those with members involved in crime and anti-social behaviour, children not attending school, one member on out-of-work benefits and generating high public service costs	Complex design with process evaluation; impact evaluation (National Impact Study and large scale face-to-face survey of families & quasi-experiment); & economic evaluation	Impact & economic evaluation based on using 6-monthly linked administrative data (crime, education, health, employment & benefits) for all families in the Programme (n=495) & matched sample of those eligible but about to start receiving support (n=314) from 10 LAs (expanded to 19 LAs); two groups were also surveyed face-to-face for matching; LAs also provided further data on Programme families not available in national admin datasets (e.g. domestic violence); plus pre-/post interview survey of	Case studies of 5 LAs to understand how programme was implemented from perspective of families & staff involving family interviews at baseline & 12 months of 50 families & online staff survey (continued to 2020)	TF keyworkers who build an understanding of all the inter-connected problems and of the family dynamics. This enables them to look at the totality of what's going on and find the root cause of the problem. The keyworker adopts a persistent and assertive approach establishing a relationship with the family and working closely with them to make sure the family resolve their problems. The keyworker agrees a single plan with the family and across	Quasi-experiment compared families which had started 9 months earlier with matched families about to start on the Programme, so short period to observe impact of the Programme; also only 70% of families were still on the Programme at 9 months. The programme was expanded for 2015-2020 to work with additional 400,000 families and included a repeated analysis after 24 or 36 months. Programme & comparison group families surveyed were not very comparable until propensity score matching took place using a very wide range of family

			Programme families in 19 LAs at two time points (no comparison)		local services. Interventions are sequenced and coordinated within this plan to ensure that different services are not contradicting each other. There is also a shared ownership of outcomes as different local agencies have agreed the plan. The keyworker adopts a strengths-based approach by recognising and building on existing strengths in the family.	characteristics.
Mental Health Services & Schools' Link Pilots, 2015-	To test whether, and, if so, how joint professional training and development workshops between	Pre-post online surveys of 'single points of contact' in schools, other school staff, CYPMHS staff & local stakeholders	Assessment of changes in knowledge & awareness of MH issues, timeliness &	Interview data on challenges & lessons learned in setting up the pilots, success	Flexibility, proactivity and willingness to understand different	Researchers undertook a feasibility test of a matched quasi-experimental study

16 (12 months data collection)[5]	education setting staff and NHS Children and Young People's Mental Health Services (CYPMHS) specialist staff could improve joint working between the two sectors, develop and maintain effective local referral routes and develop the role of 'lead contact' in both education settings and CYPMHS to improve joint working. The joint training and workshops used the CASCADE framework for collaborative working which covers: clarity of roles; agreed points of contact; structure to support joint planning and working; common outcome measures; evidence-based approach to interventions, etc.	in 22 areas (27 CCGs & 255 schools); qualitative telephone interviews with participants; and structured observations of workshops in 10 pilot areas No economic evaluation	appropriateness of referrals from schools to MHS	factors, staffing models, sustainability, potential for wider roll-out, etc.	cultures of schools vs. health settings by lead contacts. Regular review and monitoring. Sharing experiences Strategic level buy-in at the outset (e.g. having CCG lead). Single point of contact (both NHS and schools), common understanding of the pathways and criteria for specialist support. Full consultation with schools.	of student outcomes comparing pilot & non-pilot schools but this had to be abandoned because NHS routine MHS data could not identify the school of CYP referred. Early pilot showed that longer lead time was required for embedding the intervention, with full consultation with schools and allowing time to backfill capacity in NHS CYMPH due to delays in funding.
Improving	To test a new model of	Evaluated two areas:	Impact measured	Collected patient	Three levels of	GP Champion was

Access to Psychological Therapies (IAPT) demonstration sites 2006-2009[6]	service (Improving Access to Psychological Therapies) aiming to improve timely access to evidence-based services for adults with common mental health issues (anxiety, depression).	Newham and Doncaster. An observational prospective cohort study with a session-by-session outcome monitoring system, patients were asked to complete questionnaires every session. A one-off follow-up survey was carried out with patients who had attended at least two sessions. Did not involve children and young people as this was adult services.	through referral rates (not including referrals), numbers in employment, and recovery rates (based on PHQ9 and/or GAD7 scores), based on IAPT was >50% recovery rate.	experience and implementation information: documentary review, qualitative interviews.	intensity, broadly: 1) Monitoring, 2) guided self-help (e.g. providing information, medication support and signposting to other services, computerized CBT (Beating the Blues), individual and group psycho-education, exercise, social support, 3) brief CBT (max 8 hours), individual CBT (max 20 hours), CBT group and medication, of which individual or brief CBT were the most frequent (8-12 sessions) and/or counselling.	seen as "vital". Use of GP forums to engage practices were seen as "helpful". High level of management resource is required - ongoing dialogue and negotiation.

At step 2, a telephone triage approach was taken: patients could be referred for low/high intensity CBT.

Table 2. Outcome measures

Outcome measures	Description
Teacher reports	Research where school setting has been the point of access to the population of interest, Teachers are accurate reporters of children's behavioural difficulties (e.g. aggression, conduct disorder), Less able to provide accurate information on children's emotional difficulties (e.g. depression, anxiety)
Parents reports	Employed routinely in mental health outcomes evaluation; Can be accessed irrespective of the setting and are relied upon when children are considered too young to provide self-reports; Possibility of bias due to parents' mental health status and parents lack of awareness and emotional difficulties
Child self-report	UK policy and legislation has placed increasing emphasis on the importance of the child's perspective; The contribution of children's views to understand child mental health problems; Socially desirable responses; Children with behavioural and emotional problems may be less self-aware of these; less consistent in their self-perception; respond based on the "here and now" rather than based on stable levels of psychological adjustment
Me and My School (M&MS)	Captures general wellbeing as well as more problematic symptoms 24 statements to which children respond "sometimes", "always" or "never"; Focuses on six emotional difficulties and six behavioural difficulties; Emotional difficulties items include "I feel lonely" and "I cry a lot", behavioural difficulties include "I lose my temper" and "I hit out when I am angry"; Suitable for the use with a wide age range of children (age eight years and above) Developed because there was no brief child self-report measure in existence at the time of the evaluation that was suitable for children as young as eight years old (e.g. self-report SDQ only available from the age of 11)
School climate	Seven-item measure relating to school climate; Example items include "At this school, we care about each other" ad "We feel safe in school"; Responses options were "always", "sometimes" and "never
Pupil SDQ	Pupils in the secondary school age group completed the Strengths and Difficulties Questionnaires; A behavioural screening questionnaire for young people consisting of 25 items divided into five scales (emotional symptoms, conduct problems, peer problems, hyperactivity and pro-social behaviour); Example items include "I am often unhappy, down-hearted or tearful"

	and “I usually do as I am told”; Items rated on a scale of 0 (not true) to 2 (certainly true); A "total difficulties" score is calculated by summing four of the subscale scores (emotional symptoms, conduct problems, hyperactivity/inattention and peer relationship problems); The measure was used to validate the Me and My School Measure to allow the development of appropriate clinical cut off points that could be used across both primary and secondary school and to prove parent and teacher measures that could be compared with pupil report
Patient Health Questionnaire (PHQ-9)	The results of the PHQ-9 may be used to make a depression diagnosis according to DSM-IV criteria and takes less than 3 minutes to complete. The total of all 9 responses from the PHQ-9 aims to predict the presence and severity of depression. Primary care providers frequently use the PHQ-9 to screen for depression in patients.
Generalized Anxiety Disorder 7 (GAD-7)	GAD-7 is a self-reported questionnaire for screening and severity measuring of generalized anxiety disorder (GAD). GAD-7 has seven items, which measure severity of various signs of GAD according to reported response categories with assigned points (see below). Assessment is indicated by the total score, which is made up by adding together the scores for the scale of all seven items.
Common Assessment Framework (CAF)	CAF is the process to identify children who have additional needs, assess needs and strengths and to provide them with a co-ordinated, multi agency support plan to meet those needs.

References

1. AMHS EBPU (UCL & Anna Freud Centre) University College London CEM, Durham University University of Manchester University of Leicester National Institute of Economic and Social Research. Me and My School: Findings from the National Evaluation of Targeted Mental Health in Schools 2008-2011. 2011

2. Bate A, Bellis A. The troubled families programme (England). 2017

3. Day L, Bryson C, White C. National evaluation of the troubled families programme: final synthesis report. 2016.

4. Bewley H, George A, Rienzo C, Porte J. National Evaluation of the Troubled Families Programme: National Impact Study Report: Findings from the Analysis of National Administrative Data and local data on programme participation. 2016.

5. Day L, Blades R, Spence C, Ronicle J. Mental Health Services and Schools Link Pilots: Evaluation report. 2017

6. Clark DM, Layard R, Smithies R, Richards DA, Suckling R, Wright B. Improving access to psychological therapy: Initial evaluation of two UK demonstration sites. Behaviour research and therapy 2009;47(11):910-20

7. Wolpert M, Humphrey N, Deighton J, Patalay P, Fugard AJ, Fonagy P, Belsky J, Vostanis P. Children, Research, and Public Policy An Evaluation of the Implementation and Impact of England's Mandated School-Based Mental Health Initiative in Elementary Schools. School Psychology Review 2015;44(1):117-38.

8. Sharpe H, Patalay P, Vostanis P, Belsky J, Humphrey N, Wolpert M. Use, acceptability and impact of booklets designed to support mental health self-management and help seeking in schools: results of a large randomised controlled trial in England. European child & adolescent psychiatry 2017;26(3):315-24.

Document C

This working document analysed the mechanisms of change and goals of the Trailblazers as a basis for developing a theory of change for the Green Paper programme which could guide the specification for the Phase 2 evaluation.

Children and Young People Mental Health Trailblazers – Theory of change

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This working document summarises the theory of change underpinning the trailblazer programme.

a. Programme rationale/purpose and outcomes

This programme aims to improve the mental health and wellbeing of children and young people. In particular, the programme aims to identify children and young people at risk or showing early signs of mental health problems and to support them to improve their mental health and wellbeing, and avoid deterioration.

The setting of the programme are schools and colleges. Educational settings are the primary social setting in which children and young people spend much of their time and its dedicated purpose is to facilitate learning and education. Both of which provides opportunities for interventions to improve mental health. This includes routine social contact with, and exposure to, other children and young people, and teaching and other staff familiar with the child or young person, their family or carer, and their wider social environment. Schools and colleges are also places in which staff interact with parents and carers, and they are embedded in the wider community, for example, through links with local voluntary organisations.

Through their regular interaction with children and young people, staff are well placed to identify early signs of mental health problems and to take action to help their mental health and wellbeing to improve. They can do so in a variety of ways, including supporting children and young people directly; embedding a whole school approach to mental health and wellbeing; and to coordinate and liaise with other service providers, including those within and external to the school or college, in support of children and young people. Such activities have been practiced at many schools/colleges over the years, but there is a realisation that such efforts are unevenly distributed and many schools/colleges, as well as specialist services in the NHS, are overburdened with the current demand for mental health support.

The primary long-term outcome of the programme is as follows:

Children and young people in schools and colleges have better mental health and wellbeing due to improved access to, and confidence in, services and support designed for them.

This overall goals is broken down in three sub-goals, of which the first overlaps with the overall long-term goal set out above:

1. Better mental health and wellbeing among children and young people
2. Schools and colleges feel better equipped and supported
3. Children and young people, and their parents, have a positive experience when children and young people access support

In line with these goals, the programme aims to achieve the following short-term outcomes, including:

Short-term outcomes directly aimed at children and young people:

1. An increase in the number of children and young people being seen by a Mental Health Support Team (MHST), compared to the year before
2. A reduction in waiting time for access to specialist service for children and young people's mental health in the NHS
3. An increase in the percentage of children and young people with identified need who have sustained improved outcomes
4. The number of children and young people accessing support from a MHST or an NHS specialist service who report a positive experience
5. The number of parents whose children access support who report a positive experience

Outcomes 1 and 2 suggest that the programme aims to increase the number of children and young people receiving support within the school/college and that this reduces the number of referrals to specialist services, which then leads to a reduction in waiting times for those who need to access these services.

Outcome 3 implies that children and young people receive the service most appropriate to their needs and that this service (i.e. the respective mental health intervention) is effective for the type and severity of their condition and therefore leads to a sustained improvement. This is combined with two measures of user satisfaction, outcomes 4 and 5.

These outcomes are flanked by outcomes (6-8) associated with the operational stakeholders of the programme, and indeed children and young people's mental health, such as school staff, senior leads for mental health at schools/colleges; and schools/colleges more widely.

6. All staff are confident in responding to children's and young people's mental health issues, and know how to access appropriate support

7. Senior leads feel confident and knowledgeable in dealing with mental health issues and promoting mental health and wellbeing

8. An increase in the number of settings delivering a Whole school approach to improving mental health and wellbeing in children and young people.

These aims broadly reflect that one of the main mechanisms for improving children's and young people's mental health is through strengthening awareness and knowledge of school/college staff, which the programme does through the provision of training for school leads and EMHPs. The assumption here is that this awareness, knowledge and learning then percolates through the school/college to other colleagues (parents/carers; children and young people), presumably through the whole school approach.

b. Mechanisms – how the programme is expected to work; salient assumptions/tensions/critical issues; surfacing programme logic

At the heart of the programme is an investment in the workforce relevant to mental health, and the training of this workforce, at schools and colleges. This involves creating the new role of the Educational Mental Health Practitioner (EMHP), a new form of collaboration in Mental Health Support Teams (MHST), and the provision of additional staff training to address mental health problems in children and young people.

The approach has two principal components:

1. The new role of EMPH, newly trained – via a tailored curriculum – to provide services to children and young people at risk or with early signs of mental health problems within educational settings.

2. A new form of collaboration across schools and colleges through the formation of MHSTs. These are expected to consist of four EMHPs, a senior level therapist or senior member of staff who acts as their supervisor, a team manager, who may manage several teams, and administrative support. There is flexibility as to where the team will be based and its membership is likely to vary, but there is an expectation that a team serves a number of schools/colleges.[3]

To support these two components, the programme provides professional training for EMPHs, as well as on-the-job training for senior staff acting as supervisors. There is an expectation that schools and colleges have senior mental health leads in place, and that these have taken up the government's offer of Mental Health Awareness Training, which aims to equip them "the skills and knowledge to promote positive mental health and wellbeing and implement effective processes for children and young people to receive appropriate support." The training was scheduled to be offered to all state-

[3] „The first (2018/19) wave of the programme will see the creation of 59 teams across the 25 trailblazer areas, with each team providing support to around 8,000 pupils in approximately 20 education settings in their area." (Evaluation protocol – source?).

funded secondary schools in England from March 2020, but commissioning has been substantially delayed and timescales for the programme to start are uncertain.

The programme documentation acknowledges that not all mental health leads in schools may have the expected level of seniority. As the training is voluntary for staff it is possible that in some settings the offer has not been taken advantage of.

During the programme MHSTs will engage in three main activities to support children and young people:

1. Provide direct support, by identifying children at risk or showing early signs of mental health problems and by providing evidence-based interventions to them. Direct support is expected to include "effective brief, low-intensity" face-to-face interventions for children and young people and their families experiencing anxiety, low mood, friendship and behavioural difficulties; group work for children and young people such as Cognitive Behavioural Therapy for conditions such as self-harm and anxieties; and group parenting classes to include issues around conduct disorder and communication difficulties.

2. Support the senior mental health lead in each school/college to introduce or develop a whole school approach to prevent mental health problems and support children and young people at risk or showing early signs of mental health problems. This approach means that concern for mental health and wellbeing is embedded in all aspects of the school or college. Key tasks are to map the provision already in place and to provide support as agreed with the lead.

3. Give timely advice to school and college staff and liaise with external specialist services, to improve the coordination of support for children and young people. The specific aim is to help children and young people to access the "right" support and to stay in education. This aspect of the work is seen as part of an "integrated referral system" and liaison role with NHS CYPMPs and potentially other providers.

It is through a combination of these three roles that the teams are expected to strengthen the support for children and young people with mild to moderate mental health problems in such a ways that it becomes unnecessary, for this group, to refer to NHS specialist services. Mechanisms through which this could happen are school and college staff become more confident in supporting children and young people with mental health issues, have increased sources of support within their setting, and gain a better understanding of the role and remit of specialist services, and in consequence make more appropriate referrals. However, it is also possible that teams uncover unmet need which could increase the number of children requiring specialist referral and treatment.

The overall logic of the programme is preventative. It is based on the assumption that by creating a supportive environment at the school/college and by providing support when children/young people are at risk or show early signs of mental health problems the deterioration of these problems can be avoided and reversed. There is an assumption that such interventions can both ameliorate the symptoms of mental health problems and address the deeper causes of such problems. However, it may not always be possible to address such causes if these are outside the reach of the educational

setting (e.g. socio-economic disadvantage). Yet there may be many instances in which such causes interact with the school/college environment, which can be addressed within the setting.

EMHPs and MHSTs will need to be skilled in identifying different types of mental health problems and in distinguishing different levels of severity, to be able to triage children and young people effectively and efficiently. As they are responsible for a number of schools and colleges, it will be vital for them to establish rapport with staff (including teaching staff as well as other professionals delivering forms of mental health support within the setting such as school counsellors or school nurses), and potentially children/young people and their parents/carers and to have mechanisms in place to support early identification within schools/colleges.

It is also expected that the MHSTs coproduce their service offer with users (assuming these are children and young people; parents/carers; school staff?). This principle is also reflected in the whole school approach, which emphasises the involvement of all stakeholders in the approach. However, it is not entirely clear what "coproduction of services" means, for example, in relation to direct support and the delivery of evidence-based interventions.

MHST should also take into account disadvantage and seek to address inequalities. However, it is not yet clear how this will be operationalized in practice. There may also be tension between with holistic, universalist approach of the role of MHSTs and the targeted approach associated with addressing specific types of disadvantage and causes of inequalities. In theory, these two approaches should probably be combined, but it is also possible that they undermine one another.

Services are expected to be provided during and outside of term time.

MHST will be supervised by NHS Children and Young People Mental Health Services.

c. Evaluating the whole school approach

In 2015, Public Health England (PHE), in collaboration with the Children & Young People's Mental Health Coalition, published "Promoting children and young people's emotional health and wellbeing. A whole school and college approach". It makes the case for school-wide actions to promote emotional health and wellbeing and instructs schools and colleges to apply the following eight principles within their settings:

1. Maintain an approach to leadership and management that supports and champions efforts to promote emotional health and wellbeing;
2. Develop an ethos and environment that promotes respect and values diversity;
3. Develop a curriculum, and facilitate teaching and learning, to promote resilience and support social and emotional learning;
4. Enable student voice to influence decisions;
5. Promote staff development to support their own wellbeing and that of students;
6. Identify need and monitoring impact of interventions;
7. Work with parents/carers;
8. Provide targeted support and appropriate referral to specialist services.

This approach, and these principles, are also reflected in Ofsted inspection framework and guidance published by the National Institute of Health and Care Excellence (NICE).

This evaluation will examine how each principle is understood and implemented in schools participating in the trailblazer programme. More specifically it will investigate the following:

1. **Leadership and management:** This principle links the whole school approach to improving emotional health and wellbeing with the school's approach to leadership and management, involving governors, head teachers and the senior leadership team. It assigns responsibility for implementing and overseeing the approach to school leaders, both as a principle in its own right (e.g. leaders needing to understand children and young people's mental health problems) and as a crucial factor that determines the success or failure of other aspects of the whole school approach (e.g. curriculum-based teaching is more effective if supported by school leaders). The 2015 PHE document also notes that schools should have a champion for mental health; this can, but does not necessarily have to, be a member of the senior leadership team.

2. **Ethos and environment:** This principle anchors the whole school approach in the school or college as an organisation, which makes mental health everybody's business and part of the daily experience of 'being at school' rather than an aspect of teaching and learning confined to the classroom only. Ethos (or culture) also speaks to a sense of coherence between the different elements of the approach and the physical, social and emotional environment of the school. Such an environment should be safe and nurturing. The PHE document also highlights the importance of the relationships, and mutual respect, between children and young people, staff, as well as parents and carers. It also links to the Ofsted framework, which identifies the presence or absence of bullying as an indicator for the school's culture.

3. **Curriculum, teaching and learning:** This principle speaks to classroom-based teaching and learning aimed at developing the social and emotional skills and personal resilience of children and young people. The document points to the Personal Social Health and Economic Education (PSHE) curriculum as the key vehicle for such teaching. In addition, there are multiple programmes and resources on offer, from a variety of sources, that teachers can draw on to develop lessons on mental health and emotional wellbeing. The PHE document notes that such lessons should be practical and directly relevant to children and young people to be effective. It also requires staff to monitor the effects of such teaching. There are principally two ways of teaching such skills: through dedicated sessions (e.g. on bullying, managing and resolving conflict), and through integration into lessons in other subject area (see NICE guidance).

   In the scientific literature, studies distinguish between targeted and universal approaches to classroom-based interventions, with targeted approaches aimed at individuals or groups identified as at risk, while universal approaches are aimed at the entire class or school.

4. **Student voice:** This principle links to the earlier point about the school's ethos being built around mutual respect, including respect for children and young people, and the school being a caring environment in which pupils can articulate their emotions and concerns

without fear of judgement. Students want to be listened to and feel their opinions and contributions are valued, which can have a direct effect on their emotional wellbeing. There are different approaches and techniques to encouraging student participation.

The literature suggests there are a variety of ways in which student participation can be organised and facilitated. Kirby et al. (2003), referenced by Hall (2010), distinguishes between three different cultures of participation in organisations: consultation focused; participation focused; and child/youth focused organisations. Some studies emphasise the importance of 'school connectedness' (i.e. a sense of belonging) as an indicator of the cohesiveness of the school's community including pupils, families and staff (Rowe et al., 2007). This review of studies examining the whole school approach identified two main mechanisms to increase connectedness: inclusive processes that enable the participation of community members (especially pupils) and equal power relationships/partnerships; and supportive structures such as school policies and the schools' physical environment that reflects its values of participation, democracy and inclusiveness (Rowe et al., 2007). Cocking (2018) notes the importance for pupils to feel they are being heard to build a sense of connectedness and resilience. Kostenius et al. (2019) identified being valued and appreciated and feeling significant to others being a prominent concern of pupils interviewed in Scotland and Sweden.

5. **Staff development, health and wellbeing:** This principle emphasises the importance of ensuring that staff are supported and have received relevant training to recognise the early signs of mental health problems in children and young people and be confident in their response. While teachers should not be expected to replace specialist services, they should be able to identify potential mental health problems and organise a referral to specialist services. An e-learning platform is financially supported by the Government to ensure staff have access to relevant training and information materials. This principle also includes concern about the health and wellbeing of staff as part of the whole school approach.

   Rowling (2009) notes that schools are a working environment as well as a learning environment and that teachers' morale will impact on their ability to relate to students and promote mental health. A feasibility study in preparation of a randomised controlled trial of a training programme in classroom management found the training increased teachers' self-efficacy, noting that theory suggests that the programme improves children's mental health (Marlow et al., 2015).

6. **Identifying need and monitoring impact:** Schools are asked to identify tools and mechanisms to measure pupils' emotional health and wellbeing and the effects of any measures put in place to support them. There is an expectation that this is done formally (e.g. by using feedback forms; surveys using validated tools) and informally through listening to children and young people and through involving them in decision-making processes. The Ofsted framework also requires schools to demonstrate how they meet the needs of all vulnerable groups of pupils. The assessment should also include the wider aspects of the whole school approach including the performance of its leadership and improvements to the school's ethos and environment.

7. **Working with parents/carers:** This principle highlights the role of parents and carers in the whole school approach. Working with parents/carers should address the determinants of mental health problems, as well as increase the effectiveness of school-based interventions by extending the supportive environment. Approaches include parenting and family life advice, helping parents or carers to develop parenting skills, and awareness of the needs of parents, carers or other family members living in disadvantaged circumstances (e.g. providing help with transport and childcare).

   Some studies also emphasises the importance of the relationship between parents/carers and the school (e.g. work in partnership).

8. **Targeted support and appropriate referral:** This principle acknowledges that some children and young people are at higher risk of mental health problems than others and will need more intense support (also e.g. Weare and Markham, 2005). The PHE document refers to DfE guidance for schools to provide targeted support and specialist provision (e.g. DfE, 2014). It also refers to the proposal of the Children and Young People's Mental Health and Wellbeing Taskforce to introduce transformation plans for children and young people at risk of mental health problems. PHE highlights the role of school nurses and their teams in supporting at children and providing early interventions to prevent deterioration. There is also an expectation that school staff will be able to identify appropriate service providers either within the NHS or by liaising with other providers in the area. There is also the possibility of schools gaining accreditation towards an AcSEED award (www.acseed.org). Both the Ofsted framework and NICE guidance emphasise the role of partnerships between schools and adolescent mental health services and other services. NICE also notes that the approach should follow guidance on 'stepped care', set out in clinical guidelines (NICE, 2005; now superseded by NICE Guideline NG 134) and that staff should be able to use the common assessment framework to identify and assess the needs of children and young people.

The literature suggests that it is difficult to evaluate individual components of the whole school approach, with exception of the curriculum-based teaching and learning component, for which there is substantial evidence of effectiveness. Most of the other components can be seen as supporting this learning by creating an environment conducive to mental health and emotional wellbeing, involving all relevant stakeholders and treating the educational setting as a social space rather than the locus of teaching and learning only.

The evaluation may wish to investigate to what extent schools and colleges follow the whole school approach or whether they apply the approach selectively prioritising some measures over others. It would then be interesting to understand how their chosen approach is experienced by children and young people; families and carers; and school staff in various roles and at different level of seniority. It may also be helpful to include some of the stakeholders external to the school/college such as voluntary sector providers of services and NHS specialist service staff.

d. Assumptions underpinning the programme theory of change

- There is an assumption that there is an increase in children and young people with mild to moderate mental health problems which is driving demand for NHS CYPMH services and cause long waiting times. There are different 'theories' as to the reasons for this increase such as (1) an effect of austerity impacting on the socioeconomic conditions of families, (2) an effect of austerity impacting on the provision of services and support within educational settings, and (3) difficulties accessing CYPMH services as a consequence of measures of demand management (which could be a consequence of increased demand arising from 1 and 2) leading to an increase in severity thresholds. In principle it is possible, that unmet need is the result of the number of severe cases outstripping available specialist resource and that the suggested preventative measures do not affect (sufficiently) the number of severe cases (e.g. if they do not prevent 'disease progression') to balance demand and supply of specialist services entirely

- Early identification of children and young people at risk of or with early signs of mental health problem will depend on a) EMHPs or other members of the MHST knowing the children and their families sufficiently well to spot difficulties, or b) EMHPs or other members of the MHST to be sufficiently well connected with, and informed by, school staff such as teachers and/or school nurses who are sufficiently aware to identify problems. There needs to be mechanisms for this information to be transferred routinely and in a timely fashion for the EMHP/MHST to be able to intervene.

- It is also assumed that MHSTs and other school staff will be able to prioritise demand once they identified problems. It is currently not clear how and by whom prioritisation is going to be undertaken and whether this is a task that falls onto an individual or on the team as a whole (e.g. will there be team meetings to discuss cases and priorities?).

- It is assumed that direct support provided by MHSTs will be provided alongside existing support provided by educational psychologists, school nurses and others (e.g. providing counselling) and not replace it. However, schools/colleges may be tempted to shift resources if there is an additional service available.

- It is assumed that EMHPs and MHSTs are able to make suitable professional judgements about the type and severity of mental health conditions, to be able to identify, triage and support children and young people appropriately. It is expected that the training provided to them will be sufficient to equip staff with the knowledge and skills to make these judgements and implement the intervention effectively.

- Another assumption is that EMHPs and MHSTs will be able to strike the right balance of activities between the functions outlined above. There is a risk that EMHPs in particular focus on individual children and young people, at the expensive of more universalist approaches (as this is who they are trained and it may be professionally more satisfying as showing more immediate impact). It is also not clear what the right balance of activities is and whether this differs from setting to setting. There is substantial professional judgement needed by individuals and teams to make this call.

- It is also assumed that the level of engagement of MHST with schools/colleges will be sufficient to identify children and young people at risk or showing early signs of mental health problems. MHSTs are expected to serve several schools/colleges in their area and their level of engagement with each of them vary for a variety of reasons.

- It is assumed that the awareness and knowledge of, and skill in dealing with, mental health problems will to some extent percolate through the educational setting, as school staff other than the mental health lead and members of MHSTs are not specifically trained in addressing mental health problems. It is expected that this knowledge will diffuse through the whole school approach.

- The assumption is that with creating the EMHP role the workforce available to support mental health and wellbeing in schools and colleges will be increased. In addition to being aware of the possible effects on task distribution within setting during the programme, it will also be interesting to pick up any signs that suggest whether the new role of the EMHP will be sustainable, as there is no clear pathway to career development and uncertainty about future funding.

- There is much emphasis on the senior mental health lead, but it is not clear whether mental health leads always have the expected level of seniority and experience. It is also expected that leads have made use of the mental health awareness training facilitated by the government.

- If mental health awareness is part of the curriculum and of the ethos of the school, the whole school approach requires substantial buy-in from a broad range of school staff potentially. This link is not explicitly made in the programme, except by reference to the whole school approach. How will the mental health lead (senior or not) and the MHST generate such support among staff?

- Will schools/colleges have the facilities in place to support direct interventions of EMHPs and MHSTs (e.g. counselling)? This concern is mentioned in some of the programme documents but there is nothing in the programme itself to remedy potential lack of space or suitable facilities.

- MHSTs are expected to take account of disadvantage and socio-economic inequalities. Does the programme provide any specific support to MHSTs, including does it set out any specific expectations or guidelines as to what this requires? There are no specific objectives attached to this expectation and it is not clear how this should be operationalized (perhaps through the whole school approach?).

- Improving this links between NHS specialist services and MHSTs/schools/colleges has been part of a previous trailblazer programme (Links), but it is not clear how this is integrated into the trailblazer scheme and whether the learning has been applied in all participating schools/colleges. There is an assumption that most or all schools are following this pathway now. If this has not happened, the link between these services needs specific attention and

further exploration to develop the “integrated referral system” the programme aspires to.

e. What issues are important for the evaluation?

- It would be interesting to understand how MHSTs are implemented across schools, how they are composed, how they are led, the level of seniority, experience and training of their members, how they relate to and engage with school and college staff, the rapport they develop with staff, children and young people, parents/carers and with NHS specialist service staff and other providers.

- There is recognition of the fact that schools/colleges are in different places with regard to mental health awareness, approaches and needs. Variation of approach of MHSTs are built into the programme as MHSTs are expected to be attentive to individual schools/colleges needs and not provide a ‘one size fits all’ service. Will be interesting to see how MHSTs use this flexibility and what determines different approaches (e.g. availability of resources; previous experience/path dependencies; presence of particular individuals acting as champions).

- It would be beneficial to develop a good understanding of the extent to which schools and colleges implement a whole school approach to mental health and emotional wellbeing. The challenge will be to work out how individual components of the approach will be interpreted and put into practice, which resources schools and colleges will draw on, and whether these led to the desired effect of embedding a culture and ethos supportive of mental health and wellbeing.

- It would be useful to identify the type and level of support staff have received to implement the whole school approach, the resources they use, whether this is over and above the training provided within the programme, whether they use other external resources, and whether they make use of the Government’s e-learning platform available for this purpose.

- There is a wider question as to how this particular programme links with, or integrates into, a) existing approaches practices at schools and colleges, and b) other government initiatives such as the LINKs programme and the training available to senior mental health leads at schools/colleges.

- It is possible that schools/colleges and NHS specialist services will prioritise, and therefore work towards, different outcomes of the trailblazers. There may therefore be tensions between their objectives and, in consequence, between their activities. For example, staff at schools/colleges may wish to see more children and young people referred to NHS CYPMH services, while the NHS CYPMH would like the number of referrals to be reduced. Both could argue that they wish to better target their own resources, yet this may have an impact on the need for resources at the other service and on overall resource use.

- It will be interesting to see how schools/colleges interpret the mandate to provide all year, including outside term-time. Not sure how well this sits in an educational environment in

which staff, parents and children and young people themselves expect and are used to a certain seasonality of activities throughout the year (reminds me of GP out-of-hours discussions).

- How much effort is made by school staff and MHSTs to monitor the effects of their own activity, what are the determinants for this to happen or not to happen (e.g. time pressure; prioritisation of other tasks; perception and dislike of administrative overload).

Document D

This working document related to the previous one on theory of change and brought together the main elements relevant to a theory of change for the Green Paper programme without going as far as to present a fully worked up theory. It was designed to contribute to evaluation team discussions with DfE and DHSC Programme and analytical staff aimed at developing an 'official' theory of change to inform future evaluation planning.

Ideas for a Children and Young People's Mental Health Trailblazers theory of change

Kelly Singh

18 May 2021

The Programme:

(Very brief overview of what's involved)

- Designated senior mental health lead to oversee the approach to mental health and wellbeing in educational settings. All children and young people's mental health services identify links for educational settings to provide rapid advice, consultation and signposting.
- Mental health support teams (MHSTs) to provide specific extra capacity for early intervention and ongoing support, supervised by NHS CYPMH staff. Teams linked to groups of schools and colleges, providing interventions to support those with mild-moderate needs and supporting the promotion of good mental health and wellbeing.
- Trial of four week waiting time for access to specialist NHS CYPMHS

Senior mental health leads –

- Identification of (and training for) senior mental health leads
- Funding is made available for schools to get training to further develop senior mental health leads and their skills
- Leads likely to: have oversight of the whole school approach to mental health and wellbeing; support identification of at risk children and young people and those exhibiting signs of mental ill health; have knowledge of local mental health services and working with clear links into children and young people's mental health services; coordinate the mental health needs of young people within the setting and oversee the delivery of interventions delivered in the setting; support staff to help raise awareness, and give them the confidence to work with young people and oversee the outcomes of interventions on children and young people's education and wellbeing.

MHSTs[4] –

- Training for EMHPs at Higher Education Institutes
- EMHP on the job training and placements
- Appropriate clinical supervision and training for supervisors
- Support existing provision locally by training other professionals e.g. family workers
- Supporting transitions and signposting to/from other services
- Expectation of co-production of service offers/approaches with local stakeholders, inc children and young people

[4] Further notes on MHSTs on page 5 of document

- Collection of monitoring information

Three core MHST functions:

1) Deliver evidence based interventions to children and young people with mild-moderate mental health issues
2) Support senior mental health leads in each education setting to introduce or develop their whole school or college approach to mental health and wellbeing
3) Give timely advice to education setting staff, and liaising with external specialist services, to help children and young people to get the right support and stay in education.

Evidence based interventions -

- Individual face to face work: for example, effective, brief, low-intensity interventions for children, young people and families experiencing anxiety, low mood, friendship or behavioural difficulties, based on up to date evidence
- Group work for children and young people, pupils or parents for conditions such as self-harm and anxiety
- Group parenting classes to include low intensity group approaches to issues around conduct disorder, communication difficulties.

Outcomes:

- Improved mental health knowledge for pupils
- Increase in children and young people with mental health needs receiving support
- Increase in provision of timely and appropriate support
- Increase in number of children and young people with mild to moderate mental health problems that can be addressed in school and whose deterioration can be prevented
- Increased prevention of more serious/severe mental health problems
- Increase in children and young people's wider needs being met
- Improved help seeking behaviours
- Increase in numbers of children and young people seen by MHSTs compared to previous year
- Children and young people have a positive experience when they access support
- Improved identification of mental health problems
- Improved assessment of mental health needs
- Impact on volume of referrals to specialist services
- Impact on quality of referrals to specialist services
- Improved appropriateness of referrals to specialist services
- Increase of children and young people with more serious mental health problems receiving treatment [if decrease in inappropriate referrals frees up capacity and EMHPs/MHSTs identify unmet need among children and young people with severe mental health problems]
- Decrease in children and young people with more serious mental health problems receiving treatment [if direct support of children and young people with mild to moderate mental health problems and the Whole Schools approach manage to prevent or reduce deterioration of mental health in children and young people]

- Reduction in waiting times for access to NHS specialist mental health services for children and young people (long term?)
- Reduction in waiting times for children and young people to access help and support
- Increase in staff feeling confident in responding to children's and young people's mental health issues, and know how to access appropriate support
- Increase in educational setting staff feeling supported in their roles around mental health
- Increase in educational setting staff knowledge and understanding of mental health and wellbeing
- Increase in access to advice about mental health problems and how to support them for educational setting staff
- Increased educational staff wellbeing
- Increase in senior leads feeling confident and knowledgeable in dealing with mental health issues and promoting mental health and wellbeing
- Increase in the number of educational settings delivering a whole school approach to improving mental health and wellbeing in children and young people
- Increase in mental health provision in educational settings – prevention and support
- Improved ethos around mental health in educational settings – more positive and proactive
- Reduced stigma around mental health
- Reduced demands on school support/school staff (?)
- Reduced staff time spent on mental health issues (for wider staff)
- Increased parental wellbeing
- Improved parental knowledge about mental health and wellbeing
- Improved parental confidence in dealing with a child's MH issues
- Parents/carers have a positive experience when support is accessed
- Improved working between health and education
- Improved working between different agencies e.g. NHS CYPMHS, educational settings, VCS, local authorities
- Improved signposting to external services and support
- Increased access to wider mental health provision in local areas (?)
- Increase in number of children and young people being seen by MHSTs (output??)

Longer term outcomes/impacts:

- Better/improved mental health and wellbeing among children and young people
- Children and young people feel better equipped and supported
- Schools and colleges feel better equipped and supported
- Improved quality of life for children and young people, their families and carers
- Reduced need for specialist support (reduction in children and young people's MH needs?)
- Reduced demand on wider CYPMHS (?) [or increase if diverting away from NHS]
- Increased capacity/capacity building in NHS CYPMHS
- Reduction in health inequalities and impact on vulnerable groups
- Improved educational outcomes e.g. attendance, behaviour, for children and young people
- Impact on/improved long term outcomes as adults e.g. employment rates, alcohol use, crime
- Reduction in mental health problems extending into adulthood

- Cost savings (net economic impact) across sectors e.g. NHS, social care, youth justice
- Reduction in social costs of mental health care from childhood to adulthood
- More efficient use of resources

Assumptions; mechanisms:

- There is a growing group of children with MH needs that are poorly supported or not supported at all. The mental health problems of some children and young people will escalate and become more severe, increasing demand on specialist services
- There will be no significant changes in relevant policy that affect the programme
- Intervening early is effective – earlier intervention prevents deterioration and problems escalating
- Intervening early and preventing problems escalating will reduce demand on NHS CYPMHS
- Interventions and support received by children and young people are effective and improve their mental health/reduce problems (what about wider issues e.g. when mental health issues are linked to poverty, for example?)
- Children and young people will have timely access to MHST support
- Children and young people engage with the interventions and support provided
- Interventions (through the programme) will adequately address the needs of those with mild-moderate MH problems and this will decrease demand on NHS CYPMHS by preventing deterioration in these children and young people (or are effective to the point that as many referrals aren't necessary)
- MHSTs can adequately address the needs presenting in children and young people that aren't deemed serious enough to meet the referral criteria for specialist support or can signpost to services who can
- EMHPs can be trained, recruited and stay in posts (turnover does not become an issue)
- Appropriate supervisors/senior staff members can be identified, recruited and stay in posts
- MHSTs have sufficient time allocated per educational setting (and can cope) to meet existing and growing demand and/or teams can prioritise demand as required
- The approach to allocating MHST time/resource across educational settings is transparent and agreed upon (linked to student numbers?)
- MHSTs provide their three key functions across educational settings
- A balance will be struck between the three activities MHSTs are to provide, depending on the needs of a setting
- MHSTs are not hindered in their ability to deliver their core functions by time taken on administrative tasks
- MHSTs are flexible and adapt their support/offer to the needs of individual educational settings
- The 'standard' MHST intervention that EMHPs were trained to deliver is suitable and effective for all groups of children and young people
- MHSTs will work to address health inequalities and take account of disadvantage
- EMHPs are sufficiently trained to equip staff to provide effective direct support and interventions, support educational settings to develop a whole school approach and co-ordinate referrals
- Supervisors are sufficiently trained to supervise EMHPs and delivery of evidence-based interventions
- Supervisors have capacity to provide effective supervision

- EMHPs and MHSTs are suitably qualified and able to identify problems and their severity and triage children and young people appropriately and efficiently
- MHSTs carry out effective assessments of children and young people
- EMHPs and MHSTs are effectively connected into the schools they work with
- MHSTs will not displace existing school provision and be provided alongside it
- MHST support is available all year
- Creating EMHPs will increase the mental health workforce
- The work of MHSTs will build on and complement existing local services/support/initiatives
- Posts will be sustainable
- Wider mental health services are available (and have capacity) for MHSTs to refer/signpost to
- MHSTs collaborate with wider services to ensure a co-ordinated approach to supporting children and young people
- NHS CYPMHS build capacity to improve abilities to meet demand (??)
- Supervision of MHSTs does not impact on the capacity of wider/NHS CYPMHS
- There is support/buy in from partners – NHS CYPMHS, educational settings, local authorities, wider sector etc.
- Effective working/communication between partners - MHSTs, educational settings, NHS CYPMHS, VCS etc. – joint working is put in place
- There are strong partnership working arrangements between local partners and an effective governance structure that is inclusive and transparent
- There is a balance in the involvement of different sectors, particularly of health and education
- Facilities and equipment are available for support to be provided, interventions, joint working etc. to take place
- Information is shared between partners in a timely way
- More efficient use of external resources
- CYPMHS identify links to work with educational settings
- Educational settings will develop/make progress in relation to a whole school approach to mental health and wellbeing, supported by MHSTs
- Creating a mentally healthy school environment and providing support in schools can prevent children and young people from developing mental health problems
- Creating a mentally healthy school environment and providing support in schools can stop the deterioration of children and young people's mental health and reverse issues
- Through training, educational settings will have developed cultures and ways of working to support programme implementation and promote mental health
- Training for designated senior mental health leads will be provided in a timely manner
- Leads engage with and make use of available training, when provided
- Funding is made available for schools to get training to further develop senior mental health leads and their skills, and educational settings take this offer up
- Learning from training (e.g. awareness, knowledge, skills to deal with mental health problems) will cascade through the educational setting to other colleagues (WSA?)
- Educational settings will have had access to wider training for their staff e.g. mental health awareness training, training to improve working between health and education
- Educational settings will be engaged and motivated to work with MHSTs

- Educational setting staff are able to identify children and young people with mental health needs and refer these pupils to the MHSTs
- Educational setting staff will utilise the support on offer and make referrals to MHSTs
- Educational settings are adequately prepared to work with MHSTs
- Educational settings need support for those with mild – moderate mental health needs
- Senior mental health leads are sufficiently senior and experienced to help affect change
- Approaches and service offers will be co-produced with children, young people, parents and carers
- Approaches used will be flexible and take local needs and gaps into account
- The programme will demonstrate effectiveness – supporting the case for roll out and future investment

Context:

- Wider policy e.g. on schools, behaviour and mental health
- Local landscapes, availability of services, experiences of MH programmes/initiatives
- Covid-19
- Background of austerity and cuts
- Developments in wider society and links with risks – e.g. increases in child poverty
- Root causes of MH issues e.g. demographic factors
- Capacity and functioning of services inc NHS CYPMHS

Inputs

- Funding
- Training – EMHPs (university and placements), supervisors, senior mental health leads
- Workforce – new EMHP role, MHSTs, senior mental health leads, local area roles e.g. project leads
- Guidance/information
- Regional support
- Existing knowledge, teams/workforce, ways of working
- Time

<u>Additional notes on MHSTs</u>

- Provide links with NHS specialist services, where necessary
- Provide specific assessment and referral function
- Provide additional support during treatment, including supporting self-care
- Map and assess existing provision in educational settings, integrate with existing support in settings
- Agree provision to be put into place to facilitate prevention and a quick response to individual cases e.g. might include supporting wellbeing monitoring, promoting positive MH
- Assess training needs with educational settings and provide training, where appropriate or signpost to external providers
- Help and advise educational settings to get appropriate support for children and young people and stay in education
- Work as part of an integrated referral system with community and social services to ensure children and young people who need it receive appropriate support as quickly as possible.

For those with complex needs

- Support those waiting to receive or receiving NHS specialist support
- Support children and young people waiting to return to education after an inpatient stay
- Work with other agencies to develop a multi-agency management plan to support the child or young person to stay in education
- Build on existing support and provide additional support, where needed
- Work with families and support them to access other services, if required
- Support children and young people to access other services, if required – especially if urgent
- Ensure help can be re-accessed quickly, where needed
- Support educational staff to implement mental health recommendations in the classroom, understand complex needs of certain students and support them to identify and manage safety and risk in classrooms.

Document E

This report provided initial advice prepared for the two Departments and NIHR based on insights gained in the early evaluation and background work assessing the feasibility of different designs and methods for the Phase 2 evaluation. It was to be followed by more definitive advice in early 2021 explaining how the Phase 2 evaluation might best be undertaken.

Phase 2 outcome and economic evaluation of Children and Young People's Mental Health Trailblazer Programme: outline of design and commissioning options for the stakeholder group meeting, 30 November 2020

Nicholas Mays, PIRU, LSHTM

Jo Ellins, BRACE, University of Birmingham

26 November 2020

Background

The Policy Innovation and Evaluation Research Unit (PIRU) at the London School of Hygiene and Tropical Medicine (LSHTM) is currently supporting the Birmingham, Rand and Cambridge Rapid Evaluation Centre (BRACE) team led by Jo Ellins at Birmingham in the early evaluation of the above programme as part of PIRU's core funded NIHR Policy Research Programme (PRP) work programme. The original intention when the early evaluation was first identified was that once BRACE had led the rapid early evaluation, this would be followed by a phase 2 longer term outcome and economic evaluation which would be led by PIRU as part of its core programme with BRACE in support. BRACE and PIRU have concluded that we cannot take on the phase 2 evaluation in the manner originally envisaged.

First, the early evaluation has been very substantially delayed for reasons outside the control of the researchers. This occurred both before and as a result of COVID-19. Currently, the early evaluation is approximately 12 months behind its original schedule. This has at least two direct consequences: the phase 2 evaluation would cut across existing plans for other work in BRACE and PIRU, affecting the availability of research staff; and any proper outcome evaluation would be likely to require the collection and analysis of outcome data that would go beyond the current NIHR funding contracts of the two teams.

Second, PIRU no longer has the senior staff capacity to lead phase 2 and is not able to replace a recently departed, part-funded senior colleague due to a recruitment freeze at LSHTM due to the uncertain financial implications of COVID-19.

Third, we judge that the phase 2 evaluation should be led by researchers with more specialist expertise in the field of children and young people's mental health services and the education sector than we possess. We have reviewed recent similar evaluations and can see that rigorous evaluation in this field is potentially very demanding (see below). PIRU could provide specialist input to such an evaluation, with a particular focus on advising on the design of the overall study using a state-of-the-art quasi-experimental approach and undertaking the analysis of the economic data (Richard Grieve would lead this work) but the Unit will not have the capacity to lead the phase 2 evaluation for the foreseeable future. BRACE could potentially provide some qualitative research capacity but, again, only in a supporting role.

One of the work packages in the early evaluation is to develop a specification for the phase 2 evaluation (see pp26-27 of the protocol of 30 September 2019), based on insight gained in the early evaluation both in terms of its substantive focus but also feasibility of different designs and methods. The rest of this paper represents our preliminary thinking in these respects. We plan to provide more definitive advice in early 2021.

Optimal features of an outcome and economic evaluation

In an ideal world, the phase 2 evaluation would most likely include the following:

4. Assessment of impacts, covering micro (new Mental Health Support Teams (MHSTs) in Trailblazer areas delivering evidence-based interventions to children and young people with mild to moderate mental health issues and making appropriate referrals to the community and voluntary sector, and to specialist child and adolescent mental health services (CAMHS)), meso (MHSTs supporting the senior mental health lead in each education setting to introduce or develop their whole school or college approach to mental health and wellbeing) and macro (MHSTs giving timely advice to education setting staff, and liaising with external specialist services, to help children and young people to get the right support and stay in education) levels.
5. Comparison of activity (e.g. MHST services delivered), costs and outcomes between Trailblazer areas, education settings and students, and non-Trailblazer areas, settings and students requiring development of criteria for selecting comparator areas and settings within areas that are sufficiently similar in their features and student populations to provide a robust assessment of the differences in inputs, outcomes and costs between Trailblazers and those parts of the country not exposed to the Trailblazer programme, plus their recruitment.
6. Collection of primary outcome data such as students' long-term wellbeing which is not currently measured routinely using student surveys in Trailblazer and non-Trailblazer settings.
7. Selection of a set of activity and outcome indicators from routine NHS and DfE datasets, ideally linked at the individual level, that could be used to compare all the Trailblazers with matched non-Trailblazer areas and settings
8. Collection of cost data covering the total cost of MHST services as well as pre-existing services funded from local sources (i.e. in places that have already invested in similar services for mild to moderate mental health needs)
9. Research team resources to devote to maximising and maintaining participation and response rates, especially in non-Trailblazer areas and settings

The evaluation would be facilitated by the existence of a clearly defined theory of change and/or package of interventions in the Trailblazer areas easily distinguishable from the approach taken in non-Trailblazer areas, with little or no unplanned convergence over time in service models between Trailblazer and non-Trailblazer areas. There would also be a very high and sustained level of active cooperation from settings and staff in Trailblazer and comparator areas.

Review of recent evaluations of similar programmes

In contrast with the requirements of an optimal evaluation, our review of recent national evaluations of similar programmes such as Me and My School: Targeted Mental Health in Schools (TaMHS) Programme, 2008-2011, The Troubled Families Programme, 2012-15, Mental Health Services and School's Link Pilot Programme, 2015-16 and the evaluation of the Improving Access to Psychological Therapies (IAPT) demonstration sites 2006-2009 identified a range of significant difficulties and limitations in what was able to be achieved, even by skilled and experienced research teams.

Difficulty recruiting comparison areas and/or education settings

There is clearly an issue related to the recruitment of comparison group areas (LAs) and/or schools in that those with poor provision are more likely to be more reluctant to agree to be in a comparison group since they are likely to want to be in any intervention/pilot group. If areas/schools are to be randomised or allocated to intervention and comparison groups after recruitment, areas/schools with better provision may be willing to take the chance of ending up in the comparison group since they have less to gain from being in the intervention group. If recruitment is voluntary and direct to the comparison group, then areas/schools with better existing provision may be more willing to be recruited to a comparison group (assuming that they are willing to take on any extra work that may be involved) than those with poorer provision. If this is the case, then, as in the TaHMS evaluation, it may become difficult to distinguish either in provision or outcomes between intervention and comparison group schools. In the TaHMS evaluation, the evaluators eventually decided to merge the two groups.

In the Troubled Families evaluation, the evaluators avoided the issue of finding a comparison group by undertaking a contemporaneous comparison with a group of similar families about to enter the Programme (see below for more on this approach).

Convergence of service models between 'intervention' and 'control' settings

While the waiting list RCT design used in the TaHMS evaluation is strong in terms of ensuring a high level of comparability between intervention and comparison sites and increases the willingness of sites to be randomised, it is susceptible to 'contamination' between intervention group sites and comparison sites in that both sets of sites will have been through a similar application and recruitment process, and the comparison sites will be preparing to enter the scheme while remaining technically outside it. In addition, it is likely that such designs will either not be able to identify any or the full range of outcome advantages conferred by the intervention or understate their scale since the length of follow up is determined by the interval between waves in the pilot programme, not a scientific estimate of the likely time before outcome changes are likely to become apparent. In addition, and irrespective of the design of an evaluation, as time goes on, the likelihood of control settings adopting the approach in the pilot/intervention settings increases, thereby reducing the ability to identify a true effect of the pilot/intervention.

Insufficient length of follow up for (true) outcome differences to become apparent

It appears to be generally understood that the sorts of interventions represented in the Trailblazer programme require at least three years of follow up to obtain meaningful outcome data. Designing and sustaining a comparison over this period of time is challenging, particularly in the case of a

RCT. The RCT element of the TaHMS evaluation was a waiting list trial in which areas already identified as eligible to enter the scheme were randomised to start either in 2009 or 2010. While such a design clearly boosts the willingness of areas/schools to take part in an RCT, it allows only a brief interval during which comparative outcome data can be collected from 'cases' and 'controls'.

The quasi-experimental element in the Troubled Families evaluation took a different approach to estimating the impact of the Programme by undertaking a cross-sectional comparison between families that had been engaged on the Programme for approximately 9 months and a matched group of those about to or just entering the Programme, the assumption being that any difference observed could be attributed to the impact of the Programme. Apart from the question as to whether the two groups are sufficiently similar to be comparable (the results of the propensity score matching were reasonable), such an approach, though imaginative and practical, means that outcomes can only be assessed for as long as the interval between waves of the Programme. These are typically no more than 12 months apart and sometimes as little as 6 months apart. In practice, the comparison in this evaluation was essentially a before-and-after study but with before and after data collected from different families. Thus it was neither a waiting list quasi-experiment (which would have included contemporaneous baseline pre-intervention data collection) nor a regression discontinuity design.

Lack of a consistent operational definition of the intervention

Pilot programmes tend to give local implementers considerable freedom to interpret the goals of the programme quite widely and to determine what will they will put in place based on factors such as the pre-existing pattern of services, geography, etc. This was shown in the TaHMS and Troubled Families Programmes. While this variation may allow evaluators to compare different 'types' within the intervention sites, it makes it much more difficult to identify which aspects of the intervention are likely to have been responsible for the effects identified even with an experimental evaluation design. The comparison between 'types' may also suffer from limited statistical power compared with a simpler 'A versus B' comparison. Finally, with a variety of interpretations of the intervention, if the intervention group is shown to have performed no better than the comparison group, this may be because too many of the intervention areas/schools made poor decisions in terms of their local interpretation of how to implement the programme.

On the other hand, if comparisons between different 'types' within the intervention group are seen as a priority when the evaluation is being designed and there is some prior knowledge of the different 'types' and their frequency of occurrence (e.g. from an 'early' process evaluation), it may be possible to design the evaluation to capture any differences between different ways of implementing the same basic concept underlying a programme.

Limitations of the ability of routine data systems to support evaluations

The Schools' Link Pilots evaluation showed the limitations of the education and MHS sectors' data systems. In the absence of a system of data linkage, it was not possible to relate CYP referred to the MHS to specific education settings since the NHS routine data did not include information on the education setting of CYP referred. Recent plans for developing a method for linking CYP's education and MHS data that could be used for monitoring and research have been suspended as a result of the COVID-19 pandemic response. It is unclear when, or even whether, they will be resumed.

Lessons from recent evaluations

The overriding implication of this review of recent evaluations of pilot programmes with some similarities with the CYP MH Trailblazers and our current experience of the early evaluation of the Trailblazers is that robust outcome evaluation at scale involving extensive primary data collection is likely to be difficult to undertake and may not succeed in comparing the Trailblazers with the status quo ante. Including an economic dimension further increases the practical challenge. The experience to date of the phase 1 evaluation has shown that all aspects of the research such as accessing documents, obtaining monitoring reports, collating routine activity data, requesting contact details of key managers and staff, etc. have been more complex and much more protracted than we had been led to believe, before adding the difficulties thrown up by the COVID-19 pandemic. The likelihood is that such problems would be even greater in the context of an outcome evaluation directly involving children and young people themselves.

The design and approach to the evaluation is likely to be constrained significantly by the way in which the Trailblazer programme is structured and implemented. Other implications include the likelihood that the comparison between different 'types' (interpretations) of Trailblazer will be as important, if not more so, than the comparison between Trailblazer and non-Trailblazer areas and education settings. Such a comparison is also likely to be more feasible than comparing Trailblazers with non-Trailblazers since many of the elements that comprise the Trailblazer programme have already been tried out elsewhere both in previous pilots and outside specific pilot programmes.

Options for the stage 2 evaluation

With the above analysis and experience in mind, we have identified a number of more pragmatic options for the phase 2 evaluation, starting with the most obviously feasible and progressing towards more ambitious studies. The options could be combined over time to provide a more comprehensive evaluation that would go some way toward the 'ideal' evaluation sketched previously.

4. *Routine outcome data analysis with or without comparative cost and resource use in Trailblazer and non-Trailblazer populations*

This option would rely on service use and outcome data from the NHS Mental Health Services Data Set (MHSDS) with or without parallel analysis of the National Pupil Database (NPD) for the same students, but with no or little primary outcome data collection. If and when individual student level data linkage is possible between these two datasets, this could be added but this may not be available during the likely timescale of a phase 2 evaluation.

A code has been established in MHSDS for 'Mental Health in Education Service' referral which equates to MHST service use. The plan is for Trailblazer MHSTs eventually to submit their activity data to MHSDS though it is currently unclear when this will happen since the submission of similar data to NHSE in the form of quarterly returns from Trailblazers was paused due to COVID-19. Since NHS Digital, which manages MHSDS, also holds A&E, IAPT and inpatient admission data, it should be possible to obtain other non-MHSDS service use data for children and young people in contact with the MHSTs.

It would be possible, in the first instance, to get some useful insights from an uncontrolled MHSDS analysis even without including MHSDS data from suitable comparator areas and education settings, especially if the phase 1 evaluation is able to identify different 'types' of Trailblazer within wave 1. For example, from this, it would be possible to understand the characteristics of the MHST caseload,

describe referrals within the health care system by MHSTs, look at use of non-MHST services by those referred to MHSTs, such as A&E and study the pattern of service use of children and young people before and after the MHSTs began working with them. It might be possible similarly to compare the performance of different approaches to Trailblazer implementation and/or MHST composition based on a typology from the phase 1 evaluation.

As with any routine datasets, there are likely to be quality (completeness and accuracy) issues and neither dataset includes direct measurement of student wellbeing over time. However, this approach would potentially enable all 25 wave 1 Trailblazers and their children and young people to be included, thereby providing the basis for evaluating the programme as a whole. It would also have the advantage of not requiring the active cooperation of either Trailblazer or non-Trailblazer education settings or mental health services. Depending on the duration of the study and the timeliness of availability of routine data, further waves could be added to the analysis, starting with wave 1 which offers the best opportunity for assessing longer term outcomes. This is especially relevant to the outcomes in the NPD since one would expect that any improvements in mental health and resilience would result in improved educational outcomes at a later stage. Because of the different focus of the two routine datasets, some education service process and outcome data would be available for all students whereas the MHSDS data would only relate to the sub-set of students referred either to the MHST or other NHS mental health services. The comparison group will, of course, have access to a more restricted range of mental health services.

Analysis of routine data would also require the student populations within the Trailblazer settings to be clearly identified over time and, if linkage is possible in the future, for a third party to link these populations' MHSDS and National Pupil Database records and provide anonymous datasets to the research team. This is a sensitive topic and the original plan to develop a record linkage system between DfE and NHSE/NHSD has been postponed.

For any comparative analysis, key decisions would need to be taken on the variables used to select the non-Trailblazer areas and the education settings within each area, since some variables such as spending levels on mental health services or pastoral care in schools would need careful assembling. The BRACE-PIRU team has fairly good profiles of wave 1 Trailblazer areas and education settings from the phase 1 evaluation, and these would need to be replicated for later waves. Despite this, there will always be unobservable differences between Trailblazer and non-Trailblazer education settings and student populations.

The numbers of settings and students should be large enough to allow a more focused study to be undertaken, nested within the wider option 1 study, with volunteer Trailblazer and non-Trailblazer settings. This would entail matching of samples of Trailblazer and non-Trailblazer settings and comparative analysis of individually matched Trailblazer and non-Trailblazer students. To make a detailed matched study especially worthwhile, it would highly beneficial to be able to link each matched student's routine health and education data (see option 3, below).

The timing of this option will depend how quickly applications for access to the two datasets can be approved. This can be time-consuming though the NPD data will not be needed as soon as the MHSDS data since the impact of the MHSTs on educational achievement is less likely to be visible in the short-term.

In parallel with the outcome data analysis, if an economic analysis were to be included in this option, this would require collection of some primary financial and resource information from Trailblazers and non-Trailblazers, perhaps based on annual provision surveys supplemented by interviews of Trailblazer site leads. The early evaluation has shown that it is difficult to identify reliable budgetary information without detailed investigation which would only be feasible in a small number of sites. Some costs could be estimated from service use recorded in MHSDS using standard reference costs.

This option would be strengthened if some primary qualitative and descriptive data on how Trailblazers were continuing to implement MHSTs over time could be collected. Such data should help explain any differences observed in the analysis of routine data between Trailblazer and non-Trailblazer cohorts and between Trailblazers.

5. *As above, plus surveys of samples of student and parent populations*

This is a much more ambitious option since it would add primary outcome data collection in the form of periodic panel surveys of samples of students and their parents, most likely in samples of Trailblazer education settings, with a comparison sample of non-Trailblazer students and parents. Survey data would ideally be linked to the routine data in option 1. This option would have the advantage of allowing a detailed assessment of Trailblazer students' mental health, wellbeing, resilience, confidence, etc. over time.

Given that this approach would require the close cooperation of education settings, the main practical decision would be a judgement as to the willingness of education settings to take part and sustain participation, the scale of the study and whether to collect original 'control group' (non-Trailblazer) data or to rely on an existing national survey such as the Millennium Cohort Study or the "Our Future" cohort study both of which collect rich, nationally representative information on about 20,000 young people including measures of mental health and school support. These surveys could also provide some pre-Trailblazer baseline information. Surveys in Trailblazer settings would then use some of the same questions as the existing surveys. More work is needed to ascertain whether these existing surveys could provide a large enough nationally representative population for robust comparative analysis.

6. *Quasi-experimental evaluation of students' outcomes comparing outcomes of students referred to MHSTs versus matched non-Trailblazer controls in a small number of Trailblazer and non-Trailblazer sites either added to Option 1 and/or Option 2 or as a stand-alone evaluation of MHSTs*

In this option, a focused, more intensive quasi-experimental study could be nested within the much larger, ecological routine data study (option 1) and/or added to option 2. This more detailed quasi-experimental study could include student, parent and staff surveys over time, as well as detailed description of the functioning and activity of the MHSTs in each site, including their work at 'whole school' level. The focus here would be on internal validity since this kind of study is unlikely to be feasible or affordable across a large number of areas/settings. Inevitably, it would be undertaken with settings willing to take part in intensive research rather than representative of the entire Trailblazer programme. The practical problem of recruiting 'control' education settings, staff and students could be significant, as seen in previous recent evaluations (see above).

A tentative recommended way forward

Given that the primary data collection from Trailblazers in the early evaluation has only just begun and learning from that study was to have been an important input to the production of our advice on the phase 2 evaluation, it is too soon to provide definitive recommendations on the scope, phasing or commissioning route for the phase 2 evaluation. However, in light of what the BRACE-PIRU team has learned already (see above), it is clear that any approach to the phase 2 evaluation

needs to be assessed rigorously for its feasibility and as far as possible an approach chosen that is as immune as possible to obstacles related to data governance, data linkage, comparator recruitment, access to students for data collection, etc. Given these considerations, it would be prudent to try to design and implement the phase 2 evaluation in stages, starting with the most straightforward and least risky forms of data collection and analysis before considering moving to more elaborate forms of data collection and analysis. This approach could also be taken to the commissioning process (see next section). For example, the initial Trailblazer versus non-Trailblazer comparison could be based simply on aggregate routine data from education settings in the areas concerned (part of option 1). After this initial ecological analysis and perhaps further qualitative and quantitative research on the types of cases being managed by the MHSTs, their referrals, etc., it might be possible to start analysing individual level matched comparative data on Trailblazer and non-Trailblazer students by linking NPD and NHS MHSDS data for these young people. However, matching would only be possible with secure knowledge of the diagnoses being made among the Trailblazer students.

One issue that bears consideration is whether the goal of phase 2 should be primarily an evaluation of the entire programme or focused on a 'proof of concept' evaluation of key elements of the programme, especially the MHSTs introduced in Trailblazer areas but not elsewhere. Option 3 as a stand-alone study focuses on the latter.

One design issue to be resolved is whether the outcome evaluation should be confined to the first wave of Trailblazers or the first two-three waves, depending on the duration of the evaluation. The advantage of the former is the longer period of follow up though it is possible that the first wave will be atypical, including in the nature of its funding and the flexibility of its service delivery model. Given the likely lag in availability of MHSSDS data, any outcome analysis, irrespective of the number of waves included, would almost certainly need to extend beyond June and December 2023 when the respective BRACE and PIRU contracts end (especially if there is any delay in MHSTs' activity data being included in the MHSDS.

Options for commissioning the stage 2 evaluation

Irrespective of which of the options or staged combination of options set out above is eventually selected to be commissioned, there appear currently to be at least four, possibly five, main routes available for commissioning evaluation, assuming that funds can be identified and are prioritised for a phase 2 evaluation, either from NIHR or DfE, or some combination:

1. competitively tendering the phase 2 evaluation in the usual way (with an invitation to tender that builds on the research brief to be produced by the early evaluation team), either in toto or in cumulative stages. PIRU-BRACE might be invited to collaborate with other teams based on detailed knowledge of the phase 1 Trailblazers;
2. competitively tender a more focused phase 2 evaluation, not of the Trailblazer programme as a whole but a quasi-experimental evaluation of the marginal benefits and costs of the activities of MHSTs in matched groups of education settings and students with and without access to such teams;
3. inviting one of the NIHR Policy Research Units with a relevant subject area remit such as the Mental Health PRU and/or the NIHR Children and Families PRU to assemble a suitable collaborative research team to undertake the phase 2 evaluation, with or without any input from BRACE or PIRU (planning this evaluation could even begin before the final research brief/guidance is provided by the BRACE-PIRU team). The proposal for this work would need to go through rigorous peer review to access additional core funding since it is unlikely that any

PRU could take on such a study within its core funding without committing all its spare capacity for the duration.

4. encouraging BRACE and PIRU to build a wider team capable of leading a staged phase 2 evaluation, for instance, starting with an evaluation mainly based on analysis of routine data (option 1). This would entail involving more specialist staff from Birmingham, RAND and Cambridge University, and beyond, with expertise in children and young people's mental health, possibly supported by generic health economics and quasi-experimental evaluation design and data analysis expertise from PIRU. This would require BRACE and PIRU to produce a proposal for rigorous external peer review in order to be able to access the additional core funding needed.

The phase 1 team has had preliminary discussions with other colleagues in RAND and Cambridge about their potential interest in the fourth option but clearly the decision as to how to proceed is for DHSC/NIHR to take.

A fifth option is to postpone any commissioning process until it becomes clearer when MHST data will become securely embedded in the MHSDS and whether it is going to be possible in the foreseeable future routinely to link NHS MHSDS and NPD data at the individual student level and make linked datasets available for use by academic researchers.

Conclusion

Since one of the purposes of the early (phase 1) evaluation is to scope the feasibility of, and propose an approach to, a phase 2, longer-term, summative evaluation of the Trailblazer programme, we remain committed to help progress any planning and commissioning of this evaluation as part of the ongoing early phase 1 study, assuming that phase 2 remains a policy priority. The evaluation team has already undertaken substantial work to scope a phase 2 evaluation (as visible in this paper), and therefore we will be able to produce a discussion paper and draft research brief in the first part of 2021, whichever of the options for the phase 2 evaluation is chosen. However, work to date has identified many practical difficulties to be faced in undertaking rigorous outcome and economic evaluation of the programme, as shown in the compromises and limitations inherent in previous similar evaluations even when undertaken by experienced teams.

Document F

A second paper prepared for the 30 November 2020 stakeholder group meeting exploring options for accessing, linking and using routine NHS mental health services data to evaluate Programme outcomes in a Phase 2 evaluation.

Using data from Mental Health Services Data Set (MHSDS) as part of a quantitative evaluation of the Children and Young People's Mental Health Support Teams (CYPMHSTs)

Katie Saunders

25 November 2020

MHSDS holds data from the health records of individual children, young people and adults who are in contact with mental health services.

If a person is receiving care which is wholly or partially funded by the NHS then data must be submitted by the provider to MHSDS. This is the case for CYPMHSTs.

If someone is not thought to have a mental illness or services are only provided within primary care, or adult IAPT, data are not submitted

Data from the CYPMHT do not appear in current national reporting using MHSDS https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-services-monthly-statistics/performance-august-provisional-september-2020

The current data dictionary for MHSDS includes a code for Mental Health in Education Service referral. This is defined as follows: "This code is to be used for services that are located in education settings and/or primarily focused on students in schools, colleges or universities. New education based 'Mental Health Support Teams' should use this code when submitting data".

Data submissions from sites were initially in the form of quarterly monitoring data submitted to NHS England and are currently paused due to COVID. Before this pause the intention was that data submissions would run in parallel with both monitoring data submitted to NHS England, and the new submissions to MHSDS. It is unclear how far at the point of writing (late 2020) MHSDS data submissions have been implemented, with particular challenges, for example, for voluntary sector providers working with NHS systems. However given the national outcomes evaluation will not be looking to report quickly the provision of a field in MHSDS for CYPMHT referrals and the intention from the implementation side that data be submitted, the prospect of reliable data submissions to MHSDS within a 3-5 year time frame seems a reasonable assumption to make.

This means that a phase 2 evaluation incorporating data from MHSDS would be a feasible approach. This does not overcome all the challenges of such an evaluation but it is an approach that would give insight and not involve novel or unrealistic data linkages.

It would allow the following approach to be taken:

- A cohort of young people in contact with CYPMHT could be identified in MHSDS
- Other mental health referrals and contacts could then also be identified in the same data set

- Because MHSDS is held by NHS Digital it would also be possible to identify non MHSDS health service contacts (A&E attendances, IAPT, inpatient admissions) through linkages within the same health data system
- Until 2015/6 mental health data were linked to CPRD (primary care data) – this is again a proof of principle for linkages with primary care data, which might be reasonable to assume would be available in future years (although are not available currently)

For all these data sources there are established processes for making the applications for access. This is not to say that the application processes would be quick or straightforward, but equally within a 3-5 year time frame of an evaluation I would expect that the application would be successful.

There are further data sources that could be considered, for example, person level linked education and health data. My understanding is that this linkage is planned, but it is a novel cross-sectoral linkage, and so I would be much less likely to assume that these data are available within the time frame of an evaluation.

From a methodological perspective these data have limitations, including the need to check completeness and accuracy before starting to work with them (e.g. cross checking against external sources where available, looking at patterns of missingness, and where possible also evaluating accuracy of recording such as checking the ages of the referrals etc. to make sure they make sense, looking at recording by educational establishment, and checking that the numbers of and reasons for referrals are approximately consistent with the parallel NHS England data collections).

However the biggest limitations to note are first that this approach to identifying the cohort of young people in MHSDS who had contact with CYPMHT is a person-level approach and does not provide an approach to evaluating the whole-school outcomes from this part of the work. In addition, it does not include education outcome data at all, and will only provide insight into health outcomes.

The second big concern is around identifying an appropriate counterfactual, with some combination of matching or looking at changes over time probably possible, but not straightforward.

Nonetheless this approach to identifying a cohort of young people in MHSDS who have contact with CYPMHTs means that a longitudinal study of this cohort of young people over time and their contacts with health services would be possible. For example, it would be possible to properly understand the characteristics of the intervention cohort, to describe referrals within the healthcare system that are made at around the time of contact with CYPMHT and to look at contacts before and after the CYPMHT worked with the young people. Healthcare contacts in primary care and A&E are particularly likely among people with mild to moderate mental health problems and so understanding these contacts in relation to the contacts in schools would also be valuable. MHSDS does have a field for a code for the educational establishment in which the CYPMHT contact was made – it might also be possible to explore variation between establishments in terms of numbers of contacts or further referrals.

We have also discussed the possibility of using school level routine data which are publicly available to describe the schools participating in the CYPMHT programme and to look at schools-based outcomes over time. This would be straightforward in terms of data access and an analysis framework with intervention and control schools could be developed. It would give insight into the characteristics of schools within which the teams work, but given the changes in performance

measures with Covid-19, formal assessments of changes in educational outcomes over time at the school level would be complicated to interpret at least in the short term.

Document G

A detailed, costed research proposal prepared by the evaluation team in response to a request for a possible initial period of evaluation that could be undertaken ahead of the commissioning of the full Phase 2 evaluation and which could provide findings by early 2023 to inform public spending decisions relating to the Programme. Eventually, DfE and DHSC decided that this rapid initial evaluation was not essential and they would proceed directly to commission the longer full Phase 2 outcome and economic evaluation.

Impact and economic evaluation of Children and Young People's Mental Health Trailblazer Programme: proposal for initial evaluation of the 2018/19 Trailblazers

Nicholas Mays, Jo Elllins, et al.

20 April 2021

Section 1. Application Summary Information

Host organisation: This project is currently conceived as a joint initiative between the Policy Innovation and Evaluation Research Unit (PIRU) at LSHTM and the Birmingham RAND and Cambridge Rapid Evaluation Centre (BRACE) and will be hosted at both organisations.

Research title: Impact and economic evaluation of Children and Young People's Mental Health Trailblazer Programme: initial evaluation of the 2018/19 Trailblazers

Research type: Primary and secondary research

Proposed start date: July 2021

Research duration: *20 months*

End date: March 2023

Estimated research costs: £484,875

Estimated NHS support costs: £0

Section 2. Lead applicant CV

The research will be co-led by Nicholas Mays (PIRU, LSHTM) and Jo Ellins (BRACE, HSMC, Birmingham University)

Section 3. Research Background - Lead and Co-applicants

Has this application been previously submitted to this or any other funding body?
Provide necessary information

No.

Section 4. The research team

Lead applicant role in the research (100 words)

N /A

%FTE commitment

Joint Lead Applicant

Justification for Joint Lead Applicant [250 words]

The ongoing early evaluation of the Trailblazers is led by Ellins, with Mays in close support. This initial impact evaluation work will continue this relationship, building on the existing data sharing agreement negotiated by BRACE with NHS Digital and the quasi-experimental evaluative methodological expertise of the University of Cambridge and RAND (Saunders et al.), and PIRU (O'Neill, Grieve, et al.). Thus joint project leads are preferable to a single lead applicant. Ellins and Mays have worked closely and successfully together on the early evaluation of the Trailblazers, as have research staff from BRACE and PIRU. There are no practical reasons why Mays and Ellins should not be able to work together as joint leads since they have complementary skills.

Specify your (joint lead applicant) role in the future programme [75 words]

Mays will work primarily with the quantitative researchers (Saunders, O'Neill, et al.) to help shape the analyses of routine data and related methodological work (work packages 1 and 2). Ellins will work primarily on the qualitative side of the project which will extend the current early evaluation which she leads (work package 3).

%FTE commitment

Mays 10%

Ellins 10%

Co-Applicants

Please include a clear description of their role and the reasons why a public co-applicant is joining the team. Co-applicants who are patients, service users or carers are not obliged to complete a standard

CV but are required to provide a summary of any knowledge, skills and experience relevant to their role in the application. [500 words]

Specify role in research [75 words]

Katie Saunders is a Senior Research Associate statistician in the Primary Care Unit at the University of Cambridge and a member of the BRACE team. She works in health services and primary care research, with a particular focus on applied statistical analysis and methodology, and the use of routine healthcare data in research and evaluation. She will lead work package 1, including supervising a research assistant (data analysis) and will support O'Neill in work package 2 (evaluation methodology).

Stephen O'Neill is an Associate Professor in health economics and econometrics in the Department of Health Services Research and Policy at the London School of Hygiene and Tropical Medicine. Stephen has a particular focus on non-experimental methods for the rigorous evaluation of policies and programmes in health and care. He will lead work package 2 and support Saunders in planning the analyses for work package 1.
Jenny Newbould is a research leader at RAND Europe. She has extensive experience in health care research and specialises in qualitative research particularly on patients' experiences of services. Jenny will co-supervise the research fellows undertaking the interviews with key Trailblazer staff in work package 3 and take part in the analysis and interpretation of the findings based on her experience of the early (phase 1) evaluation.
Kelly Singh is an Evaluation Fellow at the Health Services Management Centre, University of Birmingham and a member of the BRACE. Kelly has over seven years' experience of managing applied health services research and evaluation across the charitable and public sectors and will provide day-to-day project management including ensuring coordination between BRACE and PIRU staff, ensuring that all the necessary research ethics and governance approvals are in place, supporting the process of negotiating the data access agreements with NHS Digital and Department for Education, etc..

%FTE commitment

Saunders 5% FTE from July 2021 to March 2022 (currently funded within existing BRACE budget) – for NPD and MHSDS data applications. Then 30% FTE from April 2022 to March 2023 (additional funding)

O'Neill 15% FTE from July 2021 to March 2023 (additional funding)

Newbould 5% FTE from January 2022 to March 2023 (additional funding)

Singh 30% FTE from July 2021 to March 2023 (additional funding)

Section 5. Other supporting roles

To be done online

Requires signature from

1. *Director of Finance*
2. *Head of Department or Senior Manager*

Section 6. Scientific Abstract *[500 words]*

to consider: Research question, Background, Aims and objectives, Methods, Timelines for delivery, Anticipated impact and dissemination

The Children and Young People's Mental Health Trailblazer Programme (the Trailblazers) represents a significant investment in additional NHS services offered within education settings and focused on supporting groups of schools and colleges to meet the needs of children and young people (CYP) with mild to moderate mental health service needs at an earlier stage of their conditions than would otherwise be the case with existing services. The current project is designed to provide a bridge between an ongoing early process evaluation focused on the implementation of new mental health support teams (MHSTs) in the 25 initial Trailblazer sites recruited in 2018/19 and longer-term outcome and economic evaluation. The objectives are to: undertake a descriptive analysis of the impact of the MHSTs in the 18/19 Trailblazers using routine mental health service and education datasets (MHSDS and NPD, respectively); develop a rigorous counter-factual design for further outcome and economic evaluation; and continue to follow the evolution of the service models of the 18/19 Trailblazers as an aid to interpreting the results of the analyses of routine health and education datasets. The study will be undertaken over a 20-month period, July 2021 to March 2023. A report will be produced for DHSC and DfE in January 2023 designed to contribute to negotiations with the Treasury on the future funding and possible expansion of the Trailblazer programme. The findings will be summarised in a range of accessible ways designed to reach a wide practitioner, policy and public audience.

Section 7. Plain English Summary of Research *(450 words)*

to consider: aim(s) of the research; background to the research; design and methods used; patient and public involvement; dissemination

In 2017, the Department of Health (DH) and Department for Education (DfE) published the *Transforming Children and Young People's Mental Health* Green Paper, which set out proposals for improving the services and support available to children and young people (CYP) with mental health problems, with a particular focus on enhancing provision for those with low-moderate needs. The proposals are currently being tested in the CYP Mental Health Services Trailblazer Programme, to inform a planned roll-out throughout England by 2023-24. There are 58 mental health support teams (MHSTs) in wave 1 Trailblazers which support CYP in more than 1,000 education settings (e.g. primary and secondary schools). An early evaluation of the CYP's Mental Health Trailblazer Programme is in progress (PIs: Jo Ellins and Nicholas Mays).

Building on the recommendations of this early, largely qualitative evaluation of the Children and Young People's Mental Health Trailblazer Programme, this proposal sets out an initial period of evaluative research designed to provide as much early impact evidence as possible to be available to policymakers to inform key Government decisions about the future funding of the Trailblazer Programme likely to take place in spring or early summer of 2023.

This project aims to: establish the feasibility of, and analytical methods necessary for, a long-term (three to five-year period of follow up) evaluation of the health and educational outcomes of the Trailblazer programme, using routine datasets (NHS Mental Health Services Data Set (MHSDS) and National Pupil Database (NPD)); to explore descriptively data on education setting exclusions and

attendance from the 2018/19 Trailblazers sites before and after the start of the programme; to identify the features of the Trailblazer programme/sites associated with different patterns of CYP's MHS referral and service use, and different levels of exclusions and attendance.

Building on links established for the earlier initial evaluation, we will seek advice and input from Youth Advisory Group, and the National Children's Bureau Young Research Advisors to inform the design of the data collection and analysis, and the interpretation of emerging findings. Outputs will be tailored to different audiences in order to maximise reach and impact. This study of the early impacts of the Trailblazer programme will be undertaken between July 2021 and March 2023 with a view to reporting to DHSC and DfE in January or February 2023. A key output of the project will be a final report in January 2023 designed to feed directly into negotiations between DHSC, DfE and the Treasury about the further funding of the Trailblazer programme.

Detailed Research Plan *(usually 7000 words)*

Using all of the headings in the order presented below, please use this section to clearly explain your proposed research. Schematics, tables, illustrations, graphs, and other types of graphics can be embedded to clarify the research plan but they should not clutter the central narrative. Images do not count towards the overall word count but inclusion of them to overcome word limits is not permitted. Images may only be included within the 'Research Plan.' Images included in other sections will be removed from the application and not seen by reviewers.

Requested structure:

1. *Background and rationale*
2. *Aims and objectives*
3. *Research plan/Methods*
4. *Dissemination, outputs and anticipated impact*
5. *Project/Research timetable*
6. *Project management*
7. *Ethics/Regulatory approvals*
8. *Patient and Public Involvement*
9. *Project/Research expertise*
10. *Success criteria and barriers to proposed work*

Upload Gantt chart

Background and rationale

Children and young people's mental health services

Recent years have witnessed a growing recognition that mental health services have for too long been marginalised. The principle of parity of esteem as established in the 2012 Health and Social Care Act has important implications for both policy and practice. There is an awareness amongst policy makers and the wider public that children and young people's mental health (CYPMH) services are not consistently available, and in many cases the CYPMH services that do exist are experiencing sustained high demand and consequent delays in access for distressed and often vulnerable children

and young people. There is evidence that the incidence of mental health problems has increased during the COVID-19 pandemic at all ages[1].

Alongside action to improve access to specialist services for children and young people with serious needs and acute problems, there is a growing focus on prevention and early intervention (see, in particular, *Future in Mind*[2]. A key aim is to ensure that children with low to moderate needs get early support – to reduce distress more quickly and prevent further exacerbation and more serious need later. There is a recognition that all services that children and young people come into contact with can play a more active role in the identification of their mental health needs and mobilisation of appropriate support, above all, schools and colleges.

In 2017, the Department of Health (DH) and Department for Education (DfE) published the *Transforming Children and Young People's Mental Health* Green Paper[3]. Building on previous initiatives and commitments, the Green Paper set out proposals for improving the services and support available to children and young people (CYP) with mental health problems, with a particular focus on enhancing provision for those with low-moderate needs. The proposals had three main elements:

1. Incentivising schools and colleges to identify a senior mental health lead to oversee the approach to mental health.
2. The creation of Mental Health Support Teams (MHSTs) providing specific extra capacity for early intervention and ongoing help, and supporting the promotion of good mental health and wellbeing within education settings.
3. Piloting a maximum four-week waiting time for access to specialist NHS children and young people's mental health services.

The Trailblazer Programme

The above three elements are currently being tested in the CYP Mental Health Services Trailblazer Programme, with the aim that the new approach and services will be implemented in successive waves covering 20-25% of areas in England by 2023-24.

The 2018/19 wave of the programme (the focus of the current study proposal) involves 25 Trailblazers in 41 Clinical Commissioning Group (CCG) areas covering five regions of England: the North, Midlands and East, South East, South West and London. There are 58 MHSTs in the 18/19 Trailblazers which support CYP in more than 1,000 education settings (including primary and secondary schools, special schools, colleges and other settings such as pupil referral units).

Key trailblazer selection criteria for the first wave 2018/19 Trailblazers included: demonstrable levels of investment in CYPMH services, knowledge of the mental health needs of CYP in the area, demonstrable progress to date in meeting targets for increasing access to mental health services for CYP, and strong leadership in mental health to ensure further improvements. The rationale given for these qualifying criteria was to ensure selected areas had the capacity and capability for implementation at sufficient pace to inform learning and testing. The Department of Health and Social Care (DHSC) and DfE also selected areas to ensure some geographical and demographic (e.g. deprivation, social mobility) diversity, and the first 25 trailblazers include areas involved in other national programmes and initiatives including the Troubled Families programme and Schools Link pilots.

Twelve of the 25 trailblazers will also incorporate pilots focusing on delivering the four-week waiting time target. The local implementation of the programme will be supported by NHS England (NHSE)

regional teams and newly created DfE mental health regional implementation teams (aligned to NHSE's regional structure).

MHSTs are primarily for children and young people in primary, secondary and further education (ages 5 to 18). They have three core functions: i) delivering evidence-based interventions to children and young people with mild to moderate mental health issues; ii) supporting the senior mental health lead in each education setting to introduce or develop their whole school or college approach to mental health and wellbeing; and iii) giving timely advice to education setting staff, and liaising with external specialist services, to help children and young people to get the right support and stay in education. The 18/19 Trailblazers have flexibility to tailor their approaches to local needs and circumstances, and therefore some variation in service models and how they are implemented is expected. This is likely to have implications for interpreting the findings of any outcome evaluation, especially generalisability since areas may have developed a model to suit their setting but which would have limited transferability elsewhere.

MHSTs typically comprise around eight members, about half of whom are Educational Mental Health Practitioners (EMHPs) – a new role in the NHS mental health workforce. Training of the first cohort of EMHPs commenced in January 2019 and the first teams became operational gradually from January 2020. The programme is also funding training for the senior mental health leads in education settings to support them in their role. This training has been delayed, most likely until 2022.

The requirement for evaluation of the Trailblazer programme

A phase 1 early evaluation of the Children and Young People's Mental Health Trailblazer Programme is in progress led by the Birmingham, RAND and Cambridge Rapid Evaluation Centre (BRACE) (principal investigator, Jo Ellins, Birmingham) in collaboration with the Policy Innovation and Evaluation Research Unit (PIRU) at the London School of Hygiene and Tropical Medicine (principal investigator, Nicholas Mays)[4]. The early evaluation is funded as part of the core work programme of the two groups, by NIHR Health Services and Delivery Research (HS&DR) and Policy Research Programme (PRP), respectively. This largely qualitative, predominantly process and originally planned to be 'rapid' evaluation has been much delayed by the COVID-19 pandemic and is now due to end in March 2022 with an interim report in April 2021. One of the work packages in the early evaluation requested by the lead policy agencies (Department of Health and Social Care (DHSC), Department for Education (DfE) and NHS England (NHSE)) was to develop a specification for a full phase 2 impact and economic evaluation over the longer term (see p26-27 of the protocol of 30 September 2019). This was to be based on insight gained in the early evaluation both in terms of its substantive focus but also in terms of the likely feasibility of different designs and methods. A separate report was prepared for the NIHR Trailblazer evaluation stakeholder group in November 2020 along these lines. It recommended a carefully staged approach to undertaking a full outcome and economic evaluation over the long term[5]. The current proposal is a developed version of option 1 on pages 5-6 of that report.

As part of this recommended staged approach, this proposal sets out an initial period of evaluative research designed to provide as much early impact evidence as possible to be available to policymakers to inform key Government decisions about the future funding of the Trailblazer Programme likely to take place in spring or early summer of 2023. Decisions will need to be taken to cover the second half of the ten-year NHS Long Term Plan. Currently, funding for the Trailblazers is only in place for the first five years until the end of financial year 2023/24. A key decision will be whether to extend the Programme beyond the Trailblazer areas to the rest of England.

The original plan was for the early evaluation findings and the experience of the research team working with local sites to inform the design of the impact and outcome evaluation, and then for there to be time to collect a number of years of outcome data ahead of the re-funding decision point so that outcome findings could contribute to the decision making. This is no longer possible due to the pandemic. In light of what the BRACE-PIRU team has learned already about recent similar evaluations and the practicalities of working with the Trailblazers, it is clear that any approach to the initial phase 2 evaluation, if it is to provide timely findings for decisions in the first half of 2023, should be implemented in stages. This involves starting with the most straightforward and least risky forms of data collection and analysis before considering moving to more elaborate forms of data collection and analysis.

Lessons from recent evaluations of similar programmes for outcome evaluation of the Trailblazer programme

The overriding implication for the current study of the review of recent evaluations of pilot programmes with some similarities with the CYPMH Trailblazers undertaken to inform this proposal (see Appendix) and our current experience of the early evaluation of the Trailblazers is that robust outcome evaluation at scale involving extensive primary data collection is likely to be difficult to undertake and may not succeed in comparing the Trailblazers with the status quo ante. Including an economic dimension further increases the practical challenge. The experience to date of the early evaluation has shown that all aspects of the research such as accessing documents, obtaining monitoring reports, collating routine activity data, requesting contact details of key managers and staff, etc. have been more complex and much more protracted than we had been led to believe, before adding the difficulties thrown up by the COVID-19 pandemic. The likelihood is that such problems would be even greater in the context of an outcome evaluation directly involving children and young people themselves.

The design and approach to the evaluation is likely to be constrained significantly by the way in which the Trailblazer programme is structured and implemented. Other implications include the likelihood that the comparison between the different Trailblazer sites may be as important over time as the comparison between Trailblazer and non-Trailblazer areas and education settings (e.g. comparing sites with different levels of funding or different MHST staff mixes), especially if there is a growing commitment in government to improving the range of mental health support available to CYP. Such a comparison is also likely to be more straightforward than comparing Trailblazers with non-Trailblazers since many of the elements that comprise the Trailblazer programme have already been tried out elsewhere both in previous pilots and outside specific pilot programmes. However, the proposed study will attempt to identify robust ways of making both sets of comparisons.

Aims and objectives

The aims of the project are:

- to establish the feasibility of, and analytical methods necessary for, a long-term (three to five-year period of follow up) evaluation of the health and educational outcomes of the Trailblazer programme, using routine datasets, and focused on the activities of the 2018/19 MHSTs, most of which began providing services in January 2020;
- to identify whether the 2018/19 Trailblazers are altering the nature and pattern of referrals to CYP's mental health services (MHS) in different Trailblazers and compared with referral patterns in non-Trailblazer student populations, using routine MHS data;

- to explore descriptively data on education setting exclusions and attendance from the 2018/19 Trailblazers sites before and after the start of the programme
- to use quantitative and qualitative methods to try to identify the features of the Trailblazer programme and/or different approaches to Trailblazer implementation associated with different patterns of CYP's MHS referral and service use, and different levels of exclusions and attendance.

The objectives are:

- To obtain separate NHS Mental Health Services Data Set (MHSDS) and National Pupil Database (NPD) datasets for the initial analyses
- For MHSDS, to obtain all data on children and young people age <25 from 2016/17 onwards
- For the National Pupil Database (NPD), to obtain datasets for children and young people (5-18 years) in wave 1 2018/19 Trailblazer educational settings
- For NPD, to develop a matching strategy for young people in similar educational settings in socio-economically similar parts of England from 2016/17 to the latest data available during the initial evaluation period (likely to be for 2020/21, available in March 2022)
- To obtain from ONS the planned linked individual level dataset of MHSDS and NPD data for the same groups (assuming that the project to link these datasets has generated a useable dataset during the period of the initial evaluation)
- To assess the completeness of the recording of MHST activity and individual CYP's outcomes in the MHSDS
- To undertake an initial descriptive analysis of MHST activity and selected NPD performance indicators (e.g. exclusions and attendance) before and after the initiation of the wave 1 Trailblazers using unlinked data and the new linked dataset, if available
- To additionally consider paired outcome data included in MHSDS looking at changes in outcomes among young people before and after contact with MHSTs, and to possibly compare these changes with control data, including external data, data from trials or other data from MHSDS if available
- To undertake a methodological review of how best to assess the impact of MHSTs on educational outcomes in the period of COVID-19, including School level effects of the programme, its effects on the student population as a whole (and/or year groups) and its effects on individual CYP referred to services provided by the MHSTs.
- To undertake semi-structured interviews with key staff in the 2018/19 Trailblazers designed to continue tracking the evolution of the implementation of the MHSTs after the end of the current early evaluation and to help interpret the findings of the above quantitative analyses.

Research plan and methods

This study of the early impacts of the Trailblazer programme will be undertaken between July 2021 and March 2023 with a view to reporting to DHSC and DfE in January 2023. A series of analyses using the linked and unlinked datasets are planned, on the basis that the linked health and education dataset outlined below may not be available during the period of the project or may arrive too late to meet the deadline of early 2023. The analyses will start with unlinked data and move on to linked data if these become available in sufficient time.

Routine data sources

1. *Trailblazer Programme Quarterly reports*

Until late 2020, all monitoring and activity data from the Trailblazers was planned to be reported directly to NHSE in the form of quarterly reports rather than to MHSDS. There was a pause in quarterly reporting in April 2020 due to COVID-19, and routine reporting only resumed in October. Since then, 'service metrics' (i.e. activity data) have been submitted to MSHDS (see below). Trailblazers continue to report other kinds of monitoring data, such as vacancy rates, details of team composition, governance arrangements, etc. in quarterly reports. This means that from April to September 2020, there was a gap in reporting of service activity specifically from the MHSTs. Since then, quarterly reports have provided data such as on staff mix and availability which will be relevant to some of the analyses described below.

2. *MHSDS data*

MHSDS held by NHS Digital (NHSD) contains data from the health records of individual children, young people and adults who are in contact with NHS mental health services. If a person is receiving care which is wholly or partially funded by the NHS then data must be submitted by the provider to MHSDS. This is the case for the CYP MHSTs.

The current data dictionary for MHSDS includes a code for Mental Health in Education Service referral which includes MHST use. This is defined as follows: "This code is to be used for services that are located in education settings and/or primarily focused on students in schools, colleges or universities. New education based 'Mental Health Support Teams' should use this code when submitting data". We are aware that a new code has been added for MHSTs and we will look at both codes.

Currently, NHSE is requiring MHSTs to use the "CARE PROFESSIONAL TEAM LOCAL IDENTIFIER" field from table MHS102 Service or Team Type D06 (MH in Education Service) in MHSDS to assign activity to MHSTs, until the MHST code is available. However, data reported via this code will also include non-MHST activity in educational settings, and therefore also require the Care Professional Team Local Identifier field from table MHS102 Service in order for to be able to extract and analyse MHST-specific data. These team identifiers are locally generated, and NHSE is currently working with sites to have those identifiers submitted via the quarterly monitoring process.

NHSE expects that the specific MHST code will be included in the MHSDS in October 2021 which will enable easier extraction and analysis of MHST activity and outcome data within MHSDS. We are aware that data on MH outcomes are additionally collected by practitioners as part of MHST activity and uploaded to MHSDS.

All the Trailblazers are reporting to NHSE that they are now providing their data to the MHSDS ahead of the adoption of the specific MHST code. However, it has been reported that voluntary sector providers in Trailblazers have had some difficulties entering their activity and other data into MHSDS. The quarterly returns from Trailblazes to NHSE for quarter 2 of 2021 indicated that seven of the 25 Trailblazers had problems submitting activity data (e.g. the pre-defined codes for diagnoses and/or interventions did not match the activities of the MHST). Thus it is unclear how complete and accurate current submissions to MHSDS are. Once we have the MHSDS dataset, we will investigate these issues before undertaking any analysis.

Since NHSD, which manages MHSDS, also holds A&E, IAPT and inpatient admission data, it should be possible eventually to obtain and link other non-MHSDS service use data for children and young

people in contact with the MHSTs. However, these linkages are unlikely to be available during the period of the proposed study.

3. *National Pupil Database (NPD)*

We will obtain from the National Pupil Database (NPD) datasets for children and young people (5-18 years) in the 2018/19 Trailblazer educational settings and use these data to develop a matching strategy for young people in similar educational settings in socio-economically similar parts of England from 2016/17 to the latest data available during the period of this initial impact evaluation (likely to be for 2020/21, available in March/April 2022).

We will additionally use publicly available data on Trailblazer school characteristics and performance, building on analyses using these data in the current early evaluation.

4. *MHSDS-NPD data linkage*

Having been postponed due to the COVID-19 pandemic, the original inter-agency plan led by DfE to undertake a linkage exercise to identify the best way to routinise linkage of a range of health and education databases for a variety of monitoring and evaluation purposes has recently been reactivated. DfE proposes that eventually the National Pupil Database (NPD) should be linked routinely with Mental Health Services dataset (MHSDS), Hospital Episode Statistics (HES), Community Health Services dataset (CSDS) and Maternity Services Data Set (MSDS).

The relevant linkage for the current study is between MHSDS and NPD. This comes in the second phase of the linkage programme, known as Extended EChild, with further linkage to other datasets after that. If all goes well, DfE currently aims to have the MHSDS and NPD linkage completed and available for external researchers in pseudonymised form by the middle of 2022 (personal communication, 13 April 2021). The intention is for this linked dataset to include MHSDS data from FY 2016/17 to the end of FY 2021/22, if at all feasible. This is ambitious but would therefore include approximately 27 months of data since the first 18/19 MHSTs started offering services in January 2020. However, the linkage work is still at a relatively early stage, with a data sharing agreement between DfE and NHSD still to be negotiated during May 2021 and technical discussions between DfE and NHSD not due to start until June. It may be, given the lag in the data reporting, that the linked dataset will only have data to March 2021 which is only approximately 14-15 months after most of the 18/19 Trailblazers started receiving referrals and is dominated by the period of severe disruption to services caused by the early months of the COVID-19 pandemic.

Given the inevitable uncertainty relating to timing of the availability of the linked dataset and its duration (not least the possibility that there will be delays with staff redeployed if there is a resurgence of the pandemic), the current proposal includes plans for unlinked analyses (see below), with the possibility of an initial linked analysis if linked data become accessible by the autumn of 2022.

5. *Access to NHSD routine data*

BRACE already has data sharing agreement with NHSD (entered into by Birmingham, RAND and Cambridge jointly) which is not project-specific but it does not currently include MHSDS. The intention is to negotiate an extension of this data sharing agreement to include MHSDS in the

summer and autumn of 2021. We are planning on the assumption that it will take six months before we have access to a useable MHSDS dataset from 2016/17 to the latest available period, with data from 2020/2021 only expected to be released in early 2022. Access to the NPD will require a data sharing agreement with the Department for Education (DfE) and access to a linked MHSDS-NPD dataset, once this is available, will require a further agreement either with NHSD and/or ONS.

Work package 1: descriptive analyses of routine data (led by Saunders with support from O'Neill and Mays)

As explained above, should linked MHSDS and NPD data become available during autumn 2022, it would be possible to undertake some analyses using a linked dataset within the currently requested budget. However, the initial analyses planned will use unlinked MHSDS data accessed from NHS Digital through the existing BRACE data sharing agreement, alongside unlinked NPD data accessed through a new data sharing agreement with DfE, plus publicly available education setting-level education data to answer the research questions below by the end of 2022 (described above). For the analyses set out below, it may be that it will only be possible to use data on MHST activity to the end of March 2021 which is approximately 14-15 months after most of the 18/19 Trailblazers started receiving referrals and includes the period of severe disruption to services caused by the early months of the COVID-19 pandemic. If a longer run of data is available (see above), we will obviously use these data. We will focus on trying to answer the following questions in WP1.

What is the quality of the data that flows from the MHSTs to MHSDS?

Quarterly 18/19 Trailblazer monitoring data for the first quarter of 2021/22 showed that 100% of Trailblazer sites were flowing data to MHSDS. We will compare data from MHSDS with the aggregate quarterly monitoring data submissions to NHS England to describe the completeness and accuracy of data on MHSTs recorded in MHSDS. There are two different ways that the work of MHSTs is recorded in MHSDS, first using an educational referral code, and second using a direct MHST flag (see above). We will compare both recording options and describe how data completeness changes over time. We will additionally describe the completeness of the paired outcome data collected from young people in contact with MHSTs and uploaded to MHSDS

Which contacts with the criminal justice system of young people referred to MHSTs are recorded in MHSDS?

MHSDS also includes information on contacts with mental health services or referrals from the criminal justice system. We will explore the completeness and usefulness of these data as a marker of contact with the criminal justice system among young people in contact with MHSTs. This will be an exploratory analysis, and will not fully capture criminal justice contacts, but may shed some insight.

What are the characteristics of the education settings with which the trailblazer 2018/19 MHSTs are working? How do these compare with other schools in the same local authority and nationally?

Using publicly available data on schools in England from academic year 2018/2019 (the last full year before the full implementation of the trailblazer MHSTs in January 2020), we will consider type of school, including size, age range, mixed or single sex and management, also

absenteeism, percentage of pupils with English as an additional language (EAL) and with special educational needs (SEN), performance at KS2, KS4 and KS5, index of material deprivation (IMD), the small area level measure of deprivation of the education setting postcode. We will also describe the trajectories of performance for these settings, and review outcomes from during COVID-19 as well where available. This will build on the baseline profiles of Trailblazer areas and education settings assembled as part of the ongoing early evaluation.

What are the characteristics of young people referred to MHSTs?

Using data from MHSDS, we will identify CYP who have been referred to MHSTs. We will describe the characteristics of the young people, particularly, where recorded, age, sex, deprivation (IMD) based on postcode of residence, ethnicity and language. We will compare these data with data on the characteristics of the Trailblazer educational settings. If the early evaluation currently underway is able to identify differences in the way in which the 2018/19 Trailblazers have been implemented, it may be possible to see whether there are any systematic differences in the populations of CYP they serve. Where possible (if educational establishment is recorded in MHSDS – there is a field although it is unclear how well this is populated), we will make this comparison using these identifiers. We will also describe, where recorded, whether any young people are looked after, or have an offence history code, or are young carers; and, where data are available, we will describe the reasons given for the referral.

What contacts have the young people referred to MHSTs had with mental health services, if any, before referral to MHSTs?

We will describe whether the young people we identify in MHSDS who have been referred to MHSTs have any previous record of contact with mental health services between 2016/2017 (the first year for which data are available in MHSDS) and the date of first recorded referral to an MHST. If possible, we will explore whether there is variation in the characteristics of people referred to MHSTs for whom the MHST is their first contact with mental health services and those who have had previous contacts with other services.

What happens to young people after they have been referred to an MHST?

Using data from MHSDS, we will describe any care episodes that occur after the date of the initial MHST referral, and whether these can be attributed to direct contact with MHSTs. We will explore existing performance indicators for CYPMHS. This will be an uncontrolled analysis.

We will also explore whether any further referrals are recorded for the young people in contact with MHSTs after the date of their MHST referral (i.e. onward referrals, for instance, to child and adolescent mental health services (CAMHS)). If possible, we will explore whether these vary by age, sex or other characteristics of the young people.

We will also describe, where possible, changes in MH outcomes among young people from data collected during contacts with MHSTs and uploaded to MHSDS

How do the young people in contact with MHSTs differ from those in contact with other parts of the local mental health services?

If possible, we will compare the characteristics of young people in contact with mental health services via MHSTs with other young people in contact with mental health services who also have episodes of care recorded in MHSDS over the same period of time in the same area and more generally. We will consider the same characteristics, for example, age, sex, reason for referral, prior service contacts, etc. to understand whether MHSTs are working with a similar or different cohort of young people with mental health problems compared with other young people with referrals to MH services. This may begin to shed light on whether the MHSTs are able to focus on CYP with 'mild to moderate' mental health needs and have the potential to prevent CYP needing to access more specialised CAMHS. It should also indicate whether the presence of MHSTs enables support to be provided to CYP wit 'mild to moderate' needs more quickly from the point of referral than simply relying on the 'low intensity support' provided by the local CYP IAPT service in the area.

Has the availability of MHSTs altered the previous pattern of use of MH services in the Trailblazer areas?

Continuing the theme of the previous analysis, this analysis will look at patterns of MH service use overall before and after the advent of the MHSTs in order to begin to see whether the addition of the services provided by MHST staff to the local service mix is associated with any changes in, for instance, the level and nature of use of CAMHS in the areas served by the MHSTs.

Has the availability of MHSTs altered education settings' performance in the Trailblazer areas?

This analysis will use NPD data to look at trends in indicators of performance in areas such as attendance and behaviour which could potentially be altered in the shorter term by the activities of the MHSTs ahead of changes in educational outcomes. We expect exclusions to be a particularly important measure to understand.

The analyses of routine data in WP1 summarised above will require that CYP from Trailblazer education settings can be clearly identified within MHSDS and NPD as well as MH service use pre-Trailblazer by CYP in the same education settings over time. However, at least as importantly, it will require the start date(s) of the MHSTs to be defined. It appears that most or all of the 18/19 Trailblazers' MHSTs were fully operational from January 2020, immediately before the pandemic reduced the numbers of referrals for several months (April-June) after which numbers rose during July-September but not to pre-pandemic levels. However, team members in training were seeing CYP, albeit under supervision before January 2020 and this activity will have been reported as MHST activity. Some teams also took referrals from beyond the education settings they were intended to serve during the first lockdown in spring 2020 because their more local referrals had reduced substantially. Despite this complexity, our current judgement, based on information collected in the ongoing early evaluation is to define the start date in terms of service delivery as January 2020.

Work package 2: interviews with Trailblazer key informants (led by Ellins with support from Mays and O'Neill)

The quantitative data analysis will be complemented by one round of interviews (in the second half of 2022) with up to three key people in each Trailblazer: the project lead; the MHST manager (or managers, who could be interviewed as a group); and a representative of the education sector (e.g.

the local authority education lead on the Trailblazer governance body). This would amount to approximately 75 interviews focusing on any changes being made in the activities and services provided by MHSTs, referral policies, staffing, resources, relationships with education settings, etc. These interviews and the selection of key informants will be guided by the experience and findings of the phase 1 (early) evaluation which is currently in progress. Despite the challenges faced by both primary and secondary education due to the pandemic and its aftermath, it should be possible to obtain interviews with a small number of key strategic and managerial staff in each of the sites without imposing a significant burden. Depending on circumstance and convenience of interviewees, these could be a mix of face to face and remote interviews either by phone or video link.

The interviews will have two linked purposes: to understand how the Trailblazers and their MHSTs are evolving over time, building on the findings of the early evaluation; and to assist in the interpretation of the findings of the analysis of routine data described above. There is particular interest to understand what the post-pandemic service model will look like. The current evaluation is indicating that Trailblazers amended their service delivery models, in particular to include some digital/remote delivery of interventions, during 2020. However, it will be important to know which sites retain some element of digital delivery and for which types of services. Also, the quarterly reports from the Trailblazers show that MHSTs have shifted the focus of their work during the pandemic, with more activity delivering individually focused interventions and less 'whole school' support. It will be important to identify whether this trend continues or reverses.

Work package 3: review of ways to assess educational outcomes in the COVID-19 period and to define a counterfactual for Trailblazer impact evaluation (led by O'Neill with support from Saunders, Mays and Ellins)

This work package has two parts and is methodological, drawing on the learning from work packages 1 and 2 in order to provide a full evaluation of the two key methodological challenges for a full evaluation, how to understand the impact of COVID-19, particularly on education outcomes, and what the most appropriate approach for generating a counterfactual is.

The first part will include a methodological review of approaches to assessing education outcomes, and the impact of MHSTs based in education settings, during and after the COVID-19 pandemic, given the disruption caused to students' learning (which has varied by area and individual education setting) and to the examination system (with different approaches used in the summers of 2020 and 2021).

The second part will inform and advise on the most appropriate choice of a counterfactual for future evaluation, considering the design of the programme, the educational and health outcomes and technical methodological approaches for causal inference from observational data.

This work package will involve literature review and will be informed by the routine data analyses carried out in work package 1 and the key informant interviews carried out in work package 2.

Review of educational outcomes

We will explore as wide a range of educational outcomes as possible acknowledging that some may be more or less likely to be disrupted by COVID-19, for example as public examination results versus

the proportion of leavers going on to further education. We will also consider exclusions as an important outcome, with a strong impact locally and nationally from lockdowns.

We will include a review of the data sets and analyses from work package 1, and will also include a review of approaches (algorithm, teacher assessment and otherwise) taken to estimating educational outcomes over the last two school years to understand whether and how these can be used in future outcome evaluations or not. It should be additionally possible to include the examination results data from summer 2022 in this exercise by which time the examination system may approximate to its pre-pandemic form.

We will also consider and explore the implications of this review for the use and interpretation of outcomes beyond education alone, particularly the integration of health and education outcomes. This work will use published sources and interviews with sector policy officials and experts, also drawing on the interviews from work package 2.

Definition of a counterfactual

In assessing the impact of MHSTs, ideally we would like to be able to contrast observed outcomes in the units of analysis (e.g. schools, or CYP) affected by the intervention to the outcomes that would have occurred in the absence of the intervention, that is the counterfactual outcomes.

However, methodologically such counterfactuals are fundamentally unobservable, requiring the use of causal inference approaches to appropriately estimate the counterfactual and hence the effects of the intervention. Practically for MHSTs it is unclear what the closest or most important comparison might be. Schools without MHSTs, other school based MH interventions, or other non-school based interventions are three possibilities.

From a methodological perspective, defining appropriate counterfactual outcomes for the evaluation of the Trailblazer interventions faces several challenges:

1) The effects and outcomes (health service utilisation, changes in health status, criminal justice contacts and educational outcomes can be calculated at several different levels – school, CCG, local authority, individual – and these are not necessarily overlapping).
2) The expected impacts of Trailblazers also occur at different levels – CCG level where the Trailblazers function, education settings in which the teams are implementing a 'whole school approach' and individuals that the teams work with directly.
3) There may also be underlying national trends that also have an impact, confounding the analysis. COVID-19 is one obvious factor that may affect both outcomes, and the measurement of those outcomes, but also underlying trends in young people's mental health over the last 5-10 years will also need to be taken into account in the evaluation.
4) The data that are available (or might be available) are available for different groups: school and local authority data on education outcomes and needs (including special educational needs); mental health and wellbeing indicators for CCGs and LAs. CCGs and LAs boundaries do not necessarily overlap, providing a further layer of complexity. DfE, PHE and NHS Digital all present baskets of indicators for children and young people's mental health and outcomes. Publicly available health indicators also change between years, and linkages are still in development.

This work package will draw together these and identify other challenges and will explore how future evaluation can use a combination of person level and aggregate data, and to consider

impacts at different levels of analysis. This work package will bring together a comprehensive review of the data available and consider the analyses that can be carried out using each dataset in isolation (unlinked) or, where possible, after linkage. We expect that methods for identifying a counterfactual developed in this work package will include recommendations about:

1. how to use unlinked MHSDS to understand what happens to individual young people before and after contacts with MHSTs, particularly in terms of contacts with other NHS mental health services, and whether counterfactuals identified from within MHSDS might be appropriate
2. how to use NPD data to allow us to understand the characteristics of schools (public school level data) and young people within schools (individual pupil data) where MHSTs have been in place, and to compare school level outcomes for these schools with a comparison group of schools without MHSTs. In this work we will explore whether it would be possible to use Oaxaca-Blinder decomposition to break down the difference in performance between education settings served by MHSTs and those not into the differences in their characteristics, the coefficients of characteristics and unexplained components attributable to the intervention[6].
3. how to use linked person level MHSDS and NPD data to explore the education outcomes of young people before and after they are in contact with MHSTs and also to compare these young people with other young people in the same schools who are not in contact with MHSTs, controlling for both school and individual level characteristics.
4. how to use area level data from children's and young people's mental health services to allow comparisons between CCGs with and without MHSTs.

A single analytic approach is unlikely to address all of the challenges outlined above. This work package will recommend a number of different causal inference approaches tailored to the specific impacts being assessed and the data available.

These alternative causal inference techniques, each make different assumptions about which units or periods can be used to estimate a valid counterfactual. These methods can be broadly grouped into those that (a) use pre-intervention data (e.g. before and after comparisons or interrupted time series); (b) use comparator units unaffected by the intervention (e.g. propensity score matching or weighting); or (c) use a combination of (a) and (b) (e.g. difference in differences or synthetic controls).

Analyses are likely to provide unreliable estimates of impact where units that are very different to the treated units (those exposed to MHSTs) are included among the pool of potential comparator units. The first key step in the analysis will therefore be to identify and exclude potential control units that are deemed to be too dissimilar to the treated units/regions (those with MHSTs) in terms of aggregate (e.g. CCG or school) level characteristics as to warrant inclusion in the analysis. To do so, we will use a methodology similar to that employed by the Office for National Statistics (ONS)[7] and NHS RightCare (www.rightcare.nhs.uk/ and https://www.england.nhs.uk/publication/similar-10-ccg-explorer-tool/). In short, the measured characteristics of the units will each be standardised so that they are measured on a comparable scale, and then the Euclidean distance (dissimilarity) from the treated unit(s) to each of the control units will be calculated, with large distances indicating greater dissimilarity. Units that are deemed to be too dissimilar will then be excluded. The sensitivity of results to varying the threshold of dissimilarity used for exclusions will be assessed.

Where individual characteristics are observable, approaches such as propensity score matching or inverse probability weighting may be used to account for the fact that the distribution of characteristics among individuals exposed to MHSTs may differ from those unexposed. Analyses will consider approaches to assess the sensitivity of impact estimates to the presence of unobserved confounders, for instance, by presenting Rosenbaum bounds. Where geographic information is available, this can be used to ensure that units in the control pool experienced similar rates of COVID-19. We will consider and assess the appropriateness of these approaches.

Where data are available both before and after the intervention, in addition to Differences-in-Differences analysis which control for time or unit specific unobserved confounders[8] or Synthetic Control approaches which account for differences in pre-intervention trajectories in outcomes[9,10] can be used to mitigate bias due to unobserved confounders. Again we will evaluate and make recommendations on the appropriateness of these approaches.

For each of the datasets, outcomes and units of analyses, we will identify the most appropriate method by which to construct a counterfactual to assess initial impacts and thus for a later full impact evaluation.

Strengths and limitations

As with any analyses dependent on routine datasets, there are likely to be quality (completeness and accuracy) issues in the routine datasets and none of them includes direct measurement of student wellbeing over time which is one of the key outcomes of the Programme. However, this approach would potentially enable all 25 18/19 Trailblazers and their children and young people to be included, thereby providing the basis for evaluating the programme as a whole. The analysis of routine data would also have the advantage of not requiring the active cooperation of either Trailblazer or non-Trailblazer education settings or mental health services during a very difficult period for both.

The two more important limitations of the initial evaluation, assuming that a report is required by early 2023, are, firstly, the limited period since 2018/19 Trailblazers were operational over which changes in referral and, services use can be studied and, secondly, the difficulty of interpreting the findings in light of the impact of COVID-19 on the activities of the Trailblazers and their MHSTs, the activities of the education settings and the mental health of their CYP.

A strength of this initial outcome study is that, depending on the timeliness of availability of the routine data, further years of data and further waves of the Trailblazer programme could relatively easily be added to the analysis of outcomes using as rigorous a design as possible. Further years of data should make it easier to identify whether the activities of the Trailblazers and their MHSTs are influencing health and educational outcomes. This is particularly the case for any changes in final educational outcomes which are unlikely to become visible for several more years. Once the route to access the linked datasets has been established and analysis plans have been tested and refined, the sorts of analyses described above could be updated each year after the end of the initial study by members of the current team or other analysts at relatively low cost. This is especially relevant to assessing the outcomes in the NPD since one would expect that any improvements in mental health and resilience would result in improved educational outcomes but at a later stage.

Dissemination, outputs and anticipated impact

Dissemination and outputs

We envisage that there will be a large audience for the findings of this evaluation including policy makers and programme leads, the managers and staff in trailblazer areas involved in local implementation, NHS CYPMH services, local authorities, schools and colleges (including teacher associations), commissioners of children and young people's mental health and wellbeing services, voluntary sector organisations, academics and researchers working in this field, children and young people, their families and carers, and the wider general public. The team will work closely with topic and communications specialists, including members of the BRACE Health and Care Panel, to tailor outputs to different audiences in order to maximise reach and impact. Through the ongoing early evaluation work, we have already started to foster links with key national bodies, including leading voluntary sector and professional associations in both education and health. We will continue to build these networks and explore opportunities to disseminate through them.

We will produce a final report in January 2023 designed to feed directly into negotiations between DHSC, DfE and the Treasury about the further funding of the Trailblazer programme. This will be accompanied by short non-technical summaries and – following review by NIHR HS&DR and PRP – will be published in the NIHR Journals Library and on the BRACE and PIRU websites. A more detailed specification for further longer-term outcome and economic evaluation will be prepared – for discussion with funders and DHSC/DfE/NHSE – most likely in February-March 2023. In addition to these formal outputs, we will seek opportunities to share and discuss emerging findings to inform ongoing implementation at a national programme and Trailblazer level. An evaluation Stakeholder Group – which includes representation from DHSC, DfE, NHSE and Health Education England (HEE) – will meet on a quarterly basis for the duration of the project as is currently the case for the early evaluation (see 'Project Management, Governance and Quality Assurance' below for more details), and will provide a valuable route for presenting and discussing formative findings. We will work with this Group to understand the key decision points for the programme, so that we can (as far as is possible) time formative feedback to align with and support these.

Our dissemination work will also include:

- Publication of findings in peer reviewed academic journals
- Presentations at conferences, seminars, workshops and meetings
- Tailored outputs addressing key findings and/or for particular audiences. This will include an output for children and young people, which we will be designed in collaboration with our child and youth advisors (see 'Involving Children and Young People' below)
- Blogs on the BRACE and PIRU websites
- Creating or identifying opportunities to disseminate through existing networks, including the National Voices member network (National Voices are a partner in BRACE)
- Use of social media such as Twitter (e.g. tweet chats)

Anticipated impact

The expectation is that this research will enable the two relevant policy Departments and related arm's length bodies to access some, albeit early stage, findings relevant to the activity and impacts of the MHSTs in the Trailblazer areas which they can use in making their investment case to the Treasury for the continuation and possible extension of the funding of the current programme in the first half of 2023.

Project / Research timetable

The main phases of the study are as follows:

Protocol development, July 2021
Data requests, August 2021-March 2022
Data preparation for WP1 and WP2, April 2022
Interim report on WP2, May 2022
Data analysis for WP1 and WP2, May-November 2022
Interviews with Trailblazer key staff, June-Oct 2022
Interpretation and writing up, December 2022-January 2023
Reporting, January 2023
Peer reviewed journal articles, Feb-Mar 2023

See the Gantt chart for more detail.

Project management

An evaluation Stakeholder Group – which includes representation from DHSC, DfE, NHSE and Health Education England (HEE) – will meet on a quarterly basis for the duration of the project as is currently the case for the early evaluation (see 'Project Management, Governance and Quality Assurance' below for more details). We will work with this Group to understand the key decision points for the Programme, so that we can (as far as is possible) time formative feedback to align with and support these. Day-to-day project management will be undertaken by Singh on behalf of the joint principal investigators.

Ethics / Regulatory approvals

Standards of good practice for research will be followed[11] and the project will be undertaken in compliance with the Data Protection Act and policies relating to the conduct of research of the Universities of Birmingham, Cambridge and LSHTM. The study will require approval by the University of Birmingham and London School of Hygiene and Tropical Medicine research ethics committees, and Health Research Authority approval (HRA) for the interview research with NHS employees. Applications for amendments to the current research ethical and HRA approvals for the early (phase 1) evaluation will be sought at the earliest possible opportunity. The team has significant experience of securing ethical and research governance approval including for projects on sensitive topics and/or involving service users and vulnerable groups.

Research processes in WP3 will be designed to ensure that participation is informed and voluntary. All potential participants will receive information about the study (purpose, design, timescales, what involvement would entail, how data will be managed, etc.) before deciding whether to take part. This will make clear that they can withdraw from the study, without giving a reason, at any time up until a specified cut-off date. Should they withdraw, their data will be destroyed. Written consent will be taken prior to participation; in the case of telephone interviews, this will involve participants returning a signed electronic consent form either in advance or straight after the interview (no data will be processed until consent has been received). Anonymity in reporting will be guaranteed.

For MHSDS we will apply for an amendment to the current BRACE Data Sharing Agreement with NHS Digital, and will complete a project specific Data Protection Impact Assessment before the work starts. Access to NPD (and likely also the linked NPD-MHSDS data) is expected to be through the

through the Office for National Statistics Secure Research Service (ONS SRS) following DfE guidance, including complying with all requirements for ONS approved researchers. We will follow NHS Digital guidance surrounding small number suppression and Statistical Disclosure Control in all reporting.

Patient and Public Involvement and Engagement

The scoping work undertaken to inform the design of the ongoing early evaluation included rapid consultation with two groups of young adults (16-25 year olds) who have lived experience of mental health issues: the University of Birmingham's Institute for Mental Health Youth Advisory Group and the Think4Brum group (the participation group for Birmingham's NHS Child and Adolescent Mental Health Services). The groups shared their views about the Green Paper proposals and what they would like the evaluation to focus on, as well as making practical suggestions about the design of the focus group research with children and young people.

The team has continued to work closely with the Youth Advisory Group, and has also established a relationship with the National Children's Bureau Young Research Advisors. We will continue to seek advice and input from these groups of children and young people in this next phase of the evaluation. Our consultation with these groups will fulfil the following aims:

- Informing the design of the quantitative analyses and qualitative data collection and analysis.
- Sharing and asking for comment on emerging findings – for example, about whether the focus, activities and early progress being made in Trailblazers is addressing the priority issues and concerns for children and young people with mental health issues.
- Discussing which outcomes valued by children and young people should be measured in the longer-term study and how, including views about existing outcome measures and the feasibility and appropriateness of using these for impact evaluation.
- Seeking advice about the best ways to frame and disseminate the research findings to children and young people.

The children and young people consulted about the study will be paid for their time and have their expenses reimbursed, consistent with best practice guidelines[12]. Their involvement will be funded through the existing BRACE PPI budget.

Project / Research expertise

Team contributions

See above, pages 2-3.

Success criteria and barriers to proposed work

Success criteria

The main criteria of success for this initial impact evaluation work will be to have established a satisfactory basis for outcome evaluation in the longer term using routine health and education data (preferably linked), identified some early impacts of the Trailblazers and provided sufficiently timely findings for these to be included in the case for future funding of the programme that DHSC and DfE will be required to make to HMT in the first part of 2023.

Barriers to proposed work

The main potential barriers to successful completion of the work in the timescale envisaged relate to being able to obtain the routine MHSDS and NPD datasets in a timely manner for the unlinked analysis. A further barrier would be presented by non-receipt of the linked MHSDS and NPD dataset in sufficient time to be included in the analysis late in 2022.

Section 10. Patient and Public involvement

Please describe how patients and the public have been involved in developing this proposal *[350 words]*
Who has been involved and why is this appropriate, what role(s) they have played and what influence of change has happened as a result of their involvement

Given that the current proposal is very much the logical extension of the early evaluation which was developed with the involvement of the University of Birmingham's Institute for Mental Health Youth Advisory Group and the Think4Brum group (the participation group for Birmingham's NHS Child and Adolescent Mental Health Services), these groups have not, so far, been involved in the development of the proposal. However, if the project is recommended for funding, we will again involve the University of Birmingham's Institute for Mental Health Youth Advisory Group, plus the National Children's Bureau's Young Research Advisors, in developing the detailed protocol for the study.

Please describe the ways in which patients and the public will be actively involved in the proposed research, including any training and support provided *[350 words]*
Incl. any training or support provided

See section 5., above, for details. It is not currently envisaged that patients and the public will be directly involved as lay members of the research team since most of the research involves applying and testing a range of sophisticated statistical analysis techniques to large administrative datasets. Children and young people will be involved as advisers and consultees on the project in the same way as the early (phase 1) evaluation.

In rare cases where proposals do NOT involve patients and the public, clear justification must be provided *[200 words]*

Section 11. Detailed budget

Justification of costs *[2000 words]*
Provide justification of costs by category: staff; travel, subsistence and conference fees; dissemination costs; equipment; consumables; PPIE; any other direct costs

Neither BRACE nor PIRU can take on this work within their current budgets. Hence, both are applying for some addition to their core funding from NIHR HS&DR and PRP, respectively. BRACE's staff and non-staff budget, in particular, is already almost entirely fully committed between now and the end of its current contract in March 2023. However, Saunders' 5% costs for July 2021 to March 2022 can be covered from existing BRACE funds (for NPD and MHSDS data access applications) as will the costs of PPIE. Consumables, equipment, fees for routine datasets travel and subsistence, transcription, conferences, dissemination, etc. are in addition to the current BRACE budget. PIRU will cover all its direct costs except for research travel and subsistence and transcription which are included in the sums requested below.

The costs of WP1 and WP2 comprise analyst time and the costs of data acquisition. For WP3, we

have assumed that we will make at least one visit to each of the 25 Trailblazers during the second half of 2022 and that all interviews (three per site) will be fully transcribed for analysis.

In order to ensure continuity of insights and experience from the early (phase 1) evaluation, the senior staff involved in leading that work are also costed to varying degrees into the current budget (Mays, Ellins and Newbould). Singh, who is project manager of the early evaluation is also included since she has experience of the research governance processes associated with gaining access to Trailblazer staff as well as coordinating research within BRACE and between BRACE and PIRU.

Details of Posts and Salaries
The relevant Staff Details and Salary Costs options below should be completed, as appropriate, for all colleagues participating on the research bid (including for those individuals listed within the 'Co-applicants' Details' section of the form)

If there are any applicants whose costs are not being claimed then, for each person, state their name and explain briefly why costs are not being claimed and what resources are being used to cover their contribution [200 words]

Please explain how the research costs requested have been calculated and justify how they have been allocated *[750 words]*

The research costs have been calculated on a marginal cost basis and at 100% FEC for PIRU, 80% FEC for Birmingham and Cambridge, and 100% FEC for RAND. The additional funding requested breaks down, as follows:

Staff (July 2021-March 2023, unless otherwise stated)
Mays 10%
Ellins 10%
O'Neill 15%
Saunders 30% (April 2022-March 2023)
Newbould 5% (Jan 22 – March 2023)
Singh 30%
RF 150% (Trailblazer interviews, April 2022-March 2023), split 50:50 between PIRU and BRACE
RA 100% (analysis of routine data, April 2022 to March 2023), currently costed at University of Cambridge but to be considered for full or part funding for an Analyst at RAND, depending on staff availability and skills for both organisations

Total LSHTM £96,396.16
Total Univ of Birmingham £55,498.94
Total Univ of Cambridge £55,725.60
Total RAND (100% FEC) £53,366.00
Total salaries £260,986.70

Indirect costs
LSHTM £59,863.00
Univ of Birmingham £46,773.18
Univ of Cambridge £62,939.20
Total IDCs £169,575.38

Estates
LSHTM £5,419.00

Univ of Birmingham £6,233.02
Univ of Cambridge £20,576.80
Total Estates £32,228.82

Direct costs
Travel and subsistence for Trailblazer interviews (assuming one visit to each of 25 Trailblazers) £6,784
Research costs (transcription, assuming 3 interviews per site and 75 interviews of one hour; NHS Digital data; DBS checks) £12,100
Open access publications (x2) £3,200
Total direct costs £22,084

Salaries	**£260,986.70**
LSHTM	*£96,396.16*
UoB	*£55,498.94*
UoC	*£55,725.60*
RAND (100%)	*£53,366.00*
Indirect Costs	**£169,575.38**
LSHTM	*£59,863.00*
UoB	*£46,773.18*
UoC	*£62,939.20*
Estates	**£32,228.82**
LSHTM	*£5,419.00*
UoB	*£6,233.02*
UoC	*£20,576.80*
Travel and subsistence	**£6,784.00**
Research costs (transcription, NHS digital data, DBS checks)	**£12,100.00**
Dissemination (2 x open access publications)	**£3,200.00**
Total	**£484,874.90**

Please explain how the research provides value for money. *[500 words]*

This research will be among the first independent academic uses of the planned linked MHSDS and NPD datasets for high priority policy evaluation. It thus has the potential to begin demonstrating the value of the investment made by DfE to link these two data systems on what will become a routine basis. The study will provide a sound platform for any future long-term outcome and economic evaluation which would most likely depend on a mix of analysis of routine data and collection of new outcome data on the wellbeing and quality of life of CYP in the Trailblazers compared with CYP not served by the Trailblazers.

Section 12. Management and Governance

Jo Ellins and Nicholas Mays will be jointly responsible for the overall delivery of the project on behalf of BRACE and PIRU, respectively. We will apply the following project management principles and processes: ensuring clarity of team members' roles and the delegation of tasks and reporting duties; development and use of project plans; and regular team meetings. Throughout the duration of the study, there will be monthly team teleconferences in order to update progress and promptly address any arising issues. Face-to-face and/or more substantive meetings will be held every 5-6 months to review and discuss progress, share emerging findings and plan future work. The project will formally report to the BRACE Centre executive team – including regular progress reports and prompt sharing of any concerns or identified risks for resolution. Senior supervision and support will be provided by Professor Judith Smith, BRACE Centre Director, who also has overall accountability for all projects delivered by BRACE. For PIRU, this role will be fulfilled via Mays' direct involvement in the project team.

The involvement of the Trailblazer programme's main policy stakeholders – DHSC, DfE, NHSE and Health Education England – will be secured through the Stakeholder Group currently convened to help steer the early evaluation. The group will be chaired by representatives from HS&DR (responsible for BRACE) and PRP (responsible for PIRU) on a rotating basis and meet every six months. Formal sign off of all outputs is by Programme Directors for HS&DR and PRP.

To assure the content of the evaluation (as opposed to its relationship to policy), standard programme requirements will apply and are the responsibility of the research team. The BRACE Centre Steering Group – comprised of members nominated by the BRACE research team and formally appointed by the NIHR HS&DR Programme Director – will also act as the steering group for this study, with responsibility for monitoring study progress and advising on scientific credibility. The equivalent function for PIRU will be met through the six-monthly meetings of the Unit's DHSC Oversight Group.

The current early evaluation team is supported by a group of advisors offering specialist expertise and advice to support study design and delivery, analysis and interpretation of findings, and the production of outputs. Members of this group will be invited to continue their involvement especially those with experience of conducting evaluations of similar programmes (e.g. Chris Bonell, Alex Sutherland and Florentina Taylor. Further advisers with specific expertise in the design and analysis of quasi-experimental evaluative studies using administrative datasets will be recruited. Members are likely to comprise Richard Grieve (Professor of Health Economics Methodology, PIRU LSHTM) who has already agreed to serve, Luke Keele (Research Associate Professor of Statistics in Surgery, University of Pennsylvania) and Ruth Keogh (Professor of Biostatistics and Epidemiology, LSHTM). The latter two are yet to be approached.

References

1. Pierce M, Hope H, Ford T, Hatch S, Hotopf M, John A, Kontopantelis E, Webb R, Wessely S, McManus S, Abel KM. Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. *The Lancet Psychiatry 2020;* 7: 883-892 https://doi.org/10.1016/S2215-0366(20)30308-4
2. Department of Health and NHS England (2015). *Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing*. London: Department of Health
3. Department of Health and Department for Education (2017). *Transforming Children and Young People's Mental Health Provision: a Green Paper*. London: HM Government

4. Ellins J, Mays N, Newbould J, Al-Haboubi M, Elmore N, Ettelt S, Fenton S-J, Ghousis A, Grieve R, Hocking L, Pollard J, Saunders K, Singh K. *Early evaluation of children and young people's mental health trailblazer programme, protocol version 5.* Birmingham and London: BRACE Rapid Evaluation Centre, and Policy Innovation and Evaluation Research Unit (PIRU), 30 September 2019 https://fundingawards.nihr.ac.uk/award/16/138/31

5. Mays N, Ellins J. *Phase 2 outcome and economic evaluation of Children and Young People's Mental Health Trailblazer Programme: outline of design and commissioning options for the stakeholder group meeting, 30 November 2020*. Report to NIHR Trailblazer Evaluation Stakeholder Group. BRACE and PIRU, 26 November 2020

6. Barrera-Osorio F, Garcia-Moreno VA, Patrinos HA, Porta EE. (2016) Using the Oaxaca-Blinder decomposition technique to analyze learning outcome changes over time: an application to Indonesia's results in PISA Mathematics (written 1 March 2011). *World Bank Policy Research Working Paper No. 5584*. Washington DC: World Bank. Available at SSRN: https://ssrn.com/abstract=1774431

7. Office for National Statistics (ONS). *Methodology note for the 2011 area classification for local authorities*. London: Office for National Statistics, 2015
Available from: www.ons.gov.uk/ons/guide-method/geography/products/area-classifications/ns-areaclassifications/ns-2011-area-classifications/methodology-and-variables/methodology.pdf

8. Ryan AM, Burgess J, Dimick JB. Why we should not be indifferent to specification in difference-in-differences analysis. *Health Serv Res*. 2014;50(4):1211-1235
9. Abadie A, Gardeazabal J. The economic costs of conflict: a case-control study for the Basque country. *Am Econ Rev* 2003;93:112-132
10. Abadie A, Diamond A, Hainmueller J. Synthetic control methods for comparative case studies: estimating the effect of California's Tobacco Control Program. *J Am Stat Assoc* 2010;105(490):
493-505
11. Social Research Association (2003). *Ethical guidelines*. Available at: http://the-sra.org.uk/wp-content/uploads/ethics03.pdf (accessed 9th May 2019)

12. INVOLVE (2015). *Public involvement in research: values and principles framework*. Eastleigh: INVOLVE

Document H

A further evidence review of other relevant previous evaluations to feed into DfE, DHSC and NIHR development of a specification for the outcome and economic evaluation of the Green Paper programme.

Overview of evaluations relevant to Phase 2 Trailblazer evaluation

Kelly Singh

10 May 2021

Child- and Parent-reported Outcomes and Experience from Child and Young People's Mental Health Services 2011–2015[1]

- Analysis of routine data related to outcomes and experience for children and young people (0–25 years old) seen across 75 services taking part in Children and Young People's Improving Access to Psychological Therapies (CYP IAPT) (April 2011 to June 2015).
- It notes that caution needs to be taken in interpretation as data are flawed, uncertain, proximate and sparse. It also notes the challenge of measuring outcomes and experience in child mental health.
- Wide range of possible measures to use due to breadth of problems children may be dealing with, the different potentially relevant domains and differing perspectives. 54 different scales are reported as being included in the CYP IAPT programme as options for practitioners to use, and 36 of these were included in analyses used in the report (21 child reported, 32 had thresholds).
- It states that "*key current indices of change and experience have been identified: raw experience of service data, raw score changes, "recovery", reliable change, reliable "recovery" (a combination of "recovery" and reliable change), effect size calculations, and the added value metric."* (pg 18)
- Lack of counterfactuals and of comparison data from other studies is highlighted, as is the lack of quality outcome and experience data. To try and overcome lack of comparison groups, throughout the report they consider comparisons with pre-CYP IAPT data held by CORC, collected between 2007 and 2010.
- *"In line with the CYP IAPT protocol, staff routinely collect demographic, outcome, and experience measures completed by the therapist, young person, and/or carer at assessment (Time 1 or T1), on a session-by-session basis, and at a review point 4-8 months later or, if sooner, case closure (Time 2 or T2). The data comprised of "periods of contact" for each child seen, which consists of a number of "events" (see Figure 1)."* (pg 28)
- 7 samples derived from the data – full; ended referrals; closed treatment cases; measured closed treatment cases; above threshold treatment cases; paired outcomes for above threshold closed treatment cases and added value score samples. Different samples were used as the denominator for different measures.
- Reported demographic and service provision data – number of cases, age, gender, ethnicity, referral source, types of difficulties seen, complexity factors, contextual/attainment factors, treatment received.
- 96,325 cases accessed services (mean 12 years old, 82% white, 52% female). 42,798 (44% of all) had practitioner ratings. Of these, around 1 in 2 had family relationship difficulties, 1 in 3 had self-harmed, 1 in 8 had experience of abuse.
- Length of treatment reported [mean length of contact was 195 days, range 0 – 1905, mean number of recorded events 5.3, range 1-268].

23,373 treatment cases were closed[5] (mean 12 years old, 80% white, 57% female) – outcomes and experiences considered for these:

- **Satisfaction with services explored with Experience of Service Questionnaire (ESQ)** – typically administered at review or case closure. This was child-reported and parent-reported.
- **Goal achievement –** children and parents set goals and scored how close to achieving them they were, the higher the score the closer to achievement. The researchers used matched goal information at time 1 and time 2 to look at pre-post effect size for goals (1.61 for children; 1.76 for parents), mean scores at time points one and two (T1: 3 and 2.5 and T2: 6.8 and 6.3 for children and parents respectively), average change in goal score (3.73 and 3.7 points for children and parents respectively) and percentage reporting movement towards and away from goals (9 in 10 reported movement towards agreed goals).

Paired outcomes for above threshold closed treatment sample[6] – outcomes and experiences considered for these:

- Recovery and reliable change[7] :
  - A mean number of 4.38 scales (range 1-13) completed per child for paired child measures and 3.9 scales (1-12) per child for paired parent measures.
  - **Recovery –** "***child-reported measures****, 36% (95% CI 35% – 37%) of children's scores were considered "recovered", whereby they were above threshold on at least one scale at the outset of treatment and below threshold on all measures at the end of treatment. Based on the* ***parent-reported measures****, 28% (95% CI 26% – 29%) of children's scores were considered "recovered" at the end of treatment."* (pg 53)
  - **Reliable change** – *"****child-reported measures****, 52% (95% CI 50.5% – 53.2%) of children's scores reliably improved, 38% (95% CI 36.3% – 39.1%) had no reliable change and 11% reliably deteriorated (95% CI 9.1% – 11.8%). On the* ***parent-reported measures****, 40% (95% CI 38.8% – 42.3%) of children's scores showed reliable improvement, 51% indicated no reliable change (95% CI 49% – 52.4%) and 9% (95% CI 7.1% – 10.5%) reliably deteriorated.* (pg 53)
  - *"Overall, 59% (95% CI 58% – 61%) of children's scores (n=3,495) "recovered" and/or reliably improved based on the* ***child-reported*** *measures, and 51% (95% CI 49% – 53%) based on the* ***parent-reported measures*** *(n=1,895)."* (pg 55).
  - **Reliable recovery** - they adapted the adult IAPT approach to estimate reliable "recovery" (recovery and reliable change) - using defined criteria *"1,569 of the 5,896 children with paired measures showed reliable "recovery" (27%, 95% CI 25% – 28%) and 609 of 3,707 parents with paired measures (16%, 95% CI 15% – 18%)."* (pg 55)
- Standardised pre-post effect sizes:
  - Effect sizes were analysed measure by measure.

[5] Closed treatment cases, which included cases where the young person was seen for a course of treatment (of at least three events, excluding assessment only) (pg 32).

[6] Paired outcomes for above threshold closed treatment sample which included closed cases where the young person was seen for a course of treatment and where they completed the same scale that was above the threshold at outset, at a second time point. (pg 32)

[7] Recovery considers whether the child has moved from being above the threshold on a scale at the first timepoint recorded to below it at the last recorded time point. Reliable change considers the amount of change from one time point to another, relative to the properties of the measure used (pg 53).

    - Most commonly used subscales were Revised Child Anxiety and Depression Scale, followed by Strengths and Difficulties Questionnaire (SDQ). A range of effect sizes were noted, for example, for SDQ, on average child reported scores improved on all individual subscales ranging from 0.73 on impact subscale to 0.89 on emotional difficulties subscale.
- The authors also calculated the added value score – allowing outcomes in the sample to be compared with those with similar issues, on the whole, not seen by services, representing average additional change experienced over what would be expected without treatment. *"For those with the relevant parent-completed SDQ information (n=1,010, 4% of closed treatment cases), the overall average AVS effect size was 0.26 (SD= 0.99, 95% CI = 0.2 – 0.32)."* (pg 59)
- Challenges of collecting data included identification of duplicates and data completeness/high degree of missing data (only 22% of closed treatment cases had at least one set of paired scales and information on issues with education, employment and training). Programme had drawn on CORC's experience and set task for those involved of achieving 90% data completion for paired outcome measures.

An evaluation of a new service model: Improving Access to Psychological Therapies demonstration sites 2006-2009[2]

- Evaluation of two services (in Newham and Doncaster) demonstrating new IAPT model for people with common mental health problems.
- Methods, to investigate:
    - Service delivery and organisation – documentary evidence from each service was collected along with data on referrals, treatment and clinical outcome routinely collected by the two services from June 2006 to April 2009.
    - Organisational processes – organisational case study with purposive sample of 57 stakeholders.
    - Patient experiences – qualitative interviews with 77 patients and patient satisfaction Client Satisfaction Questionnaire-8 (CSQ-8).
    - Service effectiveness – outcome data analysed and compared with benchmarks calculated from archived primary care mental health service datasets and from RCTs in depression and anxiety.
    - Cost effectiveness – postal questionnaire of 504 (at baseline) people looked at service costs and outcomes for patients in primary care eligible for IAPT in the demonstration sites, compared with similar patients in comparator sites.
    - Patients' access to IAPT and the impact of IAPT on use of hospital services, sickness certification and psychotropic medication - used an innovative health informatics method linking de-identified data from GP IT systems, secondary service use datasets and the IAPT datasets.
- States the demonstration period for IAPT ended in April 2008 and they followed up for one year to include moving to routine NHS service under local commissioning arrangements (from centrally commissioned demonstration site).
- Numbers of referrals and waiting times (presented in blocks of six month periods) were recorded between June 2006-April 2009. Also presents information on source of referral, demographic information, primary diagnosis assigned by referrer, initial treatment step. Recorded numbers of referred (including those who declined treatment and so on), those with at least one contact, awaiting 2nd appointments, treated and completed treatment.

Some estimates of re-referral numbers. They also looked at employment status (inc benefits) on referral and at the time of qualitative interviews.

- Patient Health Questionnaire (PHQ-9) and Generalised Anxiety Disorder (GAD-7) in IAPT toolkit: Used approach of taking first and last available measures – sample size of each data set defined by numbers completing both PHQ-9 and GAD-7 at intake. Baseline PHQ-9 and GAD-7 scores were used and the end point taken as the last completed administration of each measure (would range for sample groups depending on whether treatment was completed or not e.g. for some their last score would also be the intake score, for others would be end of treatment). Used data sets comprising patient sample downloaded as at March or May 2009.
    - Using PHQ-9 and GAD-7, they looked at numbers of patients recovered and recovery rates (in two ways – a) below caseness and b) reliable and clinically significant improvement).
    - The authors also reported uncontrolled effect sizes (UES) for PHQ-9 and GAD-7 (those with intake measure only excluded for UES) – including the scores for first and last available measure and mean change.
    - Recovery rates were also reported across three phases of implementation in each site.
    - Target of 50% recovery rate for patient outcomes in demonstration sites.
- Patient satisfaction measured using CQQ-8. Two available data sets: 1) CSQ-8 completed by patients at the end of treatment as part of comparison cohort study (from specially recruited cohorts in demonstration sites and in comparable PCTs without IAPT) and 2) completed CSQ-8 from download data in one site, which the service routinely collected as part of their clinical activity (35% of total referrals completed one or more, the majority completing a measure were those who completed or agreed to end treatment, last measure used for analysis).
- Costs and outcomes of patients - patient cohort recruited via GPs in two demonstration sites as well as matched sites.
    - Outcomes (e.g. PROMS, employment status) and service use data collected from these patients (self-report) at baseline and two follow up time points – 4 months and 8 months.
      IAPT cost and service provision information provided by two demonstration sites for the study duration (2007-2009). Cost effectiveness based on this info.
    - For IAPT patients, IAPT service use details (time and sessions) were obtained from each site in April 2010.
    - Patient reported outcome measures (PHQ-9; GAD-7; CORE-OM; SF-6D); SF-6D used for cost effectiveness; general wellbeing/happiness taken from the British Household Panel Survey.
    - Employment – patients were asked about current employment and time off work
    - Resource use – patients asked about 1) mental health service use (e.g. no of mental health professionals seen in the previous four months) and 2) about other primary, secondary and personal social service use.
    - Innovative approach to estimating cost effectiveness that didn't rely on using routinely collected data on patients using these services, instead over a 2 year period, recruited patients from selected practices from IAPT sites and matched controlled sites.
    - Findings included that access to IAPT led to significant increases in the use of an NHS psychotherapist or counsellor and reductions in GP use (significant in one site).

There were no significant changes in employment status (though lost employment days fell significantly in one site). (Please see pg 223 for more)

- GP treatment and referrals – used routinely collected data from 1) GP systems (20 practices) 2) IAPT (routinely collected programme data, between October 2007 and September 2008 included in analysis. This period was selected as it allowed more than 12 months post the start of services for referral rates to reflect ongoing activity, rather than initial higher activity rate expected due to build-up of patients in practices with more prevalent cases for whom there was previously no service available) and 3) secondary care (raw Secondary Uses Service data for the period between 01/10/2007 and 30/04/2009 in the 2 study sites) to look at referral rates, changes in antidepressant prescribing, sickness certification and use of health services e.g. hospital admissions, outpatient/A&E attendances. They linked datasets.
    - To determine any association between health service resource consumption and referral to IAPT, those identified as having been referred to IAPT were compared with control patients identified as receiving a diagnosis of a common mental health disorder after 1/4/07. They were matched for gender, age and practice.
    - They looked at referrals with common MH disorders, referral rates by age/gender/ethnicity, sickness certification, use of psychotropic drugs and use of secondary health care services in both those patients referred to IAPT and those not.
    - To understand the timing and direction of associations - needed to look at whether any treatment in IAPT patients was followed by a change in use of hospital services, prescribing or sickness certification compared to the control group. They had to estimate the timing of treatment for patients referred to IAPT to do this (too difficult to relate changes in prescribing and so on to exact start and end dates of IAPT treatment) – they therefore conducted the before and after analysis using data for six months either side of the estimated initial assessment date of the patient by IAPT. They estimated the assessment date by taking the referral date and adding the mean delay between referral and assessment.
    - Findings from the analysis suggest IAPT referral was reducing sickness certification and might lead to a reduction in use of secondary care non mental health services, particularly A&E.

Economic evaluation of Place2Be's Counselling Service in Primary Schools[3]

- Study assessing the value for money of one of Place2Be's one to one counselling services in primary schools. The analysis was intended to support commissioning decisions and provide insight into an economic case for in-school provision of this kind.
- The counselling service gives children one to one weekly sessions with a trained counsellor – tailored to each child's needs. Children can self-refer or be referred by parent/carer/teacher/other agency and the issues raised are wide-ranging including bullying, bereavement, addiction or abuse and dealing with anxiety. The aim is to improve children's mental health and wellbeing.
- The study focuses on the activities of the counselling service in 2016/17 – during that year, 4548 children in 251 primary schools benefitted from the counselling service. The study uses "*existing evidence to link improvements in the mental health of these children to better future outcomes in seven different areas as they reach adolescence and adulthood, including school attendance, employment prospects, and involvement in criminal behaviour.*" (pg 7).
- The estimate of benefits is based on a forecast of improvements across later life outcomes for children who received counselling in 2016/17, rather than based on actual observed outcomes for the children. They make the assumption that linkages between improved

mental health in earlier years and later outcomes for those children receiving counselling during that year are similar to those found in the retrospective studies they rely on in their work (retrospective evidence from related studies reported in Paull and Xu (2017)). [4]The annex of the report has more information on the evidence used.

- There were four steps to their approach:
    - Assess impact of counselling on early mental health using SDQ (please see below)
    - Link the impact data to changes in the likelihood of a range of later outcomes[8], based on wider evidence reported in Paull and Xu (2017).[4]
    - Estimate the economic benefits of the service by monetising the value of expected improvements in relevant later outcomes – using monetary values for outcomes reported in Paull and Xu (2017). Focus on outcomes that can be reliably quantified in monetary terms.[4]
    - Assess value for money – net total benefit and benefit cost ratio.
- They assessed the impact of the counselling service on children's mental health by comparing the mean SDQ score before and after counselling, using teacher and parent completed assessments. It is not completely clear how long the period "before and after counselling" is – I think there may be some variation in how long children are offered counselling for, depending on their needs. This suggests that "*One-to-one sessions usually continue for 6 weeks to 12 months depending on the individual's needs*" (Place2Be, 2020, pg 12)

  They used the assessments for a large sample of children (4-11) who received counselling in 2015/16 and assumed for the purposes of their study that it was broadly representative of the impact of the counselling service in 2016/17.
- They did not have a control group in the study so applied a 50% downward adjustment to estimated benefits to account for recovery that may have happened without the service and for fade out.
- They note that additional evidence on the extent to which gains through counselling are sustained over time, would be valuable in future evaluations.
- Their analysis of the counselling scheme (assumptions and caveats permitting – please see report for more details) in 2016/2017 suggests that:
    - Providing counselling could lead to improved outcomes in the form of truancy, exclusion, smoking, depression, crime and higher employment rates and wages.
    - £1 invested in the counselling service results in average benefits of £6.20 in terms of improved long term outcomes. Estimated average net benefit of £21.7m.
    - Potential average benefit per child from counselling of £5,706.
    - In terms of the percentage share of the estimated benefit by outcome – employment related benefits make up the highest share, with reduced truancy/exclusion lowest.
    - Estimated average benefit of counselling for all those who received counselling in 2016/2017 of £25.9m compared to a £4.2m cost.

The Place2Be: Measuring the effectiveness of a primary school based therapeutic intervention in England and Scotland[5]

- Place2Be interventions providing emotional and therapeutic support for children in schools – they are able to respond to needs as and when issues arise.
- Individual and group counselling sessions are two forms of the support provided.

[8] Truancy, exclusion, crime, smoking, depression, employment, wages.

- Individual counselling lasts for between one school term and one school year.
- Groups are of different sizes – usually six to eight children – and run for eight sessions over one school term.
- The study analysed SDQ scores for children accessing the individual and group counselling – looked at sample of children who received interventions between September 2004 and July 2006.
- Children were identified as requiring emotional support by a range of referrers including teachers, parents and self-referral.
- Over half of the sample were identified as falling within Goodman's (2001) 'abnormal' clinical category pre intervention.[6].
- SDQ was completed at the initial assessment and then at the end of the intervention. The study only used parent and teacher rated SDQ as self-reported SDQ has not been validated for those under 11.
- Repeated measures t-tests showed that children had significantly lower 'total difficulties' scores post intervention than pre intervention – rated by teachers and parents (Teacher-rated: pB0.001, d_0.39; Parent-rated: pB0.001, d_0.47). They also had significantly higher prosocial scores post intervention.
- Findings in the study indicated that around two thirds of children accessing these Place2be interventions show some improvement in social and emotional difficulties post intervention.

Mental Health Services and School's Link Pilot Programme, 2015-16[7]

- Pre and post surveys with stakeholders (single point of contact in schools; other school staff and NHS children and young people mental health service lead contact) – baseline and follow up at +10 months. The surveys included a question on referral numbers - Day et al.[5] state that this data from the surveys on referral numbers should be approached with caution as they were typically based on estimates rather than reported statistics.

Me and My School: Targeted Mental Health in Schools (TaMHS) Programme, 2008-2011[8]

- Please see Scherer and Mays[7] for full details on the research undertaken and timescales (3-year longitudinal study and 1 year randomised control trial).

- A range of measures were used including:
    - Me and My School Measure - developed as the authors state *"there was no brief child self- report measure in existence at the time of the evaluation that was suitable for use with children as young as eight"* (pg 28)
    - Pupil Strengths and Difficulties Questionnaire (SDQ) – used in the secondary school age group
    - School climate measure – seven item measure relating to school climate
    - Parent SDQ (also contained an impact supplement)
    - Parent survey on help sought
    - Teacher survey on child mental health (simple measure - rate pupils as having no difficulties – severe difficulties)
    - Teacher SDQ (on four children each year, chosen in y1 of study using specified criteria and followed across different years where possible)
    - School co-ordinator questionnaire

Please see table below for different measures and participation figures.

	2008		2009		2010	
Longitudinal study	N of pupils	N of schools	N of pupils	N of schools	N of pupils	N of schools
Pupil surveys: mental health (SDQ & M&MS) & school climate	19695	391	16732	298	11533	231
Parent surveys: child mental health (SDQ) & help seeking	1842	372	1061	268	780	215
Teacher surveys: child mental health (short response)	3671	283	6973	159	5223	124
Teacher Surveys: child mental health (SDQ)	1622	262	1148	157	833	121
School Coordinator surveys: school-based mental health support & links with other agencies	282		164		109	
LA surveys: project start-up, school-based mental health support & links with other agencies	N/A		18		21	
RCT	N of pupils	N of schools	N of pupils	N of schools	N of pupils	N of schools
Pupil surveys: mental health (SDQ & M&MS) & school climate	RCT allocation		30796	559	19418	373
Parent surveys: child mental health (SDQ) & help seeking			2857	522	1606	337
Teacher surveys: child mental health (short response)			15980	356	9322	208
Teacher Surveys: child mental health (SDQ)			2843	347	1482	201
School Coordinator surveys: school-based mental health support & links with other agencies			387		214	
LA surveys: project start-up, school-based mental health support & links with other agencies			2		56	

Source: CAMHS EBPU (UCL and Anna Freud Centre) et al. (2011). *Me and My School: Findings from the National Evaluation of Targeted Mental Health in Schools 2008-2011*

- The report states that "*detecting the impact of intervention in a short period of time can be difficult because programmes can take a long time to implement and bed down. Consequently, it can take at least three years (possibly more) from the beginning of a large scale intervention for effects to be observed in child outcomes (Groark & McCall, 2009)"* (pg 78).[10] As such, they note that the one-year lag between the RCT group starting and the collection of follow-up data may not have been sufficient to allow sufficient embedding of the project to observe strong effects in child mental health outcomes (Groark & McCall, 2009).[10]

- The report states that the association of TAMHS involvement with later academic attainment levels still had to be considered. It mentions that this would be reviewed when the relevant academic attainment level data was available in 2012 – the time when records for the pupils involved would be available.

References

1. Wolpert M, Jacob J, Napoleone E, Whale A, Calderon A, Edbrooke-Childs J. *Child- and Parent-reported Outcomes and Experience from Child and Young People's Mental Health Services 2011–2015.* London: CAMHS Press. 2016.

2.Parry G et al. *An evaluation of a new service model: Improving Access to Psychological Therapies demonstration sites 2006-2009, Final Report.* NIHR Service Delivery and Organisation programme. 2011.

3. Pro Bono Economics. *Economic evaluation of Place2Be's Counselling Service in Primary Schools* – in association with Dr Alan Little. 2018. URL: economic-evaluation-of-place2be-counselling-service.pdf. Accessed November 2022.

4. Paull G, Xu, X. Study of Early Education and Development (SEED): The potential value for money of early education, Department for Education Research report. Frontier Economics, July 2017. URL: Study of Early Education and Development (SEED): The potential value for money of early education (publishing.service.gov.uk). Accessed November 2022.

5. Lee R, Tiley C, White J. The Place2Be: Measuring the effectiveness of a primary school-based therapeutic intervention in England and Scotland. *Counselling and Psychotherapy Research*, 9:3, pp151-159. 2009.

6. Goodman, R. *SDQ: Information for researchers and professionals about The Strengths and Difficulties Questionnaire*. 2001. doi: 10.1111/j.1469-7610.1997.tb01545.x. PMID: 9255702.

7. Day L, Blades R, Spence C, Ronicle J. *Mental Health Services and Schools Link Pilots: Evaluation report.* 2017. URL: Mental Health Services and Schools Link Pilots: Evaluation report (publishing.service.gov.uk) Accessed November 2022.

8. CAMHS EBPU (UCL and Anna Freud Centre), University College London, CEM Durham University, University of Manchester, University of Leicester and National Institute of Economic and Social Research. *Me and My School: Findings from the National Evaluation of Targeted Mental Health in Schools 2008-2011.* 2011. https://www.ucl.ac.uk/evidence-based-practice-unit/sites/evidence-based-practice-unit/files/pub_and_resources_project_reports_me_and_my_school.pdf Accessed November 2022.

9. Scherer M, Mays N. (2020) *Children and young people's mental health Trailblazer programme evaluation. Review of recent national evaluations of similar schemes and implications for Phase 2 impact and economic evaluation.* London: Policy Innovation and Evaluation Research Unit (PIRU)

10. Groark CJ, McCall RB. Community-based interventions and services. In M Rutter, Bishop D, Pine S, Scott J, Stevenson E, Taylor A, Thapar (Eds). *Rutter's Child and Adolescent Psychiatry.* Fifth Edition (pp 969-988). 2009. Oxford: Blackwell.

Document I

A note prepared for DHSC describing the different possible comparisons that could be used to assess the impact of the Green Paper programme, and the different insights that each would give.

Possible comparisons for phase 2 outcome and economic evaluation of CYP MH Trailblazer programme

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Compare trailblazer programme and IAPT (i.e. support for children with mild-moderate needs delivered in the community). IAPT is the obvious comparator programme, and this approach would enable us to assess the value of having support based directly in schools (e.g. does it lead to more appropriate or more timely referrals, does it have a broader impact on how the school supports children with MH problems?). It would also allow for an assessment of the added value of the whole school approach element of the programme (because IAPT is just direct interventions). Ultimately we would be exploring whether 'IAPT in schools' is more effective than IAPT in community settings

Compare trailblazer programme with other forms of support for children with mild-moderate needs provided in schools (for example, school counsellors. This comparator group could either be schools that have bought in support from an individual school counsellor, or counselling support provided through a structured programme such as Place2Be). This kind of comparison would have a strong workforce focus. It could specifically test out the effectiveness of the TB programme's use of 'low intensity CBT informed therapies', and the extent to which support for children with mild-moderate needs can be effectively delivered by a paraprofessional workforce. Again, this comparison would allow us to explore the added value of the support that MHSTs provide for whole school approaches (something which school counsellors don't routinely provide).

Compare trailblazer programme to no intervention – to test out the impact of providing support through a 'trailblazer' approach. Given that many children with low-moderate mental health problems never receive any support, this kind of comparison would be a meaningful one to make. A key focus here could be on the preventive aims of the trailblazer programme – i.e. does providing early support to children (when their mental health problems are 'mild') prevent them later developing more acute or complex needs, for which specialist help is required?

Compare different approaches within the trailblazer programme – i.e. compare teams with different compositions/orientations (we are picking up some teams are very clinically oriented, others have a stronger focus on whole school approaches). Or compare teams led by different organisations (e.g. NHS-led teams versus voluntary sector led teams). Ideally, we'd be able to develop a typology of trailblazers in the next stage of the early research, which could support comparison *within* the programme if this was the preferred option. This evaluation would be predicated on the assumption that the TB programme is going to be rolled out, and the question is how best to do that.

Compare the impacts of MHSTs for different groups of CYP, or in different settings. An evaluation of this kind would help to produce evidence about which children and in which settings the 'standard' MHST intervention works best. A useful comparison here might be primary versus secondary schools, given there is some evidence emerging from the early findings that the MHST model is less well suited for younger children. Would also enable us to explore the extent to which the trailblazer programme might be effective in addressing inequalities in children's mental health, for example by helping children who have historically been under-served by the CYP MH system. Conversely, this kind of evaluation might help to identify the groups of children for whom MHST support doesn't work well; and therefore, in an ideal world, could inform future decisions about what further investment/service development in CYP mental health is needed

Compare the 18/19 Trailblazers with subsequent waves of the Programme. This would compare the impact of an intervention delivered by more versus less experienced sites and staff. It would also enable a comparison between the Trailblazers which had more flexibility in terms of how they developed and implemented the MHST concept with the more standardised approach of the 19/20 and subsequent waves. A complexity of this comparison relates to the fact that the 18/19 sites were most directly affected by the pandemic just as their MHSTs were starting to deliver services in early 2020.