Using behavioural insights to reduce unnecessary demand on the Multi Agency Safeguarding Hub (MASH)

Scoping report

Social Engine is working with Warwickshire County Council to examine and seek solutions to some of the specific challenges caused by excess demands placed on the MASH that are not safeguarding matters. This short scoping report sets out the approach to be taken during the course of the project based on an initial review of information and reflecting discussion with the project team. Naturally, the aim is to be evidence based in our work; therefore, whilst this document sets out our next steps and indicative time plan, we anticipate that there will be some further refinement to the final project plan.

Project team

WCC: Marina Kitchen (project sponsor) Roz Emson, Ramandeep Sandhu, Hayley McKenna
Social Engine: Avis Johns, Toby Blume, Marios Petropoulos, Kieran Saggar, Manu Savani

Overview of situation and ambition

In March 2018 Warwickshire County Council (WCC) conducted a strategic review of Children and Families and concluded that the management of demands upon the MASH was a significant priority. At that time, the annual demand on the MASH was 29,000 calls from partner agencies of which approximately 2,150 calls resulted in no further action, or required directing elsewhere. WCC estimate the direct unit cost equates to a total sum of £570,825 per annum and so a reduction of 215 per month (2,580 a year) would realise savings of approximately £57,000 and enable more timely action by an appropriate agency and the release of staff to address genuine referrals for children at risk.

The MASH facility in Warwickshire operates on a similar model to the provision in many other local authorities. It is a partnership between:

- Warwickshire County Council
- Warwickshire Police
- the National Health Service (NHS)
- other key partner agencies

The intention is to provide a 'one-stop shop' for safeguarding referrals enabling cases to be assessed and subsequently addressed by the relevant team in a streamlined process. Whilst professionals are the primary users of the service it is open to members of the public to raise their concerns. Since opening in 2016 it has received higher levels of referrals compared to statistical neighbours and, against a backdrop of increasing demand, a drive for efficiency, and review (by Ofsted and others) attention is focused on securing improvement to interactions with referrers and stakeholders in order to ensure it can operate most effectively.

Ofsted's 2017 inspection[1] found that MASH generally provided a good service, but suggested thresholds were not always consistently applied and that there were some challenges in engaging with health partners. Their

[1] Ofsted inspection of children's services May 2017 - https://files.api.ofsted.gov.uk/v1/file/2752758

subsequent focused follow-up visit[2], in July 2018, whilst not specifically mentioning MASH did raise ongoing concerns about high caseloads in children's services and the risk this presents for children as well as the burden on staff and requirement to improve processes.

Understanding the nature of the problem

Initial evidence and insight gathering conducted to inform the project scoping and trial and intervention design included reviewing a range of materials and information, as well as analysing data and holding discussions with key members of the project team.

A range of data are collected by WCC on communication coming in to the MASH team in a number of different ways:

- The telephone system used for calls into MASH records details of each call such as call duration, wait times, phone option selected and which team or business unit handle the call.
- Records kept by the MASH team records details of the child (ethnicity, language spoken and whether the child is disabled) and the caller (type of agency, name and address), method of contact, responsible team and whether the engagement was a safeguarding referral[3] or a contact.

These are the primary records collected and therefore a principle source of evidence that we have used to better understand the challenges faced and to inform the project scoping.

For our desk review, as part of the scoping phase of the project, we also reviewed a range of public-facing documents and internal reports. This included information produced by the MASH to provide guidance to professionals making referrals, advice on accessing support from other children and family services and calling the MASH telephone line. In addition, we held an inception meeting and held follow up discussions with members of the project team to gather evidence and insight to better understand the current context and background, the nature of the challenges faced and WCC's ambition for the project.

Limitations and constraints

In reviewing the available evidence it became clear that the two main data sources contained valuable information, but that it was not feasible to integrate them - as they did not contain any unique identifiers within the data that could be used to merge the two datasets. This limited the opportunity to conduct more sophisticated analysis – particularly as certain outcome measures were only present in one data set, while key characteristics about the referrer or the nature of the contact were present only in the other.

We conducted data cleansing on a dataset of client records supplied by WCC's Insight Team to understand in a more precise way where demand comes from in order to quantify and identify opportunities to intervene. This focussed principally on identifying and naming the referral agency, in order to investigate differences between different agencies regarding calls into MASH, using 'fuzzy logic' to match misspelt names, extract them from open text fields and match them against an accurate list of agencies.

Warwickshire County Council have made a number of changes to systems used over the last twelve months to improve data capture. However as we are required to consider the 2017-2018 data this historic data does not reflect any recent data improvements.

[2] Focused visit to Warwickshire children's services July 2018 - https://files.api.ofsted.gov.uk/v1/file/50011146

[3] A 'referral' is a contact that triggers a Single Assessment, while all other contacts are referred to as a 'contact'.

Approach to analysis

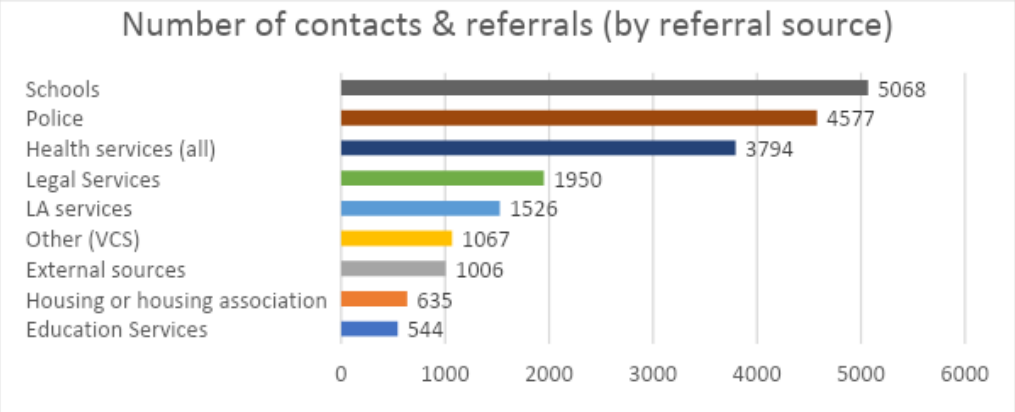
- Recorded contacts with the MASH from the most recent complete academic year for which data are available (1st September 2017-31st August 2018).
- We have excluded data from previous academic years for the purposes of bias reduction. This way, only the social, cultural and organizational-level factors that affected the increased demand of calls into MASH during 2017-2018 are considered. Identification of these factors (through stakeholder engagement) will enable us to enter them in our statistical tests as controlling variables, thus making our statistical inferences more robust.
- In our analysis we have deliberately excluded individuals and members of the public for confidentiality and ethical issues and because there is unlikely to be significant homogeneity as a group.

Findings from our analysis

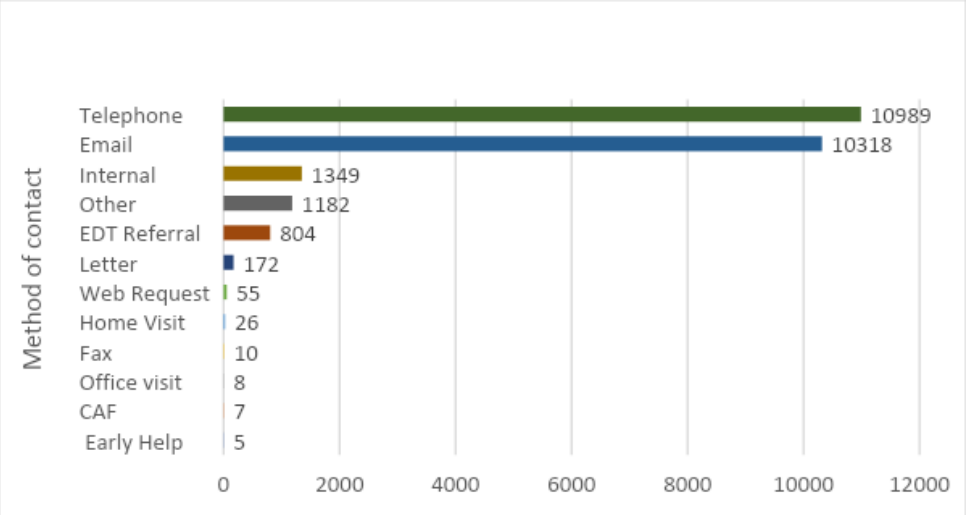
WCC differentiate between two categories of communication with the MASH team: referrals and contacts. Referrals are those that progress to a formal referral, which indicates that they *are* a safeguarding matter and are duly assessed. Contacts cover are all other types of communication and indicate that they are not a safeguarding matter as they will either be transferred to another (more appropriate) team to handle or result in no further action (NFA). However, a contact can become a referral (or vice versa) which presents some ambiguity and challenge in measurement which we recognise.

Overall communication volumes and methods

- During the period (1st Sept 2017-31st Aug 2018), contacts and referrals received by the MASH totalled 24,926. Of those, 20,861 (84%) were contacts and 4,865 (16%) were referrals.
- 4,759 of these were from individuals and anonymous callers that are outside the scope of our analysis. When we exclude these, 20,167 contacts remain.
- The majority of total contacts/ referrals into MASH came from schools (5,068 – 25%), followed by the police (4,577 – 23%) and health services (3,794 – 19%). A breakdown of contacts/ referrals received into MASH by each type of agency is shown below.

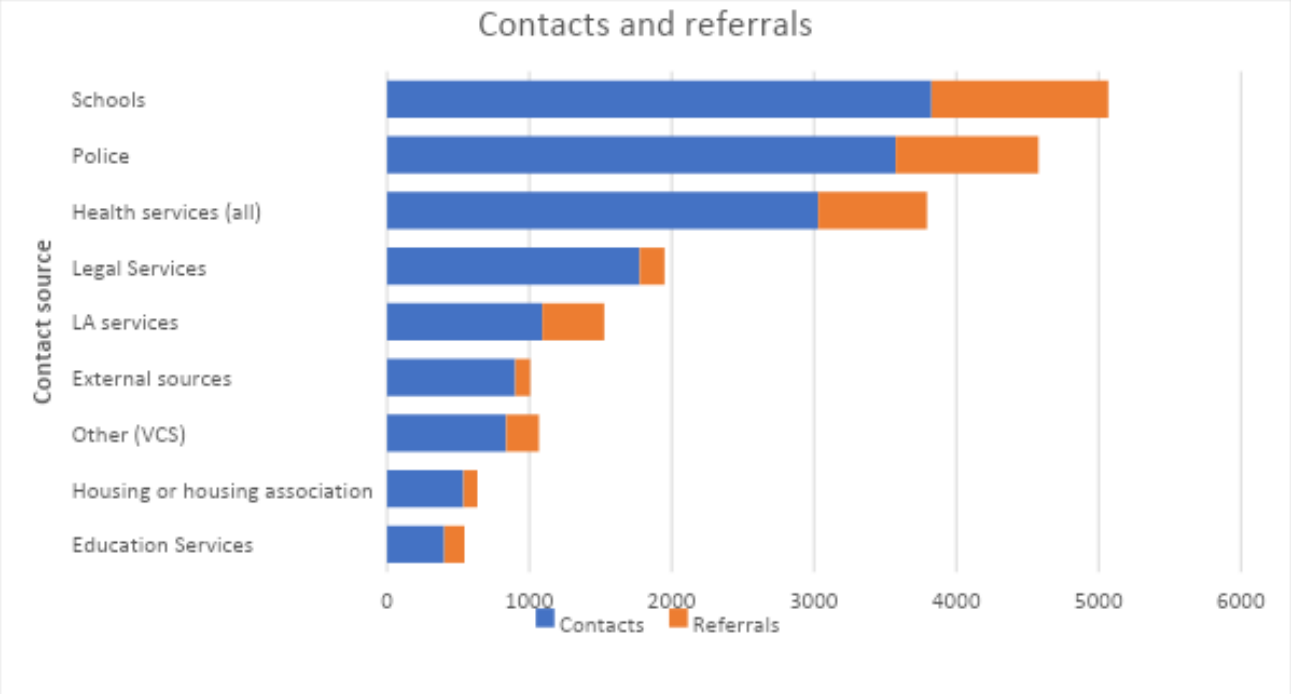


Email and telephone are by far the most common methods used to communicate with the MASH, with 44% of all contacts and referrals made by phone and 41% by email and all other methods combined accounting for just 15% of communication.



Nature of the contact

Since WCC are keen to reduce demand of non-safeguarding issues to the MASH, understanding differences in referrals and contacts is an important indicator. We therefore analysed the proportion of contacts and referrals by source type.



Schools and the Police are responsible for almost half of all contacts (48.4%), whilst two-thirds (67.4%) of all contacts can be accounted for when health services are also included.

However, although schools and police account for the majority of communication with the MASH they are somewhat more likely on average to make contact with a safeguarding issue than other referral sources as the table below shows. While around three-quarters of communication from the police and schools are 'contacts', these account for around 90% of those from external agencies (e.g. other local authorities) and legal services (such as the National Probation Service). Nonetheless, the sheer volume that come from schools and the police make them a suitable focus for seeking to reduce demand.

Referral source	Total	Contacts	Referrals	% referrals	% contacts
Legal services	1950	1775	175	9.0%	91.0%

External sources	1006	901	105	10.4%	89.6%
Housing or housing association	635	537	98	15.4%	84.6%
Health services	3794	3029	765	20.2%	79.8%
Other (VCS)	1067	837	230	21.6%	78.4%
Police	4577	3574	1003	21.9%	78.1%
Schools	5068	3826	1242	24.5%	75.5%
Education services	544	402	142	26.1%	73.9%
LA services	1526	1091	435	28.5%	71.5%

We find considerable variation in the number of contacts and referrals coming from each District within the County. Nuneaton and Bedworth and Warwick/Leamington account for a substantially higher proportion of calls than the other three Districts.

However, when we take into account the estimated population of children and young people aged 0-17[4] in each District, we find that Warwick has a considerably higher proportion of contacts and referrals relative to population size. Consequently, through the insight gathering phase, we will look at deprivation and other indicators that may help us to understand the contextual factors which are driving this variation.

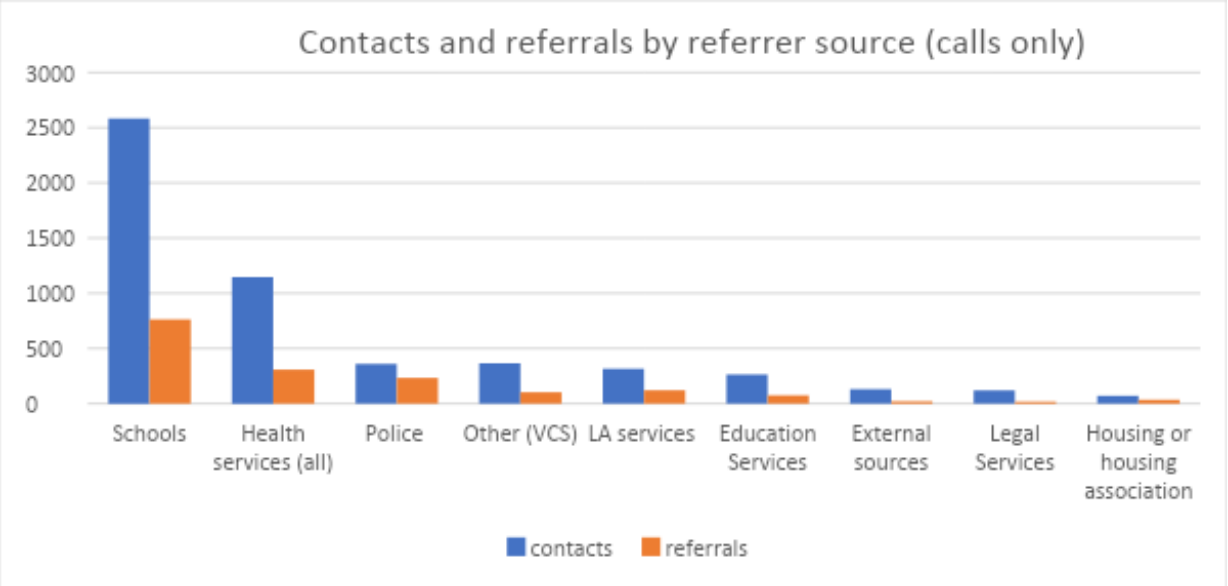
District	Contacts and referrals	Estimated 0-17 population	Contacts and referrals per head of 0-17 child population
Warwick	5,473	7,147	0.77
North Warwickshire	3,187	12,451	0.26
Nuneaton and Bedworth	6,265	27,751	0.23
Rugby	3,888	23,725	0.16
Stratford on Avon	3,104	23,523	0.13

Telephone calls

WCC made clear that it is the volume of calls to the helpline that they were keen to explore in terms of managing demand on the MASH.

When we remove all methods of communication other than telephone calls, we find that total volumes from the police reduce significantly, particularly for contacts. Calls from the police account for just 6.7% of contacts made by telephone, whilst schools account for almost half (48.2%) and health services for one in five contacts (21.4%). It is clear therefore that whilst the police are responsible for a significant proportion of contacts and referrals, these are far less likely to be made via telephone than by other communications channels, in contrast to referrals and contacts from schools. This finding underlines the decision to focus on schools.

[4] Source UK Office for National Statistics 2017 estimates



Demand on the MASH from Schools

We performed a series of descriptive and inferential tests to analyse contacts and referrals received into MASH from individual schools.

- During the 2017-2018 academic year, individual schools averaged 11.5 contacts and referrals with a standard deviation of 26.
- The high standard deviation indicates that several data points are very spread out from the average, reflecting the fact that certain individual schools are responsible for an either extremely high or low number of contacts and referrals into MASH. Of course, it is likely that the high number of contacts and referrals from certain schools is explained by certain variables, such as the number of students enrolled, or the proportion of students eligible for Free School Meals. Through statistical adjustments, we are able to control and disentangle the effects of confounding variables that are known and therefore identify the schools of particular interest, as well as identifying certain characteristics that might be useful to help us to target our intervention.
- Pearson correlation tests revealed that the percentage of pupils eligible for Free School Meals is significantly positively correlated with the number of contacts and referrals (coefficient = 0.4, p value < 0.001, sample= 193 schools).
- The number of students enrolled in a school is also positively and significantly correlated with the number of contacts and referrals (coefficient = 0.5, p value < 0.001, sample= 198 schools). Since these variables demonstrate statistically significant associations, as indicated by the p value, they will be treated as controlling variables in our regression tests.

Analysis of calls to MASH from telephone system data

The telephone system operated by WCC allows data to be extracted on the duration, routing of calls (based on caller options selected) and a number of other variables. In January 2019 the phone system was changed to improve call handling processes.

The changes enable referrers to choose alternative options if the call is not a safeguarding matter. This directs the call to a dedicated team of staff in the Customer Service Centre, who will have a conversation to elicit if the call needs to be transferred to the Early Help Officers or the Family Intervention Service.

The phone data allows us to analyse the call handling process and this will be part of our investigation and reporting.

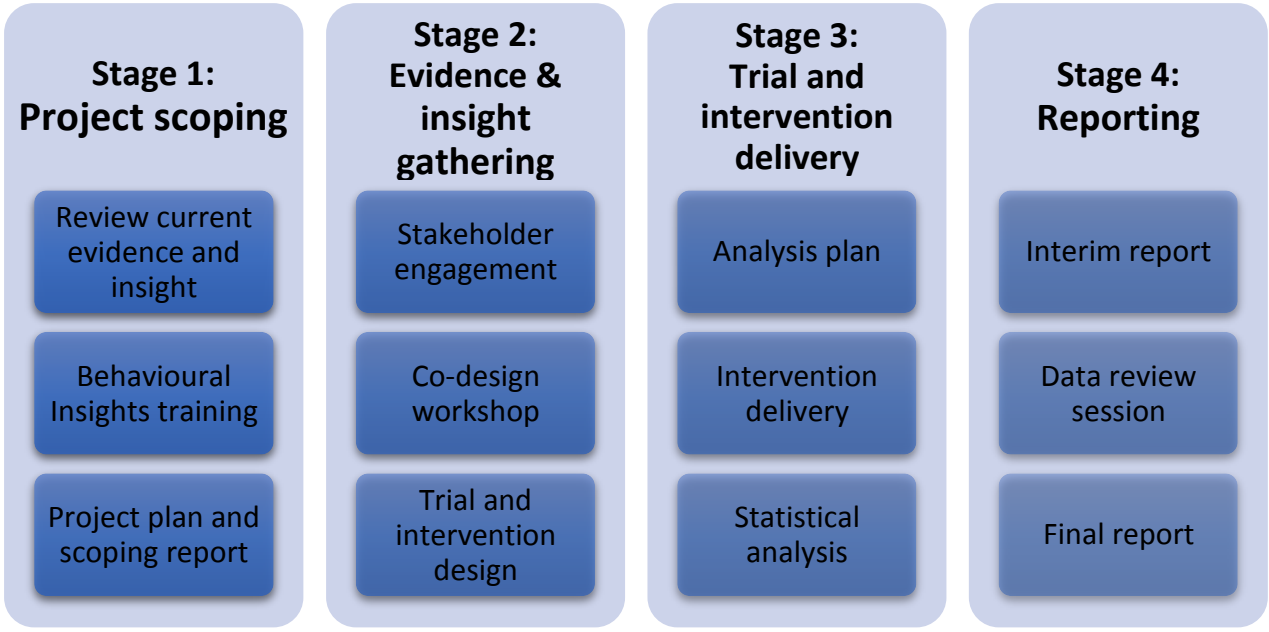
Conclusions and implications for project scope

Based on the initial analysis and insight gathering we have undertaken to inform the experimental method and intervention design, our conclusions are:

- Schools are a suitable focus for the trial as the primary source for calls to MASH that are non-safeguarding issues. They also offer a clear and identifiable target audience for our intervention with the ability to track outcomes.
- Whilst schools are the primary focus for the project, there is potential to reduce demand from health services and the police and these could also be within scope (as a secondary audience).

Summary of approach

Our approach to the project identifies four distinct stages. An iterative design methodology will ensure that each stage is informed by the previous. Our approach to the project design and delivery is based on co-production and working collaboratively with the WCC project team in order to meet your expectations, support organisational learning and help build the Council's capacity and capability.



Following the completion of the scoping phase we will undertake further evidence and insight gathering in order to develop and refine the trial and intervention design.

1. **Stakeholder engagement.** We will conduct a series of interviews and, if it is feasible to do so, focus groups with key stakeholders in order to gain further insight into the motivations and psychological drivers underlying the behaviours among our target audience. This will help us to test and refine the underlying assumptions in our intervention ideas.

2. **Mapping the customer journey.** We will review the 'touch points' and map out the customer journey of a school/referral agency to better understand the current behaviour and identify opportunities to intervene. We will also consider the process map and risk assessment approach that DSLs undertake in taking decisions about referrals as well as reviewing Council communications referring to the MASH to understand how these are likely to guide perceptions.

3. **Co-design workshop.** We will work collaboratively with the WCC project team and key stakeholders in a co-design session to develop our experimental research method and interventions. We will explore the current behaviours and underlying motivations among our target audience, based on the insight gathered from our stakeholder engagement, set expectations and measurable goals of our intervention, as well as identify opportunities to influence behaviour change. The final part of the session will use a co-design process to develop a range of intervention ideas. The output of this workshop will be an agreed design of our intervention trial which will be tailored to address the psychological and behavioural drivers that contribute to the increased demand of telephone calls coming into MASH.

Intervention design

Our initial scoping activity has identified a number of possible opportunities to intervene. Our subsequent research and engagement methods (interviews and focus groups) will enable us to cross verify and build on our initial assumptions about our target audience. This will offer actionable information that will be translated into the design of our final trial.

Potential opportunities identified thus far include:

a) Information and guidance provided to referral agencies – such as web-based/electronic guidance and safeguarding training undertaken by DSLs and other staff.
b) Telephone based intervention – providing behaviourally-informed scripts and guidance to call handlers or altering the phone messaging.
c) From 1st September 2019, 14 new Children and Families Centres will be rolled out to deliver Early Help support services across the County – the way this new provision is communicated to partners and referral agencies may present opportunities for us to intervene.

Emerging hypotheses for current high call rates to MASH

We have three current working hypotheses for explaining why people currently call the MASH for non-safeguarding issues:

1. Stakeholders do not have enough information about the process (customer journey) and appropriate steps to take in safeguarding cases (technical expertise).

2. Stakeholders lack confidence in their judgement on safeguarding cases and lack expertise within their own teams to make these sensitive judgement calls (judgement expertise).

3. Stakeholders are concerned about the levels of risk and want to have their cases logged with the safeguarding team to demonstrate they flagged potential problems early on (risk aversion).

There may be other factors we uncover during interviews and other stakeholder engagement during the insight gathering phase.

We want to explore evidence for/against these in the insight gathering phase. Based on feedback from stakeholders and our literature search, we may build all, some or other hypotheses into the trial design. For example, if we're finding lots of interviewees express concern about risk and responsibility, we will design the trial intervention to address this aspect specifically. If we find a combination of issues and it appears our intervention may not be able to isolate them, we will use qualitative follow up after the trial to explore how people felt about the trial intervention and if they changed their practices or not.

However, we will finalise the approach based on further insight gathering and in discussion with WCC project team.

Behavioural insights used to inform our intervention

We will explore a range of behavioural insights, including making messaging more salient, drawing on intrinsic motivations, considering the messenger used to convey information and the use of social norms, to develop approaches that are likely to be effective. Our intervention may also consider how framing the guidance provided to referral agencies might encourage behaviour change.

As part of evidence and insight gathering (stage 2), we will explore the motivations and practical reasons for current behaviour around contact and calls to MASH. For example, we want to explore how well informed stakeholders perceive themselves to be on safeguarding protocol and the appropriate circumstances to contact MASH. We are also interested in their self-confidence in making safeguarding judgements, as well as their attitudes towards levels of risk and appropriate management of that risk within their organisations. These questions will be put to stakeholders to understand better their rationale for contacting MASH and the steps they take prior to doing so. The insights gleaned from these interviews will help identify appropriate intervention features to reduce contacts

We will also use the stakeholder interviews to explore what referrers believe MASH's human/other resources to be. This will help us to determine whether certain inaccuracies regarding stakeholders' perceptions of MASH, including an overestimation of the size of MASH team and/ or an under-estimation of call volumes, are worth addressing in our trial intervention by making, for example, the messaging and information more salient. This approach has proven to be effective in reducing the number of missed appointments in the NHS[5] and could be effective in this situation.

Another factor we will explore through the insight gathering phase of the project is the perceptions of thresholds among referral agencies, to consider whether these have an impact on referrals. Related to this, we may also wish to investigate whether contextual factors relating to perceptions of the availability of relevant services, funding issues (e.g. if a school feels they cannot afford to support a child's emotional wellbeing) are significant factors influencing decision-making.

Approach to evaluation – experimental design

A randomised evaluation is best placed to provide robust testing of the intervention and its impact on the number and proportion of contacts. Simply put, we propose to share the intervention with around half of the referral units in the scope of the study, who are randomly selected to be in the 'intervention' group. All other similar referral units form a 'comparison' group. Over the course of approximately 3-6 months, call numbers will be monitored across the two groups. If the intervention is successful, it will reduce contacts from the intervention group relative to the comparison group.

Randomly selecting who receives the intervention is a way of protecting the analysis from confounding factors that would muddy the interpretation of either successful or weak results. Analysing administrative data will allow for conclusions to be drawn on how effective the intervention is, and amongst which referral agencies. Firm plans for the process of randomly selecting referral units, creating a balanced and valid comparison group, robust data collection and analysis will be set out following the insight gathering phase.

[5] See: https://www.gov.uk/government/publications/reducing-missed-hospital-appointments-using-text-messages/a-zero-cost-way-to-reduce-missed-hospital-appointments

But to give an example, the trial might separate schools into small/large or by proportion of FSMs, and then randomly assign half of each group to receive the intervention.

We provide here some indication of key principles, but leave open key decisions that we cannot take until after further insight gathering. At this stage, based on the available evidence to date, we anticipate randomising at the unit of the referral agency.

The potential opportunities for intervention identified may have marginal delivery costs close to zero, and a limited number of referral units we can include. We therefore anticipate including all schools (and potentially health services and police) in the sample and then work backwards to see what the minimum detectable effect size would be with this sample size and various assumptions about how the data might behave (in the absence of any comparable studies). If we estimate the minimal effect size is high, (and that detecting a statistically significant effect is likely to prove challenging), then we will look at ways to strengthen the treatment through the use of reminders or repeated communications.

We believe qualitative follow up is essential to help explore and explain the findings from experimental data, and we propose to undertake this following the trial. This might involve interviews with a small number of stakeholders in the treatment and comparison groups, covering a range of referral units within the scope of the study. Follow up data collection in this way will help understand any intervention effects we discover, and also identify how people felt about the intervention, which is key for future rollout and implementation if that is what the evidence advocates.

We will use our '7 Questions Experimental Design' structure to develop an initial experimental design methodology and consider technical specifications and practicalities around our approach to intervention delivery and impact measurement. Our 7 Questions framework provides a structured approach to RCT-design covering intervention design, data collection and measurement, randomisation, ethical and data protection issues and sample and effect size.

The session will allow us to engage and actively involve key stakeholders in project design – drawing on their knowledge and insight – in order to design effective strategies for the trial interventions and to build a shared purpose and commitment to the approach.

We will be submitting an application to the WCC research governance team prior to the trial being launched, to be fully compliant with ethical issues and data governance.

Outcome measures for the trial

WCC aim is to reduce unnecessary (i.e. non-safeguarding) calls to the MASH that can be better directed to other sources of information and support. Our primary outcome measure for the trial will therefore be the volume of contacts to MASH made by telephone call. This will be measured through MASH contact monitoring records.

We will aim to triangulate these findings by using telephone system data that tell us who and how calls are being handled – by team (e.g. customer service, MASH business support, Early Help etc) and call outcome (e.g. single assessment, info and signposting, early help follow up etc). However, this will be dependent on being able to introduce a unique identifier in telephone system data in order to match calls to MASH contact monitoring records, in order to ascertain whether a contact was in our treatment or control group.

We may want to consider a secondary outcome measure for how confident and informed stakeholders feel about the referral/consultation process. It would be helpful to have this as a baseline measure (relating to

reason 1 of our emerging hypotheses above) and to be able to show that any treatment effect reducing consultation calls does not have an adverse impact on how informed people feel.

Another secondary outcome measure might be on other modes of contact, to get a sense of whether consultation phone calls were simply displaced to email or other means of communication with the team.

Since it is essential to avoid discouraging any safeguarding issue from being referred to MASH and because our intervention will not be aimed at referrals, we do not expect there to be any reduction in the number of referrals made to MASH.

Indicative timetable

	Date
Scoping	April - 20th June 2019
Fieldwork commences	24th June 2019
Evidence and insight gathering	June - July 2019
Trial and intervention design	August 2019
Trial/Intervention delivery	September 2019 - March 2020
Fieldwork concludes	March 2020
Analysis	March - April 2020
Reporting	May - June 2020