ATTACHMENT 1: DETAILED RESEARCH PLAN

FULL TITLE OF PROJECT

Crisis responses for children and young people: an evidence synthesis of effectiveness, experiences and service organisation (CAMH-Crisis)

SUMMARY OF RESEARCH

One in 8 children aged 5-19 (12.8%) in England has a mental health difficulty and a recent National Assembly inquiry found a 100% increase in demand for services in Wales between 2010 and 2014. With resources stretched and young people often waiting lengthy periods to be seen, increasing numbers of children and young people (CYP) are seeking help or have help sought on their behalf during mental health crises. During such periods of crisis, it is vital that effective and timely evidence-based care is provided. Crisis care for CYP has become a policy priority both nationally and internationally, with substantial funding allocated to the development of crisis services. The needs of young people in crisis can be met through designated clinical services (such as local child and adolescent mental health services (CAMHS) teams, and/or dedicated CAMHS crisis teams) and in accident and emergency departments, but also through non-clinical services such as school counselling services, youth services, and internet-based counselling. Within the UK, the landscape of crisis care delivery has shifted substantially in recent years: notably, investments have been made in community crisis teams which aim to provide care close to home and avoid the need for hospital admission. There has also been an increasing emphasis on joined-up systems approaches between health, education, and third sector organisations. Different forms of crisis support are therefore available for CYP, with considerable regional variability in the way such care is delivered. However, little is known about how these different service responses are organised and experienced, whether they are effective, or how they are integrated within their local system contexts.

In this context the aim of this project is to synthesise the evidence related to the effectiveness of services that respond to CYP in crisis, the evidence that reports on the experiences of people using and working in these services and evidence relating to the organisation of these services.

Objectives

1. To critically appraise, synthesise and present the best available evidence on the organisation of crisis services for children and young people aged 5 to 25 years, across education, health, social care and the third sector.
2. To determine the effectiveness of current models of mental health crisis support for children and young people.
3. To explore the experiences and perceptions of young people, families and staff with regards to mental health crisis support for children and young people aged 5 to 25 years.
4. To determine the goals of crisis intervention

An evidence synthesis guided by the Evidence for Policy and Practice Information (EPPI) Centre approach (Gough et al. 2017) (EPPI) will be conducted, an approach particularly recommended for reviews where the findings are destined for practical use by policymakers, managers and other decision-makers. The review will be registered with PROSPERO (a

prospective register of systematic reviews), will follow guidance from the Centre for Reviews and Dissemination (CRD) and will be reported following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations. Searches will be developed initially using Medical Subject Headings (MeSH) and text words across health, social care and psychology databases from their inception. In consultation with a Stakeholder Advisory Group (SAG) supplementary methods will be developed to identify additional material including policies, reports, expert opinion pieces and case studies. All English language items relating to the provision and receipt of crisis support for CYP people aged 5-25 will be included. All included research citations will be assessed for quality using tools developed by the Critical Appraisal Skills Programme (CASP), or alternatives as necessary if suitable CASP tools are not available. Data will be extracted into tables and subjected to meta-analyses where possible or thematic synthesis with help from NVivo. Strength of synthesised findings will be reported where possible using Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach (Guyatt et al. 2008) and Confidence in the Evidence from Reviews of Qualitative Research (CerQual) approach (Lewin et al. 2015).

Reflecting EPPI Centre principles (Gough et al. 2017), opportunities will also be embedded into the project to maximise stakeholder engagement for the purposes of both shaping its focus and maximising its reach and impact. Our stakeholder advisory group (SAG) consisting of young people, carers, and professionals involved in CYP mental health care will help shape the project at key points. Information derived from the review will be summarised in accessibly written reports, journal articles and blogs. Implications will be stated for the improvement of clinical, social and third sector care and recommendations will be made for future research. With guidance from our SAG we also plan on creating an animation with guidance for parents and young people, which will be freely available online and will be publicised and shared as widely as possible via established networks.

TERMINOLOGY

Children and young people

For the purposes of the current study, CYP will include individuals within the age range of 5-25. A number of CYP mental health services (including CAMHS in certain regions) now cater for this age range; imposing an age-limit of 18 would therefore risk excluding valuable studies concerning those aged 18-25.

Crisis responses

Building on the definition used in the Cochrane review of crisis services for adults (Murphy et al. 2015), for this proposed review a crisis response for CYP is defined as follows:

> The provision of a service in response to extreme psychosocial distress, which for children and young people may be provided in any location such as an emergency department, primary care, a specialist or non-specialist community service, a school, a college, a university, a youth group, or via a crisis support line.

BACKGROUND AND RATIONALE

One in 8 children aged 5-19 (12.8%) in England has a mental health difficulty (Sadler et al. 2018) and a recent National Assembly inquiry found a 100% increase in demand for services in Wales between 2010 and 2014 (National Assembly for Wales Children Young People and Education Committee 2014). With resources stretched and young people often waiting lengthy periods to be seen, increasing numbers of children and young people (CYP) are seeking help or have help sought on their behalf during mental health crises. During such periods of crisis, it is vital that effective and timely evidence-based care is provided. Crisis care for CYP has become a policy priority both nationally (Department of Health 2015, National Assembly for Wales Children Young People and Education Committee 2014) and internationally (World Health Organization 2013), with substantial funding allocated to the development of crisis services (Welsh Government 2015a). The needs of young people in crisis can be met through designated clinical services (such as local child and adolescent mental health services (CAMHS) teams, and/or dedicated CAMHS crisis teams) and in accident and emergency departments, but also through non-clinical services provided through a range of organisations.

Within the UK, the landscape of crisis care delivery has shifted substantially in recent years with particular investments being made in dedicated community crisis teams which aim to provide care close to home and avoid the need for hospital admission (Quality Network for Community CAMHS undated). However, little is known about how these are organised and experienced, their effectiveness or how they are integrated within local systems although concerns continue to be expressed regarding their adequacy (National Assembly for Wales Children Young People and Education Committee 2018). In the context of local services they work alongside community CAMHS teams, sometimes other types of specialist CAMH services such as those providing assertive outreach, accident and emergency departments and paediatric wards. In the larger ecology of service provision crisis responses are also provided through general NHS services (e.g. in emergency departments), in schools and universities, by the police, through social services, via the third sector and through internet or telephone-based counselling services.

Despite the prioritisation of crisis care for CYP no up-to-date data is available on: types of service responses and their organisation; the experiences of young people, families and staff; and outcomes for CYP. Previous reviews have focused specifically on the provision of designated clinical services for those in mental health crisis (Janssens et al. 2013, Lamb 2009, Hamm et al. 2010), neglecting the diverse settings where young people are likely to access initial crisis support outside of the mental health system (e.g. schools, online networks and social media, crisis helplines, emergency departments, third sector organisations, the criminal justice system). However, given that CAMHS are unable to meet the needs of the high numbers of children in crisis each year, it is likely that a substantial proportion of crisis responses occur outside of NHS services. Non-NHS settings may be more frequent points of access to crisis support for young people, making it important to understand how these systems interact with designated mental health services, and how these different response types are experienced by young people and their families and what their outcomes are. For example, a recent report revealed that the highest number of referrals to children's services for 16 and 17-year olds comes from the police, while the second highest source of referral is education for those under 18 (Pona and Gibbs 2018). There have also been increasing reports of mental health problems and self-harm from teachers (Association of School and College Leaders and National Children's Bureau 2016) and from third sector organisations in frontline contact with children and adolescents.

International policy guidance has consistently stressed the importance of a joined-up systems approach in providing support to CYP, advocating cohesive working between health, education, social services, youth work, and the third sector (World Health Organization 2013). Recent guidance from the National Assembly for Wales (National Assembly for Wales Children Young People and Education Committee 2018) recommends that schools should form community hubs of cross-sector and cross-professional support for children's emotional and mental well-being. As such, a research approach which isolates clinical responses to mental health crises would risk excluding valuable data. By including evidence from wider social contexts, broader lessons may be learned about what CYP experiencing mental health crisis find particularly helpful. A more up-to-date evidence synthesis is therefore required, taking into account new evidence published since the previous reviews, as well as incorporating policy guidance, case reports and other grey and non-research literature relating to the organisation, provision and experience of mental health crisis responses for CYP.

WHY IS THE RESEARCH IMPORTANT IN TERMS OF IMPROVING THE HEALTH OF THE PUBLIC AND/OR TO PATIENTS AND THE NHS?

This project will meet a priority health need about which there is expressed and sustained interest: the mental health of CYP between the ages 5-25. This is an area of international importance (World Health Organization 2013) and is a priority for future UK mental health research (Department of Health 2017). One in 8 children aged 5-19 (12.8%) in England has a mental health difficulty (Sadler et al. 2018) with services struggling to meet demand as need rises (Department of Health 2015, National Assembly for Wales Children Young People and Education Committee 2014). A particular concern is the provision of safe, accessible and effective care for young people who need urgent help during a mental health crisis. This is in the context of a significant number of CYP experiencing mental health crises each year, characterised by serious self-harm and/or other behaviours which present major risks to the self and/or others. Recent findings show a 68% increase in self-harm incidence among girls aged 13-16 in England between 2011 and 2014 (Morgan et al. 2017).

In England, out of hours and crisis services for young people are a policy priority (Department of Health 2015, The Mental Health Taskforce 2016) with model service specifications including expectations that NHS trusts provide round the-clock home-based crisis care (NHS England 2014). In Wales, crisis care is also a priority (Welsh Government 2015b) with new CAMHS investment including money for urgent mental health interventions (Welsh Government 2015a, National Assembly for Wales Children Young People and Education Committee 2018). Intensive 'hospital at home' services have featured in Scottish guidance (Scottish Government 2012), and in Northern Ireland calls have been made for similar investments (The Regulation and Quality Improvement Authority 2011, Betts and Thompson 2017). Responding appropriately to young people in crisis has also featured in recent national Crisis Care Concordats (HM Government 2014, Welsh Government and Partners 2016). This is therefore a high priority area, which falls clearly within the remit of the HS&DR Programme in addressing the four areas of quality, access, organisation, and outcomes.

In the context of such high levels of need and in view of the urgency of this issue, it is vital that the care being provided to CYP in crisis is evidence-based and effective. However, little is known about how crisis services are organised and experienced, their outcomes or how they

are integrated within local systems. Evidence from this synthesis will create knowledge of immediate use to NHS managers, practitioners, carers and others involved in the care of CYP. The project will have an impact on services and practice by presenting its findings in accessible ways to health education and social services, to the public, to practitioners and educators.

EVIDENCE EXPLAINING WHY THIS RESEARCH IS NEEDED NOW

Despite the national and international prioritisation of crisis care for CYP no up-to-date data is available on the following aspects of the existing range of crisis responses: service organisation; effectiveness and young people's family members' and staff members' experiences. National guidance has been developed stating what ought to be present in dedicated services of this type, drawing upon what young people want. This includes care that: is immediately accessible, provided by the right professional and is understandable; is provided in settings which are acceptable and not in hospital whenever possible; and is characterised by continuity (Quality Network for Community CAMHS undated). However, we do not know how far these standards are being met and what their evidence base is. This contrasts sharply with what is known about crisis services for adults with mental health difficulties, which have been subjected to recent national audit (National Audit Office 2007) and quality inspection (Care Quality Commission 2015) and the evidence for which has recently been updated (Murphy et al. 2015, Paton et al. 2016).

From anecdotal evidence we know that the needs of some CYP in crisis continue to be met through attendance at emergency departments in district general hospitals, and via admission to paediatric or mental health inpatient units (for adults or young people). Additionally, points of initial access for CYP in crisis may happen within the broader social contexts in which they are embedded (e.g. school college, university, social media and the home) as well as through the criminal justice system (Welsh Assembly Government 2014), or in crisis services defined more broadly (e.g. police services, hospital emergency departments, and third sector crisis services) in addition to designated CAMHS crisis services. A number of alternative services provide responses for young people in crisis or distress outside of the NHS. For instance, school and university counselling services (e.g. Place2be school services), the YoungMinds text service, and online platforms such as Kooth (https://kooth.com/)., which provide online counselling and well-being support (including moderated peer-support forums, 7 days per week, until 10pm) for CYP. Youth Information Advice and Counselling Services (YIACS) are an example of a voluntary sector service for young people aged 13-25, with easily accessible mental health support in 170 centres across the UK (Youth Information Advice and Counselling Services 2014). The YIACS model allows young people immediate access to professional support and operates during evenings and weekends. New models of CYP mental health services are continually being developed across the UK, with examples including whole-system, schools-based, community-based and other models. Often these involve the integration of services across statutory and voluntary sectors (Parliamentary Office of Science and Technology 2018). Given the increasing emphasis on cohesive working across systems, there is a need to consider the evidence for all forms of crisis support provided across social, education and third sector organisational contexts, and the way in which these services might interact with clinical services when responding to crises in CYP.

INITIAL SEARCH AND THE NEED FOR AN EVIDENCE UPDATE

Collaborators in the Wales Centre for Evidence Based Care (Wales Centre for Evidence Based Care 2016) conducted an initial search of the existing literature across Medline and PSYCHinfo, to support this proposal and to establish the feasibility of conducting a full systematic review of the relevant evidence once this project is funded. Three, now outdated, systematic reviews were found which will inform this study but which also reveal a gap for a new review and synthesis. Shepperd et al. (Shepperd et al. 2008, Shepperd et al. 2009) brought together evidence for alternatives to inpatient mental health services for CYP and mapped current provision at the time. In this review 'crisis care' was included alongside other types of non-hospital care for young people with 'complex mental health needs'. Hamm et al. (Hamm et al. 2010) limited their review to emergency department interventions whilst Janssens et al. (Janssens et al. 2013) reviewed the organisation of mental health emergency care for CYP noting a lack of clarity around terminology. They, along with others (Lamb 2009), make a case for advancing the evidence base in a context in which descriptions of provision are unclear, and research is both underdeveloped and of variable quality.

The Cochrane review of crisis services for adults with mental health difficulties (Murphy et al. 2015) excludes children and young people but does, however, contain a helpful definition of 'crisis services':

> Any type of crisis-orientated treatment of an acute psychiatric episode by staff with a specific remit to deal with such situations, in and beyond 'office hours'. This can include mobile teams caring for patients within their own homes, or non-mobile residential programmes based in home-like houses within the community'.

Whilst this definition emphasises clinical service provision by those 'with a specific remit' to deal with psychiatric crisis, we derive a broader definition of crisis care, which is inclusive of non-clinical environments. For this proposed review, we consider a crisis service for CYP to be:

> The provision of a service in response to extreme psychosocial distress, which for children and young people may be provided in any location such as an emergency department, a specialist or non-specialist community service, a school, a college, a university, a youth group, or via a crisis support line.

Our search for evidence also uncovered additional studies of relevance, including evaluations in emergency departments (Wharff et al. 2012, Asarnow et al. 2009, Greenfield et al. 1995). Studies of this type have been excluded in reviews of exclusively community-based crisis services but are given here as examples of outputs which will be included in our proposed new review as they report the provision of crisis care meeting our definition reproduced above. Reflecting recent service developments, studies found in our search also include small-scale, single case, evaluations of a community intensive therapy team for children and young people in mental health need (Darwish et al. 2006) and into the work and impact of an intensive service embedded within a tiered CAMHS system (Duffy and Skeldon 2013, Duffy and Skeldon 2014). Our search also extended to the NIHR database, where we uncovered NIHR commissioned studies investigating mental health crisis services for adults (e.g. HTA 14/51/01, RPPG-0109-10078) and different ways of providing mental health care for young people (e.g. HS&DR 08/1304/062). To the best of our knowledge no comprehensive investigation of the type planned here has been (or is being) conducted into the specific provision and outcomes of

crisis care for CYP set in a wider systems context. This project will therefore fill a significant gap and generate important knowledge informing future commissioning and service provision.

AIM AND OBJECTIVES

Aim

The aim of this project is to synthesise the evidence related to the organisation and effectiveness of services that respond to CYP in crisis, and the evidence related to the experiences of people using and working in these services.

Objectives

1. To critically appraise, synthesise and present the best available evidence on the organisation of crisis services for children and young people aged 5 to 25 years, across education, health, social care and the third sector.
2. To determine the effectiveness of current models of mental health crisis support for children and young people.
3. To explore the experiences and perceptions of young people, families and staff with regards to mental health crisis support for children and young people aged 5 to 25 years.
4. To determine the goals of crisis intervention.

RESEARCH PLAN/METHODS

Quality and standards

The protocol for this evidence synthesis will be registered with PROSPERO. It will follow guidance for undertaking reviews in health care published by the Centre for Reviews and Dissemination (CRD) (2009) and will use methods informed by EPPI (Gough et al. 2017). This is an approach particularly recommended for reviews where the findings are destined for practical use by policymakers, managers and other decision-makers (Oliver et al. 2015).To ensure rigour the review will be reported following the PRISMA statement. Findings will be accessibly presented, with the help of a stakeholder advisory group and the NIHR Dissemination Centre, to ensure reach. This is an approach particularly recommended for reviews where the findings are destined for practical use by policymakers, managers and other decision-makers (Harden, 2006).

Search strategy

The search strategy will be comprehensive and designed to ensure that all relevant literature is obtained. Preliminary searches reflecting the objectives of the project to bring together evidence in the area of service organisation, effectiveness and experiences will be developed using Medical Subject Headings (MeSH) and text words using Ovid MEDLINE and PsycINFO. Comprehensive searches will then be run across health, social care and psychology databases from their inception. To ensure appropriateness of evidence, inclusion/exclusion criteria have been developed (Table 1):

Table 1: Inclusion/exclusion criteria

Inclusion	**Exclusion**
Relevant evidence on organisation of services, effectiveness and experiences specifically relating to support for CYP (aged 5-25) in emotional/mental health crisis. Evidence relating to crisis support for young people within any setting (including virtual settings). Studies published in the English Language only.	Evidence relating to adult mental health services, where there is no designated provision for young people. Evidence relating to general/non-crisis/long-term support. Evidence from non-OECD countries.

In addition to MEDLINE and PsychINFO, databases to be searched included EMBASE, Cumulative Index of Nursing and Allied Health Literature (CINAHL), ERIC, OVID EmCare, and Applied Social Sciences Index and Abstracts (ASSIA). We will also search ProQuest Dissertations and Thesis, and the Cochrane Central Register of Controlled Trials (CENTRAL). As an amendment to or original protocol, we will include the following databases to ensure breadth Scopus, Sociological abstracts, Social Services Abstracts and Justice abstracts. To identify published resources that have not yet been catalogued in the electronic databases, recent editions of key journals will be hand-searched. Reference lists of included studies will be scanned, experts contacted, and forward citation tracking performed using ISI Web of Science. The key Health Advisory Service publication *Together We Stand* was a thematic review published in 1995, defining the shape and strategy for mental health services for children and young people and so this date was added as a limit set for the search.

Preliminary database searching using combinations of methods described above has already been carried out, as part of an initial scoping undertaken in preparation of this proposal.

1 child$.ti,ab. (328686)
2 adolescen$.ti,ab. (127395)
3 1 or 2 (400791)

4 CAMHS.ti,ab. (472)
5 exp Mental Health Services/ (24177)
6 4 or 5 (24353)

7 crisis.ti,ab. (16784)
8 (crisis adj2 care).ti,ab. (173)
9 (crisis adj2 services).ti,ab. (258)
10 7 or 8 or 9 (16784)

11 3 and 6 and 10 (132)

This initial search strategy once the project commences will build on this, and it is anticipated that the following keywords will be used, in various combinations, to inform the systematic search process:
Child$ OR young people OR youth OR adolescent$ OR Teen$ OR young adult$ AND mental health OR mental illness OR psychiatric illness AND distress OR crisis$ OR harm OR psychiatric emergency OR suicide$.

Reflecting EPPI Centre methods (Gough et al. 2017), searches will also be conducted for non-research material (e.g., policies, expert opinion, case studies) using transparent approaches (Mahood et al. 2014). We will search sites such as OpenGrey, Ethos and websites of professional organizations for English language citations. Taking advice from our stakeholder advisory group (SAG) relevant websites will be searched to ensure all relevant items are located. Candidate websites for searching include:

https://www.studentminds.org.uk/
https://youngminds.org.uk
https://www.barnardos.org.uk/
https://www.mind.org.uk/
https://www.rethink.org/
https://www.place2be.org.uk/
http://www.hafal.org/

Screening

All citations retrieved via all modes of searching will be imported into the reference management software EndNote, where duplicate references will be removed. All remaining citations will be imported into the software programme Covidence where titles and abstracts will be read by two members of the research team and considered against the topic inclusion criteria. Where any doubt exists, the full text will be retrieved. Disagreements will be resolved through discussion with a third reviewer.
To achieve a high level of consistency reviewers will screen each retrieved citation meeting topic inclusion criteria using a purposely designed form. In all cases the full text will be retrieved for all citations at this stage. Authors of research studies will be contacted by the project team if further information is required. All English language items relating to the provision and receipt of crisis care for CYP (aged 5-25) will be included at this stage, regardless of quality.

Quality appraisal

Following searching and screening, information from research publications will be independently assessed for methodological quality by two reviewers using design-specific tools developed by CASP (https://casp-uk.net/). Alternative tools, reflecting the specific design and methods used in individual research outputs, will be used as necessary if suitable CASP tools are not available. Any disagreement on quality will be resolved through discussion with a third reviewer. At this stage all research items will be included other than those which are not appropriate. Non-research evidence (e.g. policies, reports, expert opinion pieces, case studies.) will not be subjected to quality appraisal.

Data extraction

All data will be extracted directly into tables and will follow the format recommended by the CRD (Centre for Reviews and Dissemination 2009). One reviewer will extract the data and a second reviewer will independently check the data extraction forms for accuracy and completeness. Any disagreements will be noted and resolved by consensus within the review team.

Data analysis and synthesis

Researchers informed by the EPPI-Centre approach recognise that different strategies exist for the analysis and synthesis of data (Gough et al. 2017). The synthesis in this review will have both configurative (involving the exploration of potentially heterogeneous materials) and aggregative (involving the pooling of data, where possible) elements (Gough et al. 2012). For intervention studies meta-analyses of data will be performed where possible. Tests for heterogeneity will be applied. Where statistical pooling is not possible the findings, along with data from non-intervention quantitative studies, will be thematically presented (Thomas and Harden 2008). The software programme NVivo will be used to help manage this process. Qualitative data, and data from non-research items, will be presented in configurative fashion using a thematic approach again assisted by NVivo. Themes will be developed inductively based on close reading of the content of all items included.

Assessing confidence

The strength of findings from the meta-analysis of intervention studies will be assessed using the GRADE approach (Guyatt et al. 2008). The strength of synthesised qualitative and non-intervention findings will be assessed using the CerQual approach (Lewin et al. 2015). The original CerQual approach was designed for qualitative findings, but we will use a process previously used by members of this research team in HS&DR 11/1024/08 (Hannigan et al. 2015), in HS&DR 08/1704/211 (Edwards et al. 2014) and which is currently being used in HS&DR 17/100/15 in using CerQual for the assessment of the confidence of synthesised findings from surveys and other non-intervention quantitative studies.

Overall summary

An overarching summary will bring all elements together. It will present key themes arising from this project as a whole and do so in accessible manner to ensure reach. Help with this will be sought from our stakeholder advisory group and from the NIHR Dissemination Centre. Both the helpful and less helpful aspects of crisis care for CYP will be identified, along with evidence relating to service organisation, effectiveness and experiences. Implications will be stated, and recommendations made for future research.

DISSEMINATION AND PROJECTED OUTPUTS

The main output from this project will be an open access NIHR Journal Library report, detailing our comprehensive, rigorously conducted, synthesis of research and other evidence relating to service organisation, effectiveness and experiences in the context of crisis care for children and young people. We will work with the NIHR Dissemination Centre to share our findings and to make sure they have maximum benefit and will follow NIHR guidance by paying close attention to stakeholder engagement, format, opportunities, context and timing (National Institute for Health Research undated). Our stakeholders are policymakers, commissioners, managers and

practitioners in field of child and adolescent mental health, along with young people using services and their families. We will engage with representatives via a stakeholder advisory group with which we will develop a publicity and dissemination strategy. The stakeholder advisory group will be independently chaired by Professor Michael Coffey from Swansea University. Agreement has been reached for a representative from Place2Be to join the SAG alongside a consultant child and adolescent psychiatrist, teacher, nurse consultant and social care worker. Liz Williams and Mair Elliot, as service user and carer co-applicants, will also support the work of identifying appropriate dissemination strategies.

In our main output (the full and final report for the NIHR 'Health Services and Delivery Research' journal) we will provide a clear statement of the implications of what we have found for services and practice and offer explicit recommendations for future research where knowledge gaps are uncovered. We also anticipate working with the NIHR Dissemination Centre to promote our findings through NIHR Signals, Highlights and Themed Reviews where opportunities allow. As we have done in other NIHR studies on which members of this team have worked (e.g., HS&DR 11/1024/08) we will produce a high-quality accessible summary for publicising online, via social media and in paper form. Papers reporting main findings will be published in gold open access form in relevant world-leading journals, tailored to audiences; candidate titles include those in the BioMed Central series, including *BMC Psychiatry*, *BMC Health Services Research* and *Child and Adolescent Psychiatry and Mental Health*. We will also present findings at key stakeholder conferences in the mental health field and take opportunities to provide briefings for key stakeholder organisations. We will create an opportunity to directly engage with stakeholders via an end of project dissemination event, which will be modelled on single-day impact events in which members of the team have previously participated (e.g., in HS&DR 11/2004/12). Throughout the study we will use social media and a project website to promote wider interest in our work, and make opportunities to engage with the public via regular fora such as Cardiff PublicUni (https://en-gb.facebook.com/PUBlicengagementcardiff/). We will offer posts for the Cardiff University mental health blog (http://blogs.cardiff.ac.uk/mental-health/), the DECIPHer blog (http://decipher.uk.net/blog/), the Crisis Care Concordat blog https://www.crisiscareconcordat.org.uk/blog/) and an article for The Conversation (http://theconversation.com/uk). We will request a blogpost on the Mental Elf Blog (https://www.nationalelfservice.net/mental-health/), and will continue using our networks to share what we find as widely as possible. With guidance from our SAG we also plan on creating an animation with guidance for parents and young people, with help from a company such as Cardiff based animators JammyCustard (https://www.jammycustard.co.uk/), who have previously produced instructive videos for Cardiff University. The animation will summarise in an accessible form the project overview and objective outcomes, be freely available online and will be publicised and shared as widely as possible via established networks. Such creative modes of dissemination provide engaging outputs which are more widely accessible to members of the public and are used increasingly by researchers in order to disseminate research findings (e.g., in previous NIHR-funded research such as the EQUIP programme, RP-PG-1210-12007). We will keep these approaches to dissemination under active review and will continue to be advised by NIHR Dissemination Centre colleagues and our stakeholder advisory group as appropriate.

In all our outputs, where our findings support this, we will make recommendations on how CYP crisis services should be organised, providing guidance to commissioners, managers and

practitioners concerned with improving services and the user and carer experience. We anticipate that the knowledge we create will have a significant impact on health service organisation and delivery, informing action (e.g., via future NICE guidance and other initiatives) to help improve the outcomes following crisis in CYP. We also intend this project to be the starting point for a larger programme of related research in its field.

PLAN OF INVESTIGATION AND TIMETABLE

We are able to directly begin work on this project on 01 January 2020 as all members of our team are in place, and as we are not required to secure independent NHS research ethics committee approval, due to the nature of the study.

Our projected timetable is as follows:

	-3 Oct 19	-2 Nov 19	-1 Dec 19	1 Jan 20	2 Feb 20	3 Mar 20	4 Apr 20	5 May 20	6 Jun 20	7 Jul 20	8 Aug 20	9 Sep 20	10 Oct 20	11 Nov 20	12 Dec 20	13 Jan 21	14 Feb 21	15 Mar 21	+1 Apr 21
Notification of award																			
Project set-up (refine protocol, agree subcontracts, comms)																			
Populate stakeholder advisory group (SAG)																			
Project begins																			
SAG meeting																			
Searching and screening for evidence																			
Quality appraisal and data extraction																			
Data analysis, data synthesis and assessing confidence																			
Summary and writing up																			
End of project event																			
Project ends																			
Report to funder																			

PROJECT MANAGEMENT

We are a strong and balanced research team well-placed to complete this project on time and to a high standard. We have expertise in: leading and managing NIHR-funded evidence syntheses to completion (Nicola Evans, Ben Hannigan and Deborah Edwards); mental health services and research (Nicola Evans, Ben Hannigan and Rhiannon Lane); evidence review and synthesis (Judith Carrier); and lived experience (Liz Williams and Mair Elliot). The project manager for this study, Deborah Edwards, is a health services researcher and systematic reviewer with experience of managing complex projects. As the researcher with the greatest time attachment to the project her responsibilities will include the day-to-day management of the study. Oversight and overall responsibility for the project will fall to the chief investigator, Nicola Evans, who is an experienced mental health services researcher and who (with Ben Hannigan, Deborah Edwards and others) has successfully completed a competitively funded systematic review in the mental health field in the past (HS&DR 11/1024/08) and who is a co-investigator on the ongoing HS&DR 17/09/08.

An independently chaired stakeholder advisory group will be populated by representatives drawn from the children and young people's mental health field, and will meet with the project team, in Cardiff, at three strategic time points in the life of the study (see plan of investigation above). Professor Michael Coffey, Swansea University has agreed to chair. As an important part of the work of this group will advising on dissemination, impact and engagement details about membership have been given above (see 'Dissemination and projected outputs'). A first meeting will be scheduled at the commencement of the project, to refine search terms and strategies for the evidence review. A second meeting will take place at the completion of evidence searching and screening. A final meeting will take place at the commencement of the whole-project synthesis and report writing phase, where progress and plans for dissemination and maximising impact will be discussed. The costs attached to this project include those associated with the convening and running of the advisory group.

Using a model successfully used in HS&DR 11/1024/08 members of the project team will initially maintain weekly contact via email, telephone and/or videoconference to ensure that packages of work are distributed according to team members' identified responsibilities, and to ensure that work plans proceed according to agreed schedules. Close monitoring of overall progress against milestones will ensure project completion on time and within budget.

APPROVAL BY ETHICS COMMITTEES

No ethics approval is needed, as this is an evidence synthesis.

PATIENT AND PUBLIC INVOLVEMENT

We have worked with Liz Williams, who identifies herself as a carer of young adults with mental health issues, and Mair Elliot who identifies herself as an expert patient in the development of this project proposal. This is clearly an area of importance for people who want to access services for CYP in psychological crisis. Both Liz Williams and Mair Elliot will be co-applicants on this study and will contribute to all stages of the project, including the selection of papers, critical review and dissemination of findings. Discussions about the focus of the project were also held with clinical colleagues working in local CAMHS in the development of the proposal.

The project will be supported by a stakeholder advisory group which will contain a consultant child and adolescent psychiatrist, teacher, social care worker and representation from Place2Be a third sector organisation that provides mental health support to children in schools.

Our engagement with patients and the public reflects commitments and experiences demonstrated in other studies on which members of this project team have worked. Examples include: HS&DR 11/1024/08 (the RiSC study, an evidence synthesis into 'risk' for young people in mental health hospital which actively involved young people as stakeholders in shaping the study's progress); HS&DR 11/2004/12 and HS&DR 13/10/75 (COCAPP and COCAPP-A which investigated care planning and care coordination in mental health services, in which service users and carers collaborated as members of lived experiences advisory groups and in which people with experience of mental health difficulties worked as researchers conducting qualitative interviews with service user participants); and Health and Care Research Wales SC-12-03 (Plan4Recovery, which involved people with experience of using mental health services as members of a lived experiences advisory group and as qualitative interviewers).

EXPERTISE AND JUSTIFICATION OF SUPPORT REQUIRED

We are a strong and balanced team. Nicola Evans is an experienced mental health services researcher with a background in children and young people's mental health nursing. She has contributed to a previous NIHR evidence synthesis (HS&DR 11/1024/08), and is currently a co-investigator on HS&DR 17/09/08 (which is developing a model for high quality service design for children and young people with common mental health problems). Ben Hannigan is an experienced chief investigator currently leading HS&DR 17/100/15. He led the RiSC evidence synthesis into risks for young people in inpatient mental health settings (NIHR HS&DR 11/1024/08) and was a co-investigator on HS&DR 11/2004/12, HS&DR 13/10/75) and Health and Care Research Wales project SC-12-03. He will mentor and support Nicola Evans, contributing across the evidence synthesis, writing up and dissemination. Deborah Edwards is an experienced health services researcher who has successfully completed multiple systematic reviews, including project managing HS&DR 11/1024/08. She will project manage this study, and contribute to the evidence synthesis, writing up and dissemination. Judith Carrier leads the Wales Centre for Evidence-Based Care, and is an experienced systematic reviewer. Rhiannon Lane uses social scientific ideas to understand the mental health field, and has training in evidence synthesis methods. Elizabeth Gillen, an information specialist, will conduct the search of the literature.

Full economic costs have been calculated, as outlined above. As chief investigator Nicola Evans has been costed at 40% fte commitment to the project. She will be supported by Deborah Edwards as project manager (40% fte) and Ben Hannigan (10%). Judith Carrier will act as lead reviewer (20%), and Rhiannon Lane will contribute as reviewer (20%). Liz Williams and Mair Elliot have been costed for 15 days each, at Involving People recommended rates of £150/day, equivalent to 5.5% fte each. Elizabeth Gillen, an information specialist has been costed for 15 days.

This division of labour and allocation of time is appropriate for a study of this nature. Additional, essential, non-staff costs included are: travel, including to three project/steering group meetings plus refreshments for the same; a sum to cover the costs of interlibrary loans; software (Covidence); attendance at two conferences, one of which is anticipated to be the International

Mental Health Nursing Research Conference; The other is the International Youth Mental Health conference; a sum for the planned end of project impact event, to which key stakeholders from the children's mental health field will be invited; a sum for the production and distribution of our accessible summary; a sum to cover the cost of producing an animation; and a sum to cover author processing charges for two gold open access publications. Support for these latter costs is requested to maximise dissemination, reach and impact.

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