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

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Glossary and abbreviations

ALPHA	Advice Leading to Public Health Advancement
ANOVA	Analysis of Variance
AoR	Adjusted Odds Ratio
AMED	Allied and Complimentary Medicine Database
ASSIA	Applied Social Sciences Index and Abstracts Database
BDI	Beck Depression Inventory
BSI	Brief Symptom Inventory
CAFAS	Child and Adolescent Functional Assessment Scales
CAMHS	Child and Adolescent Mental Health Service
CAPI	Childhood Acuity Psychiatric Illness Scale
CARES	Child & Adolescent Rapid Emergency Stabilisation
CARTS	Comprehensive Assessment and Response Training System
CASP	Critical Appraisal Skills Programme
CBCL	Child Behaviour Checklist
CBQ	Conflict Behaviour Questionnaire
CCPEP	Children's Comprehensive Psychiatric Emergency Programme
CES-D	Centre for Epidemiological Studies Depression Scale
CGAS	Children's Global Assessment Scale
CENTRAL	Wiley Cochrane Central Register of Controlled Trials
CERQual	Confidence in the Evidence from Reviews of Qualitative Research
CI	Confidence Interval
C:	Control Group
CIW	Crisis Intervention Workers
CINAHL	Cumulative Index of Nursing and Allied Health Literature Database
CSQ-8	Client Satisfaction Questionnaire
CRD	Centre for Reviews and Dissemination
CRT	Crisis resolution team
CYP	Children and Young People
DECiPHER	Development, Evaluation, Complexity and Implementation in Public Health Improvement
ERFUT	The Emergency Room Follow-up Team

EPPI Centre	Evidence for Policy and Practice Information and Co-ordinating Centre
ERIC	Education Resources information Center Database
EThOS	E-theses Online Service
FACES II	Family Adaptation and Cohesion Scales – Version II
FACES III	Family Adaptation and Cohesion Scales – Version III
FES	Family Empowerment Scale
FFS	Family, Friends, and Self Scale
FBCI	Family-Based Crisis Interventions
FISP	Family Interventions for Suicide Prevention
FFS	Family, Friends, and Self Scale
GRADE	Grading of Recommendations, Assessment, Development and Evaluation
GSI-BSI	Global Severity Index of the Brief Symptom Inventory
HASS	Harkavy Asnis Suicide Scale
HEARTSMAP	an emergency psychosocial assessment and management tool
HCP	Healthcare Professional
HMIC	Health Management Information Centre
HoNOSCA	Health of the Nation Outcome Scales for Children and Adolescents
HS&DR	Health Services Delivery and Research
HTA	Health Technology Assessment Programme
I:	Intervention
IRR	Incident Rate Ratio
IS	Impulsivity Scale
KALM	Kids Assessment Liaison for Mental Health
LFSS	Lubrecht's Family Satisfaction Survey
LOS	Length of Stay
MEDLINE	Medical Literature Analysis and Retrieval System Online Database
MeSH	Medical Subject Headings
MST	Multi-systemic Therapy
NEAT	National Emergency Access Target
NHS	National Health Service

NIHR	National Institute for Health Research
OR	Odds Ratio
PEACE	Prevention of Escalating Adolescent Crisis Events
PHSCS	Piers-Harris Children's Self-Concept Scale
PQDT	Proquest Dissertation and Thesis
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PROSPERO	International Prospective Register of Systematic Reviews
PsycINFO	Psychological Information Database
RAID	Rapid Assessment Interface Discharge
RFL-A	Reasons for Living Inventory for Adolescents
RSES	Rosenberg Self-esteem Scale
RTC	Residential Treatment Centre
SAG	Stakeholder Advisory Group
SSBS	Spectrum of Suicidal Behaviour Scale
SURE	Specialist Unit for Review Evidence
TAU	Treatment As Usual
UK	United Kingdom
VMD	Visits for Mental Disorders
WoS	Web of Science
YIACS	Youth Information Advice and Counselling Services

Grey literature: For the purpose of this evidence synthesis this covers UK only government /organisational publications or policy/guidance documents providing relevant information.

Report: A document (paper or electronic) supplying information about a particular study or crisis service. For the purposes of this evidence synthesis this covers journal articles and grey literature.

Record: The title or abstract (or both) of a report indexed in a database or website.

Study: An investigation, such as a randomised controlled trial, that includes a defined group of participants and one or more interventions and outcomes. A "study" might have multiple reports.

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Abstract

Background

The mental health care for children and young people (CYP) is a rising concern with one in six children aged 5-19 in England having a probable diagnosable mental disorder. Care for CYP in crisis is known to be delivered by multiple agencies using a range of approaches.

Objectives

The review objectives were to critically appraise, synthesise, and present the best available international evidence related to crisis services for CYP aged 5 to 25 years, specifically looking at the organisation of crisis services across education, health, social care and the third sector the experiences and perceptions of young people, families, and staff; to determine the effectiveness of current models, and the goals of crisis intervention.

Methods

All relevant English language international evidence was sought specifically relating to the provision and receipt of crisis support for CYP aged 5-25 from January 1995 to January 2021. Comprehensive searches were conducted across 17 databases, supplementary searching was undertaken to identify grey literature. Two team members appraised all the retrieved research reports (except grey literature) using critical appraisal checklists. A separate analysis was conducted for each objective. Confidence in research findings was assessed using the Grading of Recommendations, Assessment, Development and Evaluation and the Confidence in the Evidence from Reviews of Qualitative Research approaches.

Findings

One hundred and thirty-eight reports were used to inform this evidence synthesis; 39 descriptive accounts of the organisation of crisis services (across 36 reports), 42 research studies (across 48 reports) and 54 grey literature documents. The organisation of crisis services has been categorised as follows: triage/assessment-only; digitally mediated support approaches; intervention approaches and models. When looking at experiences of crisis care, four themes were identified which were:

barriers and facilitators to seeking and accessing appropriate support; what children and young people want from crisis services; children's, young people's, and families' experiences of crisis services; and service provision. In determining effectiveness, the findings are summarised by type of service and were generated from single heterogenous studies. The goals of a crisis service should be to keep CYP in their home environment as an alternative to admission; to assess need and to plan; to improve CYP and/or their families' engagement with community treatment; to link CYP and/or their families to additional mental health services as necessary; to provide peer support; to stabilise and manage the present crisis over the immediate period; and to train and/or supervise staff.

The key limitation of this review was that much of the literature was drawn from the USA. Due to the differences between USA and UK in terms of commissioning and delivering services, approaches to crisis care operating in the USA may not be directly applicable to the UK.

Future work
As only three research studies included in this evidence synthesis had been completed in the UK, a clear case exists for the commissioning of new high-quality studies to generate knowledge about efficacy and acceptability of crisis care approaches operating in the UK.

Future work
Future empirical research in this area is planned.

Study Registration
The project's PROSPERO registration number is CRD42019160134

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Plain English summary

We wanted to know more about services for children and young people in mental health crisis. The aim was to investigate what research on this topic has already been completed and we were specifically interested in: what people think of crisis care; the goals of crisis services; and whether crisis care is helpful. In our evidence synthesis we included research as well as other documents including policies.

We used a systematic approach to find relevant research from January 1995 to January 2021 and worked with a stakeholder advisory group (consisting of people able to provide expertise through personal experience, practitioners, and other researchers) whose members helped us locate relevant published material. This group also helped us find important reports and websites. We used a clear process to decide whether to include each research paper found, reflecting the aim of our study and whether the research had been completed to a good-enough standard.

We included 48 primary research articles, 36 descriptive accounts of different crisis services and 54 other types of documents. We categorised crisis services as being organised in the following ways: triage/assessment-only; digitally mediated support approaches; intervention approaches and models. When looking at experiences of crisis care, we found literature on the following topics: barriers and facilitators to seeking and accessing appropriate support; what children and young people want from crisis services; children's, young people's and families' experiences of crisis services; and service provision. As the included studies were different in nature, we were unable to clearly determine what models of crisis care work. We found seven clear goals of crisis intervention. These were that: crisis services assess and plan care; they stabilise and manage the current crisis period; they keep children and young people in their home environment; they help children and young peopleand their families to engage with community treatment; they help children and young people and their families access additional mental health services; they help access peer support; they train and supervise other staff.

Scientific summary

Background

The mental health of children and young people (CYP) is a rising concern with one in six children aged 5-19 in England having a probable diagnosable mental disorder. A recent National Assembly inquiry found a 100% increase in demand for CYP mental health services in Wales between 2010 and 2014. With resources stretched and CYP often waiting lengthy periods to be seen, increasing numbers of CYP are seeking help at a point of crisis. During periods of crisis, it is vital that care is timely, effective, and based on evidence. Crisis care for CYP has become a national and international policy priority, with substantial funding allocated to the development of crisis services. The needs of young people in crisis can be met through clinical services such as local child and adolescent mental health teams, crisis teams, accident and emergency departments, or through school counselling, 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. Different forms of crisis support from health, education, social care and third sector are available for CYP, with considerable regional variability in the way such care is delivered. However, little is known about how these different services are organised or experienced, whether they are effective, or how they are integrated within their local system contexts.

Objectives

The review objectives were to critically appraise, synthesise, and present the best available international evidence related to crisis services for CYP aged 5 to 25 years, specifically looking at:

1. The organisation of crisis services across education, health, social care and the third sector.
2. The experiences and perceptions of young people, families, and staff.
3. To determine the effectiveness of current models.
4. To determine the goals of crisis intervention.

Methods

The protocol was crafted following the guidance published by the Centre for Reviews and Dissemination at the University of York. The protocol was then registered with the International Prospective Register of Systematic Reviews.

All relevant English language international evidence was sought specifically relating to the provision and receipt of crisis support for CYP aged 5-25 from January 1995 to January 2021. All records were considered that related to the effectiveness, organisation, and goals of services that respond to CYP in crisis, and to the experiences of people using and working in these services. At a first stakeholder advisory group help was obtained in developing a search strategy, ensuring appropriate search terms were being used and assisting in the locating of otherwise unidentified sources of evidence, particularly grey literature. Types of evidence sought included quantitative, and qualitative research, and grey literature.

Following the development and testing of a search strategy, comprehensive searches were conducted across 17 databases: MEDLINE ALL; PsycINFO; EmCare; AMED; HMIC; CINAHL; ERIC; ASSIA; Sociological Abstracts; Social Services Abstracts; PQDT Open; Scopus; Web of Science; Open Grey; CENTRAL; EThOS; and Criminal Justice Abstracts. Supplementary searching was undertaken to identify grey literature and additional research material. This included use of online searches, and the targeted searching of organisational websites and journal tables of content. Reference lists of included studies were scanned, and forward citation tracking performed using Web of Science.

The title and abstract of each record were reviewed by two members of the team to establish if that paper was relevant, with a third member arbitrating if there was no consensus. The full texts of each record were accessed where a decision about relevance could not be made on abstract alone. All records deemed relevant on initial screening were then subject to a further review by two members of the team, again using a third team member for arbitration. A specifically designed form was used to guide this process.

Two team members appraised all the research reports that had been identified through screening, using critical appraisal checklists. Where there were disagreements about quality, a third team member arbitrated. None of the grey literature was appraised for quality.

Demographic data from the appraised records were extracted into tables and checked by a second team member. All appraised research material and relevant extracts from the grey literature was managed using the NVIVO-12^{TM} software from where it was thematically analysed.

A separate analysis was conducted for each objective. For objective one, the types of crisis services/responses were categorised and summarised after consultation with the stakeholder advisory group. Next, thematic summaries that explored organisation of crisis services were conducted.

To meet objective two a thematic synthesis was conducted to explore the experiences and perceptions of young people, their families, and staff with regards to mental health crisis services. The confidence in the synthesised findings from the qualitative research to address this objective was assessed by two reviewers using the Confidence in the Evidence from Reviews of Qualitative Research approach.

The third objective was to determine the effectiveness of current models of mental health crisis services. Due to the heterogeneity of the included intervention studies, meta-analyses could not be performed, and thematic summaries were therefore conducted. The confidence in the certainty of the synthesised findings from the quantitative evidence was assessed by two reviewers using the Grading of Recommendations, Assessment, Development and Evaluation approach.

The final objective was to determine the goals of crisis intervention, and this was achieved using thematic summaries.

Findings

One hundred and thirty-eight reports were used to inform this evidence synthesis; 39 descriptive accounts on the organisation of crisis services (across 36 reports), 42 research studies (across 48 reports) and 54 grey literature documents.

For objective one, the organisation of crisis services were categorised as follows: triage/assessment-only; digitally mediated support approaches; intervention approaches and models. There were triage/assessment approaches provided for CYP who presented at emergency departments, within educational settings, via telephone triage, and at out of hours mental health services. Digitally mediated support approaches were facilitated through telephone, text-based or online facilities. A wide variety of different intervention approaches have been described ranging from intervention approaches that started in the emergency department then moved to outpatient services, inpatient care through hospitals or residential treatment centres, home-based programmes, child and adolescent mental health based services, using telepsychiatry or via a community resource such as mobile outreach through to school hospital partnerships and generic walk-in crisis services provided by voluntary organisations. The thematic summaries on the organisation of crisis services highlighted four themes. These were recommendations for initial assessment in the emergency department, the importance of providing home or community-based crisis support; places of safety; and general characteristics of a crisis response. Guidance relating to how assessments are carried out in the emergency department focused on risk assessments and broadly follow NICE guidelines. These should be undertaken in separate age-appropriate areas and there should be clear follow-up pathways. Assessments should be undertaken by skilled professionals, with expertise within this client group, who receive appropriate training. Where possible, crisis care should be offered as close to home as possible, so either at home or in community-based locations, recognising that families make an important contribution to the planning and provision of care. Places of safety need to be appropriately staffed, again with experienced and trained professionals, ideally in a dedicated space so that the use of adult mental health facilities and police cells can be avoided. In general, crisis services should provide a timely response, be age-appropriate, have a single point of access, be accessible and available 24/7, be responsive and needs led, involve multi-agency working, be staffed by suitably

qualified and experienced professionals, involve crisis planning and risk assessment using evidence-based practice.

For objective two, four themes were identified which were: barriers and facilitators to seeking and accessing appropriate support; what CYP want from crisis services; children's, young people's, and families' experiences of crisis services; and service provision. Twenty-severn synthesis summary statements were generated, of which only two were judged as having a high degree of confidence and 15 were moderate using the Confidence in the Evidence from Reviews of Qualitative Research approach. The remainder were low or very low. The statements of high confidence related to what CYP want from crisis services which were centred around the need for different forms of support and pathways to services. This included support via telephone (via a direct line, with out of hours availability and staffed by trained counsellors) as well as via text and email.

For objective three, the findings are summarised by type of service and were generated from single heterogenous studies. Therefore, no meta-analysis was possible. Outcomes across the studies were graded as moderate for randomised controlled trials, and very low for observational studies. Crisis services initiated within emergency departments are effective in reducing depression and improving family functioning or empowerment. Children and young people receiving these services are more likely to be referred to and attend intensive outpatient care and are less likely to be hospitalised. They report greater satisfaction with services. Health care staff are satisfied with some aspects of mental health crisis services that they provide but are generally dissatisfied with the lack of out-of-hours availability. Telepsychiatry initiatives are effective in decreasing length of stay and costs, staff satisfaction is improved, and parents report high levels of satisfaction. When a dedicated mental health team is implemented in the emergency department, CYP are less likely to be hospitalised, length of stay is decreased, and CYP are more likely to return home. Carrying out assessment approaches within the emergency department bring success in prompting referral to community services. CYP receiving mobile crisis services are less likely to attend the emergency department post-discharge.

Home or community-based programmes are effective in reducing depression, psychiatric symptoms, the number of suicide attempts and completed suicides. Moreover, home and community-based programmes can improve self-concept, family adaptability or cohesion and are more cost-effective. CYP receiving these services are more likely to remain in the community post-treatment and less likely to be hospitalised, reporting greater satisfaction with services. CYP receiving outpatient mental health programmes are less likely to be hospitalised and experience quicker access to additional resources. An association also exists between parental satisfaction and increased adherence to outpatient treatment.

Specific inpatient programmes for crisis care for CYP are effective in reducing psychiatric symptoms, and suicidality and improving psychosocial functioning. Both crisis programmes within residential treatment centres and inpatient programmes are effective in reducing length of stay and costs.

No completed suicides or suicide attempts are reported within educational settings when assessment approaches are introduced. A variety of referral destinations are noted and in some cases referrals to more acute levels of care are avoided, and levels of staff satisfaction are high.

There were seven clear goals of crisis intervention identified for objective four. These were: to keep CYP in their home environment as an alternative to admission; to assess need and to plan; to improve CYP and/or their families' engagement with community treatment; to link CYP and/or their families to additional mental health services as necessary; to provide peer support; to stabilise and manage the present crisis over the immediate period; and to train and/or supervise staff.

Summary

. Despite multiple approaches to the organisation and provision of mental health crisis care, there was moderate evidence that CYP and their families do not know how to access such services and may not be eligible due to threshold criteria. Even when accessing services some CYP are not able to talk whilst they are in crisis and there is high quality evidence that alternative methods of communicating such as text, phone and online provision is welcomed. There is moderate evidence that CYP

would like access to peers at this time or access age-appropriate out-of-hours services. Attendance at an emergency department was the default service given the lack of alternatives and this is experienced as stressful for the CYP, noisy, busy and generally unsuitable. There was evidence to suggest that much of the care provided in an emergency department was effective: improvement of family functioning following a crisis service; intervention initiated in the emergency department; increased referral for the CYP to intensive outpatient care post emergency department; increased satisfaction with crisis services; reduction in psychiatric symptoms and improving psychosocial functioning; no increase in rate of attendance for crisis care after being seen in emergency department. Being seen in an emergency department for a mental health crisis is not the policy preference in the UK.

Limitations

The literature that informed this evidence synthesis was largely drawn from the USA. Any models or approaches of crisis care operating in the USA may not be directly applicable to the UK given the differences in the way healthcare is commissioned and delivered in the USA compared to the UK. Aside from that issue, a wide range of crisis provision was reported across many different settings which made comparison of these models difficult. It was therefore not possible to determine their relative efficacy, meaning that only general conclusions can be drawn.

Future work

As only three research studies included in this evidence synthesis had been completed in the UK, a clear case exists for the commissioning of new high-quality studies investigating discrete aspects of service delivery of crisis care in the UK, to generate knowledge about efficacy and acceptability of these models. It would also be helpful to investigate models of peer support during crises given this was welcomed by CYP.

Attempts could be made to discern the distinct needs of particular subgroups of CYP and which types of crisis intervention models are more effective for them. This is particularly pressing given the proliferation of service responses to crisis but the

relative absence of a programme of research to evaluate the varying models on offer.

Findings suggest that support prior to the point of reaching crisis point is important, but further research needs to identify precisely which kinds of community support would be most effective in preventing CYP from reaching crisis and/or feeling the need to attend an emergency department.

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Chapter 1: Background and rationale

One in six children aged 5-19 in England has a probable mental disorder[1] and a recent National Assembly inquiry found a 100% increase in demand for services in Wales between 2010 and 2014.[2] With resources stretched and young people often waiting lengthy periods to be seen, increasing numbers of 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[2,3] and internationally[4] with substantial funding allocated to the development of crisis services.[5] 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 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.[6] 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.[7] In the context of local services they work alongside community CAMHS teams, sometimes other types of specialist CAMHS such as those providing assertive outreach, emergency departments and paediatric wards. In the larger ecology of service provision crisis responses are also provided through general National Health Services (NHS) provision (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, their 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,[8–10] 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 (in the UK context) 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.[11] There have also been increasing reports of mental health problems and self-harm from teachers[12] and from third sector organisations in frontline contact with children and adolescents.[13]

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.[4] Recent guidance from the National Assembly for Wales[7] 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.

Why is the research important?

This project was designed to 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[4] and is a priority for future UK mental health research.[14] One in 6 children aged 5-19 (12.8%) in England has a mental health difficulty[1] with services struggling to meet demand as need rises.[3,7] 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. There was a 68% increase in self-harm incidence among girls aged 13-16 in England between 2011 and 2014.[15] There are a number of organisations that might respond to CYP at these times of mental health crisis, including children's mental health services, hospital emergency departments, pastoral or counselling staff in schools, third sector organisations and the police. The aim of his review is to investigate the evidence underpinning such responses. Since the development of the initial proposal for this study, the world has been affected by the COVID 19 pandemic. Initial studies have found that the mental health of CYP has been affected by the stress associated with the impact of both COVID itself and lockdowns, particularly in those CYP with specific additional vulnerabilities such as pre-existing mental health conditions, or being quarantined due to infection/fear of infection.[16] However, this study pre-dated the COVID pandemic and is not drawing on any of the COVID related literature.

In England, out of hours and crisis services for young people are a policy priority[3,17] with model service specifications including expectations that NHS trusts provide round the-clock home-based crisis care.[18] In Wales, crisis care is also a priority[19] with new CAMHS investment including money for urgent mental health interventions.[5,20] Intensive 'hospital at home' services have featured in Scottish guidance,[21] and in Northern Ireland calls have been made for similar investments.[22,23] Responding appropriately to young people in crisis has also featured in recent national Crisis Care Concordats.[24,25] 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. Evidence from this synthesis created knowledge of immediate use to NHS managers, practitioners, carers, and others involved in the care of CYP. The project was designed to have an impact on services and practice by presenting its findings in accessible ways to health education and social services, the public, practitioners and educators.

Why this research was needed now

Despite the national and international prioritisation of crisis care for CYP, no up-to-date data was available on the following aspects of the existing range of crisis responses: service organisation; effectiveness; young people's, their 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.[6] However, we did not know how far these standards were being met and what their evidence base was. This contrasts sharply with what was known about crisis services for adults with mental health difficulties, which have been subjected to recent national audit[26] and quality inspection[27] and the evidence for which has recently been updated.[28,29]

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) and online platforms provide online counselling and well-being support (including moderated peer-support forums, 7 days per week, until 10pm) for CYP. Often these involve the integration of services across statutory and third sectors.[30] Given the increasing emphasis on cohesive working across systems, there was a need to consider the international evidence for all forms of crisis support provided across social, education and third sector organisational contexts.

Initial search and the need for an evidence update

An initial search of the existing literature across MEDLINE and PsycINFO was conducted to establish the feasibility of conducting a full systematic review of the relevant evidence prior to funding being agreed. Three systematic reviews were found which informed this study, but which also revealed a gap for a new updated review and synthesis. Shepperd et al.[31] 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.[10] limited their review to emergency department interventions whilst Janssens et al.[8] reviewed the

organisation of mental health emergency care for CYP noting a lack of clarity around terminology. They, along with others,[9] made 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[28] excludes CYP 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'. (p. 6)

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

> The provision of a service in response to extreme psychosocial distress, which for CYP 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.[32–34] Our search also extended to the National Institute for Health Research (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).

In conclusion, with one in six children aged 5-19 (12.8%) in England having a probable mental disorder, the demand for services was increasing and growing numbers of CYP were seeking help during their mental health crises. New models of crisis services for CYP are continually being developed across the UK and

internationally, and there was a need to consider the evidence for all forms of crisis support provided across social, education and third sector organisational contexts, and how they interact with existing services. An up-to-date evidence synthesis was therefore required, taking into account new evidence published since the previous reviews as well as incorporating UK only grey literature relating to the organisation, provision and experience of mental health crisis responses for CYP.

Chapter 2: Working with stakeholders and defining parameters

This chapter describes the approach taken with stakeholders, including members of the public with personal experience of CYP experiencing mental health crisis and receiving care. Our engagement with patients and the public reflects commitments and experiences demonstrated in other studies on which members of this project team have worked. For example, 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). Reporting of this section is completed with reference to GRIPP2-SF standards.[35]

We worked with LW, who identifies herself as a carer of young adults with mental health issues, and ME who identifies herself as an expert patient in the initial development of the project proposal. This is clearly an area of importance for people who want to access services for CYP in psychological crisis. Both LW and ME have been co-investigators on this study and have contributed to several critical stages of the project where their expertise was most important, including the creation of search terms, selection of papers, synthesis, and plan for the dissemination of findings. Discussions about the focus of the project were also held with clinical colleagues working in local CAMHS during the development of the proposal.

The project was supported by a stakeholder advisory group (SAG) which was established during the project set-up phase. Members included professionals from a range of sectors that respond to CYP in mental health crisis, including professionals from an emergency department, a secondary school, social services, specialist CAMHS, parents with the lived experience of using mental health services for their family members and the third sector organisation Place2Be that provides mental health support to children in schools. The SAG was independently chaired by Professor Michael Coffey from Swansea University.

The full membership of the SAG is found in Supplementary Material 1, and over the life of the study the combined project team and SAG met at three strategic time points: in person in Cardiff, and then via two further virtual meetings convened using videoconferencing due to the COVID pandemic restrictions. In the first meeting, the

terms of reference (Supplementary material 2) were discussed and then agreed with the SAG, and the SAG were invited to review our search terms and assist with the generation of others, as well as identifying suitable databases and sources of UK only grey literature. The notes of the meeting can be found in Supplementary material 3. The second (virtual) meeting took place at the completion of evidence searching, providing an opportunity to share work in progress (Supplementary material 4) and the final (virtual) meeting was scheduled towards the commencement of the whole-project synthesis and report-writing phase with a focus on sharing preliminary findings and discussing plans for dissemination and maximising impact (Supplementary material 5). Following discussion during the first stakeholder meeting, the project title was changed from CAMHS crisis to CAMH crisis.

Defining the project's search parameters

At the first SAG meeting, candidate database search strategies and search terms developed by the project team for CYP were presented and discussed and candidate definitions of the terms 'crisis' and 'mental health' were distributed and discussed at length with the purpose of refinement (Supplementary material 6). The decision was made not to search by specific services such as schools, police (etc.) at this point but to just have a four-arm search.

Arm 1: Children and Young People

The additional terms discussed at the SAG for this arm focused upon trying to identify studies where our population group may have been referred to by terms more related to setting than the terminology already identified as relevant to defining a CYP. The SAG was concerned that CYP particularly within educational, juvenile, and other settings may be missed. Additional suggestions which were discussed were the words and phrases 'pupil', 'student', 'undergraduates', 'learner', 'apprentice', 'young offender' and 'adults aged 18-25 years'. A particular mention was made of adverse childhood experiences and whether this could be incorporated into this arm. The suggestions were evaluated by EG, the information specialist, and reported back to the project team. The words that were included within the final search strategy were 'pupil', 'student' and 'young offender'. Other terms were either considered to be too broad [learner and apprentice], problematic to search given the

constraints of the databases [age 18-25 and minor] or would already be retrieved through the use of existing key terms [Adverse Childhood Experiences, Children in care].

Arm 2: Crisis

At the outset, the decision was made not to search for specific crisis events as it was felt that this potentially could have led to an endless list of presenting clinical situations and that certain crisis events, not thought of, could be missed. Our strategy was to use the keywords ‘crisis’ or ‘crises’ in arm 2 and ‘mental health’ or ‘psych*’ in arm 3. However, when the search strategy was being tested to ensure that all recognised relevant papers were being retrieved EG found that several already-identified key papers were missing. This was because these papers used the term ‘rapid response’ and ‘suicide’ to define the crisis event with no mention of the terms ‘crisis’ or ‘mental health’. After discussion at a later project team meeting, it was felt that the terms ‘suicide’ and ‘self-harm’ were so synonymous with a crisis and that they should be included as specific examples in the mental health arm. The term ‘rapid response’ was then added to arm 2.

Arm 3: Mental health

The general use of a mental health arm was discussed at length, as the SAG was concerned that this could make the search very medicalised and that the project needed a strategy to ensure the retrieval of non-health sector articles. It was recognised, however, that without this third arm the search would be unwieldy. A discussion followed that, although in practice episodes of crisis happen in many sectors, it is likely that any write-up of research undertaken in the area would refer to mental health in some capacity, so this arm was included and expanded upon as detailed above. To address the concerns, and to increase the sensitivity of our search, a fourth arm was introduced that encapsulated alternative terminology that could be used to define a mental health crisis which could then be combined with arm 1 to provide us with a second search methodology.

Arm 4: Mental health and crisis

Positional operators were used within our new arm 4 to retrieve articles using alternative terminology to describe a mental health crisis. The terms discussed at the

SAG included the terms ‘severe’, ‘extreme’, ‘intense’, ‘emergency’, ‘critical incident’, ‘urgent’, ‘distress’ and ‘trauma’. ‘Trauma’ was removed as it was felt that this term would retrieve too many irrelevant records related to physical trauma. Following further discussions, it was decided to proceed with four of these terms: ‘emergency’, ‘critical incident’, ‘urgent’ and ‘distress’ in proximity to the terms ‘mental’ and ‘psych*’. Trials combining this new arm with arm 1 showed the strategy to be successful in increasing the sensitivity of our search, pulling in alternative literature, without excessively compromising precision or making the search unmanageable.

Finding UK only grey literature

Websites to search which had already been identified by the project team were circulated (Supplementary material 7), and in this first meeting SAG members were invited to identify additional online sites.

Feedback from young people

One member of the project team (RL) met with young people from the Advice Leading to Public Health Advancement (ALPHA) group. ALPHA is a research advisory group working for the Centre for Development, Evaluation, Complexity, and Implementation in Public Health Improvement DECiPHER (School of Social Sciences, Cardiff University). They are a group of young people aged 14-25 who provide advice to health-based researchers. The purpose was to obtain advice from these young people about search terms, UK organisations and services, sources of support available to them and to determine the most suitable methods of sharing the findings from this evidence synthesis. Table 1 presents the breakdown of the 11 participants by age and gender.

Table 1: Breakdown of participants attending the ALPHA group

Age	Male	Female
14	0	0
15	0	1
16	0	1
17	1	3
18	1	2
19	0	0
20	0	2

The activity was broken up to tasks. Task 1 was about generating further search terms. For this task, we split ALPHA into two groups. We asked each group to spend 10 minutes at each station discussing the topics, then moving onto the next station until all four stations have been met with both groups. We used this technique as it allows for ALPHA members to have open discussions in their group and work collaboratively to answer the questions. It also allows for the other group to analyse previous groups' findings, either by agreeing and providing further feedback or by disagreeing and providing suitable alternatives. Table 2 and Figures 1 and 2. contains a summary of the key points discussed at each station.

Table 2: Summary of key points discussed in ALPHA group

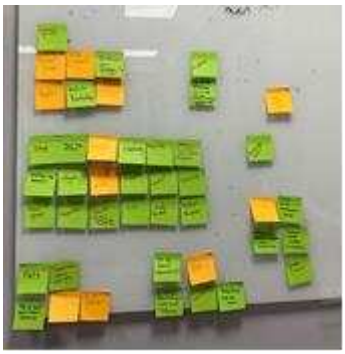
Station	Findings
Describe the following terms and how they may affect someone: • **Mental Health** • **Crisis** • **Distress**	Physical structure and chemical make-up of the brain can affect mental health. E.g. people with adverse childhood experiences are more disposed to mental disorders as their brain has changed to adapt to their environment. General attitude, good & bad, emotional wellbeing, logical thinking, and ability to think clearly, emotional responses, ability to cope. A point where you need heal, danger, inability to do or solve, sounds of trapped, isolating yourself, panic attacks. Stops your ability to function, cause distress, negative effect on wellbeing, psychological, emotions. Anxiety, depression, bipolar disorder, eating disorder, schizophrenia, psychosis, multiple personality disorder, body dysmorphia, substance abuse. Suffering in anyway – mental and physical, impairment of function, chronic stress, relationship breakdown, isolating yourself.

What places do young people go when they are in crisis?	• CAMHS part of A&E (crisis team) – in an emergency • Helpline call or text • Out of hours counsellors • GP • Samaritans • Trusted teachers • School child protection team • Youth services • School first aider – in an emergency • School – head of year or counsellors • Alone – bathroom • Running away from home • Bath/shower • Reading • Other Drama/other people's problems • Walk • Alcohol • Sofa Blanket • TV • Podcasts • Sport (friends & general waiting) • Sleep • Gym • Listen to music • Video Games • Pets • Breathing exercise • Moodle • Facebook groups/chats • Significant other (BF/GF) • Family • Talk to/text/call friends • Cleaning • FOOD! • Netflix • Online support – internet friends
What resources do young people use when in crisis?	• Mindfulness • Youtubers – click for taz • Snapchat • Live life to the full – panic button • Headspace • Tumblr • Mindhub Wales • Apps – meditation & Calm (not free) • NHS website • Tiktok

	• Shout text service • Anom account – posting without identifying self • Google
Suggestions on where to look for grey literature?	• Young Minds • Elefriends • Children's society • Mind • Anna Freud Wellbeing directory • Stonewall • Samaritans • Cardiff Nightlife • NPT youth Service • Promo Cymru • Bullies Out • MEIC • Emotional Wellbeing Service • Self-Injury support • TRIUMPH • Time to Change • Out of hours counselling services • Live Life to the Full • Calmharm • Childline • NHS helpline

Figure 1: Responses for what places do young people go when they are in crisis

Figure 2: Responses for what resources do young people use when in crisis



As a part of this study and evidence synthesis the study team wanted to know the most suitable methods and approaches for sharing these findings. The findings will be aimed and CYP and Parents/Carers to provide advice or guidance on services to access at time of emotional crisis. For this second task we asked ALPHA to remain in the same groups and answer the following questions.

1. *Who should we share this information with?*

Response: teachers, local authorities, helping, parents, in school counsellors, NHS and young people

2. *What information to include?*

Response: specific relatable information tailored for the correct audience. E.g – posters in school for young people. Main study findings with accessible information, including useful services and more specific services.

3. *Where should this information be shared?*

Response: these posters can be in hotspot areas in the schools, such as back of toilet doors. If feasible, targeted ads on Instagram or Facebook.

4. *Why do we need to share this information?*

Response: increased awareness and use of services, young people will feel comfortable knowing where they can go to access information.

5. *What is the best approach for sharing this information?*

Response: parent mail, parent pay, posters at school, animation video to showcase main findings, parents evening, email/letter, and social media.

We asked ALPHA whether it was a good idea to present the findings from this systematic review in an animation video format. It was a mixed response, some ALPHA members thought it was a good idea and a useful way of sharing the information, whereas the others were unsure. They felt that there are too many information animation videos and producing another one wouldn't have the desired impact. They suggested using a different platform for sharing this information, either poster or whole school approach.

Chapter 3: Methods and description of included reports

The methods used in this evidence synthesis and the materials finally included are described in this chapter. The protocol for the evidence synthesis was registered with the International Prospective Register of Systematic Reviews (PROSPERO – CRD42019160134) at the commencement of the project. For the purposes of this review, guidance for undertaking reviews in health care published by the Centre for Reviews and Dissemination (CRD)[36] was followed. To incorporate stakeholder views, methods informed by the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI Centre)[37 38] were used. To ensure rigour, the reporting of this evidence synthesis follows the Preferred Reporting Items for Systematic Reviews (PRISMA) statement.[39]

Aims and objectives

The aim of this project was to synthesise the international 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.

Detailed objectives were to critically appraise, synthesise and present the best available international evidence:

1. The organisation of crisis services for CYP aged 5 to 25 years, across education, health, social care and the third sector.
2. The experiences and perceptions of CYP, their families and staff with regards to mental health crisis support for CYP aged 5 to 25 years.
3. to determine the effectiveness of current models of mental health crisis support for CYP.
4. to determine the goals of crisis intervention.

Inclusion criteria

We used PICOS/PiCo framework to guide the inclusion criteria on population (P), intervention/phenomena of Interest (I), comparators (C), outcome (O), study design (S) and context (Co).

Population

This evidence synthesis considered all relevant evidence specifically relating to support for CYP (aged 5-25) in emotional/mental health crisis.

For the purposes of the current study, CYP will include individuals within the age range of 5-25. A number of mental health services for CYP in the UK and internationally now cater for this age range. Imposing an age-limit of 18 would therefore risk excluding valuable studies concerning those aged 18-25.

Intervention and phenomena of interest

This evidence synthesis considered all relevant evidence on the following:

- the organisation of services relating to crisis support
- the effectiveness of current models/interventions that provide support to CYP in mental health crisis
- the views and experiences of CYP, families and staff
- the goals of services

Building on the definition used in the Cochrane review of crisis services for adults,[28] 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, a specialist or non-specialist community service, a school, a college, a university, a youth group, or via a crisis support line.

Comparators

None

Outcomes

Organisation of crisis services, their effectiveness (all outcomes as described across the primary studies); the experiences of CYP and families and, the goals of crisis services.

Context

All records were considered with regard to the organisation of crisis services, their effectiveness, and the experiences of CYP and their families in any setting, including virtual.

Study design / Types of evidence

Types of evidence sought included both quantitative and qualitative research, and UK only grey literature. Reports published in the English language since 1995 were considered.

Exclusion criteria

- Usual care provided at emergency departments with no specific mental health component
- Standard CAMHS care
- Under 5s
- CYP not in mental health crisis
- 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
- For those studies that include participants that are children and adults where the average age of the participants was over 25 years
- Where crisis is a group crisis experience such as a mass shooting or stabbing in an educational establishment or a natural disaster
- Where care is not at actual point of crisis

Developing the search strategy

The focus of the search strategy was to achieve high sensitivity without over-compromising precision and making the search results unwieldy. To ensure that all relevant literature was obtained, a comprehensive search strategy was designed which took into consideration the discussions around the research question during the first combined project team and SAG meeting (see Chapter 2).

Preliminary searching

Preliminary database searching using MEDLINE and PsycINFO were carried out as part of an initial scoping exercise undertaken in preparation of the proposal for funding, with material from this drawn for Chapter 1. The preliminary keywords that were used to inform these searches included ‘child’ OR ‘adolescent’ AND ‘CAMHS’ OR ‘mental health’ AND ‘crisis’. This search strategy was further developed taking into account relevant synonyms and alternative spellings. The text words contained in the title and abstract and the index terms used to describe the articles retrieved

were then analysed and used to develop more comprehensive and detailed searches.

Comprehensive searching

The preliminary search terms were presented and discussed at the first combined project team and SAG meeting (see Chapter 2). As a result of this process EG developed a comprehensive search strategy.

As a means of testing and refining this search strategy before applying it across multiple databases, records retrieved across MEDLINE and PsycINFO were first screened by DE to ensure relevance, and to assess that the strategy was neither too broad nor too narrow. Once the project team was satisfied with the search strategy this was then tailored across all the databases, with searches run from database inception and undertaken between February and April 2020 (updated in January 2021). The final search strategies are displayed in Appendix 1.

The 17 databases searched were:

- On the Ovid platform: MEDLINE ALL; PsycINFO; EmCare; AMED; HMIC
- On the ESBCO platform: CINAHL; ERIC
- On the ProQuest platform: ASSIA; Sociological Abstracts; Social Services Abstracts; PQDT Open
- Others: Scopus; WoS; Open Grey; CENTRAL; EThOS
- On the National Criminal Justice Reference Service: Criminal Justice Abstracts

In order to identify UK only grey literature documents a number of supplementary searches were undertaken. Members of the SAG advised the project team as to which relevant websites to search (see Chapter 2) and a full list of websites searched along with the search terms utilised can be found in Supplementary material 8. Members of the SAG were also asked to inform the research team of any other reports they were aware of that might be relevant to the evidence synthesis.

Searches were also conducted using Google as described by Mahood et al.[40] The first 10 pages of each Google output were screened using the terms:

- young people, mental health crisis
- children, mental health crisis

To identify published reports that had not yet been catalogued in electronic databases, recent editions of Pediatric Emergency Care, Psychiatric Services, Journal of the American Academy of Child and Adolescent Psychiatry, Crisis: The Journal of Crisis Intervention and Suicide Prevention were hand-searched. These journals were selected due to the large number of outputs identified in database searches from these journals. Reference lists of included studies were scanned, and forward citation tracking performed using WoS.

Primary research records retrieved from database searches

All records retrieved from the 17 database searches were imported or entered manually into EndNote™ (Thomson Reuters, CA, USA) and duplicates removed. The total number of hits retrieved for each database are displayed in Table 3.

Table 3: Number of records retrieved by database

Database Searched	Number of References Retrieved
MEDLINE ALL*	11756
PsycINFO	10077
Emcare	4447
HMIC	663
CINAHL	5210
AMED	191
ERIC	1940
ASSIA	1037
Sociological Abstracts	701
Social Services Abstracts	564
Scopus	10593
Web of Science	9277
Cochrane	872
Open Grey	220
EThOS	320
PQDT Open	116
Criminal Justice Abstracts	10
	57994

*includes Medline E publications

Primary research records identified from supplementary searching

All primary research citations identified as potentially relevant from the supplementary searches (Table 4) were entered manually into EndNote™ (Thomson Reuters, CA, USA). A total of 31 records were identified.

Table 4: Number of citations retrieved from supplementary searching

Source	Number of citations
Reference lists of included studies	23
Forward citation tracking of included studies	7
Google	0
Stakeholder advisory group	0
Organisational websites	1
Hand searching	0
Total	31

Removing irrelevant records

The next stage was to remove irrelevant records by searching for keywords within the title using the search feature within the Endnote software. The keywords to use

to identify papers which did not meet the evidence synthesis inclusion criteria were agreed by the project team. The results for each keyword were screened by DE to ensure that they were, in fact, irrelevant before removing them. All records that remained at the end of this process were exported as an XML file and imported to Covidence™.

Examples of the types of keywords that were used were as follows:

Asthma
Armed
Abortion
Adult*
Baby
Cancer
Child abuse
Cultural crisis
Culture
Diabetes
Disaster
Economic crisis
Epilepsy
Fertili*
Financial crisis
First aid
Gun
HIV/AIDS
hostage
Hurricane
Infant
Maternal
Migrant
Military
Mother*
Neonat*
Politic*
Postpartnum
Predictor*
Prison
Refugee
Screening
Soldier
Sexual abuse
Validity
War

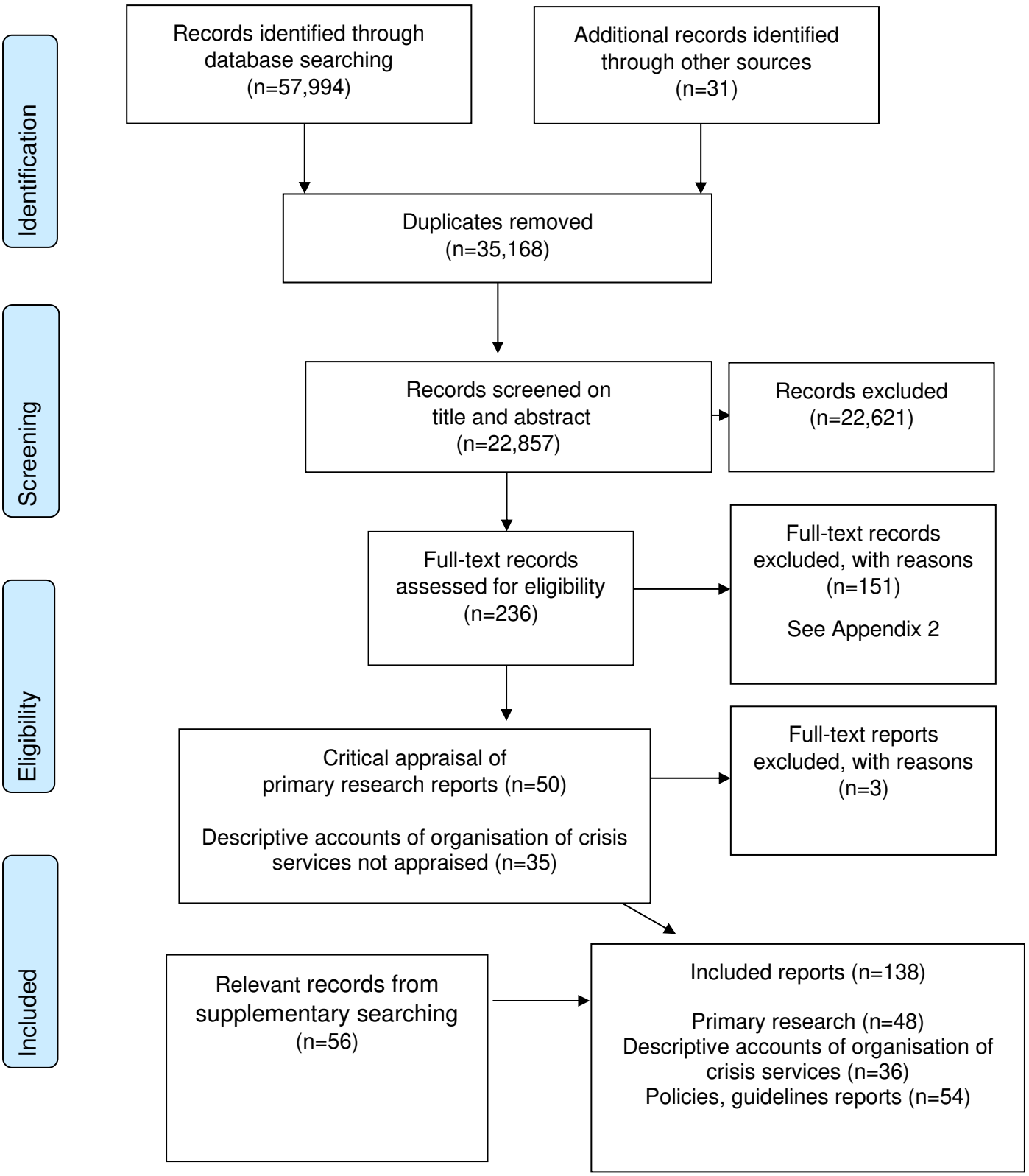
Title and abstract screening

Two members of the review team independently assessed each record for relevance using the information provided in the title and abstract using the software package Covidence™. A third reviewer resolved any disagreements. The full texts were retrieved of all records that appeared to meet the inclusion criteria, or in cases in which a definite decision could not be made based on the title and/or abstract alone.

Full text screening

A purposely designed form was used to screen each retrieved report. The form was piloted on 10 reports before being used independently by two reviewers to complete the full text screening. Disagreements were resolved through discussion with a third reviewer. All English language items relating to the objectives were included at this stage. Figure 3 shows the flow of records through each stage of the evidence synthesis process in the PRISMA flowchart.[39]

Figure 3: PRISMA flow diagram



UK only grey literature identified from supplementary searching

Sixty-nine literature records were identified as being potentially relevant from across all supplementary searches (Table 5), and these were all entered manually into EndNote™ (Thomson Reuters, CA, USA). UK only grey literature were read by two members of the project team and considered against the topic inclusion criteria, with disagreements resolved as above. Thirteen were excluded (Supplementary material 9) leaving a total of 57 being assessed as relevant to the evidence synthesis (Appendix 3).

Table 5: Grey literature retrieved from supplementary searching

Source	Number of citations
Organisational websites	64
Google	5
Stakeholder Advisory Group	0
Total	69

Reports included in evidence synthesis

One hundred and thirty-eight reports were included in the evidence synthesis which consisted of primary research (n=48), descriptive accounts of organisation of crisis services or (n=36) and UK only grey literature (n=54).

Quality appraisal

The methodological quality of all the research reports was assessed following searching and screening using a design-specific checklist (see Table 6). Alternative tools, which reflected the specific design and methods used in individual research outputs, were used as necessary when suitable Critical appraisal skills programme (CASP) tools were not available. This was independently undertaken by two reviewers, and any disagreement was resolved through discussion with a third reviewer.

Based on critical appraisal three reports were excluded[41–43]:

Rossi and Cid 2019[41]: For this qualitative study the data analysis was not sufficiently rigorous and it was concluded that there was insufficient data to be able to extract from and the publication was therefore excluded.

McBee-Strayer et al. 2019.[42] The overall assessment of the quality of this quasi experimental study was rated as “unacceptable” and the publication was therefore excluded.

Blumberg 2002.[43] The overall assessment of the quality of this quasi-experimental study was rated as “unacceptable” and the publication was therefore excluded.

The descriptive accounts of organisation/ models of crisis services, and the UK only grey literature were not subjected to quality appraisal.

Table 6: Critical appraisal checklists used in the evidence synthesis

Study design	Checklist
Randomised controlled trials	CASP checklist for RCTs[44] 11 items (‘yes’, ‘no’, ‘can’t tell’)
Quasi-experimental studies	JBI checklist for Quasi-Experimental Studies (non-randomised experimental studies)[45] 9 items (‘yes’, ‘no’, ‘unclear’, ‘not applicable’)
Prospective cohort studies	Scottish Intercollegiate Guidelines Network, Methodology Checklist 3; Cohort Studies[46] 14 items (‘yes’, ‘no’, ‘can’t say’, ‘does not apply’)
Retrospective cohort studies	Scottish Intercollegiate Guidelines Network, Methodology Checklist 3; Cohort Studies[46] 8 items (‘yes’, ‘no’, ‘can’t say’, ‘does not apply’)
Descriptive cross-sectional studies	SURE checklist[47] 12 items (‘yes’, ‘no’, ‘can’t tell’)
Qualitative studies	CASP checklist for qualitative studies[44] 10 items (‘yes’, ‘no’, ‘can’t tell’)

Key: CASP: critical appraisal skills programme; JBI: Joanna Briggs Institute; RCT: randomised controlled trials, SURE: Specialist Unit for Review Evidence

For the CASP, JBI and Specialist Unit for Review Evidence (SURE) checklists an overall score is generated reflecting the number of items answered ‘Yes’. For the Scottish Intercollegiate Guidelines Network, Methodology Checklist 3; Cohort

Studies[46] the overall assessment reflects how well the study has sought to minimise the risk of bias or confounders. The final rating is high quality, acceptable or low quality:

- High quality: This was described as the majority of criteria met with little or no risk of bias and that the results unlikely to be changed by further research.
- Acceptable: This was described as most of the criteria met with some flaws in the study with an associated risk of bias and that the conclusions may change in the light of further studies.
- Low quality: This was described as either most of the criteria not met, or significant flaws relating to key aspects of study design and that the conclusions likely to change in the light of further studies.

The authors of the checklist suggest that retrospective designs should not receive a rating higher than acceptable as they are generally regarded as a weaker design.

Data extraction, analysis, and synthesis

Where multiple research reports from the same study were identified, data were extracted and reported as a single study (forty-seven research reports covering 40 research studies). The demographic data were extracted directly into tables based on study design following guidance from the CRD.[36] The data extracted included the aim of the research, nature of the crisis, type and location of treatment, participant details, recruitment, age, gender, ethnicity, intervention or programme, data sources, outcomes, outcome measures. This process was conducted by one of the team of reviewers (JC, NE, RL) each being responsible for a different study design and then this process was independently checked for accuracy and completeness by a second reviewer (DE). A record of corrections was kept.

The full texts of all the reports and the electronic versions of all UK only grey literature were uploaded into the software package NVIVO-12^{TM}[48] in order to aid the extraction, analysis and synthesis of the content. The data analysis and synthesis for each of four objectives was conducted separately and is presented as separate chapters.

The first objective was to critically appraise, synthesise and present the best available evidence on the organisation of crisis services for CYP aged 5 to 25 years, across education, health, social care and the third sector. To answer objective one a narrative approach was employed that involved the development of thematic summaries[37,49,50] synthesizing the data relating to the organisation of crisis services from primary research, descriptive accounts, and UK only grey literature documents. Thematic summaries are *"summaries of findings of their included studies that have been arranged into themes".*[51(p. 187)] The software package NVIVO was used to aid this process Natural groups of studies that investigated the same areas were brought together into meaningful sections and the final thematic summaries were written by one researcher and checked by a second. This is presented in Chapter four.

The second objective was to explore the experiences and perceptions of CYP, their families, and staff with regards to mental health crisis support for 5- to 25-year-olds. A thematic synthesis[51] was performed on qualitative data extracted from primary research studies, wider research reports, and stakeholder consultations (that were part of a wider body of work) with service providers and/or young people and their families. Using NVIVO, Inductive data-driven codes, led jointly by RL and DE, were generated through line-by-line reading of each document in line with each of the research objective. The codes were then grouped into themes and sub-themes by one researcher (RL) and checked by a second (DE). The confidence in the synthesised findings from the qualitative research to address objective three was assessed by two reviewers (DE and NE) using the Confidence in the Evidence from Reviews of Qualitative Research (CERQual) approach.[52,53] This is presented in Chapter five.

The third objective was to determine the effectiveness of current models of mental health crisis support for CYP. Due to the heterogeneity of the included intervention studies meta-analyses could not be performed and thematic summaries as described above were conducted. Outcome data were extracted as it was presented across the primary research reports using NVIVO. The purpose of this was just to group data for each outcome and not to code the extracts in any detail. The confidence in the synthesised findings from the quantitative data was assessed by

two reviewers (DE and JC) using Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach.[54] This is presented in Chapter six.

The fourth and final objective was to determine the goals of crisis intervention. To answer this objective, thematic summaries as described above were employed to bring together the data relating to the goals of crisis services across the primary research, descriptive accounts, of the organisation of crisis services and UK only grey literature documents. This was led by BH and checked by DE and NE. This is presented in Chapter seven.

Description of reports

Forty-eight reports covering 42 research studies were deemed suitable for inclusion in the evidence synthesis. Demographic information on the characteristics of included research studies is displayed in Appendices 4 to 10. Thirty-six additional reports covering 39 descriptive accounts of the organisation services were also included (see Supplementary material 10).

Country of origin

The majority of the research reports were conducted within the USA (25 studies across 30 reports)[32,34,55–82] followed by Canada (8 studies across 9 reports),[83–91] UK (n=3),[92–94] Australia (n=2),[89,90] and one study from each of the following countries: Ireland,[97] The Netherlands,[98] New Zealand[99] and Sweden.[100] The descriptive accounts of the organisation of crisis services were mainly from the USA (19 descriptions across 15 reports)[33,101–114] and Canada (n=10).[115–124] Three reports were from Australia[125–127] and one report from each of the following countries: Germany,[128] Switzerland,[129] The Netherlands[130] and the UK.[131]

Study designs and methods

For the research studies there were 31 quantitative studies (reported across 37 reports)[32,34,55–67,69–73,75–87,90,91,96,98] and eleven qualitative studies.[68,74,88,89,92–95,97,99,100] The quantitative studies included prospective cohort studies (n=1),[32] retrospective cohort studies (n=12),[34,60,63–66,69,70,72,73,85,87] quasi-experimental studies (4 studies across 6 reports),[80,81,84,90,91,96] RCTs (4 studies across 8 reports)[55,59,62,76–79,82] and descriptive cross-sectional studies (n=10).[56–58,61,67,71,75,83,86,98]

Participant characteristics

Participants across the research studies were as follows:

- CYP experiencing or who had experienced a crisis (31 studies across 34 reports)[32,34,56–61,63–73,75,80–82,84,85,87,89–93,96–98,100]
- CYP experiencing crisis and their family members (2 studies across 6 reports)[55,62,76–79]
- family members/parents of CYP experiencing crisis (n=2)[74,86]
- caregivers and siblings of CYP experiencing crisis(n=1)[88]
- family and close friends bereaved by suicide of a CYP (n=1)[95]
- youth counsellors (n=1)[132]
- staff members from project sites (n=1)[92]
- emergency department medical staff (n=1)[83,94]

Participant group sizes for CYP ranged from two[132] to 2532.[60] One qualitative study had a large number of participants (n=1449), but data from only a third of these were analysed.[89]

Some studies did not identify the ages of the CYP labelling them as adolescents,[34] young people,[132] child psychiatry patients,[69] elementary school students[75] or high school students.[58,67,71,75] Three studies only included young people aged over 16 (16-24 years,[100] 16-25 years,[92] 18-25 years[68]).

The majority of research studies included a mix of male and female CYP. One study included male CYP only,[56] and a further study (across two reports) included female CYP only.[80,81] A further seven studies did not report the gender of the CYP.[34,64,69,75,88,92,99]

Outcomes across effectiveness studies

Symptoms of depression

Levels of depression were reported in three studies (across four reports)[55,76,80,81] and were measured using the Beck Depression Inventory (BDI),[80,81] the brief Symptom Inventory (BSI)[76], anxiety and depression subscale of the Check Behaviour Checklist

(CBCL),[76] Hopelessness Scale for Children of the youth self-report[76] or the Centre for Epidemiological studies depression scale (CES-D).[55]

Psychiatric symptoms

Psychiatric symptoms or symptomatology was addressed in three studies (across four reports).[62,77,85,98] These were measured using the Global Severity Index of the Brief Symptom Inventory (GSI-BSI),[62,77] functioning sub-scale on the Childhood Acuity Psychiatric Illness Scale (CAPI),[85] or the Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA).[98]

Behaviour

Three studies (across four reports) investigated internalising and externalising behaviour using the CBCL.[55,59,62,77] The internalising behaviours measured reflected mood disturbance (including anxiety and depression) and social withdrawal. The externalising behaviours reflected conflict with others and violation of social norms.

Psychosocial functioning

Psychosocial functioning was investigated across four studies (across five reports)[59,62,77,84,85] and was measured using the Child and Adolescent Functional Assessment Scales (CAFAS),[59] Children's Global Assessment Scale (CGAS),[84] the youth and/or caregiver reports on the social competence sub-scales of the Child Behaviour Checklist (CBCL),[59,62,77] youth reports on the Antisocial Friends and Conventional Involvement of Friends sub-scale of the Family, Friends, and Self Scale (FFS),[62,77] and through tracking school attendance.[62,77] Greenham and Bisnaire (2008) measured the levels of functioning of those with psychiatric symptoms using the functioning sub-scale on the CAPI.[85]

Hospitalisation rates

Nine studies (across 12 reports)[32,62,66,72,73,77,78,82,84,87,90,91] investigated the effectiveness of a number of different crisis based interventions or assessment processes on hospitalisation rates. This was either explored at the time of the crisis,[66,84] within 72 hours of the crisis,[73] within 30 days of the crisis,[66,87] at one month follow up,[82] two months follow up,[84,91] three months follow-up,[32] six months follow up,[84,91] up to one-year follow up[62,77,78] or at an unspecified time frame.[72,90]

Costs

Costs were addressed in seven studies.[56,63,65,70,72,79,91] The types of analysis that was conducted included cost savings (n=6),[56,63,65,70,72,91] cost-effectiveness (n=2),[79,91] cost-efficiency[72] and opportunity costs.[65] Five studies reported significant cost savings[56,63,65,70,72] and one found no significant differences.[91]. Of the studies reporting cost savings, four out of the five reported that these savings were reflective of reduced LoS.[56,65,70,72]

Discharge destination and referral pathways

The destination to which CYP were discharged or referred onto was reported across 11 studies,[32,56,57,59,61,63,72,83,85,90,98] and are reported as follows:

- home (biological or foster family) or the residence they were previously living in (n=5)[56,57,59,72,85] and where reported the percentage of those discharged, ranging from 65%[63] to 86%[59]
- new living situation (n=1, 6%)[85]
- residential treatment facilities (n=2, 2%,[63] % not reported[57])
- detention centres (n=1, % not reported)[57]
- outpatient mental health services (n=3)[32,61,98] and where reported ranging from 43%[32] to 90%[61]
- intensive outpatients (n=1, 21%)[32]
- day services (n=1, 9%)[63]
- discharged against medical advice (n=1, 12.2%)[63]
- hospital / inpatient psychiatric units (n=10)[32,56,57,59,61,63,72,83,85] and where reported ranging from 8%[59] to 35%.[32]
- out of home placement (n=1, 5%)[59]
- no further specialised treatment needed (n=2)[83,98] ranging from 16.7%[98] and 82%[83]
- other services which included outpatients or other psychiatric facilities (n=1, 12.2%)[63]

Emergency department visits post-discharge

Repeat emergency department visits post-intervention were addressed in nine studies[32,34,60,64,70,72,73,84,87] at the following timepoints post-discharge: within 72

hours,[72,73] within one month,[32] within 30 days,[64,87] six months,[84] within 12 months[34,70] or 18 months.[60]

Family functioning/empowerment

Six studies (across seven reports) addressed family functioning or empowerment.[33,59,62,77,80–82] This was measured using the Family Adaptation and Cohesion Scales – Version II (FACES II),[59] Family Adaptation and Cohesion Scales – Version III (FACES III),[62,77,80,81] caregiver self-reports on the GSI-BSI,[62,77] the Family Empowerment Scale (FES)[82] or the Conflict Behavior Questionnaire (CBQ).[55]

Length of stay

Two studies provided descriptive information regarding length of stay (LoS) across the inpatient crisis programmes/interventions[57,85], and nine studies[56,63,65,69,70,72,73,84,87,96] investigated the impact of a variety of interventions on LoS.

Completed suicide and suicide attempts

Five studies investigated the incidence of attempted or completed suicide at different follow-up points post-intervention.[32,55,76,84]

Suicidality

Five studies across six reports reported on levels of suicidality[32,55,80,81,84,85] measured using the Harkavy Asnis Suicide Scale (HASS),[55,80,81] the risk factors subscale of the CAPI,[85] Spectrum of Suicidal Behaviour Scale (SSPS),[84] and the Reasons for Living Inventory for Adolescents (RFL-A).[82]

Post-discharge use of services / resources

Four studies (across six reports) [55,80,81,84,87,91] investigated the effects of interventions on resources and/or patient treatment accessed post-discharge.

Self-esteem / Self-concept

Three studies (across five reports) investigated the impact of the intervention on levels of self-esteem[62,77,80,81] or self-concept.[59] The instruments used included the Rosenberg Self-esteem scale (RSES),[80,81] the Self-Esteem subscale of the Family, Friends, and Self Scale (FFS),[62,77] or the Piers-Harris Children's Self-Concept Scale

(PHSCS).[59]

Impulsivity

One experimental study across two reports investigated the impact of the intervention on levels of impulsivity using the Impulsiveness Scale (IS).[80,81]

Satisfaction with mental health crisis services/programmes

Aspects of satisfaction with mental health crisis services/programmes were reported in nine studies[62,72,73,75,82,83,86,90,96] and one organisational report.[94] Five studies looked at client satisfaction defined as satisfaction with the mental health crisis service/programme by patients, their parents or guardians [62,72,82,90,96] which was measured using the Lubrecht's Family Satisfaction Survey,[62] the Client Satisfaction Questionnaire (CSQ-8),[59] a telehealth satisfaction survey[72] or a satisfaction questionnaire developed specifically for the study.[90,96]

Health care staff satisfaction with mental health crisis services/programmes

Four studies[72,73,83,94] investigated health care staff satisfaction with the service. This was measured with a telehealth satisfaction survey,[72] or satisfaction questionnaires developed specifically for the study.[73,83,94]

Satisfaction with clinicians who delivered the mental health crisis service/programme

Satisfaction with the clinicians who delivered the mental health crisis service/program was explored in two descriptive cross-sectional studies.[75,86] This was measured using a satisfaction questionnaire developed specifically for the study[75] or an adapted version of the Quality of Care Parent Questionnaire.[86]

Results of quality appraisal

Randomised controlled trials

The methodological quality of each of the four RCTs were judged against the relevant 11 quality criteria used in the CASP checklist and each is summarised in Table 7 below. Five reports reported on different elements of the same multi-systemic therapy (MST) intervention and were appraised as one study.[62,76–79] Only one study scored highly answering 'Yes' to all the questions on the checklist.[55] Only one study scored highly answering 'Yes' to all the questions on the checklist.[55,133] Two studies did not provide enough information to determine if true randomisation

had taken place (Q2), just stating that randomisation had been performed and no further details were provided.[59,82] In one study not enough information was provided to determine whether all participants had been accounted for at the end of the trial (Q3).[59] Two studies blinded recruitment and assessment staff (Q4).[55,82] For one study the experimental and control groups were not treated identically due to the nature of the intervention and control (Q6). All of the studies reported results for all the outcomes (Q7). Only one study reported confidence intervals with regard to the precision of the estimate of the treatment effect (Q8). Due to the way the sample was recruited it was difficult to say whether the results were generisable across two studies.(Q9)[59,62,76–79] It was not evident whether the benefit of the intervention was worth the harms and costs in one study (Q11).[55]

Quasi-experimental studies

The methodological quality of each of the four quasi- experimental cohort studies were judged against the nine quality criteria used in the JBI checklist and each is summarised in Table 8 below. Where multiple reports existed for the same study, these were appraised as one study. Three studies scored highly with one pilot study included that had a lower score.[96] For one study there were some differences between the study group and matched comparison group (Q2).[90] Another study did not delineate between the control and experimental group in terms of loss to follow up (Q6) but overall this was low (3% at two months and 8% at six months).[84] For one other study[96] all carers who were able to be contacted took part in the survey, differences between groups were taken into account in the analysis.

Cohort studies

The methodological quality of each of the 13 cohort studies was judged against the relevant quality criteria derived from the Scottish Intercollegiate Guidelines Network, Methodology Checklist 3; Cohort Studies checklist,[46] and each is summarised in Table 9 below. All 13 studies were judged to be of acceptable quality, indicating that some flaws in the study design were present with an associated risk of bias. For two studies it was not possible to determine if the two groups being studied were from the same source population[34,65] and for a further two studies the two groups were from different populations (Q2).[34,72] The retrospective cohort study conducted by Maslow et al. did not have a comparison cohort (Q2).[64] Four studies did not identify

any confounders[64,73,82,87] and in one further study it was not possible to determine this information (Q13).[34] Only three of the studies provided confidence intervals as part of the statistical analysis (Q14).[60,66,73] Although the study by Greenham and Bisnaire was a retrospective study, 89.8% of parents/guardians gave informed consent for the use of their clinical information for research purposes.[85] Three studies utilised both retrospective and prospective samples, with the retrospective data used as the control group.[34,69,87]

Descriptive cross-sectional studies

The methodological quality of 10 descriptive cross-sectional studies were judged against the 12 quality criteria used in the SURE tool,[47] and each is summarised in Table 10 below. Five papers failed to clearly state the study design.[58,61,67,71,75] All studies addressed clearly focused questions apart from one where it was unclear.[71] All studies selected participants fairly and all provided details on participant characteristics, apart from Walter et al.[75] who provided details of students attending schools in general rather than of those in crisis. Two studies did not provide adequate details of their methods of sampling[61,98] and in a further two studies it was unclear whether the outcome measures were appropriate.[75,83] One evident weakness for most studies was poor description of statistical methods, this was only described well in four studies.[75,83,86,98] Results were well described in all 10 studies. One study failed to provide information on participant eligibility.[75] No studies reported any sponsorship/conflict of interest and three studies failed to identify limitations.[58,61,71]

Qualitative studies

The methodological quality of each of the 10 qualitative studies, were judged against the 10 quality criteria used in the CASP Qualitative Checklist,[44] and each is summarised in Table 11 below. Only one study discussed whether the relationship between researcher and participants had been adequately considered, indicating an overall weakness in reporting this concept.[100] Across four studies not enough information was provided to state definitively whether the research design was appropriate to the aims of the research (Q3).[88,89,94,99] The recruitment strategy was unclear for two studies (Q4).[89,92] Three studies did not state whether they had ethical

approval (Q7).[74,94,97] Six studies failed to identify whether the data analysis was sufficiently rigorous with a lack of in depth description (Q8).[88,89,92–94,97]

Table 7: Critical appraisal scores for randomised controlled trials

Citation	Location of intervention	Type of intervention	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Asarnow et al. 2011[55] USA	ED	Crisis services/interventions initiated within the ED	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Evans et al. 2003[59] USA	Homes	Home or community-based programme	Y	CT	CT	N	N	Y	Y	N	CT	Y	CT
Hengeller et al. 1999[62] Henggeler et al. 2003[77] Huey et al. 2004[76] Schoenwald et al. 2000[78] Sheidow et al. 2004[79] USA	Homes	Home or community-based programme	Y	Y	Y	N	Y	N	Y	N	CT	Y	Y
Wharff et al. 2019[82] USA	Pediatric ED	Crisis services/interventions initiated within the ED	Y	CT	Y	Y	Y	Y	Y	N	Y	Y	Y

Key: ED: Emergency Department; CT: can't tell, N: No, Y: Yes

Q1: Did the trial address a clearly focused issue?
Q2: Was the assignment of patients to treatments randomised?
Q3: Were all of the patients who entered the trial properly accounted for at its conclusion?
Q4: Were patients, health workers and study personnel 'blind' to treatment?
Q5: Were the groups similar at the start of the trial
Q6: Aside from the experimental intervention, were the groups treated equally?
Q7: How large was the treatment effect (Are outcomes listed, is the primary outcome clearly specified, are there results for each outcome)?
Q8: How precise was the estimate of the treatment effect (Are confidence intervals provided)?
Q9: Can the results be applied to the local population, or in your context?
Q10: Were all clinically important outcomes considered?
Q11: Are the benefits worth the harms and costs?

Table 8: Critical appraisal scores for quasi-experimental studies

Citation	Location of intervention	Type of intervention	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Roberts et al. 2017[90] Canada	Telepsychiatry suite in remote Eds	Telepsychiatry	Y	N	Y	Y	Y	Y	Y	Y	Y
Rotheram-Borus et al. 1996b[81] Rotheram Borus et al. 2000[80] USA	ED	Crisis services intervention initiated within the ED	Y	Y	Y	Y	Y	Y	Y	Y	Y
Greenfield et al. 2002[84] Latimer et al. 2014[91] Canada	Paediatric ED and then outpatient department	Outpatient mental health programme	Y	Y	Y	Y	Y	U	Y	Y	Y
Nagarsekar et al. 2020[96] Australia	Pediatric ED	Assessment approach with the ED	Y	Y	U	Y	N	Y	Y	Y	Y

Key: ED: Emergency Department; N: No; Y: Yes, U: Unclear

Q1: Is it clear in the study what is the 'cause' and what is the 'effect' (i.e. there is no confusion about which variable comes first)?
Q2: Were the participants included in any comparisons similar?
Q3: Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?
Q4: Was there a control group?
Q5: Were there multiple measurements of the outcome both pre and post the intervention/exposure?
Q6: Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?
Q7: Were the outcomes of participants included in any comparisons measured in the same way?
Q8: Were outcomes measured in a reliable way?
Q9: Was appropriate statistical analysis used?

Table 9: Critical appraisal scores for cohort studies

Citation	Location of intervention	Type of intervention	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Rating
Wharff et al. 2012[32] USA	PED	Crisis services/interventions initiated within the ED	Y	Y	Y	N/A	55.4%	Y	Y	N/A	Y	Y	Y	Y	N	N	A
Greenham and Bisnaire 2008[85] Canada	Inpatient unit	Inpatient care	Y	N	Y	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	N	A
Fendrich et al. 2019[60] USA	Community	Mobile Crisis Service.	Y	Y	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	Y	A
Holder et al. 2017[63] USA	PED	Implementation of a dedicated MH team in the ED	Y	Y	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	N	A
Mahajan et al. 2007[65] USA	PED	Implementation of a dedicated MH team in the ED	Y	CS	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	N	A
Rogers et al. 2015[70] USA	Inpatient unit	Inpatient care	Y	Y	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	N	A
Uspal et al. 2016[73] USA	PED	Implementation of a dedicated MH team in the ED	Y	Y	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	N	Y	A
Lee et al. 2019[87] Canada	PED	Assessment approach with the ED	Y	Y	Y	N/A	11%	CS	Y	N/A	Y	Y	Y	N/A	N	N	A
Martin 2005[66] USA	Community	Mobile crisis service.	Y	Y	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	Y	A
Thomas et al. 2018[72] USA	Telepsychiatry suite in remote ED	Telepsychiatry	Y	N	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	N	
Maslow et al. 2017[64] USA	Outpatient clinic	Outpatient mental health programme	Y	N/A	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	N	N	A
Reliford and Adebanjo 2018[69] USA	PED	Telepsychiatry	Y	Y	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	Y	N	A

Greenfield et al. 1995[34] Canada	Outpatient clinic	Outpatient mental health programme	Y	CS	N/A	N/A	N/A	N/A	Y	N/A	N/A	Y	Y	N/A	CS	N	A

Key: A; acceptable; C: Can't say; ED: Emergency Department N: No; N/A: Not applicable; PED: Paediatric Emergency Departments; Y: Yes

Overall assessment rated as acceptable. This is interpreted as most criteria met, although some flaws in the study with an associated risk of bias and the conclusions may change in the light of further studies.

Q1: The study addresses an appropriate and clearly focused question.
Q2: The two groups being studied are selected from source populations that are comparable in all respects other than the factor under investigation.
Q3: The study indicates how many of the people asked to take part did so, in each of the groups being studied.
Q4: The likelihood that some eligible subjects might have the outcome at the time of enrolment is assessed and taken into account in the analysis
Q5: What percentage of individuals or clusters recruited into each arm of the study dropped out before the study was completed.
Q6: Comparison is made between full participants and those lost to follow up, by exposure status.
Q7: The outcomes are clearly defined.
Q8: The assessment of outcome is made blind to exposure status. If the study is retrospective this may not be applicable.
Q9: Where blinding was not possible, there is some recognition that knowledge of exposure status could have influenced the assessment of outcome.
Q10: The method of assessment of exposure is reliable.
Q11: Evidence from other sources is used to demonstrate that the method of outcome assessment is valid and reliable.
Q12: Exposure level or prognostic factor is assessed more than once.
Q13: The main potential confounders are identified and taken into account in the design and analysis
Q14: Have confidence intervals been provided.

Table 10: Critical scores for descriptive cross-sectional studies

Citation	Location of Treatment	Type of Treatment	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Michael et al. 2015[67] USA	High school	Assessment approach with educational settings	N	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y
Sale et al. 2014[71] USA	High school	Assessment approach with educational settings	N	U	Y	Y	Y	Y	Y	N	Y	Y	N	N
Capps et al. 2019[58] USA	High School	Assessment approach with educational settings	N	N	Y	Y	Y	Y	Y	N	Y	Y	N	N
Walter et al. 2019[75] USA	Elementary and High school	Assessment approach with educational settings	N	Y	Y	Y	N	U	Y	Y	N	Y	N	Y
Baker and Dale 2002[56] USA	Residential treatment centre	Crisis programmes	Y	Y	Y	Y	Y	Y	Y	U	Y	Y	N	Y
Baker et al. 2004[57] USA	Residential treatment centre	Crisis programmes	Y	Y	Y	Y	Y	Y	Y	U	Y	Y	N	Y
Dion et al. 2010[83] Canada	Psychiatric ED at a children's hospital	Crisis services/interventions initiated within the ED	Y	Y	Y	Y	Y	U	Y	Y	Y	Y	N	Y
Lee and Korczak 2014[86] Canada	PED	Outpatient mental health programmes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Gillig 2004[61] USA	Outpatient clinic	Adolescent crisis service	N	Y	U	Y	Y	Y	N	N	Y	Y	N	N
Muskens et al. 2019[98] Netherlands	Home	Home based programme	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y

Key: N: No; Y: Yes; U: Unclear ED: Emergency Department PED: paediatric emergency department

Q1: Is the study design clearly stated?
Q2: Does the study address a clearly focused question?
Q3: Are the setting, locations and relevant dates provided?
Q4: Were participants fairly selected?
Q5: Are participant characteristics provided?

Q6: Are the measures of exposures & outcomes appropriate?
Q7: Is there a description of how the study size was arrived at?
Q8: Are the statistical methods well described?
Q9: Is information provided on participant eligibility?
Q10: Are the results well described?
Q11: Is any sponsorship/conflict of interest reported?
Q12: Finally…Did the authors identify any limitations and, if so, are they captured above?

Table 11: Critical appraisal scores for qualitative studies

Citation	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1. Bolger 2004[97]	Y	Y	Y	Y	Y	N	N	N	Y	Y
2. Haxell 2015[99]	Y	Y	CT	Y	Y	N	Y	CT	Y	Y
3. Idenfors et al. 2015[100]	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4. Garcia et al. 2007[92]	Y	Y	Y	CT	Y	N	Y	CT	Y	Y
5. Liegghio and Jaswal 2015[88]	Y	Y	CT	Y	Y	N	Y	CT	Y	Y
6. Liegghio et al. 2017[89]	Y	Y	CT	CT	Y	N	Y	CT	Y	Y
7. Narendorf et al. 2017[68]	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
8. Nirui and Chenoweth 1999[95]	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
9. Walter et al. 2006[74]	Y	Y	Y	Y	Y	N	N	Y	Y	Y
10. NICCY 2018[93]	Y	Y	Y	Y	Y	N	Y	CT	Y	Y
11. RCEM 2018[94]	Y	Y	CT	Y	Y	N	N	CT	Y	Y

Key: CT: Can't tell; NICCY: Northern Ireland Commissioner for Children and Young People; N: No; R: Royal College of Emergency Medicine; Y: Yes

Q1: Was there a clear statement of the aims of the research?
Q2: Is a qualitative methodology appropriate?
Q3: Was the research design appropriate to address the aims of the research?
Q4: Was the recruitment strategy appropriate to the aims of the research?
Q5: Was the data collected in a way that addressed the research issue?
Q6: Has the relationship between researcher and participants been adequately considered?
Q7: Have ethical issues been taken into consideration?
Q8: Was the data analysis sufficiently rigorous?
Q9: Is there a clear statement of findings?
Q10: How valuable is the research?

Chapter 4: Organisation of crisis services

This chapter addresses the first objective which is to present the best available evidence on the organisation of crisis services for CYP aged 5 to 25 years, across education, health, social care and the third sector.

Firstly, an overview of the different types of crisis services/responses that have been described across the included literature was presented to the SAG at their second meeting (Supplementary material 4). After discussion it was decided to categorise the different types of crisis services/responses as follows: Triage/assessment-only approaches; digitally mediated support approaches; and intervention approaches and models (see supplementary material 11).

Triage/Assessment-only approaches

Twenty-two reports described different triage/assessment-only approaches for CYP experiencing crisis (Supplementary material 11) and three UK only grey literature documents[93,134] each presented a case example. Approaches included CYP presenting in crisis to the following types of services: emergency departments, educational settings, telephone triage, out-of-hours mental health emergency services.

Emergency departments

Eight reports described mental health assessment tools for paediatric emergency department clinicians which included the HEADS-ED,[110,116,117] HEARTSMAP[87,119,123,124] and a mental health Assessment Triage Tool.[115] Four reports described urgent follow-up models after initial assessment had taken place at the emergency department.[86,120–122] Two reports described the addition of involving trained mental health workers within a medical emergency department setting.[65,83] Another report described Kids Assessment Liaison for Mental Health (KALM) which sought to build extra capacity for an emergency department medical officer to complete the assessment and to link with an on-call psychiatrist regarding an assessment and management plan.[96] A further two reports described videoconference-based psychiatric emergency consultation programmes (telepsychiatry).[69,72] One further report described the Enhanced Care Coordination for all CYP aged 0 to 21 years presenting with mental health concerns. The model

involves a comprehensive needs assessment, a review of the CYP's current use of services, and a package of medical and behavioural health follow up with support for the family.[110]

A case example described a 24/7 service which uses a model where the Crisis Response Home Treatment Team work together with Rapid Assessment Interface Discharge (RAID) professionals. Children and young people are assessed by mental health practitioners in emergency department within two hours and then linked with onward support.[93] Another case example described a crisis service which provides assessments in the emergency department within four hours and appropriate follow-up care which is available beyond normal office hours. The aim of the service is to prevent admission, and support can be provided for up to six weeks.[134]

Educational settings

Four reports investigated CYP who presented within educational settings.[58,67,71,135] Of these, three[58,67,71] explored the use of the Prevention of Escalating Adolescent Crisis Events (PEACE) protocol within USA high schools. This is an in-school facility where high school-aged children can be assessed by psychology services before referral on to appropriate mental health services. The fourth publication presented an Urgent Evaluation Service for students that aimed to provide ambulatory psychiatric evaluation within school hours offering same-day assessment, coordination of care and linkage to the emergency department within the same hospital if required.[135]

Telephone Triage

Two reports[102,110] described crisis telephone services within the US where an onward referral was made to appropriate services. One case study described a triage approach that responds to CYP presenting with mental health crises. This allows for all referrals to access care via a single point of access telephone number between 9am and 9pm. The response time is determined by the location of the CYP, so between 4 and 24 hours. Further assessment is carried out by either a consultant or the crisis team.

Out-of-hours mental health services

One report[130] described an out of hours mobile crisis team for childcare/custody protection services as well as mental health care providers in the region. One case study described a street triage model which enables police officers to seek immediate consultation, advice, or face-to-face support from a specialist mental health practitioner in making an assessment between 6pm and 2am about anyone they encounter with an apparent mental health crisis. This is for all ages not specifically for CYP. The aim of this model is to reduce the use of Section 136 Mental Health Act 1983 and to provide more appropriate response to people's mental health needs. (In England and Wales, Section 136 of the Mental Health Act 1983 refers to powers that police have to remove a person from a public space, where they appear to be suffering from mental disorder, to a place of safety).

Digitally mediated approaches

Five reports described the organisation of digitally mediated approaches for CYP who were experiencing crisis (Supplementary material 12). One further UK only grey literature document presented two case examples describing digitally mediated approaches.[136] Approaches included telephone support/counselling services, text-based support/counselling services, telephone and text support/counselling services, or online mutual-help groups.

Telephone support/counselling

One report[101] described a telephone-based approach for CYP experiencing crisis, with which follow-up, emergency support, and phone tracing for those feeling suicidal are available. The case example[136] described Childline[137] and the Samaritans[138] which provide support for people in mental health crises, particularly those who feel suicidal, with Childline in particular aimed at CYP under 19 years. While both offer support via the phone and email, Childline has a live webchat facility.

Text-based support/counselling

Three reports[99,104,109] described text-based support for CYP experiencing any type of crisis. All three involved possible onward referrals or further support following initial contact. The case example[136] described SHOUT which is a 24-hour text messaging service for young people in crisis, that uses artificial intelligence to assist the

prioritisation of messages before young people making contact are assigned to a volunteer.

Telephone and text support/counselling

One report[127] described a joint telephone and text-based support service for University students in crisis with possible onward referrals to GP medical services and University support services.

Online mutual-help groups

One report[118] described peer-run online support for young people experiencing mental health issues, including suicidality. Responses were provided by trained volunteers within 24 hours of posting.

Intervention approaches and models

Fifty-one reports described intervention approaches and models in response to CYP experiencing crisis (Supplementary material 13 to 15). In additionsix UK only grey literature documents presented case examples which described a range of intervention approaches and models.[139–144] The different intervention approaches and models included inpatient services, outpatient mental health programmes, mobile crisis services, crisis services or interventions initiated within emergency departments, increasing paediatric mental health expertise in the emergency department, home or community based crisis programmes, school-hospital partnerships, multi-component or multi-agency services, crisis programmes located within residential treatment centres (RTCs) or generic crisis services.

Inpatient services

Eight reports [68,70,85,106,108,128,129,131] described inpatient models of care in response to CYP experiencing crisis. There were a number of theoretically informed therapeutic approaches employed: psychoanalytic therapy,[128,129] solution-focused brief therapy,[131] motivational therapy,[131] as well as a broader approach to brief crisis intervention. A case example described a purpose-built inpatient unit which also contained a dedicated S136 facility alongside the specialist intensive care and generic wards.[139]

Outpatient mental health programmes

Seven reports explored outpatient mental health programmes.[34,61,64,84,91,110] One study involved an outpatient crisis programme for CYP with high levels of mental health risk or behavioural difficulties experiencing a crisis.[110] Three studies involved rapid response outpatient models for adolescents presenting to paediatric emergency departments following suicide attempts.[34,84,91] One study described an adolescent crisis service for those in rural areas within an outpatient clinic[61] and a further study described an integrated paediatric mental health outpatient clinic which was designed to enhance capacity for urgent assessments.[64]

Mobile crisis services

Four reports[60,66,113,114] described mobile crisis services. One report explored a Mobile Crisis Intervention Service, which involved rapid deployment to home or community locations, warm phone lines (a crisis line run by peers), crisis stabilisation, crisis safety planning, and short-term treatment.[113] Two reports described Emergency Mobile Psychiatric Services which provide: crisis stabilisation and support; screening and assessment; suicide assessment and prevention; and a brief, solution-focused intervention.[60,114] Of these reports, one was a description of the programme[114] and the other examined whether the programme was associated with reduced behavioural health emergency department visits for those who had used the service.[60] One study described a mobile response team for CYP at risk of endangering themselves or others.[66] All services provided referral and linkage to ongoing care within community or inpatient settings.

Crisis services or interventions initiated within emergency department

Two reports[105,110] explored crisis services initiated within emergency departments. One report described a Paediatric Psychiatry Crisis Service[105] which included post-discharge monitoring for those experiencing suicidality, including onward referral to outpatient services. The other publication described a Response Model[110] for CYP presenting to the emergency department in psychiatric crisis. In this model, referral for additional mental health services can be provided, including long-term crisis stabilization treatment (up to 6 months).

Three reports considered Family-Based Crisis Interventions (FBCI).[32,82,107] The FBCI is an intervention conducted in the emergency department which looks to stabilise suicidal adolescents within a single visit so that they may return home safely with their families. One report presents a detailed description of the intervention,[107] and a further two reports explore the feasibility and safety of FCBI[32] and detail the efficacy outcomes.[82] Six reports explored Family Interventions for Suicide Prevention (FISP).[33,55,80,81,111,133] The FISP was designed to be used during the emergency department visit and sought to deliver an intervention improving outcomes for suicidal youths and enhance motivation for follow-up treatment. Two of the reports presented in-depth descriptive details of the intervention.[33,81] A further three of the reports described an RCT that tested the effectiveness of the intervention across different periods of follow-up.[55,80,111]

Increasing paediatric mental health expertise in the emergency department

In the specific context of the emergency department, two reports[63,73] described services with the goal of increasing the availability of specialist mental health staff as a route to responding more effectively to CYP's crises. The first involved additional training for psychiatric professionals in an emergency department for those presenting in crisis.[63] The other publication described the implementation of a dedicated mental health team within an emergency department for children presenting with psychiatric complaints (excluding self-inflicted injuries).[73]

Home or community-based crisis programmes

Two reports[59,103] described three models of intensive in-home services: home based crisis intervention (HCBI); enhanced HBCI, and crisis case management. Of these, one report described the three services[103] and a further report sought to determine the effectiveness and compare all three models across a range of outcomes for children in psychiatric crisis.[59] Home-based MST for CYP presenting to emergency departments or inpatient services with *psychosis, or with suicidal or homicidal ideation or threat* was the focus of six reports.[62,76–79,112] Of these, one report described the adaptation of MST for use in youth presenting with psychiatric emergencies,[112] and a further five reports tested the effectiveness of MST compared to hospitalisation across a range of outcomes across different periods of follow-up.[62,76–79]

The case examples described a number of different approaches to home-based crisis care within the UK.[140,141,144] The first set out CYP mental health local transformation plans including the development of a number of intensive home treatment services in the UK.[140] This service is being designed to help the CYP at risk of admission by providing direct care through daily visits at home. The service also aims to support other non-specialist professionals who care for CYP in crisis by providing consultation, for example in emergency departments. The publication by the National Collaborating Centre for Mental Health on "All Age Crisis Care"[141] provided a description of a CAMHS home treatment team as an example of positive practice. Young people who have been identified as requiring an inpatient admission are offered care at home, and the team then work to discharge them as soon as possible and to provide them and their family with practical support.[141] Five areas from the East of England provided information on their current crisis service, their responses to mental health crises of CYP, and three case examples which detailed home based services.[144] One Home Treatment Team was designed as a hospital avoidance service in which the home treatment team provide a service to CYP with complex needs aged 2-18 who would otherwise be admitted to hospital, or to CYP discharged early. An Intensive Community Outreach offered intensive home-based care following a rapid assessment. This was aimed at CYP aged 11-17 years with either severe, enduring, or complex mental illness, or at those who found engaging with services difficult. Both mental and physical health needs are addressed by this service. The aims of these services were to reduce costs associated with inpatient care and to keep the CYP as close to home as possible. A tertiary service provided CYP aged 12 to 18 years with additional support alongside other involved providers at transitional points such as following discharge after self-harm, before a planned admission, following discharge from inpatient care or to avoid admission.

Four reports[125,126,139,141] provided descriptions of services that are organised and located within CAMHS. The reports described the Safety-First Assessment Intervention (SFAI), which provides an assessment and family-focused intervention delivered by CAMHS clinicians working within an intensive care and assessment team for high risk CYP. The focus of the SFAI is to assist the young person and their

family to achieve both physical and emotional safety.[125,126] One report presented a description of the SFAI and a further report described the Safety First Model which underpins the intervention. A case example presented within the Care Quality Commission report on "A Safer Place to Be"[139] also described how safety planning was integrated into existing processes including liaising with police to avoid the application of Section 136 mental health Act 1983.[139] The report by the National Collaborating Centre for Mental Health on "All Age Crisis Care" provided a description of a CAMHS Crisis, Liaison and Intensive Home Treatment Team as an example of positive practice.[141] The focus of this service was to provide comprehensive mental health and risk assessments to CYP in crisis, including follow-up support, intervention options, and transition to adult services. The service collaborated with CYP, their families or carers and relevant professionals to co-produce personalised crisis care plans. This collaborative model was also described as being used for future service developments.

School/hospital partnerships

One report[75] evaluated the implementation of a school/hospital partnership using a model of multi-tiered systems of support to deliver crisis management in acute mental health crisis.

Crisis programmes located within residential treatment centres

Two reports[56,57] described an on-campus crisis residence programme as an alternative to hospital treatment for boys aged 5 to 17 years who were experiencing a psychiatric crisis whilst residing in a RTC.

Multi-component or multi-agency services

Three reports[113,145,146] described the use of multi-component approaches to crisis care. The Ventura County Children's Crisis Continuum is a continuum of services providing three levels of care:[113] a mobile crisis team offering de-escalation and safety planning at home or in the community; a crisis stabilisation unit providing a brief admission of less than 24 hours for assessment and safety planning; and a crisis resolution team (CRT) offering therapeutic treatment for a few months for two CYP at a time. The Solar community CRT offering both working hours and an out-of-hours service seven days a week.[146] The service aims to triage CYP within one hour

of referral and to complete assessment with four hours in which both home or community treatment are offered. Ribbers et al.[145] described a Crisis and Transition Services Model which was an emergency department diversion program which provides transitional clinical care, offers safety planning, lethal means restriction counselling, 24-hour crisis support, and care coordination. Other services variably include in-home individual and family therapy, psychiatric evaluation and medication management, and family peer support.

A case example from the OSCA crisis team described a multi-agency team that offered wraparound, 24/7 care to CYP in crisis at their homes.[141] Another case example offered a range of different approaches including out-of-hours, self-referral 'havens', targeted intervention for vulnerable CYP, a day service, and a specific out-of-hours and weekend crisis service offering assessments, home visits and a residential unit for up to 10 days.[142] The final case example provided a 24/7 multi-agency crisis response teams, all age RAID teams, intensive home treatment teams, access to safe zones, enhanced community support over seven days, and 72-hour crisis beds.[143]

Generic crisis services

One report[92] provided information on three generic services that contained components addressing crisis care. The first generic services was a city centre providing early intervention in crisis that took referrals from GPs, CAMHS, and self-referrals for CYP aged 13-25 years with a range of mental health problems . Another generic service was for CYP aged 16-25 years experiencing distress/crisis with referrals accepted from professionals, families, friends, and self-referrals. A large variety of interventions were provided for those experiencing distress/crisis including drop-in support with attending other services, intensive support, and childcare for 24-48 hours. A third generic services was a self-referral support catering for CYP aged 16-21 years already using other services, including providing a rapid response to those suffering from crisis with onward referral and signposting to other agencies, with referrals also accepted from the organisation's support workers.

Organisation of crisis services: Thematic summaries

The second part of the chapter presents a series of thematic summaries for the organisation of crisis services/ responses as described across the descriptive reports and the UK only grey literature documents. For details of the methods of the narrative approach to thematic summaries see the methods section on page 51-53. Four thematic summaries were developed based on the included literature: recommendations for initial assessment in the emergency department; the importance of providing home or community-based crisis support; places of safety; and general characteristics of a crisis response.

Recommendations for initial assessment in the emergency department

Several recommendations relating to initial assessment in the emergency department were evident in the literature including:

- national development of all-age liaison psychiatry services in A&E[3]
- assessments to be undertaken in a separate age-appropriate area of the emergency department thus reducing the impact of the environment on CYPs' mental health[134,141,147,148]
- assessment undertaken by professionals with expertise with this client group[134,147–149]
- assessment to be conducted in a non-judgemental manner and be developmentally appropriate[134]
- assessment to be sensitive to the needs of the CYP[134,150]
- both a physical and mental health assessment to be included[147,151]
- alternative locations for crisis assessments to be identified, such as crisis cafes.[141]

In line with NICE guidance,[147] after being assessed in the emergency department, CYP (especially those who have harmed themselves) normally require admission to an inpatient paediatric or medical ward for a full physical and psychosocial assessment.[147,149–151] Sometimes admission is required due to safeguarding or social concerns.[134] However, the Royal College of Emergency Medicine disputes this practice due to the lack of evidence of its benefit.[149] It is also important that clear follow-up pathways are developed with multi-disciplinary CAMHS input.[134,148,151]

It is considered essential that all emergency department staff have the appropriate skills and understanding about the mental health needs of CYP,[134,151] especially those who are vulnerable due to family instability and mental health stigma.[134,148] Specialist liaison professionals can be available to offer support, supervision and advice to emergency department staff,[134,148,151] and where this is not available contact with local on-call mental health services has been suggested.[134] Paediatric liaison teams provide crisis assessments within acute hospital settings, where this can include short stays including multi-disciplinary interventions to avoid admission for inpatient psychiatric care.[144] However, whilst liaison improves links between CAMHS and emergency department staff the commissioning and provision of these services in acute settings in some regions in the UK has been reported to be varied.[152]

The importance of providing home or community-based crisis support

It is recognised that the first port of call if a CYP needs help for a mental health crisis should be in the home or the community and that admission to hospital should be avoided if possible.[24,143,153] If CYP do need to be admitted then this should be as close to home as possible so that local teams can maintain contact with families and carers[24,143] unless they are factors in the crisis.[24] Families are acknowledged as being able to make an important contribution to the planning and provision of care to CYP in crisis.[143,154,155]

In the UK, services can follow the CYP from hospital to home, such as the Tier 3.5 or Tier 3+ teams[144] or Crisis Care Home Treatment Teams[144] or intensive outreach services[156] which are designed to support early discharge from hospital by offering intensive home treatments with the goal of preventing readmission. Alternatively, intensive home treatment is designed to help avoid admission by providing home-based intervention.[17,144,154,157]

With regard to CAMHS, a recent NHS benchmarking exercise identified that only 40% of CAMHS networks currently have community-based crisis response services.[144] There are several different models available such as clinic-based,

assertive outreach, home treatment[152] or intensive community treatment[21,144,152,158] which are provided by professionals with appropriate training in risk assessment,[150] who receive supervision[159] and adhere to best practice principles.[160]

From the literature in this chapter, examples of innovations in crisis care include locating a CAMHS service in emergency department which operates seven days a week from 8am to 11pm to ensure CYP can be seen in a timely manner by specialists,[161] a CAMHS-operated telephone support service,[161] 'crisis plans' or 'crisis cards' so that CYP and their families know what to do in a crisis situation[161] and Saturday morning clinics for CYP on the waiting list.[161] Services also need to ensure that an assertive approach to follow-up of those who do not attend appointments is undertaken.[144] It has been suggested that CAMHS should use their webpages to inform CYP and families what support is available to them, including information on support available in a crisis, which should contain details of out-of-hours services.[162]

Places of safety

In the UK, all people experiencing mental health disturbances (including CYP) to a degree that might be harmful to themselves or others can be moved to a 'place of safety' by the police. Section 135 or 136 of the mental health Act 1983 for England and Wales[159] gives police the authority to act in these situations and move the person to an appropriate location.

The creation of dedicated Section 136 facilities for CYP are recommended[139,143,163] as long as this is linked with other facilities with adequate staffing.[155] These should have separate entrances, have sufficient staff who are appropriately trained, have been checked through the national Disclosure and Barring Service, and have access to additional support should de-escalation or restraint be required.[155] Such facilities can be located across a variety of settings and include adolescent mental health inpatient units, hospitals, paediatric wards, or any other suitable places.[155,164] An example of one such place of safety is a designated under-16s safe space attached to one local inpatient CAMHS unit. It is staffed by experienced professionals, in a suitable environment, who can access a dedicated on-call consultant psychiatrist as

required. This has resulted in a dramatic reduction in the numbers of CYP being inappropriately held in police custody[139] There are some specific suites for CYP in the emergency department[152,155,164] but these are not widespread.[152]

The inappropriateness of the places of safety that are sometimes used for CYP have been widely reported such as adult mental health facilities[24,139,155] and police cells.[24,25,156,159,165,166] Police cells should only be used in very exceptional circumstances where the immediate safety of a CYP requires it.[24] In these instances, a protocol needs to be developed between relevant services to guide practice in that situation[152].

In the exceptional situations where a CYP is detained under S136 in a police cell several recommendations exist which include:

- an assessment by professionals suitably qualified and experienced working with CYP[164]
- a review, ideally multi-agency of the CYPs care within seven days[155]
- the detention needs to be reported as a 'serious untoward incident' for governance purposes.[25,139,155]

Ideally, the police would work proactively with mental health care professionals (HCPs), to plan how the needs of CYP presenting in mental health crises are collaboratively addressed.[20,152] Whenever a CYP has been detained under S135/136, this data should routinely be collated and reported for quality assurance and monitoring.[155]

In some areas of the UK, where no specific places of safety are identified,[3] it is acknowledged that there is a need for a clear pathway for those CYP detained under the S135/136 MHA other than a police station. This needs to be age-appropriate, used only as a short-term measure (up to 72 hours), while a longer-term plan for that CYP is developed.[139,143,155,156] It is acknowledged that there might be a difference in what can be considered suitable in an emergency compared with longer term care.[167] Sometimes the police do not know how to access mental health care and it

has been suggested that there needs to be some form of advanced agreement about how police can access the facility or pathway.[134,139,152,159,164]

General characteristics of a crisis response

Providing a timely response

It is recognised that responses to the CYP in crisis should be timely, so the CYP does not need to wait for help.[3,14,24,144,151,155,168] However, the independent report carried out by the Mental Health Taskforce published in 2016 reported that less than half of CYP services have a dedicated crisis team.[17] The Youth Commission for Mental Health recommended that CYP should not be turned away from hospitals or other services when at a crisis point for their mental health and that hospitals should have a crisis support team.[169] The amount of time a CYP in mental health crisis may need to wait for an assessment from specialist professionals varies greatly.[144,151,153,154,164,170–173] A general principle is that CYP should be seen quickly and easily.[173] This varies from within a few hours of initial request,[144] to the same day[144] but is mandated as being within four weeks.[171]

Age-appropriate care

Wherever possible, those responsible for the care and treatment of CYP should be CAMHS specialists. In exceptional cases where a young person is admitted to an adult psychiatric ward, clinical staff should have regular access to, and make use of, a CAMHS specialist for advice and consultation.[159] The mental health Crisis Care Concordat sets out that the views of CYP should be sought in the setting and maintenance of quality standards for crisis services to ensure they are age-appropriate and suitable for their needs and each CYP should have access to an advocate.[24] However, access to appropriate and timely psychiatric liaison from specialist CAMH services is not always available, with some CYP placed inappropriately on general paediatric or adult wards.[3] The Welsh Government recommends that admitting a CYP over 16 years of age to an adult mental health ward outside working hours in a crisis / emergency situation should only be considered after a risk assessment of the presenting concerns is carried out and admission is deemed appropriate due to risk of self to others and / or a need for a place of safety.[164]

In evaluating the Crisis Care Concordat for England Gibson et al.[163] suggests that a CYP focussed model of crisis care is urgently needed to address the lack of crisis services for CYP, especially with regard to the local availability of appropriate inpatient care. To better support people of all ages at risk of experiencing a mental health crisis, the Department of Health in 2017 launched a £15 million scheme, 'Beyond Places of Safety' to support services for those needing urgent and emergency mental health care, including CYP.[14] In Wales,[20] recommendations include ensuring that arrangements for the holding of designated beds for CYP admitted in crises are in place and sustainable. It is also acknowledged that services also need to ensure CYP aged 16-17 do not fall between paediatric and adult services.[152]

Providing a single point of access

A clear pathway with a single point of access is advocated.[20,174,175] Emergency departments across the UK offer a 24/7 single point of access to CYP following self-harm or a mental health crisis.[149,151–153] Access to services remain poor and the number of CYP attending emergency departments for a psychiatric condition has continued to rise. Whilst this mirrors the general rise in A&E attendance, more CYP presenting at emergency departments receive a psychiatric diagnosis with some struggling to access services until they reach crisis point.[176]

Accessibility

Ideally specific pathways for CYP in crisis need to be developed in order to avoid CYP presenting to the emergency department and/or being admitted to paediatric wards.[143] It is widely agreed that services should be located at a place suitable and accessible for CYP, and available at a time that suit the CYP[14,134,143,144,153,155,157,164,169,177] to enable a swift and comprehensive assessment of the crisis issue.[3] Crisis care should include facilities to conduct risk assessments 24/7 along with practical support and interventions to reduce risk from a confident and well-trained multi-agency team.[134,143,153] Suggested locations include face-to-face appointments in locations in which the CYP feels safe,[144] including the use of Safe Zones (locations staffed by the third sector where CYP can go to receive support, advice or intervention that is away from a stressful or triggering environment),[14,143,153] dedicated safe spaces within the emergency department (quiet

and welcome environment that is monitored by staff with mental health training)[169] or at the CYP's home.[14,155]

Crisis and out-of-hours services should incorporate specialist advice, support, consultation by phone and direct face-to-face assessment and management where necessary.[164] Support services that offer out-of-hours services are available in a variety of methods including: face-to-face, telephone, and on-line including those appealing to CYP such as mobile applications.[136,143,144,160,169,177,178] It is also felt that attempts need to be made to appropriately advertise the availability of such services so that CYP know about them,[169] and that such platforms might also be useful in promoting health more generally.[160] Even with online and telephone support, there needs to be a process of triaging to ensure an appropriate intervention or pathway is offered to CYP[136] and that people working in these services are trained to deal with CYP in crisis.[152]

Help and support can also be provided in educational settings,[14,143,168,170,178] or through voluntary organisations[143,178] as well as via the internet[143,178]or phone contact[143,144] and at times of the day that ensure CYP do not need to take time off school.[169] Higher education institutions within the UK draw from a range of initiatives to support young people in crisis including in-house support services, [168] outsourced or external service provision.[14,168,170] Such provision could include 24/7 counselling or support service,[14] online self-help services,[14] and crisis lines for signposting to out-of-hours support,[14,168] crisis phone lines[14] counselling[14] or referral and liaison with external mental health services[168,170] which includes emergency services and subsequent hospital admission[168] or urgent response services.[168]

Availability

Crisis services for CYP should ideally offer out of hours availability.[17,143,144,153,155,157,169,174,175,177,179,180] The Welsh Government recommends that Health Boards should prioritise the resources available in CAMHS services to ensure that community intensive treatment teams or comparable services have access to sufficient CAMHS expertise in managing the demands of young people for extended hours.[164] A recommendation of the Mental Health Taskforce in 2016 was that for CYPs NHS England should develop an equivalent model of care to the

current crisis resolution and home treatment teams for adults available around the clock, with a community-based mental health response which provides intensive home treatment as an alternative to acute inpatient admission.[17] Compared to adult services, however the low numbers of CYP presenting in crisis in a local area may mean that the cost of providing 24/7 CAMHS care would be proportionally very high.[151] The lack of a 24/7 CAMHS workforce is ameliorated to some extent by use of social care, paediatricians, and adult mental health professionals, but does mean that CYP might have a wait of up to five days to receive definitive care planning which is seen as unacceptable.[151]

Although out-of-hours cover is provided across some CAMH services,[144] there is a wide variation in service provision[152] and most CAMHS routinely provide crisis services during normal office hours.[151] Even though the availability of 24-hour access is welcomed it is difficult to provide due to insufficient workforce[151] and limited capacity.[164]

The provision of home based crisis care that is available 24/7[17,157,174] should be made available to all CYP regardless of age and ethnic backgrounds.[3,143,150,151,157,163] By 2023/24 NHS England[174] states that there will be 100% coverage of 24/7 mental health crisis care provision for CYP which combines crisis assessment, brief response. and intensive home treatment functions. This follows on from their earlier recommendation in the five year forward view for mental health,[175] that clinical commissioning groups should commission improved access to 24/7 crisis resolution and liaison mental health services which are appropriate for CYP. In the Green Paper "Transforming Children and Young People's Mental Health Provision" it is suggested that the savings made from reducing and minimising hospital stays should be reinvested to improve local community response for CYP presenting in crisis and that there should be improved access to intensive home treatment with support from their local community team.[14]

Responsive and needs-led

One report suggests that because access to routine CYPs' mental health services is poor, CYP struggle to access services until they reach a crisis point.[176] It is helpful to

conceptualise crises in CYP as a psychosocial response to a contextual stressor such as a safeguarding, physical or mental health stressor.[144] As a consequence, services that are provided to CYP in crisis should be responsive and targeted to CYPs' individual needs[143,144] and at a level of intensity that is appropriate using the stepped-care approach.[143] A key characteristic of crisis provision is an assertive approach that often involves creativity to connect with CYP.[144,155] This can be achieved either through mobilising resources around the CYP in the community, or by linking with a third sector provider or an emergency department.[155] It has been recommended that the location of any intervention should be as close to home as possible, including if inpatient care is required.[24,157]

Evidence-based

It is acknowledged that interventions provided to CYP should be evidence-based so that limited resources are used effectively and to ensure the best possible outcomes.[3,14,140,143] It is important that training for health professionals providing crisis services should also be evidence-based.[20,151]

Multi-agency working

A health-only response is not likely to resolve a crisis[143,151] as the nature of crises for CYP are often wide ranging in nature, resulting from problems at home, school, experience of trauma, families being under stress or family breakdown. As such, services need to draw on a multi-agency approach,[14,143,144,150,153,155,172,180] and involve health, social care, education and the third sector.[14,178] A co-ordinated response,[3,20] preferably with a 24-hour community-based service available[17,180] and a follow-up plan,[20,143] is considered important. In Wales it has been suggested that a country-wide triage model could allow HCPs to work with Welsh police forces and be situated in police control rooms to provide advice when CYP present in crisis.[20]

Suitably qualified /experienced professionals

It is acknowledged that assessments of CYP in crisis ideally should be carried out in a timely fashion by professionals who themselves are competent in this skill.[24,144,150,151] Professionals should have appropriate training to achieve competence in this area.[143,153,164,170,172] It has also been suggested that professionals with specialist skills and knowledge in the care of CYP with mental health needs

should provide training, advice and consultation to paediatric wards, emergency departments and social services[143,150,164,172,181] and should develop protocols for the assessment and care of CYP in crisis.[150]

Crisis planning

The development of a crisis plan is suggested as useful for CYP at risk of further episodes of mental health crisis.[134,154,168,182] Crisis plans need to be developed proactively in collaboration with CYP,[134,163,168,183] their families[134,150,184] and other relevant professionals[24,182] and be available if required in the case of crisis.[134]

Such a plan needs to contain information on how to recognise early warning signs of a relapse or crisis,[154] who to contact[150] and how to access support during crises including out of hours[150,168,182] or to prevent admission to hospital.[154] Crisis plans should contain self-management strategies.[181]

Risk assessment

Crisis care should include facilities to conduct risk assessments 24/7 along with practical support and interventions from a confident and well-trained multi-agency team.[134,143,153]

Chapter summary

This evidence synthesis has shown that there are a number of different approaches to crisis care which all have applicability to the UK provision. These include: triage/assessment-only; digitally mediated support approaches; and intervention approaches and models. Triage/assessment approaches include responses to CYP who present in times of crisis to emergency departments, to educational settings, to telephone triage and to out-of-hours psychiatric emergency services. Digitally mediated support approaches are facilitated through telephone and/or text-based responses or online technology. Finally, a wide variety of different intervention approaches and models have been described ranging from treatment that is started in the emergency department then moved to outpatient services, inpatient care through hospitals or RTCs, home-based programmes, CAMHS-based services, treatment involving telepsychiatry or via a community resource such as mobile outreach through to school/hospital partnerships and generic walk-in crisis services

provided by voluntary organisations.

Four themes emerged from the thematic summaries of the descriptive reports and UK only grey literature documents. These were recommendations for initial assessment in the emergency department; the importance of providing home or community-based crisis support; places of safety; and general characteristics of a crisis response. The first theme with recommendations for initial assessments in an emergency department includes assessments being undertaken in separate age-appropriate areas by skilled professionals with expertise with CYP who have received appropriate training. Guidance relating to how initial assessments are carried out in the emergency department also focuses on risk assessments and broadly follows NICE guidelines. The importance of follow-up pathways is emphasised.

The importance of providing home or community-based crisis support is the focus of the second theme. Where possible, crisis care should be offered as close to where CYP live as possible, so either in the home or in community-based locations, recognising that families make an important contribution to the planning and provision of care. The third theme is around places of safety. This shows that places of safety need to be appropriately staffed with experienced and trained professionals, ideally in a dedicated space so that the use of adult mental health facilities and police cells can be avoided. The final theme addresses general characteristics of a crisis response. This highlights that, in general, crisis services should provide a timely response, be age-appropriate, have a single point of access, be accessible and available 24/7, be responsive and needs-led, involve multi-agency working, be staffed by suitably qualified and experienced professionals, and involve crisis planning and risk assessment using evidence-based practice.

Chapter 5: Experiences and perceptions of crisis support

The second objective for this evidence synthesis was to explore the experiences and perceptions of CYP aged 5 to 25 years, their families, and staff with regards to mental health crisis support. This chapter therefore presents a thematic synthesis of qualitative data from primary research studies, wider research reports, and stakeholder consultations with service providers and/or young people and their families that was part of a wider body of work. For details of the methods of the thematic synthesis see the methods section on page 51-53. Four themes were identified which were: *Barriers and facilitators to seeking and accessing appropriate support; What children and young people want from crisis services; Children's, young people's and families' experiences of crisis services; and Service provision.*

Barriers and facilitators to seeking and accessing appropriate support

Six qualitative studies,[68,74,95,97,99,100] qualitative data from within two wider research reports[92,93] and four stakeholder consultations with service providers and/or young people as part of a wider body work [20,144,169,185] contribute to this theme, which addresses the barriers and facilitators to seeking and accessing appropriate support. Seven sub-themes were identified which were *Service eligibility; Knowing where to go when in crisis, Access to mental health services and professionals; Support from others during times of crisis; External factors that influence access; and Transitions across services.*

Service eligibility

Participants in one study described how having diagnostic-specific eligibility criteria in place for free or reduced-cost care had prevented them previously accessing the service.[68] Other services had a threshold such as suicidality, before offering a service to CYP.[74] Families of CYP who had accessed a crisis helpline felt that their definition of crisis was not the same as that of the call handlers and as a result felt dismissed by the service.[74] Across the UK it was noted that those with less severe mental health problems were not eligible for specialist CAMHS services and felt there was nowhere to turn to other than the emergency department when they needed help.[185]

Knowing where to go when in crisis

Being unsure as to what relevant services exist, where to locate them and how to access them was found to prevent CYP from getting help.[100] Some CYP had heard of mental health services but did not know what they provided or how to get in touch with them. Although services may have had a web presence, with detail of a mobile psychiatric team,[100] this was too vague, and more information about how the service worked was wanted. The lack of direct phone numbers made it difficult to make contact, or several attempts were needed to navigate through a web of services before accessing the right one.[68,100] Friends and relatives of those who had taken their own lives commented that they had been unaware of how to manage or help people at risk of suicide before it had become an issue for them.[95] Stakeholders in the UK felt that this lack of information for family members could be one of the reasons why there was an increase in use of the emergency department when CYP were experiencing crisis.[144] Knowing of friends and and/or family members who had already accessed services was also described by some as an important means of finding out what support was available.[68] Some CYP initiated initial contact via walk-in crisis services or hotlines, or through meetings that had been previously scheduled if they were already known to mental health services.[74] The lack of information for parents/carers was highlighted as a factor which potentially had an impact on the increased use of emergency departments.[144]

Access to mental health services and professionals

Children and young people frequently described wanting easier access to inpatient and outpatient mental health services and specialist professionals [92,97,144]. Suggestions included more informal walk-in / drop-in services without having to have an appointment[92,97], 24/7 provision[92,144] and clear and single points of access.[144] Some CYP described wanting immediate help as they found that they had to wait too long for appointments after initial contact was made and felt that their condition deteriorated as a result.[93,100,144] One report explored what parents would like to happen when their CYP were experiencing crisis, and these included timely support, service cohesiveness, and ease of access. Parents reported wanting to be able to access appropriate and timely support or advice at all times, including out-of-hours.[144] Having a single point of access to services was noted as helpful, as

opposed to having numerous different services with different means of accessing these.[144]

Support from others during times of crisis

Having someone to talk to in times of crisis, whether this was a friend or family member, was seen as important.[97,100] Some CYP felt that talking to someone in confidence outside of the family, such as a teacher, school counsellor, community nurse, emergency department staff, priest or GP who could be trusted and provide a non-judgmental atmosphere, was also crucial.[97,99]

However, some CYP described feelings of hopelessness and being unable to confide in others.[95,97,169] Some CYP did not want help at times when they felt suicidal, and young men in particular identified that they struggled to open up to others.[97] From the perspective of family and friends of those who had committed suicide, people reported that the CYP had found it difficult disclosing the details of their emotional state to their GP, partly because of the short consultation time, their lack of relationship with the GP or the doctor's perceived insufficient knowledge.[95]

Some families felt that one of the key facilitators that enabled them to access support was existing relationships with professionals, such as school personnel, police, parole officers, counsellors, and child protection agencies.[74] Having support from significant people in their lives (e.g. family, friends, teachers etc.) was seen as being key to accessing support for some, particularly during times of poor mental health and diminished capacity, making it difficult for individuals to actively seek help on their own behalf.[68,100] Parents and other family members in particular were important as they could provide practical help and accompany CYP to their appointments. They were also able to provide information as well as signpost to appropriate services and community resources.[68]

External factors that influence access

The external factors that influenced a CYP's and/or their parents' ability to access crisis services included financial concerns and difficulties with transportation. Financial concerns were evident in US studies for those who were not covered by insurance or who had poor financial resources.[68,74]

It was reported by CYP that transportation to the crisis service in some instances was provided by the police, other service providers, secure transport companies, and family members or significant people in their lives[68,74] and in other cases CYP walked or took public transport.[68] For some, not having access to transportation was considered a barrier [68,74] and parents with a child displaying challenging behaviour who did not have their own transport described avoiding public transport because of the inherent difficulties with that.[74]

Transitions across services

In a study looking at uninsured young adults, other social service organisations, such as domestic violence counsellors, homeless services, criminal justice and substance use services facilitated access to help by providing referrals or transport.[68] However, it was often reported that there was a lack of continuity in mental health service provision following a young person's discharged from the criminal justice system where mental health care had been provided.[68] Another study described lack of communication and collaboration between child welfare, school systems and mental health providers a common barrier exerting an effect on service quality.[74] Findings from interviews with young people tell of a young person being "shuttled around groups" and ultimately taking their own life.[169p.16.] In other studies, youth stated that they did not want to be "passed around" services when they are in crisis.[144p.91]

Where specific crisis intervention teams had been created there was an improvement in their willingness to collaborate with specialist CAMHS, accident and emergency and paediatric services were found to make noticeable differences.[20]

Where investment had been made into specific crisis services (emergency liaison, crisis outreach), the collaboration between CAMHS, emergency department and crisis care was improved and thus more accessible.[20,144] Parents reported that the sharing of information between agencies and sectors was viewed as important, enabling all involved professionals to have access to the same information about young people and their families. This helped avoid having to keep providing the same information repeatedly.[144]

What children and young people want from crisis services

Two primary studies,[97,99,100] qualitative data from within one wider research report[92] and two reports of consultations with stakeholder service providers and/or young people as part of a wider body work [144,161] contribute to this theme which explored what young people want from crisis services. Four sub-themes were identified which were: *Importance of lived experience and peer support; Services specifically for young people; Attributes of health professionals; Need for different forms of support and pathways to services.*

Importance of lived experience and peer support

Some young people identified the importance of peers, who have experienced mental health difficulties in the past, working alongside HCPs and counsellors in any service. Moreover, being able to meet up and share with others who had had similar experiences was crucial.[97] Peer support in schools and youth work settings was also seen as important, along with more training for teachers in mental health issues, so that teachers could become more aware of how best to support young people when in mental health crisis.[92]

Services specifically for young people

Many CYP felt that there should be services catering specifically for them.[92,97,144] Specific types of crisis support were also needed, and older youths felt it would be helpful if there were services targeted specifically at 16-25 year olds which are 'young-people-friendly' in design and approach.[92] In one area, there was a request for services for the under-14s because there was no crisis care for this group.[144]

Attributes of health professionals

Parents wanted health professionals to understand that a crisis for a young person was also a crisis for parents.[144] Children and young people felt that when they are in crisis they would like a choice of workers, so they can build rapport with someone.[92] They also wanted those caring for them to be sensitive[92] and compassionate to their needs[144], to listen to what they say[144] and to exhibit transparency.[144] They also wanted to be seen as a "real person" and to feel understood.[144p.91] Skilled support was also highlighted as being important, specifically the ability to ask the right questions, to navigate the system and to be clear on next steps.[144] Many CYP

wanted drop-in crisis services to be staffed by youth workers with knowledge of mental health.[92] Others had concerns that staff within other crisis services were not sufficiently trained to help those with mental health issues, especially in the emergency department.[144,161] A potential solution suggested by CYP withexperience of crisis services was for them to become involved in staff training[92,144] so that a more sensitive service could be provided.[92]

Need for different forms of support and pathways to services

The need for different forms of support and pathways to services was identified by CYP, including through telephone[92,97,100,144] text[99,144] and email.[100] Those who preferred to use the telephone to make contact said that they would want to have access to a direct number, as being passed back and forth was found to be frustrating.[100] Others wished for an out-of-hours telephone helpline manned by skilled counsellors who also knew the available local services to signpost people to.[92] Those CYP who wanted to remain anonymous felt that being able to access staff this way would be helpful.[97] Texting services were seen as positive, and CYP described what they liked about them which included immediate support, convenience, comfort, anonymity, having control, low cost, a distraction from rumination and negative thinking, and having the ability to store and refer back to the messages at a later date.[99]

Parents felt that telephone counselling services, that their children had used, did not provide timely services and that the duration of crisis counselling via a hotline was found not to be long enough.[95] There were some occasions where there was a mismatch between what a telephone hotline was offering and what parents wanted.[74] Hotline services worked well where parents could transport their children to the mental health centre or other location for assessment. However, hotline services were not helpful in resolving an immediate crisis with a child's violent or dangerous behaviour and parents were often told to phone the police.[74] On other occasions, some families reported that hotline responders told them to "call back during business hours."[74 p.615/6]

Children's, and young people's and families' experiences of crisis services

Five primary studies[68,74,95,97,100] and qualitative data from within seven wider reports[20,92,93,144,150,169,185] contribute to this theme, which addresses young people's and their families' experiences of crisis services. Four sub-themes were identified which were: *Lack of support before crisis is reached; Assessment, management and follow-up in the* emergency department*; Processes leading to inpatient admission and experience of inpatient care,* and *Views of CAMHS and crisis teams*

Lack of support before crisis is reached

A general lack of support before crisis is reached was described by CYP.[92,93,95,169] This included being moved around services;[93,169] not being taken seriously by GPs who often put CYP concerns down to age or hormones[93,169] and HCPs being dismissive of the urgency of the situation and prioritising other issues.[169] Long wait times for mental health appointments after making initial contact with GPs[68,93] and a lack of information for parents/carers on where to go if their child was in mental health crisis[144] have also been reported by CYP and their families. In this context, the emergency department often becomes the default option for CYP when faced with a mental health crisis, particularly in instances of self-harm and/or overdose.[20,93,185] Calls have been made for crisis services to work with young people who feel they are at risk of falling into crisis, helping them to develop strategies and access resources at an earlier point.[92]

Stakeholders in the UK acknowledged that CYP often have difficulties accessing support from specialist CAMHS and/or primary care.[20,74,185] In some cases it is because they are not considered eligible[185] or because there are gaps in the availability or accessibility of appropriate care[74,185] in particular out-of-hours or crisis responses.[185]

Assessment, management and follow-up in the emergency department

Family and friends of those who had taken their own lives felt that there had been a lack of appropriate hospital management of people with suicidal behaviour, with care often involving the patient just being given medication.[95] Parents and CYP report that there are often long wait times in the emergency department, including during the triage process, often resulting in delays in receiving specialist mental health

support.[74,93,100,144] Other negative experiences that CYP have reported with regard to emergency department visits include the lack of suitability of the environment, more specifically noisy, bright, large numbers of people,[144] lack of mental health professionals 24/7,[144] no privacy,[144] and poor attitudes of staff.[92,97,144] Children and young people, their friends, families, and other stakeholders in the UK frequently raised concerns about the level of follow-up care after discharge from emergency department following a crisis.[20,93,95,97] However, some CYP described that staff was supportive and understandingin the emergency department.[97,150]

Processes leading to inpatient admission and experience of inpatient care

The processes leading to admission where a CYP was in mental health crisis were found to be overly complicated, lengthy and frustrating for both the CYP themselves and their families.[68] This process may have occurred in community mental health centres, criminal justice locations or in emergency departments. The apparent lengthy wait appeared to be linked to the need for agencies to share information, and for practitioners to be able to access previous medical records. The experience of receiving care, however, was reported by CYP as being positive,[150] who found healthcare practitioners to be positive and reassuring, and treatment effective relating to self-harming behaviour and the prescribing of medication. However, others felt they were being treated like a patient rather than a person.[92]

Views of CAMHS and crisis teams

There were mixed views from CYP about CAMHS with some finding them exceptional[93] after an initial wait and others not pleased with their service.[95] The use of crisis plans as a contingency agreement was not common, even though it was felt that these are important.[144] Where crisis plans existed, they were insufficiently detailed, suggesting such interventions as calling the case manager, crisis hotline or police.[74]

A further area in which views were expressed was in relation to the naming of ‘crisis services’. Some CYP reported that the term ‘crisis’ may deter some CYP from receiving help as they felt it assumes that they were already on a pathway to crisis as opposed to actually being in crisis.[92]

Service provision

Three primary studies,[74,88,89] qualitative data from within one wider research report[92] and four reports of consultations with stakeholders, service providers and/or young people as part of a wider body work[20,94,139,144] contribute to this theme, which addresses young people's and their families' experiences of crisis services. Five sub-themes were identified which were: Inappropriate admissions to adult wards; Availability of a crisis team outside traditional office hours; Geographical boundary issues and variable service provision across different regions; CAMH services and Police involvement and places of safety.

Inappropriate admissions to adult wards

When experiencing crisis some CYP were sometimes admitted to adult or paediatric wards.[20,92,144] Frontline crisis mental health practitioners noted that although considered inappropriate,[20,144] where CYP needed admission, successful adaptations could sometimes be made for accommodation on adult mental health wards. Service providers from the UK in the report by Garcia et al.[92] described an example of a third sector organisation that works with adult mental health services to raise awareness of what the third sector can offer, and to connect with all young persons on adult wards during their admission.[92]

Availability of a crisis team outside traditional office hours

It was acknowledged that demand also presents during evenings and weekends, and at these times crises could be exacerbated due to insufficient services.[20] The lack of availability of a crisis team and/or specialist CAMH services outside traditional office hours was frequently reported, and as a consequence the emergency department was often the first port of call for CYP experiencing a crisis.[20,94,144,161] However, where CAMHS experts were available, this was seen by both service providers and CYP to be helpful.[94] The tension for commissioners was described as providing accessibility where demand dictates without being wasteful with under-used resources.[20] Young people often reported that they had to wait a long time to be seen out-of-hours.[144]

Geographical boundary issues and variable service provision across different regions

Other barriers identified by both stakeholders and CYP across the UK were about accessing a service when the CYP originated from a different locality from where the service was sited,[20,92] or where the CYP was 16-17 years and the age appropriateness of a service was unclear.[144] Although some areas have crisis services for CYP, availability in different areas was variable, with some services only operating within office hours.[144] Some CYP were admitted into hospital as a strategy to avoid breaching emergency department waiting times targets.[144] Referral onto statutory services by third sector organisations was difficult when the CYP lived outside the district, so involvement of a GP was sometimes necessary to facilitate this process.[92] Different processes to manage safeguarding are described, some using liaison nurses to check the reason for the CYPs' attendance at emergency departments.[144]

CAMH services

Stakeholders in the UK presented a variety of views regarding CAMHS provision. It was felt that there needs to be fully supported community mental health provision for CYP to reduce the need for inpatient care, and to reduce length of stay (LoS).[20,139] It was also felt that developing community-based resources,[139,144] such as assertive outreach,[20] and early intervention are critical to reduce the need for admission into crisis beds.[20] Emergency department clinical leads and emergency department mental health departmental leads from across the UK reported that CYP do not have access to CAMHS in the emergency department and the only way that a CYP can be assessed by CAMHS is for them to be admitted.[94]

Police involvement and places of safety

Analysis of memos from police encounters with CYP in mental health crisis, and interviews with caregivers and siblings revealed that the main reason for contact was to de-escalate situations such as self-harming, harming others, and aggression. In such cases the CYP would be escorted to the emergency department for further mental health assessment.[88,89] Families of CYP admitted to a mental health ward stated that police officers had been involved as part of the crisis response to homes or schools, although families did not like the use of police in these situations.[74]

In Wales, UK police representatives reported that despite an increase in the frequency that police have needed to manage mental health crises with CYP, there is optimism that increased resources will become available following government investment and through the introduction of the Mental Health Crisis Care Concordat.[20] The Mental Health Crisis Care Concordat is a national agreement setting out how services and agencies will work together to support people in crisis. This approach helps to address police concerns about their lack of suitable resources and appropriate training to be able to effectively help CYP in mental health crises.[20] A suggestion of how this could be applied is the introduction of a mental health practitioner in police control rooms to advise officers when faced with a CYP in crisis.[20]

The police also have a role to play when CYP need a place of safety, and staff have raised concerns about the lack of appropriate facilities and feel alternatives are needed.[139,144] Staff were aware that in some instances CYP were reviewed in police cells, although the police did seek alternatives where available such as in residential units or emergency departments.[139] In one area, it was reported that 41 CYP had been detained in police cells over the previous year.[139] Although this is ordinarily regarded as an unsuitable environment, there is an acknowledgement that there is a difference between what a suitable environment is for a CYP in an emergency situation compared to longer term provision.[139]

Confidence in the evidence

The qualitative findings were assessed for confidence using the CERQual approach and 27 synthesis summary statements were generated which are presented in Table 12 below. Out of the 27 synthesis summary statements, only two were judged as having a high degree of confidence. The remaining statements were judged as having a moderate (n=15), low (n=3) or very low (n=7) degree of confidence. Supplementary material 16 includes the detail of how the CERQual statements were generated, along with the detail derived of the ungraded summary statements derived the reports of consultations with stakeholders, service providers and/or young people as part of a wider body of work.

Chapter summary

A thematic synthesis of the qualitative data identified four themes with regards to the experiences of crisis support from the perspective of CYP, their families, stakeholders and service providers (see Table 12). These themes were: barriers and facilitators to seeking and accessing appropriate support; what children and young people want from crisis services; CYPs and families' experiences of crisis services; and service provision.

The first theme reveals a number of barriers and facilitators to seeking and accessing appropriate support. One of the barriers identified is that various thresholds of eligibility exist making access to specialist services difficult (CERQual-Moderate). Another barrier is that many CYP and their friends and relatives state that they do not know where to turn when they are experiencing mental health crises (CERQual-Moderate). Several external factors influence access, and some CYP feel that their ability to access crisis services is affected by finance and transport (CERQual-Moderate). Transitions across services, in particular clear pathways between different services, are seen as helpful but a lack of communication and collaboration is often described with CYP often slipping through the gaps (CERQual-Low). Children and young people say that they want easier and more immediate access to mental health services and mental health professionals (CERQual-Moderate). Support from others during times of crisis is identified as a facilitator, although while some CYP want someone to speak to, others find it too difficult to talk at the time of a crisis (CERQual-Moderate). Where CYP have support from significant people in their lives they are assisted to access crisis services (CERQual-Moderate).

The second theme explored what CYP want from crisis services. Some CYP feel that peer support and involving those with lived experience of mental health crisis within services is important (CERQual-Moderate) or feel that services should cater specifically for them and be targeted at specific age groups (CERQual-Moderate). Others describe the attributes that they would like the health professionals who they engage with during times of crisis to have, which include being understanding, sensitive, compassionate, having good listening skills, and being skilled and

knowledgeable in mental health issues (CERQual-Very Low). The need for different forms of support and pathways to services is identified by CYP, including through telephone, text, and email (CERQual–High). Access to crisis support via telephone is preferred via a direct line, with out-of-hours availability and staffing from trained counsellors (CERQual–High). However, parents report that telephone counselling services are not always seen as providing timely or appropriate advice (CERQual-Moderate). Children and young people report that texting provides immediate support and anonymity, and they like having the ability to store and refer back to the messages at a later date (CERQual-Moderate).

Children's, young people's and families' experiences of crisis services was the focus of the third theme. Children and young people feel that there is a general lack of support before crisis is reached (CERQual-Moderate). Stakeholders acknowledge that that CYP often have difficulties accessing support from specialist CAMHS and/or primary care for MH problems before a crisis is reached. (CERQual-Very Low). Long wait times for specialist services and a lack of information result in the emergency department being the default option when CYP are in mental health crisis (CERQual-Very Low). A number of concerns are raised by CYP, their families and stakeholders with regards to the assessment, management and level of follow-up care of those CYP who present in crisis to an emergency department (CERQual-Moderate). Some CYP find the noisy and busy environment of emergency department unhelpful with a lack of privacy and poor staff attitudes adding to this unsuitability (CERQual-Moderate). The processes leading to admission when a child or young person is in crisis are described as being lengthy, over-complicated and frustrating and there are mixed views from CYP regarding their experiences of inpatient care (CERQual-Moderate). There are also mixed views from CYP about CAMHS and crisis services (CERQual-Moderate) and some feel that crisis plans lack sufficient detail (CERQual-Very Low).

The fourth theme was concerned with service provision. Where CYP have been inappropriately admitted to adult or paediatric wards, service providers feel that sometimes adaptations could be made (CERQual-Very Low). Stakeholders and service providers in the UK express a number of concerns with regard to inadequate

crisis care outside of traditional office hours, but when available this is seen as helpful (CERQual-Low). Geographical boundary issues and variable service provision across different age groups and across different regions are concerns expressed by stakeholders and service providers in the UK (CERQual-Very Low). Stakeholders feel that the need for crisis beds could be reduced by ensuring adequate community resources such as assertive outreach and early intervention services, however, admission is required from emergency department for CYP to have CAMHS assessments (CERQual–Very Low). With regard to police involvement, although some families report that they do not like police involvement some find that it helps to de-escalate situations (CERQual-Low). Service providers have raised concerns regarding the lack of appropriate facilities in police cells as places of safety and feel that alternatives are needed (ungraded not primary research).

Table 12: CERQual summary of findings table

Summary of evidence synthesis finding	Studies contributing to evidence synthesis finding	CERQual Confidence
Synthesis 1: Barriers and facilitators to seeking and accessing appropriate support		
Service eligibility 1. Various thresholds of eligibility exist making access to specialist services difficult.	Studies 6, 8 Consultations with stakeholders[185]	M
Knowing where to go when in crisis 2. Many CYP and their friends and relatives state that they do not know where to turn when they are experiencing mental health crises.	Studies 1, 7, 8	M
Access to mental health services and professionals 3. Children and young people want easier and more immediate access to specialist services.	Studies 1, 2, 4, 5 Consultations with CYP[144]	M
Support from others during times of crisis 4. Some CYP want someone to talk to, whereas others find it too difficult to talk at the time of a crisis.	Studies 1, 2, 3, 6, 7, 8 Consultations with CYP[169]	M
5. Where CYP have support from significant people in their lives this assists them to access crisis services.	Studies 1, 6, 8	M
External factors that influence access 6. Some CYP feel that their ability to access crisis services is affected by external factors such as finance and transport.	Studies 6, 8	M
Transitions across services 7. Clear pathways between different services are seen as helpful, but a lack of communication and collaboration is often described with CYP often slipping through the gaps.	Studies, 6, 8 Consultations with stakeholders & CYP[20,144,169]	L
Synthesis 2: What children and young people want from crisis services		
Importance of lived experience and peer support 8. Some CYP feel that peer support and involving those with lived experience of MH crisis within services is important.	Studies 2, 4	M
Services specifically for young people 9. Some CYP feel that services should cater specifically for them and be targeted at specific age groups.	Studies 2, 4 Consultations with CYP[144]	M

Attributes of health professionals 10. Children and young people would like the health professionals they engage with during times of crisis to be understanding, sensitive, compassionate, have good listening skills and to be skilled and knowledgeable in MH issues.	Study 4 Consultations with CYP[144]	VL
Need for different forms of support and pathways to services 11. The need for different forms of support and pathways to services is identified by CYP, including through telephone, text, and email.	Studies 1, 2, 3, 4 Consultations with CYP[144]	H
12. Access to telephone crisis support is preferred via a direct line, with out of hours availability, and staffed by trained counsellors.	Studies 1, 2, 4	H
13. Children and young people report that texting provides immediate support and anonymity, and they like having the ability to store and refer back to the messages at a later date.	Study 3	M
14. Parents report that telephone counselling services are not always seen as providing timely or appropriate advice.	Studies 6, 7	M
Synthesis 3: Children's, and young people's and families' experiences of crisis services		
Lack of support before crisis is reached 15. Children and young people feel that there is a general lack of support before crisis is reached.	Studies 4, 5, 7, 8 Consultations with CYP[169]	M
16. Long wait times for specialist services and a lack of information result in the ED being the default option when CYP are in MH crisis.	Studies 5, 8 Consultations with stakeholders & CYP[20,185]	VL
17. Stakeholders acknowledge that CYP often have difficulties accessing support from specialist CAMHS and/or primary care for MH problems before crisis is reached.	Study 6 Consultations with stakeholders & CYP[20,185]	VL
Assessment, management and follow-up in the ED 18. A number of concerns have been raised by CYP, their families, and stakeholders with regards to the assessment, management and level of follow-up care of CYP who present in crisis to an ED.	Studies 1, 2, 5, 7 Consultations with stakeholders & CYP[20,144,150]	M
19. Some CYP find the noisy and busy environment of ED unhelpful with lack of privacy and poor staff attitudes adding to the unsuitability.	Studies 2, 4 Consultations with CYP[144]	M
Processes leading to inpatient admission and experience of inpatient care 20. The processes leading to admission when a CYP is in crisis are described as being lengthy, overcomplicated and frustrating and there are mixed views from CYP regarding their experiences of inpatient care.	Studies 4, 8, Consultations with CYP.[150]	M

Views of CAMHS and crisis teams 21. There are mixed views from CYP about CAMHS and crisis services 22. Children and young people feel that crisis plans lack sufficient detail.	 Studies 4, 5, 7 Study 6	M VL
Synthesis 4: Service provision		
Inappropriate admissions to adult wards 23. Where CYP have been inappropriately admitted to adult or paediatric wards, service providers feel that sometimes adaptations could be made. 24. Stakeholders and service providers in the UK express a number of concerns with regard to inadequate crisis care outside of traditional office hours, but when available this is seen as helpful.	 Study 4 Consultations with service provioders[20,144] Study 4, 11 Consultations with stakeholders & providers[20,144,161]	 VL L
Geographical boundary issues and variable service provision across different regions 25. Stakeholders and service providers in the UK express a number of concerns with regard to variable service provision in terms of location and age entry criteria.	 Study 4 Consultations with stakeholders & service providers[20,144]	 VL
CAMH services 26. Stakeholders feel that need for crisis beds could be reduced by ensuring adequate community resources such as assertive outreach and early intervention services, however admission is required from ED for a CYP to have a CAMHS assessment.	 Study 11 Consultations with stakeholders[20,94,139,144]	 VL
Police involvement and places of safety 27. Although some families report that they do not like police involvement, they find that it helps to deescalate situations.	 Studies 9, 10	 L

Key: CYP: children and young people; ED: emergency department; H: high; L: low; MH: mental health; M: moderate; VL: very low

Chapter 6: Effectiveness of intervention approaches or models of mental health crisis support

The third objective was to determine the effectiveness of current models of mental health crisis support for CYP. We have used this phrase to encapsulate all intervention approaches or models. This chapter therefore presents the analysis of the data from quantitative research studies that explored the effectiveness of the following intervention approaches or models: crisis services/interventions initiated within the emergency department (five studies across seven reports);[32,55,80–83,94] home or community based programmes (three studies across six reports);[62,76–79,98] inpatient care (two studies);[70,85] crisis programmes within residential treatment centres (one study across two reports);[56,57] outpatient mental health programmes (three studies across four reports);[34,64,84,86] mobile crisis services (two studies);[60,66] telepsychiatry (two studies);[72,90] implementing a dedicated mental health team in the emergency department (two studies);[63,73] assessment-only approaches within the emergency department (three studies);[65,87,96] and assessment approaches within educational settings (two studies across four reports).[58,67,71,75] As there was too much heterogeneity across the studies with regards to the interventions a meta-analysis was not performed, and all findings are therefore presented as a series of thematic summaries.

The outcome data from the RCTs and observational studies were assessed for confidence using the GRADE approach. Due to heterogeneity of the different interventions within similar settings, outcome data was only available for results that arose from single studies and guidance was followed on undertaking the GRADE for data of this type.[186] Supplementary material 17 includes the detail of how the GRADE evidence profiles were generated. The RCTs were all downgraded from High to Moderate and the observational studies from low to very low. The overall summary of findings table that describes effectiveness of current models of mental health crisis support across the different settings is presented in Table 13 below.

Crisis services/interventions initiated within the emergency department

Symptoms of depression

Two experimental studies across three reports[55,80,81] investigated symptoms of depression. Adolescents in a specialised emergency department programme conducted by Rotherham-Borus et al.[80,81] reported significantly lower levels of depression when assessed after the emergency room intervention (post-discharge assessment), than did those who received standard care (mean score BDI: I:12.6±11.0; C: 15.9±10.0, p<0.01) For the emergency department -based FISP intervention conducted by Asarnow et al.[55] there were significant improvements in levels of depression from baseline to follow-up post intervention (CES-D total score p<0.05 and for severe depression: OR 0.24, 95%CI 0.14 to 0.41).

Behaviour

One experimental study[55] investigated behaviour. The study by Asarnow et al.[55] found that the FISP intervention did not lead to significant improvements in internalising and externalising behaviour (CBCL total problems in clinical range, OR 0.52, 95% CI 0.30 to 0.90, p=0.02).

Hospitalisation rates

Two experimental studies[32,82] explored hospitalisation rates: Wharff et al.[32] conducted a pilot study of a family-based crisis intervention (FCBI) for suicidal adolescents and their families and reported that none of the patients for whom data was collected at the one-day follow-up required inpatient hospitalisation. At the three-month follow-up, 12.7 % of patients reported that they had been hospitalised since the initial ER visit and of these only two (3.6%) were hospitalised because of suicidal complaints. Adolescents in the pilot cohort were significantly less likely to be hospitalised than those in the comparison group (36% versus 5%, p<0.0001). The same intervention was then tested by Wharff et al.[82] in an RCT and adolescents who had received FBCI were significantly less likely to be hospitalised compared with those who received treatment as usual (TAU) (FBCI 38%, TAU 68%; OR 3.4; 95% CI: 1.7 to 6.8; p<0.005).

Discharge destination

One experimental study that explored a FBCI which was conducted by Wharff et al.[32]

looked at discharge destination. The authors found that CYP in FBCI were significantly more likely to be referred to intensive outpatient than those in the treatment-as-usual (TAU) comparison group (FCBI: 21%, TAU 5.3%, p<0.001).[32]

Emergency visits post discharge

One experimental study conducted by Wharff et al.[32] looked at the number of emergency visits post discharge.[32] No significant differences were reported in CYP needing another crisis evaluation since their initial visit to the emergency department between CYP receiving FBCI (13%) and TAU (4%, p=0.07).

Family functioning/empowerment

Three experimental studies across four reports explored family functioning/empowerment.[55,80–82] Wharff et al.[82] investigated the effectiveness of FCBI for suicidal adolescents and their families. Significantly higher ratings of family empowerment were reported by parents in the FBCI group at post-test compared to those who received TAU as usual (mean change FES: I: 2.7±3.8; C: 1.0±3, p<0.005), which were maintained at the one month follow up period (p<0.001). Another study conducted by Rotherham-Borus et al.[80,81]reported that there were no significant differences in levels of family adaptability (p>0.05) or family cohesion (p>0.05) between receiving specialised emergency department care or standardised emergency department care at initial follow up[81] or 18 months later.[80] For the emergency department-based FISP intervention conducted by Asarnow et al.[55] there were significant improvements in levels of family functioning from baseline to follow-up post intervention (p<0.001).

Completed suicide and suicide attempts

Two experimental studies looked at the number of completed suicides and suicide attempts.[32,55] For those receiving the FISP within an emergency department in the study conducted by Asarnow et al.[55] it was reported that this did not lead to significant decreases in suicide attempts (I: n=4, 6.4%, C: n=5, 6.5%, OR 1.0, 95% CI 0.3 to 3.8). Wharff et al.[32] reported on the implementation of specialised family based intervention conducted within the emergency department (FBCI) found no incidence of attempted or completed suicide within three months of the intervention.

Suicidality

Three studies across four reports explored suicidality.[55,80–82] Adolescents who took part in a specialised emergency department intervention reported by Rotheram-Borus et al.[80,81] found significantly lower mean scores for levels of suicide intent at post-discharge assessment than did those who received standard care (mean scores on the HASS: I:1.4±2.38; C:2.1+2.86, p<0.05). The emergency department-based FISP intervention conducted by Asarnow et al.[55] found no significant differences in levels of suicide intent at follow up post-intervention (mean scores HASS: I: 13.6±13.3; C: 12.1±12.2; AOR (baseline suicide attempts were adjusted for site, gender, age, and baseline CES-D; the follow-up analyses included additional variables of time to follow-up, baseline suicide attempts, and baseline CBCL Total Problem Score) 1.7, 95% CI -2.7 to 6.2) or suicidal behaviour (mean scores HASS: I: 3.2±4.8; C: 3.6±4.7; AOR -0.3, 95% CI -1.9 to 1.3). The findings from Wharff et al.[82] indicated that all participating adolescents whether in the intervention or control groups reported lower levels of suicidality at post-test and at one month follow-up, compared with the baseline assessment. Further analysis did not find any significant differences between the groups (mean change RFLA I:0.07±0.44; C: 0.15±0.45, p=0.24).

Post-discharge use of services / resources

Two experimental studies across three reports looked at post-discharge use of services / resources.[55,80,81] One of the goals of the emergency department intervention (FISP) conducted by Asarnow et al.[55] was to link paediatric suicidal patients with follow-up mental health treatment. The findings showed that FISP patients were significantly more likely than those in the control group to be linked to outpatient treatment after discharge (I: 92%; C:76%; AOR (adjusted for baseline score for the same outcome, days between baseline and follow-up, site, age, gender, CBCL total problems and CES-D) 6.2, 95% CI 1.8 to 2, p=0.004) and to receive significantly more outpatient treatment visits (I: 5.3±7.0; C: 3.1±5.5; AOR 2.0, 95% CI 1.3 to 3.2, p=0.003) than those in the control group. The aim of the specialised emergency department intervention conducted by Rotheram-Borus et al.[80,81] was to assess the impact of the intervention on outpatient treatment adherence. Those CYP who received the specialised program were significantly

more likely than those who received standard care condition to return to the clinic for any outpatient treatment following their discharge from the emergency department (I: 95.4%; C: 82.7%, x^2 5.56, df1, p=0.018). However, there was no significant difference in the number of treatment sessions attended by both groups (I: 5.73 ± 3.40; C: 4.67 ± 3.71, p=0.079). Logistic regression analysis was conducted to determine which variables predicted adherence to outpatient treatment. Higher suicidal behaviour scores (OR 1.30, 95% CI 0.00 to 0.46, p<0.05) and higher self-esteem were a significant predictor of completing treatment. It was also determined that those in specialised care intervention were three times more likely to complete outpatient treatment than youths in the standard care condition (OR 3.11, 95% CI 1.20 to 16.98, p<0 .02). Baseline suicidal ideation (OR 1.09, 95% CI 1.00 to 7.43, p<0.05) was also associated with treatment completion with the more ideation the CYP reported, the more likely they were to complete treatment.[80,81]

Self-esteem / Self-concept

One study across two reports explored self-esteem.[80,81] The introduction of a specialised emergency department program in the study by Rotheram-Borus et al.[80,81] had no significant impact on levels of self-esteem immediately post-discharge (mean score RSES: I: 29.0$\pm$5.61; C: 27.6$\pm$5.32, p>0.05).

Impulsivity

One study across two reports explored impulsivity. Rotherham-Borus et al.[80,81]reported that the introduction of a specialised emergency department program had no significant impact on levels of impulsivity (mean score IS: I: 10.8$\pm$4.69; C: 11.7$\pm$4.37, p>0.05).

Client satisfaction

One experimental study looked at client satisfaction.[82] Wharff et al.[82] compared a family-based intervention conducted in the emergency department (FBCI) with usual care. At post-test, parents/guardians whose CYP had been randomised to FBCI reported significantly higher levels of patient satisfaction compared with their usual care counterparts (mean score CSQ-8: I: 30.4$\pm$2.4; C: 28.6$\pm$3.3, p<0.001).

Health care staff satisfaction with mental health crisis services/programmes

Two descriptive cross sectional studies investigated health care staff satisfaction with the service.[83,94] Dion et al.[83] explored the emergency department staff satisfaction with the Crisis Intervention Program, which was collected in terms of both numeric data and open-ended responses highlighting satisfaction with all aspects of the programme apart from availability of crisis intervention workers (CIWs), in particular coverage during weekends and nights. Frequently reported strengths included reduction of emergency department physician workload, skills of the CIW at managing and assessing patients, prompt access to mental health services, and CIWs' awareness of community resources. The Royal College of Emergency Medicine conducted a national survey with all of its members regarding the services and quality of care that CYP in the emergency department receive (n=93/240 responded).[94] Sixty two percent of respondents reported that they felt that emergency department services for CYP presenting with an acute mental health problem were 'poor' or 'awful', with wide variability in availability of CAMHS and other specialist services, particularly at evenings and weekends [94]

Summary

What this evidence synthesis has shown is that crisis services/interventions initiated within the emergency department are effective in reducing depression (GRADE: very low to moderate) and improving family functioning (GRADE: moderate) or family empowerment (GRADE: very low) between recruitment and follow-up periods. Mixed findings are reported regarding the number of outpatient visits attended, with one of two studies reporting that those in the intervention group attended more outpatient treatment sessions (GRADE: moderate). Mixed findings are also reported for suicidality with only one out of three studies reporting that the intervention was effective in reducing levels of suicidality (GRADE: very low to moderate). Children and young people receiving crisis services initiated within the emergency department are more likely to be linked or referred to intensive outpatient care (GRADE: moderate), to attend for outpatient treatment (GRADE: very low) or to complete outpatient treatment (GRADE: very low) and are less likely to be hospitalised (GRADE: very low). They also report greater satisfaction with services compared to those in a control group (GRADE: moderate). No differences are reported for

behaviour (GRADE: moderate), family adaptability (GRADE: very low), family cohesion (GRADE: very low), impulsivity (GRADE: very low), self-esteem (GRADE: very low), likelihood of repeat emergency department visit post-discharge (GRADE: very low), number of completed suicide or suicide attempts between recruitment and follow-up periods (GRADE: very low to moderate). Health care staff are satisfied with some aspects of mental health crisis services/programmes that they provide but are generally dissatisfied around the lack of out-of-hours availability.

Home or community-based programmes

Symptoms of depression

One experimental study conducted by Huey et al.[76] investigated symptoms of depression. A significant linear time effect ($p<0.001$) for reduction of depression symptoms (across all measures) was found for those CYP receiving home-based MST at the time of crisis up to 1 year post treatment.

Psychiatric symptoms

One descriptive cross-sectional study[98] and one experimental study across two reports[62,77] investigated psychiatric symptoms: Muskens et al.[98] investigated changes in the type and severity of mental health symptoms from admission to two and four months post-discharge following a period of intensive home treatment, combined with admission to psychiatric high and intensive care. A 53% reduction on mean HoNOSCA total scores after 4-5 months of treatment were observed (Admission: 18.82$\pm$5.18; 2 months: 13.03$\pm$5.06; 4 months: 9.4$\pm$5.16, $p<0.01$) There were no significant moderating effects found for gender, age, primary diagnosis, clinical admission, home treatment-time, additional therapy, and medication.[98] Henggeler et al.[62,77] investigated differences in emotional distress in those receiving home-based MST compared to those who received usual services (emergency hospitalisation) at the point of crisis. They reported that CYP in both groups demonstrated clinically significant reductions in emotional distress over time ($p>0.05$).[62] For those in the MST condition, levels of emotional distress sharply declined during the first few weeks of treatment, levelled during treatment, and improved slightly during follow-up. Those in the emergency hospitalisation condition demonstrated a steady improvement in symptoms that levelled during follow-up.[77]

Behaviour

Two experimental studies across three reports[59,62,77] investigated behaviour. The study by Evans et al.[59] investigated the effectiveness of three models of intensive in-home services. Significant reductions in both internalising behaviour and externalising behaviour scores were reported from admission to six months post-discharge for all programs ($p<0.05$). Henggeler et al.[62] compared MST to usual services (emergency hospitalisation) and found that at the time of completion of MST at four months, MST was significantly more effective than emergency hospitalisation at decreasing youths' externalising behaviour (mean scores CBCL-Externalising caregiver report: MST: 63.7 ± 12.4; Hospitalisation: 64.3 ± 14.2, $p<0.05$ or mean scores CBCL-Externalising teacher report: MST: 67.8 ± 15.1; Hospitalisation: 38.0 ± 13.0, $p<0.05$). However, these differences were no longer significant at 12 to 16 months follow-up.[77] Henggeler et al.[62,77] also reported that caregiver- and teacher-reports for internalising problems for the youths were similar between treatment conditions and no significant differences were observed for internalising behaviours at any time point ($p>0.05$).

Psychosocial functioning

Two experimental studies across three reports[59,62,77] investigated psychosocial functioning. Henggeler et al.[62] investigated differences in psychosocial functioning between those receiving home-based MST compared to those who received usual services (emergency hospitalisation) at the point of crisis. At the time of MST completion, youths in the MST condition spent significantly fewer days out of school than counterparts in the hospitalisation condition (mean days: MST: 14 ± 36.8; Hospitalisation: 37 ± 58, $p<0.05$). However, at 12 to 16 months post-recruitment it was reported that these group differences were no longer statistically significant with both groups of youths having spent significantly fewer days in a regular school setting compared to baseline.[77] There were also no significant differences in psychosocial functioning as measured by the CBCL-Social youth report ($p>0.05$), the CBCL-Social caregiver report ($p>0.05$) or the FFS ($p>0.05$) between those in the MST or emergency hospitalisation condition.[62] Evans et al.[59] found no significant changes in social competency scores from admission to discharge or post-six months discharge across three models of intensive home services. The data from the CAFAS in the

study of HCBI conducted by Evans et al.[59] was not included in the final analysis due to the poor quality of the responses obtained at follow-up.

Hospitalisation rates

One experimental study across three reports[62,77,78]investigated hospitalisation rates. Henggeler et al.[62] demonstrated that home-based MST resulted in only 44% of youths being hospitalised within the one-year study time period. Overall, youths in home MST intervention had 72% fewer days in hospital than those in the control group.[78] Between the time when the control group was discharged from hospital and when the MST group had completed their treatment (at approximately four months) 13% of those in the control group had been re-hospitalised for an average of 8.5 days.[77] It was found that MST was significantly effective ($p<0.001$) in preventing admission to hospital for 75% of youths assigned to the MST arm of the study during the two week period following referral.[78]

Costs

One experimental study compared the costs of an intervention against usual care to determine if the intervention was cost-effective. Sheidow et al.[79] calculated insurance expenditures for those in receipt of MST or usual services to determine if MST was cost-effective and showed significant savings from the time treatment was started to when it was completed four months later (Mean$\pm$SD; MST: \$8,236$\pm$6,680; Usual care: \$11,725$\pm$5,065, $p=0.004$). However, from the period when treatment finished to the 12 months follow-up point costs were comparable (Mean$\pm$SD; MST: \$11,709$\pm$13,396; Usual care: \$13,451$\pm$16,351, $p=0.556$). Risk-adjusted models of costs were also calculated and adjusted for youth's age, caregiver's age, and educational level, number of caregivers in the household, and a variable representing the interaction between the treatment duration, the treatment, and differences in symptoms levels as measured by the GSI. This analysis showed that MST demonstrated better short-term cost-effectiveness for each of the clinical outcomes than did usual care (inpatient care followed by community aftercare).[79]

Discharge destination

Two experimental studies looked at discharge destination[59,78] and following discharge from home-based programmes, between 57%[78] to 86%[59] of CYP were

able to continue living within the community depending on the type of intervention. Evans et al.[59] also explored the difference across three different home-based interventions and found that there was no significant difference between each of the models in relation to CYP remaining in the community (CCM: 78.4%; HBCI: 83%, HBCI+ :85.7%). Schoenwald et al.[78] demonstrated that CYP receiving home-based MST spent fewer days in out-of-home placements compared to the hospitalisation comparison group (MST: 644 days, Comparison: 1,490 days, no further statistical analysis). They also had fewer days in foster care, supervised independent living, group home, residential treatment centre, hospital care, and detention, but more days in therapeutic foster care (no statistical details provided).

Family functioning/empowerment

Two experimental studies across three reports explored family functioning.[59,62,77] Henggeler et al.[62] investigated the effects of home-based MST compared to usual services (emergency hospitalisation) and found that family functioning significantly improved for the youths in the MST condition. More specifically youths reported significant greater family adaptability than those in the hospital condition from baseline to 12 to 16 months follow up ($p<0.039$) but no changes in levels of family cohesion ($p>0.05$). Families in the MST condition had become more structured, whereas families in the hospitalisation condition had become less structured ($p<0.009$).[62] Caregiver reports of family cohesion showed significant treatment effects ($p<0.001$) in that family cohesion significantly increased for those in the MST condition and significantly decreased for those in the hospitalisation condition ($p<0.004$).[62] Over time youths receiving MST reported a slight increase in adaptability, whereas youths receiving emergency hospitalisation reported a slight decrease in family adaptability, resulting in a significant linear between-group effect. Youth reports of family cohesion differed significantly between groups, with emergency hospitalisation families evidencing no significant change and MST youths reporting a steady decrease during MST treatment followed by a rise in family cohesion (U-shape). A further report from the same study showed that caregiver reports of cohesion were generally stable, with only a slight linear increase over baseline among MST families, but no significant between-group differences in patterns.[77] In the study conducted by Evans et al.[59] for those children receiving

home-based care across three different programmes, HBCI, HBCI+ and CCM all reported significant gains from admission to discharge in family adaptability ($p<0.01$). With regard to family cohesion only those in the HBCI and HCBI+ showed significant gains ($p<0.05$). Families of children who received HBCI or HBCI+ services also showed significant admission to discharge gains in cohesion (FACES II), although these gains were not noted for families of children assigned to CCM, main effect for admission to discharge ($p>0.05$).

Completed suicide and suicide attempts

One experimental study conducted by Huey et al.[76] looked at the number of completed suicides and suicide attempts. The results indicated that both MST and psychiatric hospitalisation were significantly associated with a reduced incidence of attempted suicide as rated by the youths themselves ($p<0.001$) and their caregivers ($p<0.001$). However, MST was significantly more effective than psychiatric hospitalisation at reducing attempted suicide over the course of 16 months following recruitment. Results also indicated that age ($p<0.05$), gender ($p<0.01$), and ethnicity ($p<0.01$) each moderated the effects of MST on caregiver-rated attempted suicide incidence.[76]

Self-esteem / Self-concept

Two studies across three reports explored self-esteem.[59,62,77] Differences in self-esteem were explored for those receiving home-based MST compared to those who received usual services (emergency hospitalisation) at the point of crisis in the study by Henggeler et al.[62] For those in the MST condition there were no significant differences in levels of self-esteem from baseline to completion of the MST (Mean scores FFS: Baseline: 2.57 ± 0.9 Completion of MST 2.55+1.1).[62] At the time of completion of MST, those youths who were in the hospitalisation condition reported significant improvements in self-esteem compared to those in the MST condition (mean scores FFS: MST: 2.55 ± 1.1; Hospitalisation: 2.73 ± 0.9, $p<0.05$).[62] However, at the one year follow-up time point these treatment effects were no longer observed (mean scores FFS: MST:2.50, Hospitalisation: 2.22, $p>0.05$).[77] In the study conducted by Evans et al.[59] children assigned to each of three models of intensive home services showed significant improvement in self-concept from admission to discharge ($p<0.05$) and these improvements were still present six months post-

discharge (p<0.01).

Client satisfaction

One experimental study looked at client satisfaction.[62] Evans et al.[62] compared home-based MST to usual services (emergency hospitalisation). Youths who received MST and their caregivers reported significantly greater treatment satisfaction at the time MST was completed than those who received emergency hospitalisation (mean score LFSS: Youth-MST: 15.7±4.4; Youth-hospitalisation: 13.3±4.2, p=0.007; Caregiver-MST: 17.6±3.2; Caregiver-hospitalisation: 16.5±3.4, p value not reported) and at one year follow up (mean score LFSS: Youth-MST: 15.5±4.5; Youth-hospitalisation: 12.0±4.6, p value not reported; Caregiver-MST: 17.9±3.4; Caregiver-hospitalisation: 16.4±3.9, p=0.044).

Summary

Effectiveness of home or community-based programmes were the focus of three studies across seven reports.[59,62,76–79,98] The findings showed that home or community-based programmes are effective in reducing depression (GRADE: moderate), psychiatric symptoms (GRADE: moderate) and improving self-concept (GRADE: moderate), family adaptability (GRADE: moderate) or family cohesion (parents' perspective) (GRADE: moderate), number of completed suicide and suicide attempts (GRADE: moderate) between recruitment and follow up periods and are more cost-effective. Mixed findings are reported for behaviour with one out of two studies reporting that the intervention was effective in reducing levels of internalising and externalising behaviour (GRADE: moderate). Children and young people receiving these services are more likely to remain in the community post-treatment (GRADE: moderate), less likely to be hospitalised (GRADE: moderate), and report greater satisfaction with services compared to those in a control group (GRADE: moderate). No differences are reported for psychosocial functioning (GRADE: moderate), self-esteem (GRADE: moderate), and family cohesion (CYP perspective) (GRADE: moderate) between recruitment and follow up periods.

Inpatient care

Psychiatric symptoms

One experimental study[85] investigated psychiatric symptoms. During admission to an inpatient crisis stabilisation programme, Muskens et al.[85]reported significant reductions in the severity of psychiatric symptoms regardless of the type of services received (mean change scores: crisis group 10.4±9.3; assessment group 10.7±7.8; transition group 9.8±11.5, p>0.05 for both univariate or multivariate ANOVAs).

Psychosocial functioning

One experimental study[85] investigated psychosocial functioning. During admission to an inpatient crisis stabilisation programme, Greenham and Bisnaire[85] demonstrated improvements regardless of the type of services received (mean change scores: crisis group 5.3±9.1; assessment group 5.8±9.5; transition group 4.8±11.2, p>0.05 for both univariate or multivariate ANOVAs).

One experimental study conducted by Rogers et al.[70] investigated costs.[70] There were significant cost savings after CARES was established which the authors felt was reflective of reduced LoS. Specifically, the average charge for patients significantly decreased ($1472.20 pre-CARES; $903.15 post-CARES, decrease of $569.05, p<0.0001) and the total cost per patient also significantly decreased ($1472.20 pre-CARES; $903.15 post-CARES, decrease of $569.05, p< 0.0001). However, there were no significant differences in the payments per patient (pre-CARES of $923.88; post-CARES $812.29; decrease of $111.59, p<0.06).

Emergency visits post discharge.

One experimental study conducted by Rogers et al.[70] looked at the number of emergency visits post discharge.[70] No significant differences in the recidivism rate (single visits or more than one visit per year for those who had been inpatients before and after the introduction of the CARES inpatient programme ($\chi 2 = 0.089$, p=0.766)) were found.

Length of stay

Two experimental studies investigated LoS.[70,85] Greenham and Bisnaire[85] reported that the median LoS in an inpatient crisis and stabilisation programme and

assessment service was 4 days with a mean of 6.2±6.9 days. Another study conducted by Rogers et al.[70] evaluated LoS before and after the introduction of the CARES unit and found that LoS was significantly shorter post CARES compared with the former emergency department provision (mean LoS: pre CARES 19.7±32.6 hours, post CARES 10.8±19.9 hours, p<0.001, reduction of 47.3%).

Suicidality

One experimental study conducted Greenham and Bisnaire[85] explored suicidality. During admission to an inpatient crisis stabilisation programme, reductions in levels of suicide risk were demonstrated regardless of the type of services received (mean change in scores: crisis group 11.4±10.0; assessment group 12.6±9.1; transition group 7.7±7.9, p>0.05 for both univariate or multivariate ANOVAs).[85]

Summary

Two studies[70,85] explored the effectiveness of specific inpatient programmes for crisis care in CYP. This evidence synthesis found that specific inpatient programmes are effective in reducing psychiatric symptoms (GRADE: moderate), and suicidality (GRADE: moderate). and improving psychosocial functioning (GRADE: moderate) between recruitment periods and follow up. These inpatient programmes can also decrease LoS (GRADE: moderate) and subsequently costs (GRADE: moderate) at the time of the crisis. No differences are reported in the rate of emergency department visits for up to one year post discharge (GRADE: moderate).

Outpatient mental health programmes

Psychosocial functioning

One experimental study[91] conducted by Greenfield et al.[91] investigated psychosocial functioning. No significant differences were reported in levels of psychological and social functioning after the introduction of a rapid response outpatient model at two months follow up (mean scores CGAS: I: 13.12±14.6; C: 13.48±15.5, p>0.05) and six months follow up (mean scores CGAS: I:14.86±15.29, C; 13.26±17.52, p>0.05).

Hospitalisation rates

One experimental study, across two reports[84,91] explored hospitalisation rates. A rapid-response outpatient model was effective in reducing hospitalisation rates

(defined as hospitalisation at least once at any hospital for reasons related to suicidality). Adolescents in the intervention group were 71% less likely to be hospitalised immediately after assessment in the emergency department for suicidality (I: 11%; C: 40%; RR 29, 95% CI 0.18 to 0.46, p<.001) and 59% less likely to be hospitalised over the six months after an emergency assessment in the emergency department for suicidality (I: 18%, C: 43%, RR 0.41, CI 0.28 to 0.61, p<0.001).[84,91]

Costs

One experimental study investigated costs.[91] Latimer et al.[91] investigated cost savings from the treating hospital's perspective and a societal perspective for those receiving a rapid response treatment intervention compared to those in control group without a rapid response. There were no significant differences (difference $1,886, p=0.11) in hospital costs per person between the intervention ($2114, range £134 to $46, 273) and the control ($4,000, range $150 to £127, 998). There were also no significant differences (difference $991, p=0.67) in societal viewpoint costs per person between the intervention ($10,785, range £1424 to $107,406) and the control ($11,775, range $559 to £164,134). The point estimates indicated that the intervention would save the treating hospital approximately $1208, and society approximately $636, for every additional point improvement on the CGAS functional scale compared with the control intervention. However, the control intervention would save the treating hospital approximately $13,780, and society approximately $7238, for every additional point improvement on the suicide severity scale compared with the intervention.[91]

Emergency visits post discharge

Three experimental studies[34,64,84] looked at the number of emergency visits post discharge. Greenfield et al.[84] reported no significant differences within the six month follow-up period after the introduction of a rapid response outpatient team and initial presentation to the emergency department (p>0.05). In addition, Greenfield et al.[34] reported no significant differences within 12 months after the introduction of a specialised outpatient service with an emergency Room Follow-up Team (p>0.05). A further study conducted by Maslow et al.[64] reported on the first year after opening an integrated paediatric mental health outpatient clinic for acute mental health crisis.

Examination of electronic health data indicated a reduction in the rate of emergency department visits within 30 days after patients' initial contact with the clinic (333 emergency department visits in 30 weeks before and 172 emergency department visits in the 30 weeks after). However no further statistical analysis was conducted to confirm this finding.

Length of stay

One experimental study conducted by Greenfield et al.[84] investigated LoS. No significant differences were reported in LoS in the emergency department after the introduction of a rapid response outpatient model at recruitment (mean days: I: 6.6±5.6; C:3.9±3.8, p>0.05), two months follow-up (mean days: I: 7.1±6.1 C: 4.1±3.9, p>0.05) and six months follow-up (mean days I: 7.8±9.9; C: 5.1±6.8, p>0.05).

Completed suicide and suicide attempts

One experimental study conducted by Greenfield et al.[84] looked at the number of completed suicides and suicide attempts.[84] No significant differences in the numbers of suicide attempts made were reported during the six-month follow-up period, excluding those at the time of recruitment, as a result of the implementation of a rapid response outpatient team (p<0.05).

Suicidality

One experimental study conducted by Greenfield et al.[84] explored suicidality. No significant differences were reported in levels of suicidality after the introduction of a rapid response outpatient model at two months follow-up (mean scores on the SSBS: I: -1.64±1.26; C: -1.63±1.27, p>0.05) and six months follow-up (mean scores on the SSBS: I: -1.40±1.26; C: -1.54+1.21 p>0.05).[84]

Post-discharge use of services / resources

One experimental study across two reports looked at post-discharge use of services / resources.[84,91] Resource use during the six months follow-up period after the introduction of an outpatient rapid response model for those presenting in crisis to an emergency department was investigated and was found to be similar for those in the intervention and control group for the majority of services. However, those from the control group, on average, had more meetings with outpatient psychotherapists

(mean: I: 0.06±0.47; C; 0.44±1.60, p<0.01) and social workers (mean I: 0.13±6; C: 0.57±1.91, p<0.01) than those from the experimental group. Time from first telephone contact with a health professional following discharge from an emergency department varied from 1.5 days (lower quartile to upper quartile, 1.0 to 6.0) for the patients in the experimental group and four (1.0 to 7.5) for patients in the control group. Time to first appointment was six days (1.0 to 11.0) for the patients in the experimental group and ten days (5.0 to 17.0) for patients in the control group.[84,91]

Satisfaction with clinicians who delivered the mental health crisis service/programme

One descriptive cross sectional study explored satisfaction with clinicians who delivered the mental health crisis service/programme.[86] Lee and Korsak[86] explored parents' satisfaction with an outpatient urgent care clinic consultation.[86] It was noted that there was a significant association between parental satisfaction and the degree to which parents felt listened to by consultants (p<0.05), the amount learned from the consultation, and time between referral and consultation and appointment length (p<0.05). Over 52% of parents implemented consultant recommendations with a significant association between satisfaction and adherence (p<0.05).

Summary

The effectiveness of outpatient mental health programmes was explored in three studies across four reports.[64,84,91,120] This evidence synthesis found that CYP receiving outpatient mental health programmes are less likely to be hospitalised compared to those in a control group (GRADE: very low) and experience quicker access to additional resources (GRADE: very low). An association also exists between parental satisfaction and increased adherence to outpatient treatment (GRADE: very low). No differences are reported for psychosocial functioning (GRADE: very low), in the rate of emergency department visits for up to one year post discharge (GRADE: very low), LoS in the emergency department before discharge to a rapid outpatient service (GARDE: very low), number of suicide attempts (GRADE: very low), suicidality (GRADE: very low) or post discharge use of resources (GRADE: very low).

Mobile crisis services

Hospitalisation rates

One experimental study conducted by Martin[66] investigated hospitalisation rates. There were no significant differences in the percentage of CYP who were hospitalised within 30 days of attending a mobile crisis intervention or a walk-in hospital-based crisis intervention (OR 1.01, 95% CI 0.54 to 1.92).[66] However, regardless of service provision, CYP aged 6-11 years were 298% more likely to be hospitalised within 30 days after a crisis stabilisation than CYP aged 15–17 years (OR 3.98, 95% CI,1.66 to 9.51, p<0.002).

Emergency visits post discharge

One experimental study conducted by Fendrich et al.[60] looked at the number of emergency visits post discharge. It was reported that youths who had attended an emergency mobile crisis service for a behavioural health need (defined as one in which any psychiatric diagnosis was provided during an emergency department service encounter) had significant reductions in further visits to the emergency department in the next 18 months compared to those in a comparison sample (IRR 0.75; 95% CI 0.66 to 0.85 a reduction of 25%).

Summary

Two studies investigated the effectiveness of mobile crisis services[60,66] and CYP receiving mobile crisis services are less likely to attend emergency department post-discharge compared to those in a control group (GRADE: very low) but there are no differences in the rates of hospitalisation (GRADE: very low).

Telepsychiatry

Hospitalisation rates

Two experimental studies[72,90] investigated hospitalisation rates. Roberts et al.[90] explored outcomes between telepsychiatry or face-to-face emergency consults for CYP from rural and remote communities, finding that there were no differences in admissions (Telepsychiatry: n=18; face-to-face: n=5, p>0.05). However, Thomas et al.[72] reported that CYP who received telepsychiatry as opposed to usual care were significantly less likely to be admitted to hospital (AoR -adjusted for patient variables

no further details provided; 0.59, 95% CI 0.40 to 0.86, p<0.001).

Costs

One experimental study conducted by Thomas et al.[72] investigated costs. The use of telepsychiatry consultations was compared to usual care and total patient charges were significantly lower for those who received telepsychiatry consultations ($3,493 versus $8,611, p<0.001). A cost-efficiency analysis concluded that while telepsychiatry was more expensive than usual care, the improved efficiency of telepsychiatry resulted in lower charges and shorter LOS.[72]

Discharge destination

One experimental study looked at discharge destination.[90] Roberts et al.[90] explored outcomes between telepsychiatry and face-to-face emergency consults for CYP from rural and remote communities, finding that there were no differences in referral pathways (Telepsychiatry: n=37; face-to-face: n=32, p>0.01).

Emergency visits post discharge

One experimental study conducted by Thomas et al.[72] looked at the number of emergency visits post discharge.[72] No significant differences in the 72 hour emergency department visit return rate were reported among patients who received a telepsychiatry emergency consultation (85%) compared to those who received usual care (90%, p>0.05).

Length of stay

Two experimental studies investigated LoS.[69,72] Reliford and Adebanjo[69] demonstrated a significantly reduced monthly LoS in the paediatric emergency department for those who did not need admission (pre: 285 hours; post:193 hours, p=0.032). However, there was no significant difference in monthly LoS for those who required admission (pre: 168.5 hours; post: 161.7 hours, p>0.05). The second study conducted by Thomas et al.[72] showed a significant reduction in monthly LoS in the paediatric emergency department (pre: 5.5 hours; post 8.3 hours, p=0.001).

Client satisfaction

Two experimental studies looked at client satisfaction and reported high patient or parent/guardian satisfaction with telepsychiatry emergency assessments in terms of

overall acceptability (user friendliness of the technology) and efficiency (time saved from not having to travel).[72,90] Parents and guardians expressed appreciation for not having to travel to access main services, which saved them time and money, and stated they would use the service again.[72,90]

Health care staff satisfaction with mental health crisis services/programmes

One experimental study investigated health care staff satisfaction with the service.[72] Thomas et al.[72] conducted a survey both before and after the introduction of telepsychiatry. Satisfaction survey scores significantly increased on questions regarding the process for evaluating and managing patients with mental health concerns ($p<0.05$), family satisfaction ($p<0.05$), making appropriate disposition decisions ($p<0.05$), and process safety ($p<0.05$). No change occurred in faculty members' levels of comfort around, or when assessing, patients with mental health concerns ($p>0.05$).

Summary

The effectiveness of telepsychiatry initiatives are reported across two studies.[72,90] Telepsychiatry initiatives are effective in decreasing LoS (GRADE: very low) and costs (GRADE: very low). Parents report high levels of satisfaction (GRADE: very low) and levels of staff satisfaction are improved (GRADE: very low). No differences are reported in the rate of repeat visits to the emergency department (GRADE: very low) or in referral pathways after the introduction of telepsychiatry (GRADE: very low). Mixed findings are reported for the rate of hospitalisation with one out of two studies reporting that telepsychiatry is effective at reducing the likelihood that a person will be hospitalised (GRADE: very low).

Implementation of a dedicated mental health team in the emergency department

Hospitalisation rates

Two experimental studies[63,73] explored hospitalisation rates. Uspal et al.[73] reported that there were no significant increases in admission rates (pre intervention 23%, post intervention 22%, $p<0.01$) or the 72-hour return rate (pre intervention 2.1%, post intervention 3.6%, $p<0.01$) after the implementation of a dedicated mental health team in the emergency department. Holder et al.[63] found that as a result of introducing additionally trained psychiatric professionals fewer CYP were admitted to

a paediatric treatment unit (p<0.005). However, there was a significant increase in the number discharged to a psychiatric hospital post-intervention as opposed to pre-intervention (p<0.05).

Costs

One experimental study investigated costs. Holder et al.[63]implemented a programme that added CYP psychiatrists and psychiatric social workers to the paediatric emergency department[63] but did not find any significant differences in cost before and after its introduction (pre-program: $602; post-program: £588, decrease: $14, p=0.451). The authors concluded that this was attributable to the costs of the additional staff even though LoS had decreased.

Discharge destination

One experimental study conducted by Holder et al.[63] looked at discharge destination. Introducing additionally trained psychiatric professionals to a paediatric emergency department significantly increased the number of CYP returning to the home environment after the initial crisis (pre: 65%; post: 65.2%, p<0.05).[63]

Emergency visits post discharge.

One experimental study conducted by Uspal et al.[73] looked at the number of emergency visits post discharge. No significant differences in the 72-hour emergency department return rates were reported after the introduction of a dedicated mental health team based in paediatric emergency department (p=0.13).[73]

Length of stay

Two experimental studies investigated LoS.[63,73] Holder et al.[63] reported a significant reduction in LoS from triage to discharge (mean LoS: pre 14.7 hours; post 12.1 hours, p<0.001), and the other study conducted by Uspal et al.[73] found a significant reduction in overall LoS in the paediatric emergency department (mean LoS: pre 332 minutes, 95% CI 309-353; post 244 min, 95% CI 233-254, p<0.01).

Health care staff satisfaction with mental health crisis services/programmes

One experimental study investigated health care staff satisfaction with the service. Findings from the retrospective cohort study conducted by Uspal et al.[73] reported that those working within a paediatric emergency department after the introduction of

a dedicated CYP mental health team reported significant improvements including feeling:

- that the system supported making appropriate disposition decisions regarding discharge plans or on admissions for patients with acute mental health concerns ($p<0.05$),[73]
- satisfaction with the paediatric emergency department process for evaluating and managing patients with mental health concerns and that the system is safe for patients ($p<0.05$),[73]
- that families were satisfied with the paediatric emergency department processes for evaluating and managing patients ($p<0.05$).[73]

However, there were no significant differences in the levels of comfort around patients or in assessing patients with acute mental health concerns before and after the introduction of the intervention ($p>0.05$).[73]

Summary

When a dedicated mental health team is implemented in the emergency department, CYP are less likely to be hospitalised (GRADE: very low) and more likely to return to a home environment (GRADE: very low). LoS is also decreased (GRADE: very low). No differences are reported in the 72-hour return rate to the emergency department (GRADE: very low) or in the costs of implementing the service (GRADE: very low).

Assessment approaches within the emergency department

Hospitalisation rates

One experimental study conducted by Lee et al.[87] explored hospitalisation rates. A tool known as HEARTSMAP was used for assessing and managing CYP within the paediatric emergency department and reported that it was reliable at identifying CYP requiring psychiatric admission. During pilot implementation, 62 patients received HEARTSMAP assessments: 46 (74%) of HEARTSMAP assessments triggered a recommendation for emergency department psychiatry assessment, 39 (63%) were evaluated by psychiatry and 13 (21%) were admitted. For those hospitalised for further psychiatric care at their index or return visit within 30 days, 100% were initially identified by HEARTSMAP at the index visit as requiring emergency department psychiatric consultation.[87]

Costs

One experimental study conducted by Mahajan et al.[65] investigated costs. Costs were described as an average cost per hour of occupied emergency department room as a result of the addition of a full-time psychiatric social worker who evaluated all CYP with mental health needs. A reduced LoS for those CYP who presented to the emergency department with a mental health crisis was reported and the associated cost savings were calculated to be $10,651. Opportunity costs of extended LoS of visits for mental disorder (VMD) in the emergency department after the addition of a full-time psychiatric social worker were also calculated to establish the average revenue foregone had a non-VMD emergency department patient occupied the same room. With average LoS longer for VMD than non-VMD visits, lost revenue due to extended LoS for VMD was estimated at $201,173.30.[65]

Length of stay

Three experimental studies investigated LoS.[65,87,96] Mahajan et al.[65] described the addition of a full-time psychiatric social worker as part of a Child Guidance Model and found that the overall LoS in the emergency department was significantly reduced (pre: 259.49$\pm$171.12 minutes; post: 216.39$\pm$152.95 minutes, mean difference 43.10 minutes, p=0.001). The time taking for physician disposition to be undertaken (pre: 169.31$\pm$140.83; post: 218.10$\pm$171.02 minutes, mean difference 48.79 minutes, p=0.00) and for triage were also significantly reduced (pre: 45.67$\pm$40.72 minutes; post: 41.56$\pm$35.83, mean difference 4.11 minutes, p=0.08)[65] as a result of the addition of a full-time psychiatric social worker.

Another study conducted by Nagarsekar et al.[96] implemented the Kids Assessment Liaison for Mental Health (KALM) which sought to build in extra capacity for an emergency department medical officer to complete the assessment and then to link with an on-call psychiatrist regarding an assessment and management plan. There was no significant difference (p=0.1407) in median LoS for those on the KALM pathway (4.13 hours (minimum 0.46 hours, maximum 11.55 hours)) compared to those on the care as usual pathway (5.09 hours (minimum 0.21, maximum 19.12)). The National Emergency Access Target (NEAT) stipulates that a patient should be treated and leave the emergency department within 4 hours. Fewer patients

breached NEAT when the KALM pathway (56%) was used but differences were not significant (OR 0.68, 95% CI 0.36 to 1.31; p=0.252) when compared to those in the usual care pathway (64%).

Lee et al.[87] found that the introduction of the assessment-based approach HEARTSMAP did not have any significant effect on LoS in the paediatric emergency department (pre HEARTSMAP: median 288 minutes; post HEARTSMAP: median 297 minutes, p=0.89).

Emergency visits post discharge

One experimental study conducted by Lee et al.[87] looked at the number of emergency visits post discharge.[87] No significant differences in the 30 day emergency department return rate were reported after the introduction of HEARTSMAP in the paediatric emergency department (p>0.05).

Post-discharge use of services / resources

One experimental study conducted by Lee et al.[87] in which the HEARTSMAP assessment tool was implemented in a paediatric emergency department, looked at post-discharge use of services / resources.[87] In addition to HEARTSMAP, an emergency outpatient follow-up service was created for families with unmet mental health needs (the “LINK” clinic). All CYP for which HEARTSMAP triggered recommendations for further community services accessed these resources within 30 days. These resources included access to social workers, primary care providers, private psychiatry, private counselling, private psychology, school counselling, substance misuse/detox services/, youth clinic, non-urgent community mental health services or urgent community mental health services.

Client satisfaction

One experimental study looked at client satisfaction.[96] Nagarsekar et al.[6] assessed how satisfied carers were with the newly implemented KALM pathway compared to the care as usual pathway. There were no significant differences between the two care pathways. However, the number of carers answering the survey for the KALM pathway was small (n=16) so findings should be treated with caution.[96]

Summary

Carrying out assessment approaches within the emergency department was successful at triggering recommendations for further community services which were accessed but there were no differences in the 30-day return rate to the emergency department (GRADE: very low). Mixed findings are reported for LoS with one out of three studies reporting a reduced length of stay (GRADE: very low). There were also no differences in client satisfaction with the newly implemented KALM pathway compared to the care as usual pathway (GRADE: very low).

Crisis programmes within residential treatment centres

Costs

One descriptive cross-sectional study conducted by Baker and Dale[56] investigated costs. The daily costs of total treatment across the entire sample at a crisis programme within a RTC were $300 per day for a total of 2,628 days as compared to $550 a day for a total of 2,628 days if the sample of boys had been treated in a nearby hospital, thereby saving $650,000. However, hospital stays were on average 15 days longer, and on accounting for this scenario the savings were calculated to be $1,490,250.

Length of stay

One descriptive cross-sectional study reported across two reports investigated LoS.[56,57] Baker et al.[57] reported that the LoS for youths admitted to a crisis residence programme varied depending on from where they had been referred (biological family: 4.17$\pm$4.08 weeks; foster homes: 3.77+3.01 weeks; RTC: 6.68 weeks). Baker and Dale[56] reported that LoS was significantly shorter (on average by 15 days) for youths treated at a Crisis Residence for their first crisis than for those treated in hospital (mean LoS: crisis residence 24.30$\pm$20.72 days; hospital 39.04$\pm$33.18 days, $p<0.04$), despite this group being more at risk.

Summary

Only one study across two reports focused on RTCs and found that they are effective in reducing LoS and subsequently costs at the time of the crisis (GRADE: not applicable).

Assessment approaches within educational settings

Discharge destination

Three descriptive cross-sectional studies looked at discharge destination.[58,67,75] Both Michael et al.[67] and Capps et al.[58] focused on students' risk of harm following assessment using the PEACE protocol. They reported that decisions on referral options were based on the severity of the crisis or family preference and included comprehensive school mental health services that offer assessment support and a counselling centre (ranging from 26%[58] to 33%);[67] community mental providers (14.3%[67] to 26.9%[58]). Michaels et al.[67] also reported that around 12% of students, who were felt to be a significant risk of self-harm, were hospitalised after the initial assessment (either straightaway or within two weeks). Walter et al.[75] investigated the outcomes of a school-hospital partnership that delivered crisis interventions to students and found that in 26% of encounters they were able to avoid referrals to more acute levels of care.

Completed suicide and suicide attempts

Three descriptive cross-sectional studies that implemented the PEACE protocol ,including initiation of a response/safety plan, looked at the number of completed suicides and suicide attempts.[58,67,71] All studies found that there were no completed suicides or suicide attempts that necessitated medical intervention immediately after (i.e., within the same day) the protocol administration was completed.[58,67,71]

Satisfaction with clinicians who delivered the mental health crisis service/programme

One descriptive study explored satisfaction with clinicians who delivered the mental health crisis service/programme.[75] Walter et al.[75] explored a school/hospital partnership that sought to provide multi-tiered levels of support. They reported high levels of school staff satisfaction with the way in which crisis services were provided by programme clinicians and across the different aspects of supportoffered

Summary

Assessment approaches within educational settings were reported across four studies.[58,67,71,75] No completed suicides or suicide attempts were reported within educational settings when assessment approaches were introduced (GRADE: not applicable). A variety of referral destinations are noted and in some cases referrals

to more acute levels of care were avoided. Moreover, levels of staff satisfaction weree high (GRADE: not applicable).

Overall summary

The overall summary of findings is presented in Table 13. The quality of evidence reporting the effectiveness of approaches or models of crisis support is variable from moderate to very low. The areas where the evidence is moderate and therefore worthy of consideration for clinical application are in the following sections: improvement of family functioning following a crisis services or intervention initiated in the emergency department; increased referral for the CYP to intensive outpatient care after being seen in emergency department; increased satisfaction with crisis services; reduction in psychiatric symptoms and improving psychosocial functioning; no increase in rate of attendance for crisis care after being seen in emergency department.

Much of the evidence about effectiveness was drawn from outside of the UK in different service settings, and consequently might not be directly applicable to UK services, as in the UK, the preference is for emergency departments not to be the first point of contact for people in mental health crises.

Table 13: Summary of findings table

Outcomes	Findings	Studies
1. Effectiveness of crisis services/interventions initiated within the ED		
Symptoms of depression	↓ (2 studies)	Asarnow et al. 2011[55] Rotheram-Borus et al. 1996[81], 2000[80]
Behaviour	- (1 study)	Asarnow et al. 2011[55]
Hospitalisation rates	↓ (2 studies)	Wharff et al. 2019[82] Wharff et al. 2012[32]
Repeat ED visits post-discharge	- (1 study)	Wharff et al. 2012[32]
Family functioning	↑ (1 study)	Asarnow et al. 2011[55]
Family empowerment	↑ (1 study)	Wharff et al. 2019[82]
Family adaptability	- (1 study)	Rotheram-Borus et al. 1996[81], 2000[80]
Family cohesion	- (1 study)	Rotheram-Borus et al. 1996[81], 2000[80]
Linkage to outpatient services	↑ (1 study)	Asarnow et al. 2011[55]
Number of outpatient visits attended	↑ (1 study)	Asarnow et al. 2011[55] Rotheram-Borus et al. 1996[81], 2000[80]
Attend for any outpatient treatment	↑ (1 study)	Rotheram-Borus et al. 1996[81], 2000[80]
Complete outpatient treatment	↑ (1 study)	Rotheram-Borus et al. 1996[81], 2000[80]
Referral to intensive outpatient care	↑ (1 study)	Wharff et al. 2012[32]
Number of completed suicide and suicide attempts	- (2 studies)	Asarnow et al. 2011[55] Wharff et al. 2012[32]
Impulsivity	- (1 study)	Rotheram-Borus et al. 1996[81], 2000[80]
Self esteem	- (1 study)	Rotheram-Borus et al. 1996[81], 2000[80]
Suicidality	↓ (1 study) - (2 studies)	Rotheram-Borus et al. 1996[81], 2000[80] Wharff et al. 2019[82] Asarnow et al. 2011[55]
Client satisfaction	↑ (1 study)	Wharff et al. 2019[82] Asarnow et al. 2011[55]
Health care staff satisfaction with mental health crisis services/programmes	Mixed responses (2 studies	Dion et al. 2010[83] RCEM 2018[94]
2. Home or community-based programmes		
Symptoms of depression	↓ (1 study)	Huey et al. 2004[76]
Psychiatric symptoms	↓ (2 studies)	Muskens et al 2019[98] Henggeler et al. 1999,[62] 2003[77]
Behaviour	↓ (1 study) - (1 study)	Evans et al. 2003[59] Henggeler et al. 1999,[62] 2003[77]
Psychosocial functioning	- (2 studies)	Evans et al. 2003[59] Henggeler et al. 1999,[62] 2003[77]
Hospitalisation rates	↓ (1 study)	Henggeler et al. 1999,[62] 2003[77] Schoenwald et al. 2000[78]
Cost-effectiveness	↑ (1 study)	Sheidow et al. 2004[79]
Remain in community post treatment	↑ (2 studies)	Evans et al. 2003[59] Schoenwald et al. 2000[78]
Family adaptability	↑ (2 studies)	Henggeler et al. 1999[62] Evans et al. 2003[59]
Family cohesion (youth report)	- (2 studies)	Henggeler et al. 1999[62]

		Evans et al. 2003[59]
Family cohesion (parental report)	↑ (1 study)	Henggeler et al. 1999[62]
Family structure	↑ (1 study)	Henggeler et al. 1999[62]
Number of completed suicide and suicide attempts	↓ (1 study)	Huey et al. 2004[76]
Self-esteem	- (2 studies)-	Evans et al. 2003[59] Henggeler et al. 1999,[62] 2003[77]
Self-concept	↑ (1 study)	Evans et al. 2003[59]
Client satisfaction	↑ (1 study)	Henggeler et al. 1999[62]
3. Inpatient care		
Psychiatric symptoms	↓ (1 study)	Greenham and Bisnaire 2008[85]
Psychosocial functioning	↑ (1 study)	Greenham and Bisnaire 2008[85]
Costs	↓ (1 study)	Rogers et al. 2015[70]
Suicidality	↓ (1 study)	Greenham and Bisnaire 2008[85]
Length of stay	↓ (1 study)	Rogers et al. 2015[70]
Repeat ED visits post-discharge	- (1 study)-	Rogers et al. 2015[70]
4. Crisis programmes within residential treatment centres		
Costs	↓ (1 study)	Baker and Dale 2002[56]
Length of stay	↓ (1 study)	Baker et al. 2004[57]
5. Outpatient mental health programmes		
Psychosocial functioning	- (1 study)	Greenfield et al. 2002[91]
Hospitalisation rates	↓ (1 study)	Greenfield et al. 2002[91]
Cost-effectiveness	↑ (1 study)	Latimer et al. 2014[91]
Repeat ED visits post-discharge	- (3 studies)	Greenfield et al. 1995[34] Greenfield et al. 2002[91] Maslow et al. 2017[64]
Length of stay in ED	- (1 study)	Greenfield et al. 2002[91]
Post-discharge use of services / resources	- (1 study)	Greenfield et al. 2002[91]
Access to additional resources	↑ (1 study)	Greenfield et al. 2002[91]
Number of suicide attempts	- (1 study)	Greenfield et al. 2002[91]
Suicidality	- (1 study)	Greenfield et al. 2002[91]
Parental satisfaction	↑ (1 study)	Lee and Korczak 2014[86]
6. Mobile crisis services		
Hospitalisation rates	- (1 study)	Martin 2015[66]
Repeat ED visits post-discharge	↓ (1 study)	Fendrich et al. 2019[60]
7. Telepsychiatry		
Hospitalisation rates	- (1 study) ↓ (1 study)	Roberts et al. 2017[90] Thomas et al. 2018[72]
Costs	↓ (1 study)	Thomas et al. 2018[72]
Referral pathways	- (1 study)	Roberts et al. 2017[90]
Repeat ED visits post-discharge	- (1 study)	Thomas et al. 2018[72]
Length of stay	↓ (2 studies)	Roberts et al. 2017[90] Thomas et al. 2018[72]
Parental satisfaction	High levels	Roberts et al. 2017[90] Thomas et al. 2018[72]

Staff satisfaction	↑ (1 study)	Thomas et al. 2018[72]
8. Implementation of a dedicated MH team in the ED		
Hospitalisation rates	↓ (2 studies)	Uspal et al. 2016[73] Holder et al. 2017[63]
Length of stay	↓ (2 studies)	Uspal et al. 2016[73] Holder et al. 2017[63]
Returning to home environment	↑ (1 study)	Holder et al. 2017[63]
Repeat ED visits post-discharge	- (1 study)	Uspal et al. 2016[73]
Costs	- (1 study)	Holder et al. 2017[63]
Health care staff satisfaction with mental health crisis services/programmes	↑ (1 study)	Uspal et al. 2016[73]
9. Assessment approach within the ED		
Repeat ED visits post-discharge	- (1 study)	Lee et al. 2019
LoS	↓ (1 study) - (2 studies)	Mahajan et al.2007 Lee et al. 2019 Nagarsekar et al. 2020
Costs	↓ (1 study)	Mahajan et al.2007
Client satisfaction	- (1 study)	Nagarsekar et al. 2020
Triggering recommendations for further community services	Successful	Lee et al. 2019
10. Assessment approaches within educational settings		
Number of completed suicide and suicide attempts	None reported	Michael et al. 2015[67] Sale et al. 2014[71] Capps et al. 2019[58]
Referral pathways	Variety of referral destinations Acute levels of care avoided	Mchael et al. 2015[67] Sale et al. 2014[71] Capps et al. 2019[58] Walter et al. 2019[75]
Staff satisfaction	High	Walter et al. 2019[75]

Key: ED: emergency department; ↓:significant reduction/s; ↑ significant improvement/s; - no significant differences, N/A: not applicable as descriptive study

[a] downgraded from high due to serious limitations for risk of bias

[b] downgraded frow low due to serious imprecision (no confidence intervals or power calculations)

[c] downgraded from high to moderate due to serious imprecision (no confidence intervals or power calculations)

- significant positive effect
- mixed effect / responses
- no effect or difference

Chapter 7: Goals of crisis interventions

The fourth objective was to determine the goals of crisis intervention. This chapter therefore addresses this by presenting a number of thematic summaries of the goals of crisis services from primary research (n=48), descriptive accounts of the organisation of crisis services (n=36), and UK only grey literature documents (n=54). For details of the methods of the narrative approach to the development of the thematic summaries, see the methods section on page 51-53. Seven distinct goals have been described across the included literature; these have been categorised as follows:

1. to keep CYP in their home environment as an alternative to admission,
2. to assess need and to plan,
3. to improve CYP's and/or their families' engagement with community treatment,
4. to link CYP and/or their families to additional mental health services as necessary,
5. to provide peer support,
6. to stabilise and manage the present crisis, over the immediate period,
7. to train and/or supervise staff

Five services however did not provide any explicit, or implicit, description of their goals.[74,88,95,97,100] Crisis care was provided with little information provided on the service *per se* but these papers described the following:

- descriptions of young people with suicidal ideas being seen in the emergency department [97]
- young people's experiences of using a variety of inpatient, community or emergency department services[88,100]
- an investigation involving interviews with family members and close friends of people who had taken their own lives[95]
- a study examining young people's and family members' comprehension of crises[41]
- a project recruiting families of children admitted to hospital.[74]

To keep children and young people in their home environment as an alternative to admission

Twelve services described in 22 reports explicitly have the goal of keeping CYP in their own homes and avoiding admission to psychiatric hospital.[32,34,56,57,59,61,62,66,76–79,82,91,98,103,107,110,112,113,122,145]

Examples include services which aim to reduce inappropriate admission, defuse crises and also reduce frustration amongst community and emergency department staff in securing access,[122] along with single-session FBCI delivered in the emergency department aiming to improve mutual understanding of CYP's suicidal behaviour and avoid admission.[32,82,107] Other services with the goal of avoiding admission include WAARM which provides immediate access to home care consisting of five sessions of family-based interventions along with a service providing 'rapid response' follow-up following a paediatric emergency department visit.[110] The Emergency Room Follow-up Team (ERFUT) is an outpatient crisis service beginning with the receipt of referrals from emergency department, and involving initial contact within 24 hours of presentation with the purpose of avoiding admission.[34,91] The crisis and transition services model diverts CYP from the emergency department for home-based care.[145] Multi-systemic therapy is a family-based, strengths-oriented, intervention which has also been proposed and tested as an alternative to hospital admission for CYP experiencing severe emotional distress[62,76–79,112] with other services including short-term, intensive, home-based care mobilised within 24 hours of receipt of referral and offered for typical periods of four to six weeks.[59,103]

Avoiding hospitalisation and the dislocations this brings has also been the goal of services providing intensive, residential, services in the community.[56,57] In addition, solution-focused Intensive Home Treatment and Psychiatric High & Intensive Care (combining work on improving relationships, reducing self-harming behaviour and reintegration into school, work and leisure) involves up to four months of home-based care potentially following a purposefully short hospital admission.[98] The HBCI combines crisis resolution, relationship-building and skills-teaching including in contexts where cultural competency is important.[59,103] Other community programmes

with hospital-avoidance goals include multi-disciplinary crisis intervention combining family therapy, psychiatric care and school consultation. In resource-limited rural settings, outpatient-based services have been proposed as an alternative to admission.[61] Two different mobile crisis services have been described, which respond wherever in the community the need arises and also have the explicit goal of helping CYP remain at home.[66,113]

To assess need and to plan

Forty-five services described in 61 reports either explicitly identify the goals of assessing the needs of CYP and their families and/or planning interventions or infer to them as necessary precursors to providing care and treatment.[32–34,55,58–60,64,66,67,70–73,75–82,85–87,90,91,96,98,102–120,122–126,129–131,133,135,145,146,168]

In emergency department, triage involving the use of specific assessment tools or scales by nurses is described.[115] The 'HEADS interview' is a professional-led interview approach which focuses on home, education (eating), activities/ambition, drugs and drinking, sexuality, suicide, and depression.[116,117] Variants include HEADS-ED,[87,110] HEADDS[96] and the online HEARTSMAP tool, designed to support comprehensive assessment by emergency department clinicians informing recommendations for onwards intervention outside the emergency department environment based on staff members' estimations of urgency. [119,123,124] Examples are also reported of an emergency department diversion service in which assessment and safety planning are key,[145] and of mental health teams being located in emergency departments[73] as a way of enabling expert mental health assessment (including in remote emergency departments). Two different examples are described of telepsychiatry supporting remote assessment.[72,90] To support the goal of enabling expert child psychiatrist assessment following emergency department visits, a combination of a telephone and face-to-face appointments have also been used.[122] Another service involves mental health professionals visiting and assessing CYP, within hours of their arrival in emergency department after a suicide attempt. The aim of this approach was to promote longer-term inpatient treatment.[129] Another innovation involves the use of a 'soap opera' format video in the in emergency department, shown to CYP, who have attempted suicide, and their

families by therapists as a precursor to the shared planning of responses to future suicide-eliciting circumstances.[80,81,111]

Specific clinical interventions introduced into the in emergency department context, which presuppose assessments of need and care planning, include the family systems approach underpinning the FISP.[33,55,133] These include the goal of decreasing the risks of repeat suicidal behaviour by promoting the uptake of follow-up appointments. Family-based crisis intervention is a further emergency department-based approach, which has the single-session goal of assessing, safety planning, and intervening through the construction of what is described as a 'joint crisis narrative'.[32,82,107]

Brief, assessment-oriented, hospital-based services include the Children's Comprehensive Psychiatric Emergency Programme (CCPEP), which combines brief inpatient stabilisation and/or outpatient care following a thorough assessment.[106] Other examples involving the use of short-stay hospital beds for the purposes of initial assessment include a service beginning with interdisciplinary assessment [85] and the CARES unit which provides short-stay assessment and stabilisation.[70] Further examples of suites of services combining inpatient and outpatient care, beginning with assessment, are the Comprehensive Assessment and Response Training System (CARTS) program[108] and a programme potentially beginning with up to two weeks of admission (if needed) for assessment and initial planning and treatment followed by intensive home treatment.[98] One further model involves the use of an evaluation centre, through which triage assessments and outpatient care are provided.[64]

Services offering alternatives to emergency department interventions for CYP in crisis also exist. The goal of meeting mental health crisis needs, beginning with the triage of CYP referred, is a component of an inclusive mental health service for all 0-19 year olds provided by the Solar community crisis resolution team.[146] Out of a variety of initiatives described in a single publication,[110] all involve some aspect of assessment, which are as follows::

- The Lifespan Paediatric Behavioural Health Emergency Services which brought together combinations of hospital-based and community crisis responses and with suites of integrated services including a telephone triage line for the rapid assessment of need called KidsLink,
- The Nationwide Children's Hospital created the Outpatient Crisis Program which provides outpatient urgent assessments within 72 hours of presentation,
- The Allina Health System provides an acute response model (WAARM) which provides expert mental health assessment in the children's emergency department to reduce waits for urgent interventions and time spent in the emergency department,
- The Enhanced Care Coordination initiative involves expert mental health assessment within 48 hours of paediatric emergency department discharge and linking to follow-up.

Multiple examples exist of specific models or intervention approaches which begin with crisis assessment and/or planning components (including outside of the hospital environment). The HCBI is a model of home-based crisis care set up to prevent hospital admission, beginning with care initiated within 24 hours of referral and extending for a period of 4 to 6 weeks[12], to which Enhanced HBCI adds training in cultural competence. [59,103] The Safety First Model approach emphasises community-based support to promote safety, and begins with formulation and collaborative planning. The service operates on a 'safety not cure' ethos and begins with assessment in the home and family environment.[125,126] A further model begins with the addressing of 'disorganisation' in families through systemic functional analysis.[131] Multi-systemic therapy begins with a comprehensive plan underpinned by the use of an 'ecological framework' which locates the young person in their family, peer, and neighbourhood environment.[62,76–79,112] Another example from a mobile crisis service is the Emergency Mobile Psychiatrics Services which also began with stabilisation, support, and assessment followed by care for up to 45 days.[60,114]

In the case of schools and universities, the PEACE protocol was a school-based approach to self-harm and suicide assessment and response planning.[58,67,71] The

MTSS programme was another, tiered, school-based approach, beginning with the training of staff to identify crisis and extending to clinical assessment and planning.[75] Reports also exist of universities developing specific crisis responses which begin with stabilising and assessment, where necessary, referring on.[168] Moreover, there is a report of a model for school-aged young people in which triaging and assessment of safety concerns is offered as an alternative to visits to the in emergency department.[135]

The model of providing same-day mental health professional assessment and treatment planning was commonly reported. This was reported through telephone referral from emergency department (or community) staff was reported,[105] along with urgent outpatient assessment within 72 hours of emergency department attendance[86,120] or proactive telephone contact followed by an appointment in the case of CYP presenting to emergency department.[71,84,91] The Emergency Room Follow-up Team was a service receiving referrals for assessment and intervention following emergency department presentation, beginning with contact with the family within 24 hours.[34]

Examples of telephone, text, and internet services as vehicles for the direct assessment of CYP in crisis exist include the Screening, Assessment and Support Services programme, which takes calls from concerned adults or directly from CYP in crisis, with phone operators then able to direct people onwards for face-to-face assessment as necessary.[102] Similar services exist for students, underpinned by the idea that out of hours telephone contact involving safety assessment and crisis planning with people associated with the university is less stigmatising than contact with external agencies.[102] Two text-based services are also described, providing assessment and safety planning.[104,109] In addition, internet-based services provide both information and message boards for CYP to share their concerns, with the content monitored by peer volunteers trained in suicide prevention.[118]

Other crisis response models providing assessment and planning include mobile services offering outreach after hours.[130] One mobile crisis response is part of a combined suite of services also including 24 hour stabilisation, a crisis residential

team, and outpatient care, with safety planning the goal of the mobile team.[113] The Mobile Response Team aims to prevent admission by offering rapid stabilisation and safety planning.[66]

To improve children and young people's and/or their families' engagement in community treatment

A specific goal identified in ten crisis response services described in 16 reports is to improve the engagement of CYP and/or their families in community treatment.[32,33,55,59,80–82,103,107,110,111,113,125,126,129,133]

Examples include the FISP,[33,55,133] HCBI,[59,103] FCBI,[32,82,107] Kids'Link,[110] WAARM,[110] Enhanced Care Coordination initiative,[110] an emergency department-based innovation involving the use of videotape with the explicit purpose of improving adherence to follow-up,[80,81,111] the Ventura County Children's Crisis Continuum,[113] the Safety First Model[125,126] and an inpatient Crisis Unit for Adolescents and Young Adults service, which seeks to overcome resistance to ongoing support.[129]

To link children and young people and/or their families to additional mental health services

Forty services in 52 reports have one of their stated goals as connecting children, young people and families to ongoing mental health support.[32,33,55,59,60,64,66,67,70,71,73,75,80–82,84–87,91,96,98,102–107,109–111,113,114,116–127,129,133,135,145,146,168]

Emergency department based services describe goals including the arrangement of post-emergency department follow-up, with examples including referral to a variety of inpatient, outpatient, and community care services.[96,121,122,145] More specifically the literature describes the following:

- the FISP seeks to link young people from the in emergency department to ongoing care[33,55,133]
- the FBCI includes the creation of a joint crisis narrative identifying what needs to be done to avoid future crises[32,82,107]
- a family treatment approach involving the use of a 'soap opera'-style video includes the facilitation of outpatient follow-up[80,81,111]

- a model of locating a dedicated mental health team in the emergency department also looks to support young people and families to access ongoing support[73]
- a model that combines triage and outpatient services and seeks to connect young people to community services[64]
- a Pediatric Psychiatry Crisis Service refer suicidal CYP for additional therapy to either one of the subspecialty clinics within the outpatient department or to an outside agency.[105]

Rapid response outpatient models describe the goal of connecting young people to ongoing care, with one involving referring patients with 'urgent', but not 'emergent', needs from the emergency department to a follow-up service able to respond within three days.[86,120] A second model is also described in which all emergency department assessments for crisis are followed by immediate referral to a rapid response outpatient team which initiates telephone contact and ongoing care.[84,91] Publications that have focused on assessment in the emergency department also describe a focus on discharge and disposition arrangements such as HEADS-ED intervention,[110,116,117] and HEARTSMAP.[87,119,123,124]

Outside of the emergency department, a number of services with mobile, hospital and community components describe linking young people and families to ongoing services as part of their goals. Mobile crisis services aim to provide links to ongoing care after a period of crisis stabilisation.[60,66,113,114]

Crisis services located in the community also describe the goal of linking young people and their families to ongoing support in either hospital or community settings. As part of the systematic, family-based Safety First Assessment Intervention, therapists work purposefully with support networks in the community.[125,126] Whilst the Screening, Assessment and Support Services intervention is a crisis telephone line which links callers to hospital or community crisis care.[102] Services that provide home-based programmes, such as the HBCI model, aim to avoid hospitalisation, including through connecting young people and families to existing mental health services, whilst the HBCI+ adaptation also ensures that staff are culturally

competent.[59,103] Enhanced care coordination linking young people onwards was described in a US initiative,[110] as was the linking work provided by the WAASH Model.[110] Crisis case management had the goal of assessing in the home and linking young people and their families to existing services.[59,103] Integrated services were also described, where a goal arising from short hospital admission and intensive home-based care was to increase motivation for therapy.[98] Two-way communication between urgent care providers and rural outpatient clinics were also described, enabling decisions to be made on onwards care and support.[61] In an inclusive mental health service, crisis care was provided as one component with the goal of integrating this with ongoing services.[146]

Descriptions exist of inpatient care linking young people to ongoing services. For example, the CCPEP provided immediate crisis care plus connects young people and families onwards to additional services.[106] Onwards referral to other mental health services were also described.[129] Evaluations were also described of inpatient services which include the goal of mobilising resources in the community during preparation for discharge.[85] The CARTS unit provided crisis stabilisation but also aimed to connect young people to ongoing services in either the community or hospital settings.[70]

Services provided in educational settings, including examples organised using telephone and text responses, include the option of opening up routes for onward referral and long-term support.[75,127,168] The PEACE protocol, used in the high school setting, supports systematic assessments of risk and helps guide decision-making, and includes the option in individual plans of action to mobilise external services or to arrange follow-up.[58,67,71] A service running as an alternative to the emergency department for school students in crisis has the goal of linking young people to ongoing services.[135]

Support based crisis response services involving the use of technology similarly include goals of linking young people to other services where necessary. For example, a website and online message board service where messages are monitored by trained volunteers who make onwards referrals as needed,[118] and text-

based services which include in their goals the direction of people who make contact towards longer-term help.[104,109]

To provide peer support

Two services in two reports described the goal of providing peer support.[101,118] Teen Line is one, this being a telephone service in which carefully selected, trained and supported high school student volunteers respond to calls received by other young people in crisis.[101] The second description is of an internet-based service where young people are able to read information and also participate in an online message board addressing 'suicide'. Messages are monitored by trained peers and serve as a means of providing and receiving support.[118]

To stabilise and manage crisis

A stated goal of 35 crisis response services cited across 50 reports is to stabilise and manage the young person's crisis in the immediate period, using combinations of emergency department-based interventions, hospital care or care on an outpatients or community basis.[32–34,55,58–60,62,64,66–68,70,71,73,75–82,84–86,91,96,98,102,103,105–107,110–114,120,122,125,126,129–131,133,135,145,146,168]

Responses located in the emergency department setting with the clear aim of immediately stabilising and managing crisis include services linked to the goal of avoiding admission,[122] whilst FISP aims to directly minimise the risk of suicidal behaviour.[33,55,133] The FBCI as a single-session intervention, aims to assess and stabilise with a focus on safety planning and non-judgmental collaboration.[32,82,107] The videotape, soap opera, approach aims to immediately plan for foreseeable suicide-eliciting scenarios in the future[80,81,111] whilst rapid response models to follow-up from the emergency department have been used in order to stabilise and manage the crisis.[34,84,86,91,120] Led by emergency department medical officers, one model begins with the structured assessment of need to inform decision-making.[96] The location of a mental health team in the emergency department is also described in a service which has the goal of working with the emergency department medical team to deescalate crises and promote safety.[73] Whilst the Crisis and Transition Services programme aims to stabilise crises whilst aiding transition to community services.[145]

Three of the services (described in a single descriptive paper) Kids'-Link, WAARM and the Enhanced Care Coordination initiative, all centre on the provision of responses to stabilise.[110] Triage within an evaluation centre receiving referrals from the emergency department and other sources is described in a service in which safety planning and suicide risk reduction are initial goals.[64] Crisis services as part of all-inclusive approach to young people's mental health care aims to offer rapid management of crisis.[146] In a further service, crisis workers have options to refer both to inpatient or intensive community care, with the aim of providing an immediate response.[102] Multiple descriptions are also found of mobile crisis services, which aim to stabilise and manage the immediate crisis.[60,66,113,114,130]

Specific models of intervention include examples explicitly identifying the initial aim of managing the crisis or (for example) providing 'containment'.[131] Other service goals include ensuring physical, emotional, and relational safety including through partnerships with wider networks, as with the Safety First Model.[125,126] Brief stabilisation is also the goal of models preventing hospital admission, such as the HBCI and HBCI+ approach[59,103] a service offering up to daily contact[105] and MST.[62,76–79,112]

In hospital settings, acting swiftly to respond to crisis following a suicide attempt has been identified as a goal in order that young people do not trivialise their self-harm attempt.[129] Whilst the option to provide inpatient care as a stabilisation response, or to immediately refer for community care, is also described in an integrated model.[106] The MST approach when used in the inpatient setting has the goal of resolving crisis, using an ecological approach which locates the individual in their broader context.[112] The CARES programme described their goals as one of rapid stabilisation in a residential unit.[70] Short admissions, where necessary, combined with intensive home treatment is also described in services which set out to reduce self-harming behaviour using specific psychological and medical therapies.[98] Crisis stabilisation, in hospital and over a short period, is also the goal of services where risk reduction is a key aim[85] along with providing a level of immediate care beyond what can be achieved in the community.[68]

Services with goals to immediately stabilise and manage exist in education setting.[58,67,71,75,135,168] The PEACE protocol[58,67,71] is an in-school facility where high school-aged children can be assessed by psychology services before referral on to appropriate mental health services (see chapter four, educational settings, p48). The PEACE protocol receives referrals from anyone in the school system, and aims to guide intervention tailored to the level of risk. The MTSS model is a comprehensive school-based programme with a tiered approach, at the top of which is a crisis intervention component to manage acute need.[75] Services for university students in the UK include initial responses from staff aiming at stabilising the crisis,[168] whilst the Urgent Evaluation Service offers a rapid response to the management of crisis in school students as an alternative to emergency department presentation.[135]

To train and supervise staff

Ten services described in 11 reports include the goal of training and supervising of staff.[59,80,81,83,96,103,110–112,115,119,122,125,126] More specially this includes:

- the training of emergency department staff in the use of a triage tool,[115]
- the training of emergency department medical officers in the use of an assessment tool,[96]
- the education of staff in the emergency department, crisis and wider primary care and school system in the use of a rapid response model,[122]
- the education and training for emergency department to use HEARTSMAP, a tool used to inform assessments and decision-making,[119]
- an emergency department-based model combining a video and family therapy which includes the goal of training emergency department, mental health and other staff as part of the overall service,[80,81,111]
- the training of emergency department staff as part of a well-resourced emergency department service offering crisis intervention,[83]
- training and supervision as part of the community-based SFAI approach,[125,126]
- the home-based HBCI approach begins with four days of training in the Homebuilders model for staff,[103]
- increasing the clinical supervision offered to therapists, with this being provided by child psychiatrists as part of providing community-based MST,[112]
- the training of school crisis teams to use a standardised risk assessment and

the education of paediatricians about a crisis hotline – Kids-'Link.[110] countries.

Summary

In this evidence synthesis, we have elicited what goals of a crisis service should be, and in brief these are to keep CYP in their home environment, to facilitate the assessment of the child or young person's needs, offering a stabilisation of the crisis, improve CYP and their family's engagement with community treatment and to link them to ongoing mental health services as necessary, through, peer support where possible. Some crisis services include training and/or supervision of others as part of their function. The goals have been identified from policy and empirical evidence, most of which were generated outside of the UK. The goals nevertheless have resonance with practice the UK, with the key goals of stabilising the immediate crisis and identifying ongoing mental health support being a common driver for crisis services.

Chapter 8: Discussion and conclusions

This project was conducted using EPPI methods of engaging with stakeholders through a number of routes. The SAG and the two co-applicants who identify themselves as experts by experience, current or previous users of mental health services helped with the identification of key search terms, the location UK only grey literature documents with the sense-making of our findings and with dissemination strategies. For the evidence synthesis overall, comprehensive searching was conducted across 17 databases. Supplementary searching included online searches using Google, targeted interrogation of organisational websites and of journal tables of content, scanning reference lists of included studies and forward citation tracking.

One hundred and thirty-eight publications were used to inform this evidence synthesis which included 39 descriptive accounts of the organisation of crisis services (across 36 reports), 42 primary research studies (across 48 reports) and 54 sources UK only grey literature documents .

For the purpose of this evidence synthesis, CYP were defined as those between 5 and 25 years of age. There was some debate in the design of this study on the age boundaries. We felt that under five years old, children were unlikely to have a mental health crisis and where challenges in their behaviour existed this would be addressed by health visiting and equivalent services. There were a number of options for the upper age limit for this evidence synthesis. We were aware from clinical colleagues that some services operate to aged 16, others to aged 18 and we were aware of the emergence of ‘youth’ mental health services that often span ages 14-25 years. With the aim of being as inclusive as possible, for the purposes of this evidence synthesis, we selected age 25 as the upper age limit in order to capture any research on services or models for youth.

As a defining boundary, we considered a crisis response to be the provision of a service in the context of extreme psychosocial distress, which for CYP 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.

In this evidence synthesis, we have elicited what the goals of a crisis service should be, and in brief these are to keep CYP in their home environment, to facilitate the assessment of the child or young person's needs, offering a stabilisation of the crisis, and connecting the CYP and their family to access ongoing care after the crisis through available care and support, peer support where possible. Some crisis services include training and/or supervision of others as part of their function. Despite multiple approaches to the organisation and provision of mental health crisis care (see chapter four), there was moderate evidence that CYP and their families do not know how to access such services, and may not be eligible due to threshold criteria. Even when accessing services some CYP are not able to talk whilst they are in crisis and there is high quality evidence that alternative methods of communicating such as text, phone and online provision is welcomed. There is moderate evidence that CYP would like access to peers at this time or be able to access age-appropriate services which is available out-of-hours. Attendance at the emergency department was the default service given the lack of alternatives and this was described as stressful for the CYP, experienced as noisy, busy and generally unsuitable. There was evidence to suggest that much of the care provided in the emergency department was effective: improvement of family functioning following a crisis services or intervention initiated in the emergency department; increased referral for the CYP to intensive outpatient care after being seen in emergency department; increased satisfaction with crisis services; reduction in psychiatric symptoms and improving psychosocial functioning; no increase in rate of attendance for crisis care after being seen in emergency department.

One of the dilemmas posed by this review is that philosophically, emergency departments are not designed to manage crises for mental health for any age, but in this review, we found that actually there were a significant number of innovative models located in emergency departments which were both effective and acceptable for CYP experiencing such a presentation. The challenge is to develop services that are available prior to a crisis or in an accessible and available location that provides a service outside of office hours, with appropriately skilled professionals to reduce the use of emergency departments for this purpose. This review specifically looked

at the international literature to learn from models beyond the UK. It was surprising that most of the studies retrieved through this review originated from the USA. Comparisons between the healthcare provision between the USA and UK are difficult because of the different way healthcare is both commissioned and delivered There was also a lack of studies that described how different services were integrated, particularly so in relation to the UK, so this was not commented upon. Therefore, direct applicability of findings from the review to the UK is not possible, but there are principles about practice that can be adapted and used to inform service development. In the UK, as a general principle, it is not advocated that emergency departments become to key service to support CYP in mental health crisis, but where this needs to happen, due to limited services elsewhere, there are evidence-based practices and processes elicited from this review that could be embraced.

Of the 27 synthesis summary statements that were assessed for confidence using the CERQual approach, only two were judged as having a high degree of confidence. When a synthesized review finding is assessed as being 'high confidence', this indicates that this should be seen as a reasonable representation of the evidence relating to the phenomenon of interest. The statements of high confidence for this evidence synthesis relate to what CYP want from crisis services, which are centred around the need for different forms of support, and pathways to services. This includes support through telephone (via a direct line, with out-of-hours availability and staffed by trained counsellors) as well as via text and email. Despite the availability of evidence from CYP and their families about acceptability, much of this was not good quality and thus ought not be used to inform developments.

Implications for practice and service development

In considering implications for practice and service development following this evidence synthesis, we were mindful that the literature included was predominantly from outside the UK, in countries such as the USA where the model of healthcare deliver is quite different to that in the UK. In doing so, we considered the strength of evidence as well as contextual issues in order to make recommendations that could be relevant and applicable to the UK. The GRADE and CERQual assessments presented in earlier chapters are explicitly drawn on in this section, with particular

weight given to the two summary statements for which there is a high degree of confidence and for the 14, for which there is a moderate degree of confidence, cautious recommendations are offered.

Key implications are as follows:

1. A high degree of confidence exists in the synthesised evidence relating to crisis responses using telephone, text, and email, and in the synthesised evidence relating to direct line telephone access with round-the-clock support from trained staff. Taken together these have important implications for future service commissioning. It is suggested that in the development or review of crisis services, the inclusion of text, telephone and email could be helpful as a component of a 24-hour service model.

2. Several of the synthesis statements that were of moderate confidence related to the barriers and facilitators to seeking and accessing appropriate support. As CYP and families do not know how to access crisis care, better signposting and information using family friendly language possibly co-produced with CYP and avoiding the use of jargon on how to locate the right service are important. Addressing the thresholds of eligibility that exist that make access to specialist services and professionals difficult and making crisis services easier to access for those with financial or transport issues are also priority areas for CYP and families.

3. A moderate degree of confidence was found confidence exists in the synthesised evidence relating to CYP feeling that peer support and involving those with lived experience of mental health crisis within services is important or feel that services should cater specifically for them and be targeted at specific age groups. Where new services are being commissioned or existing services developed, it might be helpful to include representatives from a panel of CYP to advise on aspects of service design to address age appropriateness of facilities.

4. What this evidence synthesis has identified with a moderate degree of confidence is that due to long wait times for specialist services that the services provided by emergency department are a central component to mental health crisis care for CYP. This is offered as a recommendation with caution, given the unique structure and function of the NHS compared with health services overseas but an acknowledgement that there might be aspects to be drawn from the evidence that could inform operating processes in UK emergency departments where CYP present with mental health crises. We acknowledge that the quality of evidence from intervention studies was low. Therefore, caution is recommended before applying this for service development but these are issues that might need considering in service developments and design of future research projects. It is clear is that crisis care, and assessment initiated within the emergency department can result in a number of positive outcomes for CYP. To strengthen this, services need to be developmentally appropriate, staff in emergency department need a level of expertise with this client group, and the environment needs to offer privacy and a calm environment. The emergency department also needs to be networked with outpatient care, where there is transparency about eligibility and 24-hour availability. The emergency department environment itself could benefit from creating a separate area to address the concerns about the noisy and busy environment, the lack of privacy and poor staff attitudes. Admission processes could be streamlined.

5. Services should consider pathways in and out of crisis as there was evidence with a moderate degree of confidence of a general lack of support before crisis is reached as well as the assessment, management, and level of follow-up care of those CYP who present in crisis to an emergency department. Mental health support networks could be strengthened to increase the possibility of CYP being able to access early and appropriate support within their community in order to prevent episodes of crisis. Accessible community-based early intervention support with shorter waiting times is therefore important. This has relevance for the UK context with investment in

preventative and supportive services offering care in a way that might reduce the chance of a CYP experiencing a mental health crisis.

6. School, community, and home-based crisis programmes also appear to be associated with a number of positive outcomes for CYP. However, it is important that a variety of different modes of crisis support are available so that CYP can access these in the way that is most convenient for them (e.g., telephone, email, text based, in person etc.).

Implications for future research

1. With most of the research evidence being generated in the USA, and only three research studies included in this evidence synthesis being completed in the UK, a clear case exists for the commissioning of new high-quality studies investigating the organisation, delivery and effectiveness of the range of existing services that provide crisis responses to CYP in the UK.

2. Given that the importance of out-of-hours support for CYP in crisis was highlighted by a number of stakeholders, further research could usefully explore the precise types of support that would be most useful in out-of-hours situations (e.g. whether this would need to be available 24/7 and or what form it would take, e.g. a drop-in centre, telephone support, or face-to-face).

3. Further research needs to identify precisely which kinds of community support would be most effective in preventing CYP from reaching a mental health crisis.

4. A number of different types of crisis intervention models have been shown to be associated with positive outcomes for CYP: it would be helpful to identify whether particular interventions/models are more effective for different subgroups of CYP and to explore the distinct needs of particular subgroups of CYP when in crisis.

5. Much of the evidence about acceptability from CYP and their families was not of good quality so further good quality research into this aspect is justified.

Limitations

In advance of conducting this evidence synthesis, we had anticipated there would be a body empirical research that reported on a range of social, education and health innovations related to supporting CYPe in mental health crisis in both the UK and overseas. However, the validity of the results is limited by the methods of the included studies as there was a lack of high quality research from well conducted RCTs. The literature that informed this evidence synthesis was largely drawn from the USA. There were papers from other countries, but there was a paucity of UK based empirical research, so generalisability to a UK audience is limited. Reported in the literature was a wide range of types of intervention within each setting. It was therefore not possible to conduct a meta-analysis or to make comparisons about these and determine their efficacy so only general conclusions are made. A decision was made to only include UK-only policy and guidance, but this was prior to the discovery that most research evidence that met our criteria for inclusion was from outside the UK. This therefore might be considered a limitation of the scope of the evidence synthesis . The age range for this evidence synthesis attempted to capture research that was relevant for CYP up to 18 years and also to capture emerging literature that might have been available for youth (18-25 years). There were three studies that reported only for young people over the age of 16 years so the evidence was predominantly children and early adolescents.

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Contributions of authors

Nicola Evans (Reader) contributed to the development of the protocol, screened, selected, appraised and synthesised reports, and wrote for and edited the final report.

Deborah Edwards (Research Fellow) contributed to the development of the protocol, screened, selected, appraised and synthesised , and wrote for and edited the final report.

Dr Judith Carrier (Reader) contributed to the development of the protocol, screened, selected, appraised and synthesised reports, and wrote for and edited the final report.

Mair Elliott (Public and Patient Project Member) contributed to the development of the protocol, screened reports, and commented on the final report.

Elizabeth Gillen (Subject Librarian) contributed to the development of the protocol and searched for reports and wrote for and edited the final report.

Ben Hannigan (Professor of Mental Health Nursing) contributed to the development of the protocol, screened, selected, appraised and synthesised reports, and wrote for and edited the final report.

Dr Rhiannon Lane (Research Associate) contributed to the development of the protocol, screened, selected, appraised and synthesised reports, and commented on the final report.

Elizabeth Williams (Public and Patient Project Member) contributed to the development of the protocol, screened reports, and commented on the final report.

Data sharing

All available data can be obtained by contacting the corresponding author

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Appendices

Appendix 1: Final search strategies

MEDLINE (Conducted in February 2020 and updated January 2021)

#	Search term	Results
1	exp Adolescent/	1994329
2	exp Child/	1881002
3	exp Young Adult/	812513
4	exp Students/	124926
5	adolescen*.tw	269263
6	teen*.tw	29733
7	child*.tw	1351093
8	“young person”.tw	1024
9	“young adult*”.tw	91753
10	“young people”.tw	26245
11	“young patient*”.tw	28302
12	youth*.tw	71671
13	Juvenile*.tw	79683
14	p?ediatric*.tw	339038
15	student*.tw	270751
16	pupil*.tw	28442
17	“young offender*”.tw	474
18	OR 1-17	4157532
19	exp Crisis Intervention/	5611
20	crisis.tw	48352
21	crises.tw	10317
22	“rapid response”.tw	5862
23	OR 19-22	65249
24	exp Mental Health/	36655
25	exp Mental Disorders/	1216222
26	exp Psychology, Adolescent/	13386
27	exp Psychology, Child/	13244
28	exp Adolescent Psychiatry/	2811
29	exp Child Psychiatry/	5551
30	exp Community Psychiatry/	2008
31	exp Mental Health Services/	93977
32	exp Community Mental Health Centers	3205
33	mental*.tw	343355
34	psych*.tw	794644
35	camhs.tw	359
36	exp Suicide/	61612
37	exp Self-Injurious Behavior/	69276
38	suicid*.tw	75153
39	“self-harm”.tw	5117
40	“self-injur*”.tw	4582
41	OR 24-40	1944932
42	18 AND 23 AND 41	4773
43	(mental adj5 emergenc*).tw	1360
44	(psych* adj5 emergenc*).tw	4795
45	(mental adj3 “critical incident*”).tw	6
46	(psych* adj3 “critical incident*”).tw	28
47	(mental adj3 urgent).tw	55
48	(psych* adj3 urgent).tw	130
49	(mental adj3 distress).tw	2344
50	(psych* adj3 distress).ti	5164

51	OR 43-50	13476
52	18 AND 51	5088
53	42 OR 52	9600

PsycINFO (Conducted in February 2020 and updated January 2021)

#	Search term	Results
1	adolecen*.tw	254388
2	teen*.tw	22597
3	child*.tw	703951
4	“young person”.tw	1306
5	“young adult*”.tw	49386
6	“young people”.tw	28017
7	“young patient*”.tw	1863
8	youth*.tw	99634
9	Juvenile*.tw	27204
10	p?ediatric*.tw	39336
11	student*.tw	582787
12	pupil*.tw	26765
13	“young offender*”.tw	1400
14	Students/	23477
15	OR 1-14	1415340
16	Crisis Intervention/	3492
17	Crises/	5392
18	Crisis Intervention Services/	1422
19	crisis.tw	33294
20	crises.tw	8634
21	“rapid response”.tw	781
22	OR 16-21	40364
23	Mental Health/	63465
24	Mental Disorders/	82887
25	Adolescent Psychiatry/	4847
26	Adolescent Psychology/	4021
27	Child Psychiatry/	6655
28	Child Psychology/	4280
29	Community Psychiatry/	863
30	Mental Health Services/	33881
31	Community Mental Health/	2021
32	Emergency Services Psychiatric/	1153
33	mental.tw	421441
34	psych*.tw	1232205
35	camhs.tw	600
36	Suicide/	26556
37	Self-Injurious Behavior/	3909
38	suicid*.tw	64162
39	self-harm.tw	5388
40	self-injur*.tw	6368
41	OR 23-40	1489794
42	15 AND 22 AND 41	6056
43	(mental adj5 emergenc*).tw	1209
44	(psych* adj5 emergenc*).tw	5761
45	(mental adj3 “critical incident*”).tw	11
46	(psych* adj3 “critical incident*”).tw	87
47	(mental adj3 urgent).tw	35
48	(psych* adj3 urgent).tw	188
49	(mental adj3 distress).tw	2306

50	(psych* adj3 distress).ti	4933
51	OR 43-50	14076
52	15 AND 51	3749
53	42 OR 52	9555

EMCARE (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	exp child/	607961
2	exp adolescent/	326461
3	exp young adult/	61127
4	exp student/	153306
5	adolescen*.tw	135560
6	teen*.tw	14730
7	child.tw	474785
8	“young person”.tw	721
9	“young adult*”.tw	37853
10	“young people”.tw	17616
11	“young patient*”.tw	8505
12	youth*.tw	47404
13	juvenile*.tw	13672
14	p?ediatric*.tw	141558
15	student*.tw	158682
16	pupil*.tw	7478
17	“young offender*”.tw	433
18	OR 1-17	1121095
19	exp crisis intervention/	1783
20	crisis.tw	17506
21	crises.tw	3373
22	“rapid response”.tw	1810
23	OR 19-22	22301
24	exp mental health/	93023
25	exp mental disease/	624707
26	exp child psychiatry/	5487
27	exp child psychology/	2975
28	exp social psychiatry/	884
29	exp mental health service/	23268
30	exp community mental health/	2490
31	mental*.tw	163139
32	psych*.tw	349034
33	camhs.tw	339
34	exp suicide/	20791
35	exp automutilation/	6698
36	self-harm.tw	3174
37	self-injur*.tw	2311
38	OR 24-37	866519
39	18 AND 23 AND 38	1749
40	(mental adj5 emergenc*).tw	850
41	(psych* adj5 emergenc*).tw	2175
42	(mental adj3 “critical incident*”).tw	5
43	(psych* adj3 “critical incident*”).tw	22
44	(mental adj3 urgent).tw	37
45	(psych* adj3 urgent).tw	67
46	(mental adj3 distress).tw	1444
47	(psych* adj3 distress).ti	2192
48	OR 40-47	7609

49	18 AND 48	2192
50	39 OR 49	3851

HMIC (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	exp children/	19989
2	exp young people/	10769
3	exp students/	3889
4	adolescen*.tw	3988
5	teen*.tw	1590
6	child*.tw	30745
7	“young person”.tw	158
8	“young adult*”.tw	1000
9	“young people”.tw	5373
10	“young patient*”.tw	69
11	youth*.tw	2123
12	juvenile*.tw	560
13	p?ediatric*.tw	2602
14	student”.tw	6632
15	pupil*.tw	621
16	“young offender*”.tw	335
17	OR 1-16	50,150
18	exp Crisis Intervention/	121
19	exp Crisis intervention services/	198
20	crisis.tw	2891
21	crises.tw	328
22	“rapid response*”.tw	128
23	exp rapid response teams/	44
24	OR 18-23	3310
25	17 AND 24	475
26	(mental adj5 emergenc*).tw	103
27	(psych* adj5 emergenc*).tw	181
28	(mental adj3 “critical incident*”)	0
29	(psych* adj3 “critical incident*”)	2
30	(mental adj3 urgent).tw	11
31	(psych* adj3 urgent).tw	12
32	(mental adj3 distress).tw	165
33	(psych* adj3 distress).tw	492
34	OR 26-33	916
35	17 AND 34	177
36	25 OR 35	647

*For this search the mental health arm wasn’t added to Part A search as combining the two arms of population and crisis resulted in only 475 results and it was decided to sift through all of these and those generated from Part B search.

CINAHL (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	(MH “Child”)	419,380
2	(MH “Adolescence+”)	484,604
3	(MH “Young Adult”)	228,337
4	(MH “Students+”)	125,959
5	TI adolescen*	83,532
6	AB adolescen*	88,970
7	TI teen*	9,117
8	AB teen*	10,721

9	TI child*	258,851
10	AB child*	323,474
11	TI “young adult*”	14,862
12	AB “young adult*”	24,894
13	TI “young person”	60
14	AB “young person”	630
15	TI “young people”	5,969
16	AB “young people”	13,261
17	TI “young patient*”	1,598
18	AB “young patient*”	4,523
19	TI youth*	22,604
20	AB youth*	34,713
21	TI juvenile*	5,729
22	AB juvenile*	6,357
23	TI p#ediatric*	70,729
24	AB p#ediatric*	84,378
25	TI student*	72,977
26	AB student*	122,062
27	TI pupil*	1,505
28	AB pupil*	3,994
29	TI “young offender*”	200
30	AB “young offender*”	238
31	OR 1-30	1,199,847
32	(MH “Crisis Intervention”)	3,668
33	TI crisis	9,364
34	AB crisis	13,752
35	TI crises	732
36	AB crises	13,752
37	TI “rapid response*”	945
38	AB “rapid response*”	1,282
39	OR 32-38	25,349
40	(MH “Mental Health”)	34,042
41	(MH “Mental Disorders+”)	524,045
42	(MH “Adolescent Psychiatry”)	1,209
43	(MH “Child Psychiatry”)	1,777
44	(MH “Adolescent Psychology”)	3,655
45	(MH “Child Psychology”)	2,879
46	(MH “Community Mental Health Nursing”)	1873
47	(MH “Community Mental Health Services”)	9,725
48	(MH “Mental Health Services+”)	74,351
49	TI mental*	64,876
50	AB mental*	128,126
51	TI psych*	109,573
52	AB psych*	229,195
53	TI camhs	133
54	AB camhs	360
55	(MH “Suicide+”)	29,100
56	(MH “Injuries, Self-Inflicted”)	2,356
57	TI suicid*	19,120
58	AB suicid*	21,513
59	TI “self harm”	1,677
60	AB “self harm”	2,928
61	TI “self injur*”	1,479
62	AB “self injur*”	2,022
63	OR 40-62	825,803
64	31 AND 39 AND 63	2,040

65	TI mental N5 emergenc*	437
66	AB mental N5 emergenc*	802
67	TI psych* N5 emergenc*	948
68	AB psych* N5 emergenc*	1,489
69	TI mental N3 “critical incident*”	4
70	AB mental N3 “critical incident*”	9
71	TI psych* N3 “critical incident*”	4
72	AB psych* N3 “critical incident*”	18
73	TI mental N3 urgent	14
74	AB mental N3 urgent	59
75	TI psych* N3 urgent	22
76	AB psych* N3 urgent	74
77	TI mental N3 distress	372
78	AB mental N3 distress	1,468
79	TI psych* N3 distress	3,386
80	OR 65-79	8,034
81	31 AND 80	2,702
82	64 OR 81	4,624

AMED (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	exp Child/	18046
2	exp Adolescent/	5872
3	exp Students/	3434
4	adolescen*.tw	7622
5	teen*.tw	293
6	child*.tw	24295
7	“young person”.tw	37
8	“young adult*”.tw	1660
9	“young people”.tw	684
10	“young patient*”.tw	155
11	youth*.tw	1270
12	juvenile*.tw	407
13	p?ediatric*.tw	3416
14	student*.tw	8312
15	pupil*.tw	209
16	“young offender”.tw	13
17	OR 1-16	37804
18	crisis.tw	512
19	crises.tw	77
20	“rapid response”.tw	29
21	OR 18-20	587
22	exp Mental Health/	2000
23	exp Mental Disorders/	28631
24	exp Adolescent psychology/	51
25	exp Child psychology/	90
26	exp Community mental health service/	842
27	exp Mental health services/	1695
28	mental.tw	16759
29	psych*.tw	56174
30	camhs.tw	9
31	exp Suicide/	1281
32	exp Self injurious behavior	256
33	suicide*.tw	1655
34	“self-harm”.tw	82

35	“self-injur*”.tw	330
36	OR 22-35	76269
37	17 AND 21 AND 36	51
38	(mental adj5 emergenc*).tw	25
39	(psych* adj5 emergenc*).tw	61
40	(mental adj3 “critical incident*”).tw	0
41	(psych* adj3 “critical incident*”).tw	0
42	(mental adj3 urgent*).tw	1
43	(psych* adj3 urgent*).tw	4
44	(mental adj3 distress).tw	67
45	(psych* adj3 distress).tw	795
46	OR 38-45	930
47	17 AND 46	137
48	37 OR 47	187

ERIC (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	TI adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p#ediatric* OR student* OR pupil* OR “youth offender*”	940,015
2	AB adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p#ediatric* OR student* OR pupil* OR “youth offender*”	355,288
3	OR 1-2	966,788
4	TI crisis OR crises OR “rapid response*”	3,803
5	AB crisis OR crises OR “rapid response*”	11,586
6	OR 4-5	13,386
7	TI mental* OR psych* OR camhs OR suicide* OR “self-harm” OR “self-injur*”	41,082
8	AB mental* OR psych* OR camhs OR suicide* OR “self-harm” OR “self-injur*”	120,360
9	OR 7-8	127,708
10	3 AND 6 AND 9	1,048
11	TI mental N5 emergenc*	9
12	AB mental N5 emergenc*	77
13	TI mental N3 (“critical incident*” OR urgent OR distress)	16
14	AB mental N3 (“critical incident*” OR urgent OR distress)	103
15	TI psych* N3 (“critical incident*” OR urgent OR distress)	332
16	AB psych* N3 (“critical incident*” OR urgent OR distress)	1,127
17	TI psych* N5 emergenc*	46
18	AB psych* N5 emergenc*	151
19	OR 11-18	1,518
20	3 AND 19	952
21	10 OR 20	1,972

ASSIA (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	MAIN SUBJECT EXACT (“Adolescents”)	25,366
2	MAIN SUBJECT EXACT (“Children”)	51,450
3	MAIN SUBJECT EXACT (“Young adult”)	9,892
4	MAIN SUBJECT EXACT (“Students”)	23,077
5	ti (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p*ediatric OR student* OR pupil* OR “young offender*”	197,417

6	ab (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p*ediatric OR student* OR pupil* OR “young offender*”	318,691
7	OR 1-6	346,143
8	MAIN SUBJECT EXACT (“Crisis Intervention”)	688
9	MAIN SUBJECT EXACT (“Crisis”)	227
10	MAIN SUBJECT EXACT (Crisis Management”)	71
11	ti (crisis OR crises OR “rapid response*”)	4,085
12	ab (crisis OR crises OR “rapid response*”)	10,582
13	OR 8-12	12,668
14	MAIN SUBJECT EXACT (“Mental Health Care”)	11,881
15	MAIN SUBJECT EXACT (“Psychiatric disorders”)	5,721
16	MAIN SUBJECT EXACT (“Adolescent psychiatry”)	418
17	MAIN SUBJECT EXACT(“Child psychiatry”)	514
18	MAIN SUBJECT EXACT (“Community psychiatric nursing”)	83
19	MAIN SUBJECT EXACT (Community mental health services)	3,291
20	MAIN SUBJECT EXACT (“Mental health services”)	9,989
21	ti (mental* OR psych* OR camhs)	49,405
22	ab (mental* OR psych* OR camhs)	112,609
23	MAIN SUBJECT EXACT (“Suicide”)	4,465
24	ti (suicide* OR “self-harm” OR “self harm” OR “self-injur*” OR “self injur*)	10,201
25	ab (suicide* OR “self-harm” OR “self harm” OR “self-injur*” OR “self injur*)	15,950
26	OR 14-25	141,857
27	7 AND 13 AND 26	544
28	ti (mental N/5 emergenc*)	132
29	ab (mental N/5 emergenc*)	314
30	ti (psych* N/5 emergenc*)	44
31	ab (psych* N/5 emergenc*)	174
32	ti (mental N/3 (“critical incident*” OR urgent OR distress))	190
33	ab (mental N/3 (“critical incident*” OR urgent OR distress))	884
34	ti (psych* N/3 (“critical incident*” OR urgent OR distress))	22
35	ab (psych* N/3 (“critical incident*” OR urgent OR distress))	102
36	OR 28-35	1,622
37	7 AND 36	441
38	27 OR 37	960

Sociological Abstracts (Conducted April 2020 and updated January 2021)

#	Search term	Results
1	MAIN SUBJECT EXACT (“Adolescents”)	27,118
2	MAIN SUBJECT EXACT (“Children”)	39,326
3	MAIN SUBJECT EXACT (“Young adults”)	8,902
4	ti (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p*ediatric OR student* OR pupil* OR “young offender*”	134,124
5	ab (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p*ediatric OR student* OR pupil* OR “young offender*”	266,404
6	OR 1-5	290,185
7	MAIN SUBJECT EXACT (“Crisis Intervention”)	336
8	ti (crisis OR crises OR “rapid response*”)	14,637
9	ab (crisis OR crises OR “rapid response*”)	38,885
10	OR 7-9	45,629
11	MAIN SUBJECT EXACT (“Mental Health Services”) OR MAIN SUBJECT EXACT (“Community Mental Health Centres”) OR MAIN SUBJECT EXACT (“Mental Health”) OR MAIN SUBJECT EXACT (“Community Mental Health”)	14,454
12	ti (mental* OR psych* OR camhs)	21,006

13	ab (mental* OR psych* OR camhs)	63,754
14	MAIN SUBJECT EXACT (“Suicide”)	3,319
15	ti (suicide* OR “self-harm” OR “self harm” OR “self-injur*” OR “self injur*)	5,419
16	ab (suicide* OR “self-harm” OR “self harm” OR “self-injur*” OR “self injur*)	8,669
17	OR 11-16	80,940
18	6 AND 10 AND 17	517
19	ti (mental N/5 emergenc*)	16
20	ab (mental N/5 emergenc*)	85
21	ti (psych* N/5 emergenc*)	27
22	ab (psych* N/5 emergenc*)	101
23	ti (mental N/3 (“critical incident*” OR urgent OR distress))	109
24	ab (mental N/3 (“critical incident*” OR urgent OR distress))	435
25	ti (psych* N/3 (“critical incident*” OR urgent OR distress))	2
26	ab (psych* N/3 (“critical incident*” OR urgent OR distress))	49
27	OR 19-26	727
28	6 AND 27	171
29	18 OR 28	679

Social Services Abstracts (Conducted April 2020 and updated January 2021)

#	Search term	Results
1	MAIN SUBJECT EXACT (“Adolescents”)	15,154
2	MAIN SUBJECT EXACT (“Children”)	23,483
3	MAIN SUBJECT EXACT (“Young adults”)	3,598
4	ti (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p*ediatric OR student* OR pupil* OR “young offender*”	83,569
5	ab (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p*ediatric OR student* OR pupil* OR “young offender*”	117,890
6	OR 1-5	131,762
7	MAIN SUBJECT EXACT (“Crisis Intervention”)	620
8	ti (crisis OR crises OR “rapid response*”)	2,361
9	ab (crisis OR crises OR “rapid response*”)	6,549
10	OR 7-9	7,866
11	MAIN SUBJECT EXACT (“Mental Health Services”)	7,433
12	MAIN SUBJECT EXACT (“Community Mental Health Centres”)	781
13	MAIN SUBJECT EXACT (“Mental Health”)	13,119
14	MAIN SUBJET EXACT (“Community Mental Health”)	1,325
15	ti (mental* OR psych* OR camhs)	17,027
16	ab (mental* OR psych* OR camhs)	35,736
17	MAIN SUBJECT EXACT (“Suicide”)	1,577
18	ti (suicide* OR “self-harm” OR “self harm” OR “self-injur*” OR “self injur*)	2,781
19	ab (suicide* OR “self-harm” OR “self harm” OR “self-injur*” OR “self injur*)	4,454
20	OR 11-19	45,980
21	6 AND 10 AND 20	410
22	ti (mental N/5 emergenc*)	35
23	ab (mental N/5 emergenc*)	116
24	ti (psych* N/5 emergenc*)	12
25	ab (psych* N/5 emergenc*)	20
26	ti (mental N/3 (“critical incident*” OR urgent OR distress))	70
27	ab (mental N/3 (“critical incident*” OR urgent OR distress))	345
28	ti (psych* N/3 (“critical incident*” OR urgent OR distress))	0
29	ab (psych* N/3 (“critical incident*” OR urgent OR distress))	17
30	OR 22-29	547
31	6 AND 30	149
32	21 OR 31	544

Scopus (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	TITLE (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR paediatric* OR pediatric* OR student* OR pupil* OR “young offender”	1,707,464
2	ABS (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR paediatric* OR pediatric* OR student* OR pupil* OR “young offender”	3,033,729
3	OR 1-2	3,569,657
4	TITLE (crisis OR crises OR “rapid response*”	84,062
5	ABS (crisis OR crises OR “rapid response*”	214,600
6	OR 4-5	257,464
7	TITLE (mental* OR psych* OR camhs OR suicid* OR “self-harm” OR “self-injur*”	744,496
8	ABS (mental* OR psych* OR camhs OR suicid* OR “self-harm” OR “self-injur*”	1,652,030
9	OR 7-8	1,954,700
10	3 AND 6 AND 9	4,477
11	TITLE (mental W/5 emergenc*)	628
12	ABS (mental W/5 emergenc*)	1,744
13	TITLE (psych* W/5 emergenc*)	3,235
14	ABS (psych* W/5 emergenc*)	5,776
15	TITLE (mental W/3 distress)	717
16	ABS (mental W/3 distress)	3,380
17	TITLE (psych* W/3 distress)	6,769
18	TITLE (mental W/3 (“critical incident*” OR urgent))	25
19	ABS (mental W/3 (“critical incident*” OR urgent))	120
20	TITLE (psych* W/3 (“critical incident*” OR urgent))	77
21	ABS (psych* W/3 (“critical incident*” OR urgent))	356
22	OR 11-21	19,877
23	3 AND 22	4,408
24	10 OR 23	8,683

Web of Science (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	TOPIC (adolescen* OR teen* OR child* OR “young person” OR “young adult*” OR “young people” OR “young patient*” OR youth* OR juvenile* OR p$ediatric* OR student* OR pupil* OR “young offender”	3,159,103
2	TOPIC (crisis OR crises OR “rapid response*”	209,757
3	TOPIC (mental* OR psych* OR camhs OR suicid* OR “self-harm” OR “self-injur*”	1,588,843
4	1 AND 2 AND 3	3,162
5	TOPIC (mental NEAR/5 emergenc*)	1,573
6	TOPIC (psych* NEAR/5 emergenc*)	5,627
7	TOPIC (mental NEAR/3 distress)	3,075
8	TOPIC (psych* NEAR/3 distress)	7,645
9	TOPIC (mental NEAR/3 “critical incident*”)	14
10	TOPIC (psych* NEAR/3 “critical incident*”)	41
11	TOPIC (mental NEAR/3 urgent)	93
12	TOPIC (mental NEAR/3 urgent)	242
13	OR 5-12	17,724
14	1 AND 13	4,288
15	4 OR 14	7,263

CENTRAL (Conducted February 2020 and updated January 2021)

#	Search term	Results
1	MeSH descriptor: [Adolescent] explode all trees	100,693
2	MeSH descriptor: [Child] explode all trees	1236
3	MeSH descriptor: [Young Adult] explode all trees	258
4	MeSH descriptor: [Students] explode all trees	4080
5	(adolescen* OR teen* OR child* OR "young adult" OR "young person" OR "young people" OR youth* OR juvenile* OR paediatric* OR pediatric* OR student* OR "young offender*"): ti, ab, kw (word variations have been searched)	265016
6	OR 1-5	303485
7	MeSH descriptor: [Crisis Intervention] explode all trees	152
8	(Crisis OR crises): ti, ab, kw (word variations have been searched)	3348
9	MeSH descriptor: [Hospital Rapid Response Team] explode all trees	13
10	("rapid response"): ti, ab, kw (word variations have been searched)	355
11	OR 7-10	3696
12	MeSH descriptor: [Mental Health] explode all trees	1379
13	MeSH descriptor: [Mental Disorders] explode all trees	70204
14	MeSH descriptor: [Psychology, Adolescent] explode all trees	252
15	MeSH descriptor: [Psychology, Child] explode all trees	256
16	MeSH descriptor: [Adolescent Psychiatry] explode all trees	1379
17	MeSH descriptor: [Child Psychiatry] explode all trees	12
18	MeSH descriptor: [Community Psychiatry] explode all trees	15
19	MeSH descriptor: [Mental Health Services] explode all trees	6480
20	MeSH descriptor: [Community Mental Health Services] explode all trees	711
21	MeSH descriptor: [Community Mental Health Centres] explode all trees	112
22	(mental* OR psych* OR camhs): ti, ab, kw (word variations have been searched)	168895
23	MeSH descriptor: [Suicide] explode all trees	1139
24	MeSH descriptor: [Self-Injurious Behavior] explode all trees	1342
25	(suicid* OR "self harm" OR "self-harm" OR "self injur*" OR "self-injur*"): ti, ab, kw (word variations have been used)	5891
26	OR 12-25	198618
27	6 AND 11 AND 26	411
28	(mental NEAR/5 emergenc*: ti, ab, kw (word variations have been searched)	110
29	(psych* NEAR/5 emergenc*: ti, ab, kw (word variations have been searched)	418
30	(mental NEAR/3 "critical incident*"): ti, ab, kw (word variations have been searched)	0
31	(psych* NEAR/3 "critical incident*"): ti, ab, kw (word variations have been searched)	3
32	(mental NEAR/3 urgent): ti, ab, kw (word variations have been searched)	7
33	(psych* NEAR/3 urgent); ti, ab, kw (word variations have been searched)	26
34	(mental NEAR/3 distress): ti, ab, kw (word variations have been searched)	259
35	(psych* NEAR/3 distress): ti, ab, kw (word variations have been searched)	489
36	OR 28-35	1274
37	6 AND 36	394
38	27 OR 37	774

Open Grey (Conducted April 2020 and updated January 2021)

(crisis OR crises) AND (child* OR adolescen* OR teen* OR student* OR "young person" OR "young adult*" OR "young people" OR "young patient*" OR youth* OR juvenile* OR paediatric* OR pediatric OR pupil* OR "young offender*")

220 references found.

EThOS & PQDT Open (Conducted February 2020 and updated January 2021)

A series of basic keyword searches were compiled to search both EThOS & PQDT using the agreed terms used in the previous searches describing both population and crisis

EThOS (320 references found)

PQDT Open (116 references found)

Criminal Justice Abstracts (Conducted February 2020 and updated January 2021)

A series of basic keyword searches were compiled to search Criminal Justice Abstracts using the agreed terms used in the previous searches describing both population and crisis

0 References found

Appendix 2: Table of studies excluded from the review

Author/s	Reasons for exclusion
Adams 1996	Not about intervention or care
Al et al. 2004	Focus on family crisis and child safety, rather than child crisis
Anderson et al. 2000	Evaluation of a skills training program not a model of crisis care
Archbold 2015	MH consultation and support for GPs – not crisis
Archbold 2016	MH consultation and support for GPs – not crisis
Asarnow et al. 2015	Follow up treatment with participants recruited within 3 months of suicide attempt
Balkin et al. 2011	Characteristics of YP presenting to an acute psychiatric hospital
Besier et al. 2009	Not about intervention t or care
Biddle et al. 2014	Examined students who participated in a student assistance programme and their drug/alcohol related behaviours and school suspensions
Boyer et al. 2013	Characteristics of children and adolescents presenting to psychiatric ED over a 6-year period
Brock et al. 2011	Not about intervention or care at point of crisis
Brown et al. 1999	Unavailable
Buffini and Gordon 2015	Although 42% of participants were between 18 to 24 years there was no separate data presented for this age group
Caffy et al. 2019	Explored the increasing time between presentation at the ED of a patient with a primary psychiatric complaint and their disposition
Campo 1996	Discussion paper
Canto et al. 2017	Review article
Cappelli et al. 2019	Satisfaction and outcomes of routine ED practice
Catalan et al. 2020	Not about intervention or care
Chun et al. 2013	Discussion paper
Chun et al. 2015	Discussion paper
Clossey et al. 2018	Not related to YP in crisis but children with severe behavioural problems
Cloutier et al. 2010	Description of clinical presentations and expectations of YP attending ED for mental health concerns
Cordell and Snowdon 2015	Clinical characteristics of those presenting receiving crisis treatment in a multi-program, multiservice agency serving vulnerable youth in both community and residential settings
Crisp et al. 2020	Peer support MH training for universities
Currier and Allen 2003	Not related to YP in crisis
Currier et al. 2010	Mean age of participants is 32.7 years

D'Oosternick et al. 2008	Not about intervention or care
Dieppe et al. 2009	Development of an ED triage tool
Dixon et al. 2011	An outreach service for young homeless people, but is not about point of crisis care
Donaldson et al. 1997	Follow up treatment involving treatment of suicidal behaviour not a model of crisis response
Donaldson et al. 2005	Follow up treatment involving treatment of suicidal behaviour not a model of crisis response
Doulas and Lurgio 2010	Discussion paper
Doulas and Lurgio 2014	Evaluation of a crisis intervention team training program for police officers
Doupnik and Fong 2019	Commentary
Doupnik et al. 2018	Discussion paper
Duarte-Velez et al. 2016	Follow up treatment after discharge from ED
Edelsohn and Gomez 2006	Discussion paper
Ellem et al. 2019	Participants were not in mental health crisis
Epstein 2004	Critical stress de-briefing after an incident
Ermer 1999	Not a model of crisis care
Evans et al. 1996a	Conference presentation – full study publication retrieved
Evans et al. 1996b	Conference presentation – full study publication retrieved
Evans et al. 2001	Baseline statistical data only – full study publication with follow up retrieved
Flomenhaft and Voronoff 2000	Not about intervention or care
Forrest 2004	News article
Foster 2009	Literature review
Frosch et al. 2011a	Focus on characteristics related to repeated attendance at the ED
Frosch et al. 2011b	Focus on prior mental health service use in suicide attempters
Futo 2011	Discussion paper
Gadancheva et al. 2019	Characteristics of adolescents with MH crisis presented to ED
Gibson et al. 2016	Discussion of use of different psychological services for adolescents with MH problems and not about the moment crisis
Golstein and Finding 2006	Discussion paper
Gould et al. 2006	Survey re use of a helpline, not all surveyed had had a crisis
Gould et al. 2007	Adults
Grady et al. 2011	Not about intervention or care
Grimes et al. 2011	YP with serious emotional disturbance
Grover and Lee 2013	Discussion of a paediatric behavioural health unit but no therapeutic approach and treatment not described
Grudnikoff et al. 2015	Characteristics and disposition of adolescents with MH crisis presenting to ED

Grupp-Phelan 2019	Follow up treatment after discharge from ED not a model of crisis response
Grupp-Phelan et al. 2012	Identifying YP with risk factors for suicide
Halamandaris and Anderson 1999	Discussion paper
Hackfield et al. 2020	Not an evaluation of a crisis service
Halsall et al. 2014	Not an evaluation of a crisis service
Hanson 2016	Participants had disruptive behavioural disorders in a school setting
Harrison 2013	Not a model of crisis care
Hart et al. 2008	Participants were not in the moment crisis
Hazell 2003	Description of a model of standard ED care
He et al. 2004	Focuses on factors predicting admission to hospital for youths in state custody
Henggeler et al. 1997	No statistics the aim was to highlight service and treatment issues prior to the full RCT
Herbert 2008	Unavailable
Hopson and Kim 2004	Discussion paper
Huggett et al. 2017	A mobile app and a paper-based pocket guide companion for YP with MH issues
Hutt-Macleod 2019	Not an evaluation of a crisis service
Iyer et al. 2015	Not about intervention or care
Jacobsen et al. 2020	Discussion of an intervention for inpatient care
Jabbour et al. 2016	Protocol for research study
James et al. 2011	Discussion about the role of school resource officers
Jorm et al. 2020	Discussion of increase in rates of MH in CYP
Kalafat et al. 2007	Mean age of participants is 32.6 years
Kalb et al. 2017	Not an evaluation of a crisis service
Kamradt 2000	Insufficient details reported (a brief mention of a mobile crisis team with a wraparound service)
Kennedy et al. 2009	Characteristics of YP attending an ED based crisis intervention program and very brief description of intervention program
Leiter 2018	Unavailable
Leon et al. 2000	Evaluating the use of psychiatric hospitalisation by residential treatment centres
Leverett et al. 2020	Specifically, on sequelae of trauma
Lightburn et al. 2002	Description of innovative practices not insufficient detail on individual programs
Mascayano et al. 2018	Early onset psychosis programme
McKay and Shand 2006	Description of standard CAMHS care
McNamara O'Brien et al. 2017	Skill based app for use following discharge from an acute care setting
Mendez 2006	Not an evaluation of a crisis service

Meyer et al. 1996	Paediatric intensive care unit treatment and not about mental health crisis
Mier et al. 2008	Description of college-based counselling services with a very brief section on crisis care
Millller and Barber 2002	Discussion paper
Milne et al. 2019	Evaluating the accuracy of an automated triage system of an online peer support forum
Mokkenstorm et al. 2017	Evaluation of an online suicide prevention crisis chat service includes all ages. YP not reported separately
Monahan et al. 2011	Not an evaluation of a crisis service
Montreuil et al. 2018	De-escalation approaches in mental health settings and the use of restraint and seclusion
Morris et al. 1997	Families in crises pending children being placed in care
Morrison 2007	Critical Incident Stress Management not individual crisis
Mroczkowski and Havens 2018	Discussion article with brief overviews of programs from across USA and Canada
Narendorf et al. 2017	Prior experiences of using other mental health services since diagnosis
Navarro et al. 2020	Not an evaluation of a crisis service
Newman 2000	Not about intervention or care
Newton et al. 2009	Characteristics of YP attending EDs with MH problems and the associated costs
Newton et al. 2011	Characteristics of YP attending Eds with MH problems
Newton et al. 2014	Association of patient and ED mental health visit characteristics with wait time and length of stay
Nickerson and Zhe 2004	Survey of school psychologists of a broad range of crisis such as terrorist attacks and natural disasters
Nolan et al. 2005	Not an evaluation of a crisis service
Norohna 2000	Unavailable
O'Reilly et al. 2019	Mental health first aid training
Ougrin et al. 2018	Not an evaluation of a crisis service
Owen and Charles 2016	Not an evaluation of a crisis service
Owens et al. 2011	Study of families of completed suicides,
Painter 2009	Not an evaluation of a crisis service
Parsons 2003	Discussion paper
Parsons 2016	Theoretical paper
Pazaratz 1998	Residential treatment program established to deal with adolescent drug users
Pazulinec 2009	Discussion paper
Peake 2011	Not about YP in crisis
Perez 2018	Unavailable
Pfeiffenberger et al. 2014	Care needs of children of adults who accessed crisis services
Pikard et al. 2018	Characteristics, diagnosis and referral patterns to a Child and Adolescent Mental Health Urgent Consult Clinic

Pilowsky and Kates 1996	Crisis as in developmental /attachment crisis
Pineda and Dadds 2013	Not an evaluation of a crisis service
Porter 2018	Not an evaluation of a crisis service
Pycroft et al. 2015	Not an evaluation of a crisis service
Reder and Quan 2004	Availability of social workers to the ED
Reinhart et al. 2019	Review article
Rhodes et al. 2012	Highlighted key aspects of ED management of paediatric suicide-related behaviours as priorities for performance measure development
Rice 2015	Not an evaluation of a crisis service
Rice et al. 2014	Follow on treatment / care after crisis has been dealt with
Rickwood et al. 2015	Not an evaluation of a crisis service
Rittner 1995	Not an evaluation of a crisis service
Roberts and Yeager 2005	Juvenile drug abuse, assessment and treatment
Rogers et al. 2017	Review of ED attendance
Rudd et al. 1996	Not an evaluation of a crisis service
Ruth et al. 2013	Factors leading to immediate hospitalisation of CYP after a psychiatric emergency
Shankar et al. 2020	Discussion about preventing adolescent suicide
Spirito et al. 1995	Follow up treatment after discharge from ED not a model of crisis response
Starling et al. 2016	Characteristics of children presenting to a paediatric ED with MH problems
Sullivan and Riveria 2000	Characteristics of children and adolescents presenting to psychiatric ED
Taylor and Gibson 2016	Not a model of crisis care
Thompson 2018	Predictors which influence help-seeking behaviour for depression, anxiety, and suicidal thoughts among YP
Thompson et al. 2020	Not an evaluation of a crisis service
Urgelles et al. 2012	Emergency prevention and management intervention but emergencies were family emergencies
Van Der Linden et al. 2019	YP and adults and no disaggregated results
Vichta et al. 2018	YP in the study are not described as being in crisis
Witkon et al. 2012	Case example of domestic abuse involving a 12-year-old girl and the involvement of social services
Woolston 2002	Theoretical discussion paper
Wright et al. 2016	Description of standard CAMHS care
Yu et al. 2010	Patient and treatment characteristics of paediatric mental health ED visits associated with alcohol and other drug use
Zakirova et al. 2016	Theoretical discussion paper

Key: CBT: cognitive behaviour therapy; ED: emergency department; GP: general practitioners; MH: mental health; RCT: randomised controlled trial; YP: young people

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Appendix 3: Table of policies, guidelines and reports

Author **Title**
1. Healthy London Partnership 2016[151] Improving care for children and young people with mental health crisis in London. Recommendations for transformatio delivering high-quality, accessible care
2. Local Government Association 2019[142] Improving care for children and young people with mental health crisis in London. Findings from the LGA's peer learni programme
3. Healthy London Partnership 2018[152] Children and young people's mental health crisis peer review. Summary findings report
4.National Collaborating Centre for Mental Health[141] All age crisis care: Improving the quality of care in England. Recommendations and positive practice
5. Royal College of Emergency Medicine 2019[149] Mental health in emergency departments
6. Royal College of Emergency Medicine 2018[94] National survey on mental health services for children and young people (CYP) in the emergency department (ED)
7. Royal College of General Practitioners et al. 2017[172] Intercollegiate position statement on children and young peoples' mental health
8. Royal College of Paediatrics and Child Health 2018[134] Facing the Future: Standards for children in emergency care settings
9. Fellow-Smith et al. 2016[155] Defining a health-based place of safety (S136) and crisis assessment sites for young people under 18. Position stater Ps02/16
10. Mental Health Foundation 2004[148] No help in a crisis. Developing mental health services that meet young people's needs
11. Centre for Mental Health 2018[184] Missed opportunities for 16-25-year olds
12. Wilkins et al. 2019[136] Charities, young people and digital mental health services
13. Care Quality Commission 2017a[161] Review of children and young people's mental health services. Phase one report
14. Care Quality Commission 2014[139] A safe place to be. Findings from our survey of health-based places of safety for people detained under section 136 o Mental Health Act
15. Care Quality Commission 2017b[183] The state of care in mental health services 2014 to 2017. Findings from CQC's programme of comprehensive inspect specialist mental health services
16. Care Quality Commission 2018[185] Are we listening? Review of children and young people's mental health services
17. Williams et al. 2015[168] Understanding provision for students with mental health problems and intensive support needs
18. Faculty of Child and Adolescent Psychiatry and Royal College of Psychiatrists 2015[156] Survey of inpatient admissions for children and young people with mental health problems. Young people stuck in the between community and inpatient care
19. Royal College of Psychiatrists 2014[150] Managing self-harm in young people
20. Garcia et al. 2007[92] Listen up! Person-centres. Approaches to help young people experiencing mental health and emotional problems
21. Clarke et al. 2018[170] Suicide-safer universities
22. National Institute for Clinical Excellence 2004a[147] Self-harm in over 8s; short-term management and prevention of recurrence. Clinical guideline 16
23. National Institute for Clinical Excellence 2004b[147] Self-harm in over 8s; long-term management and prevention of recurrence. Clinical guideline 133
24. National Institute for Clinical Excellence 2004c[182]

Antisocial behaviour and conduct disorders in children and young people: recognition and management. Clinical guide
25. National Institute for Clinical Excellence 2013[154] Psychosis and schizophrenia in children and young people: recognition and management. Clinical guideline 155
26. National Institute for Clinical Excellence 2015[157] Bipolar disorder, psychosis and schizophrenia in children and young people. Quality standard 102
27. Mental Health Taskforce 2016[17] The five year forward view for mental health
28. NHS England 2019a[174] NHS mental health implementation plan 2019/20 – 2023/24
29. NHS England 2019b[179] The NHS long term plan Accessed 14th May 2020
30. NHS England 2016a[175] Implementing the five year forward view for mental health
31. East of England Clinical Networks 2017[144] East of England. Mental health crisis care toolkit. Children and young people. Summary document
32. HM Government 2014[24] Mental health crisis care concordat. Improving outcomes for people experiencing mental health crisis
33. Department of Health and Department of Education 2017[14] Transforming children and young people's mental health provision: A green paper
34. Department of Health 2015[159] Mental Health Act 1983: Code of practice. Chapter 19: Children and young people under the age of 18
35. National Audit Office 2018[176] Improving children and young people's mental health services
36. House of Commons Health Committee 2015[165] Children's and adolescents' mental health and CAMHS: Government response to the committee's third report of sessi 15. Fifth Special Report of Session 2014–15
37. London Strategic Clinical Network 2015[153] London acute care standards for children and young people. Driving consistency in outcomes across the capital
38. NHS England 2016b[140] Children and young people's mental health Local Transformation Plans. A summary of key themes
39. HM Government 2017[178] Preventing suicide in England: Third progress report of the cross-government outcomes strategy to save lives
40. Department of Health and Department of Education 2018[171] Government response to the first joint report of the education and health and social care committees of session 2017- transforming children and young people's mental health provision: A green paper
41. NHS England and the Department of Health 2015[3] Future in mind. Promoting, protecting and improving our children and young people's mental health and wellbeing
42. Gibson et al. 2016[163] Evaluation of the crisis care concordat implementation
43, Irvings and Barnes 2018[143] Integrated crisis care for children and young people up to age 18 across Greater Manchester. The REACH-IN model
44. Welsh Government 2012[173] Together for mental health: A strategy for mental health and wellbeing in Wales
45. Welsh Government 2019[180] Together for mental health: Delivery plan: 2019-2022
46. Welsh Government and Partners 2015[25] Mental health crisis care concordat
47. Welsh Government 2019[166] Wales crisis care concordat national action plan 2019-2022
48. National Assembly for Wales. Children, Young People and Education Committee 2018[7] Mind over matter. A report on the step change needed in emotional and mental health support for children and young Wales
49. Welsh Assembly Government 2008[167] Mental Health Act 1983: Code of practice for Wales. Chapter 32: Children and young people under the age of 18
50. Scottish Government 2017[21] Mental health strategy: 2017-2027
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Mental health strategy 2017-27. Second annual progress report
52. Children & Young People's Mental Health Taskforce 2019[160] Children and young people's mental health taskforce: Recommendations
53. Children & Young People's Mental Health Taskforce 2018[162] Children and Young People's Mental Health Taskforce: Delivery plan
54. Youth Commission on Mental Health 2019[169] Youth commission on mental health services report
55. Department of Health, Social Services and Public Safety 2012[158] Child and adolescent mental health services. A service model

Key: CYP: children and young people; MH: mental health; YP: young people

Appendix 4: Characteristics of randomised controlled trials included in the review

Study **Aim** **Nature of crisis** **Type of treatment** **Location of treatment**	**Recruitment** **Participant characteristics**	**Intervention** **Outcome/s of interest** **Outcome measure/s**
Asarnow et al. 2011[55] USA Aim To evaluate the FISP designed to increase motivation for follow-up treatment, support, coping, and safety, augmented by care linkage telephone contacts after discharge Nature of crisis Suicide attempt or ideation Type of treatment Specialised ED intervention Location of treatment ED or inpatient units	Participants Youths aged 10-18 years (n=181, rr 86%) and their parents Intervention (n=89) / Control (n=92) Recruitment From 2 EDs (April 2003 to August 2005) Age (years) Mean±SD Overall: 14.7±2.0 Intervention: 14.8±2.1 Control: 14.6±1.9 Gender Female (I: 66%; C: 72%) Ethnicity White non-Hispanic (I: 35%, C:32%) African American (I: 14%, C: 12%) Hispanic (I: 35%, C: 32%) Other (I: 35%, C: 32%)	Intervention *Family Intervention for Suicide Prevention versus usual care* FISP: An ED-level staff training designed to improve usual ED care and the quality of the ED environment in which the other intervention components were delivered, Outcome/s of interest Primary outcome: Rates of outpatient MH treatment after discharge Secondary outcomes: Suicide attempts, levels of suicidality, depression, family functioning and behaviour Outcome measure/s *Baseline and 2 months after discharge* Routinely collected data Service Assessment for Children and Adolescents (modified) DISC-IV, HASS, CES-D, CBCL, CBQ
Henggeler et al, 1999[62], 2003[77] Huey et al. 2004[76] Schoenwald et al. 2000[78] Sheidow et al. 2004[79] USA Aim To determine whether MST, modified for use with youths presenting psychiatric	Participants Adolescents aged 12 to 17 years and their families (n=116, rr 87%), three dropped out before starting) Intervention (n=57) / Control (n=56) Recruitment Referral for hospitalisation was initiated by personnel from community child service agencies (MH, juvenile justice, social	Intervention Multisystemic therapy versus hospitalisation Multisystemic therapy: A family centred, home-based intervention that targets the multiple systems in which the youth and family are embedded. Treatment is delivered in home or community settings by a therapist who is available 24hr a day 7 days a week. Psychiatric hospitalisation: Admission to an inpatient unit for stabilisation, psychiatric evaluation and the establishment of an aftercare plan Outcome/s of interest Hospitalisation, resource use[62,77,78] Placement outcomes[77,78] Discharge destination[78]

emergencies, can serve as a clinically viable alternative to inpatient psychiatric hospitalisation Nature of crisis Suicidal ideation, homicidal ideation, psychosis, or threat of harm to self or others Type of treatment Multisystemic therapy Location of treatment Homes	welfare, schools), probate court, & caregivers. After initial assessment crisis caseworkers assisted the MST team to meet with the family to determine study eligibility Age (years) Mean±SD 12.9±2.1 Gender Female (35%) Ethnicity African American (65%) White (33%) Asian American (1%) Hispanic (1%)	Caregiver and youth satisfaction with services[62] Cost-effectiveness[79] Changes in status from admission to discharge/follow up for the following clinical outcomes - Behaviour, psychosocial functioning, emotional distress and self-esteem[62,77] - Depressive affect (Depression, anxiety, hopelessness)[76] - Suicidal ideation and suicide attempts[76] - Family functioning and family relations[62,77] Outcome measure/s *Baseline (T1), when control group were discharged from hospital (T2), at completion of MST around 4 months FU (T3), 6 months FU (T3) and at 1-year FU post treatment (T5)* Global Severity Index of the BSI, [62,77] FACES-111,[62,77] CBCL,[62,77] Depression subscale of the BSI,[76] Self-Esteem subscale of the FFS, [62,77]Hopelessness subscale of the YSR,[76] Suicidal ideation using items from YSR, BSI and YRBS,[76] Suicide attempts using items from CBCL, YRBS,[76] Lubrecht's Family Satisfaction Survey[77] Days in foster care, group homes, RTCs, juvenile justice facilities, and MH or substance abuse inpatient facilities were aggregated to index out-of-home placements[77,78] Medicaid costs[79]
Evans et al. 2003[59] USA Aim To examine the efficacy of three models of intensive in-home services HBCI, HBCI+ and crisis case management - as alternatives to hospitalisation for children experiencing a psychiatric crisis Nature of crisis Psychiatric crisis including dangerousness to self and others, suicide ideation, aggression Type of treatment Intensive in-home services Location of treatment Homes	Participants C|YP aged 5 to 17 years (n=279, rr 89.4%) and their families. Of these, 13 children enrolled twice during the study period, and 49 (17.6%) failed to successfully complete HBCI (n=90) HBCI+ (n=85) CCM (n=63) Recruitment Those who were at risk for inpatient admission or other out-of-home placement as a result of a psychiatric crisis. Assessed by clinicians at participating hospitals Age (years) Mean±SD 12.3±3.6 Gender Females (47.1 %) Ethnicity Hispanic (58.8%) African American (33.6%)	Intervention Three models of intensive in-home services which were intensive, short-term interventions, lasting approximately 4 to 6 weeks and conducted in homes HBCI: was based on the Homebuilder's model of family preservation developed for a child welfare population. Counsellors trained in this model carry caseloads of two families concurrently. The goal of this programme is to keep children in their home environment through resolving the immediate crisis, teaching caregiver's communication and other relevant skills, helping families improve relationships, and linking the child and family to needed services HBCI+: had the same programmatic goal as HBCI and offered the same services. In addition to the counsellor, the intervention team in this model used a bilingual, bicultural family advocate who established a parent support group and provided individualised parent support and advocacy. CCM: an adaptation of the existing Intensive CCM that did not offer clinical treatment services in the home. The programme goal was to assess needs provide concrete services and link the child and family to needed services in order to keep children in their natural environments. Case managers carried maximum caseloads of eight families: four families in crisis and four requiring generic case management services. Outcome/s of interest Percentage of children maintaining at home/community Self-concept, family functioning, behaviour and social competencies Discharge destination Outcome measure/s

	White (5.5%) / Other (2.1%)	*Baseline, post treatment, 6-month FU* Routinely collected data Piers-Harris Children's Self-Concept Scale FACES II, ISSB, CBCL
Wharff et al. 2019[82] USA Aim To examine the efficacy of FBCI Nature of crisis Suicidality Type of treatment Specialised ED intervention Location of programme Pediatric ED	Participants Adolescents aged 13 to 19 years (n=142, rr 49%), Withdrawn (n=3) Intervention (n=68) / Control (n=71) Recruitment Those presenting to the ED with suicidality (Jan 2012 to May 2014) Age (years) Mean±SD I: 15.4±1.3 / C: 15.6±1.5 Gender Female (I: 74%, C: 70%) Ethnicity Black (I: 4%, C: 8%) / White (I: 62%, C: 70%) Latino (I: 9%, C: 10%) Asian (I: 4%, C: 1%) / Mixed (I: 21%, C: 15%)	Intervention Family-Based Crisis Intervention: Participants received a standard psychiatric evaluation followed by an emergency psychiatry intervention. The FBCI was designed to sufficiently stabilise suicidal adolescents within a single ED visit and delivered by social workers in a 60-90-minute session. The session helped the adolescent and family develop a joint crisis narrative of the problem and taught them cognitive behavioural skill building, therapeutic readiness, psycho-education about depression, and safety planning. TAU: Participants received a standard psychiatric evaluation and clinical/discharge recommendations Outcome/s of interest Primary outcomes: Suicidality, family empowerment Secondary outcomes: Client satisfaction and recidivism (Hospitalisation post-discharge, crisis assessment post-discharge) Outcome measure/s Baseline, 1MFU RFL-A, FES, CSQ-8 Recidivism - via two self-reported questions (since your initial visit to the ED, has your child required another crisis evaluation & has your child been psychiatrically hospitalised again)

Key: BSI- Brief Symptom Inventory; C: control; CBCL: Child Behaviour Checklist; CBQ: Conflict behaviour Questionnaire; CCM: Crisis Case Management; CES-D: Center for Epidemiological Studies Depression Scale; CSQ-8: Client Satisfaction Questionnaire 8-items; DISC-IV: National Institute of Mental Health Diagnostic Interview Schedule for Children Version IV; ED: emergency department; FACES-II: Family Adaptability and Cohesion Evaluation Scale II; FACES-III: Family Adaptability and Cohesion Evaluation Scale III; FACES-III: Family Adaptability and Cohesion Evaluation Scales; FBCI: Family-Based Crisis Intervention; FES: Family Empowerment Scale; FFS: Family, Friends, and Self Scale; FFS: Family, Friends, and Self Scale; FISP: Family Intervention for Suicide Prevention; FU: follow up HASS: Harkavy Asnis Suicide Scale; HBCI: Home-Based Crisis Intervention; I: intervention; ISSB: Inventory of Socially Supported Behaviours; MH: mental ; health; MST: Multisystemic therapy; MST: Multisystemic therapy; ns: not specified; PEI: Personal Experiences Inventory; RCT: randomised control trial; RFL-A: Reasons for Living Inventory for Adolescents; RTC: Regional treatment centres; TAU: treatment as usual; YRBS: Youth Risk Behaviour Survey; YSR: Youth Self Report

Appendix 5: Characteristics of included quasi experimental studies

Study **Aim** **Nature of crisis** **Location of programme**	**Recruitment** **Participant characteristics**	**Intervention** **Outcome/s of interest** **Outcome/s**
Roberts et al. 2017[90] Canada Aim (1) examine physician and patient satisfaction with emergency psychiatric consult through telepsychiatry (2) compare clinical characteristics and outcome of telepsychiatry emergency consults with face-to-face emergency consults of children and adolescents from rural and remote communities Nature of crisis Suicidal, anxiety, aggression, psychosis Location of programme Remote	Recruitment Children and adolescents under 18 years of age, who were assessed by the CAMHUCC at a university hospital from Nov 2015 to Nov 2016 and who completed the telepsychiatry satisfaction questionnaire The matched comparison group consisted of 60 patients who had face-to-face assessment in the clinic over the same 12-month period Participants Children and adolescents under 18 years of age (n=120) I (n=60) / MCG (n=60) Age (years) Mean±SD 14±0.36 Gender Females (67%) Ethnicity (% Aboriginal) I (50%); MCG (6.7%) (p<0.001)	Intervention Telepsychiatry assessment and brief intervention The CAMHUCC has a telepsychiatry suite, linked through the Ontario Telemedicine Network, allowing telepsychiatry assessment for patients and direct consultation to the ED physicians in remote emergency rooms and clinics within 24h of patient presentation Outcome/s Patient satisfaction Referral pathways Hospitalisation Discharge destination Outcome measure/s AOQ: Patient satisfaction Routinely collected
Rotheram-Borus et al. 1996a[81] Rotheram-Borus et al. 2000[80] USA Aim To compare standard ER treatment to a specialised ER programme To evaluate the impact of a specialised ER care intervention over the subsequent 18 months Nature of crisis Suicide attempts Type of programme Assessment approach	Participants Adolescents aged 12 to 18 years (n=140) Standard ER care (n=75); specialised ER care (n=65) Recruitment A consecutive series of adolescents' suicide attempters and their families presenting to the ER from March 1991 to August 1992 received the standard ER care; those presenting from Sep 1992 to Feb 1994 received the specialised ER programme Age (years) Mean±SD Standard ED care 15.3±1.6; Specialised ED care 15.0±1.4	Intervention Specialised ED programme Three changes were introduced 1. Staff training workshops 2. "Soap Opera" Videotape: Setting realistic treatment expectations and to provide families with a better understanding of adolescent suicidality and the course of outpatient therapy 3. Family Therapy Session - After discharge from the ER all attempters were referred to the Adolescent Suicidal Disorders Clinic for a standardised, outpatient, six session family treatment programme (SNAP) Outcome/s of interest Depression, suicidality, impulsivity, self-esteem, family functioning Outcome measure/s

Location of programme ED	Gender (Female) 100% Ethnicity Latino (Standard ED care 85.3%; Specialised ED care 89.2 %)	*Baseline* Pierce Suicidal Intent Scale; Hamilton Rating Scale for Depression *Post-discharge assessment* Weekly logs - attendance at least one treatment session; completion of SNAP treatment and the total number of treatment sessions attended AOQ for attitude towards treatment HASS, BDI, FACES III, RSES, Junior 16 *3, 6 12 & 18 months follow up* HASS, BDI, FACES III, Junior 16
Greenfield et al. 2002[84] Latimer et al. 2014[91] Canada Aim To study the clinical outcomes of suicidal adolescents who were treated within a rapid-response outpatient model in a setting in which a ten-day wait was usually required before outpatient treatment could be started[84] To investigate the cost-effectiveness of a rapid response team compared with usual care, for treating suicidal adolescents[91] Nature of crisis Suicide attempts Location of programme Paediatric A&E and then outpatient department	Recruitment Suicidal adolescents admitted to ED during the study period (December 1996 to October 1998) Participants Adolescents aged 12 to 17 years (n=286 I (n=158) / C (n=128) Age (years) Mean±SD I: 14 ±1.59 / C: 14±1.46 Gender (Female) I (72%) / C (66%) Ethnicity White I(70%); C(72%) Black (I: 30% / C: 4%) Hispanic (I: 4% / C: 4%) Other (I: 18% / C: 20%)	Intervention Rapid response outpatient team Assessed by on-call paediatrician as needing as immediate psychiatric consultation. For the intervention group the on-call psychiatrists had access to the rapid-response outpatient team. Psychiatrists in both groups either admitted the patient or discharged them from the ED with subsequent referral to the intervention or control condition Intervention: Rapid response outpatient team who contacted the patient and family. Interventions were aimed at reframing misconceptions, maladaptive behaviours, and communicating patterns Control: No assess to the rapid response outpatient team. Psychiatrists could follow the patient as an outpatient, or refer to a variety of hospital-based outpatient psychiatric clinic, a non–hospital based community health facility, or a private mental health worker Outcome/s Psychosocial functioning, suicide attempts, level of suicidality[84] Time to first contact with HCP and first appointment[84] Hospitalisation and ED return rates[84,91] Length of stay[84] Resource use: inpatient and outpatient services[91] Costs, Cost-effectiveness[91] Outcome measure/s *Baseline 2MFU, 6MFU* Children's Global Assessment Scale[84] Spectrum of Suicidal Behaviour Scale[84] Routinely collected data Research interview 2 & 6 six months after ED assessment[84] Hospital service costs (ED visits, outpatient visits, inpatient stays, & rapid response team) based on financial & activity reports of the hospitals, supplemented by information from

		hospital financial officers & data supplied by trial research team, & estimated using standard methods[91] Fees paid to physicians and unit costs of drugs were obtained from the Quebec Health Insurance Board[91] Costs of private visits with a psychiatrist or other health care professionals were obtained from professional boards[91]
Nagarsekar et al. 2020[96] Australia <u>Aim</u> To investigate an innovative pathway which builds capacity of ED medical officers to manage children and adolescents with MH problems <u>Nature of crisis</u> MH problems including deliberate self-harm, suicidal behaviour, emotional dysregulation or situational crisis <u>Location of programme</u> Pediatric ED	<u>Recruitment</u> Children and adolescents presented for MH problems in an ED (September to December 2017) <u>Participants</u> Children and adolescents aged 8–17 years <u>Age (years)</u> < 11 (I: 10%, C:5.9%) 12-15 (I: 60%, C: 69%) >16 (I: 30%, C: 25%) <u>Gender (Female)</u> I (66%) / C: (66%) <u>Ethnicity</u> Not stated	<u>Intervention</u> A clinical pathway called Kids Assessment Liaison for Mental Health (KALM) pathway was implemented in the ED which build in extra capacity for an ED medical officer to complete the assessment and to link with an on-call psychiatrist regarding assessment and management plan Control: Care as usual <u>Outcome/s</u> Length of stay Carer satisfaction <u>Outcome measures</u> Clinical and demographic data were collected for all eligible ED presentations from the ED Patient Management Systems. Carer survey administered by CAMHS clinicians as part of routine follow up phone calls within 48 hours of the ED presentation

Key: AOQ: authors own questionnaire; BDI: Beck Depression Inventory; CAMHUCC: Child and Adolescent Mental Health Urgent Consult Clinic; CMHA: Children's Mental Health Agencies; C: control; ED: emergency department; ER: emergency room; FACES III: Family Adaptability and Cohesion Evaluation Scales; HASS: The Harkavy Asnis Suicide Survey; HCP: health care professional; I: intervention; Junior 16: Junior Eysenck Questionnaire; KALM: Kids assessment liaison for mental health; MCG: matched comparison group; MH: mental health RSES: Rosenberg Self-Esteem Scale; SNAP: Successful Negotiation Acting Positively

Appendix 6: Characteristics of prospective cohort studies included in the review

Author, Year **Country** **Aim** **Nature of crisis** **Type of intervention**	**Location of programme** **Setting / Recruitment** **Patient characteristics**	**Design** **Outcome/s of inte** **Outcome measur**
Wharff et al. 2012[32] USA Aim To explore the safety and feasibility of FBCI in a population of adolescents presenting with suicidal complaints in a large urban paediatric ER Nature of crisis Suicidal attempt Type of intervention Family-based crisis intervention Specialised ED interventions	Location of programme Pediatric ED Recruitment Suicidal adolescents presenting consecutively to the Pediatric ED at Boston Children's Hospital over 18 months from Jan 2001 to June 2002 Compared retrospectively with suicidal adolescents who presented consecutively to the same ED 18-months from January 1999 to June 2000 Participants Prospective cohort (I): Adolescents aged 13 to 18 years (n=67, rr 67%) Retrospective cohort (C): Adolescents (n=150) Age (years) Mean±SD I: 15.6±1.5 / C: ns Gender Female (I:76%; C:74%) Ethnicity White (I: 65%, C: 64.7%) / Black (I: 11%, C: 17.3%) Hispanic/Latino (I: 11%, C: 11%) Biracial (I: 3%, C: 1.3%) / Asian (I: 2%, C: 2.7%) Other (I: 3%, C: 4.0%)	Design Prospective cohort Compared with dat Outcomes Suicide attempts Referral pathways Hospitalisation pos Emergency departr Outcome measure *1 day fu, 1-week fu* Data was obtained collected data

Key: C: comparison; ED: emergency department; FACES II: Family Adaptability and Cohesion Evaluation Scale II; FBCI: Family-based crisis intervention; fu: follow up; I: intervention; ns: not specified; rr: response rate; SD: standard deviation; YCSU: youth crisis stabilisation unit

Appendix 7: Characteristics of retrospective cohort studies included in the review

Author, Year **Country** **Aim** **Nature of crisis** **Location of programme**	**Patient characteristics** **Recruitment**
Greenham and Bisnaire 2008[85] Canada Aim To describe characteristics and outcomes of youth aged 7 to 17 who received inpatient psychiatric and MH services along different clinical pathways of a new service delivery model Nature of crisis Suicidal ideation Location of programme Inpatient psychiatry unit at the Children's Hospital of Eastern Ontario	Participants Youths (CSS (n=96); IAS (n=90); TCS (n=25)) Recruitment Consecutive admissions to the programme over a 1-year period from Oct 2000 to Oct 2001. The majority were admitted through the ED (65%) or from an off-service bed on another medical/surgical ward (21%). Age (years) Mean±SD CSS: 14.8±2.0; IAS: 14.9±1.8; TCS: 15.3±1.2 Gender (Female) CSS: (n=64%); IAS (70%); TCS (80%) Ethnicity Ns
Fendrich et al. 2019[60] USA Aim To evaluate a mobile crisis service intervention implemented in Connecticut with the aim of examining whether the intervention was associated with reduced behavioural health ED use among those in need of services Nature of crisis Behavioural health need (as one in which any psychiatric diagnosis was provided during an ED service encounter) Location of programme Community based	Participants Client sample using the MCS: Youths aged 4 to 18 years (n=2,532) Comparison sample using the ED: Youths aged 4 to 18 (n=3,961) Recruitment Clients anywhere in the state can access mobile crisis services by dialling a specifically assigned number that connects to a call specialist at a call centre. All those receiving services during the fiscal year 2014 Age (years) Mean±SD MCS: 12.20±-3.38; ED: 12.60±3.65 Gender (Female) MCS (51%); ED (45%) Ethnicity Non- Hispanic White (MCS: 33%; ED: 39%) Non-Hispanic Black (MCS: 20%; ED: 12%) Hispanic (MCS: 40%; ED: 29%) Other (MCS: 7%; ED: 20%)
Holder et al. 2017[63] USA Aim To assess improvement in the ED length of stay and costs after implementation of an ED programme which added board-certified psychiatrists and trained psychiatric social workers to the PED Nature of crisis	Participants Before July 2010, patients treated had limited access to evaluations by staff with MH expertise CYP aged 5 to 18 years (Pre-programme: n=1237; Post-programme: n=1983) Recruitment All paediatric psychiatric visits of children aged 5 to 18 years who were seen and discharged from the Greenville Memorial Hospital ED from Jan 2007 to June 2013 Age (years) Mean±SD Pre-programme:14.9 ± 3.1; Post-programme: 14.3 ± 3.1

Children in crisis with mental health disorders/behavioural reasons Location of programme PED	Gender (Female) Pre-programme (46.2%); Post-programme (47.3%) Ethnicity White (Pre-programme: 72.7%; Post-programme: 71.3%) African American (Pre-programme: 20.4%; Post-programme: 21.2%) Hispanic (Pre-programme: 4.2%; Post-programme: 3.7%) Other (Pre-programme: 2.8%; Post-programme: 3.8%)
Mahajan et al. 2007[65] USA Aim To evaluate the impact of the child guidance model on the ED length of stay and ED costs on children with visits for mental disorders Nature of crisis Suicidal/homicidal ideation, behavioural problems, violent/psychotic behaviour Location of programme PED	Participants Children (n=1031) of which 54% (n=561) were evaluated by the child guidance model team Recruitment All children who attended the PED for mental disorders over a 1-year period from June 2002 since the initiation of the child guidance model Age (years) Mean±SD 12.5 ± 3.4 Gender Females (33%) Ethnicity Ns
Rogers et al. 2015[70] USA Aim To determine how the CARES unit influenced length of stay and costs for psychiatric patients in the PED Nature of crisis Acute psychiatric emergencies Location of programme Crisis stabilisation unit (Inpatient)	Participants CYP aged 5 to 17 years presenting 1 year before CARES, Oct 2006 to Oct 2007 (n=1719 pre-CARES), were compared with 1 year after, Oct 2007 to Oct 2008 (n= 1863 post-CARES) Setting / Recruitment Patients who presented to the PED with an acute psychiatric emergency Age (years) Mean±SD Pre-Cares 12.9±3.1 / Post-Cares 13.2± 2.9 Gender (Female) Pre-Cares (48.2%) / Post-Cares (48.1%) Ethnicity White (Pre-Cares 42.9%; Post-Cares 43.2%) African American (Pre-Cares 36.1%; Post-Cares 34.3%) Hispanic (Pre-Cares 18.7%; Post-Cares 20.5%)
Uspal et al. 2016[73] USA Aim To improve the quality of care for patients with psychiatric complaints at a tertiary care children's hospital's ED using Lean methodology Nature of crisis Psychiatric complaints (self-inflicted injuries excluded) Location of programme PED	Recruitment Patients attending the PED who were identified as having a MH complaint on or before arrival to the PED. New process was implemented in March 2011. Pre implementation period March 2010-March 2011. Post-implementation period March 2011-March 2012 Participants All children with a primary discharge diagnosis code consistent with a MH diagnosis Age (years) Mean±SD Pre-I: 13.5 ±3.4; Post-I: 13.8± 3.4 Gender (Female) Pre-I (65%); Post I (51%) Ethnicity White (Pre-I 55%; Post-I 49%) Black (Pre-I 8%; Post-I 11%) Other/refused (Pre-I 23%; Post I: 24%)
Martin 2005[66]	Participants

USA Aim To determine if a mobile crisis intervention has comparable or lower youth hospitalisation outcomes compared to hospital-based crisis intervention Nature of crisis Serious risk of psychiatric hospitalisation Location of programme Community	Youth aged from 4-17 years (n=897) served by the Psychiatric Emergency Services (n=584) and the Mobile Response Team (n=313) Recruitment No details provided Age (years) 0-5 (MRT 2%; PED 1%); 6-11 (MRT 27%; PED 13%) 12-14 (MRT 42%; PED 34%); 15-17 (MRT 29%; PED 52%) Gender (Female) MRT (51%); PED (54%) Ethnicity Caucasian (MRT 58%; PED 58%) African American (MRT 28%; PED 24%) Filipino (MRT 0.6%; PED 0.5%); East Asian (MRT 1%; PED 8%) Latin American (MRT 1%, PED 3%) Mexican Am/Chic (MRT 10%; PED 8%) Other Non-White (MRT 0.3%; PED 2%) S.E. Asian (MRT 0.6%; PED 1%) / unknown (PED 2%)
Lee et al. 2019[87] Canada Aim To evaluate the impact of HEARTSMAP on the PED flow and system utilisation Nature of crisis Acute psychiatric consultation (depression, anxiety, suicidal ideation, self-harm, substance abuse, mood, eating, behavioural, and psychotic disorders or their permutations) Location of programme PED	Recruitment Retrospective sample: A random sample of MH related PED visits of patients aged <17 years. Using an administrative database containing records of all BCCH PED visits, MH-related presentations were identified from chief complaints and discharge diagnoses Prospective sample: Youth aged <17 years who were identified by the triage nurse as presenting PED for a MH related complaint and placed in the MH assessment room Participants CYP aged <17 years Retrospective sample (n=104); Prospective sample (n=70) Age (years) Mean Retrospective sample: 13.5; Prospective sample: 12.9 Gender (Female) Retrospective sample (66%); Prospective sample (72%)
Greenfield et al. 1995[34] Canada Aim To determine the impact of an outpatient psychiatric ERFUT on the hospitalisation rate of youth in crisis (mostly suicidal adolescents) Nature of crisis Suicide attempt Location of programme Outpatients	Recruitment Suicidal adolescents admitted to ED during the study period (dates not provided) Participants Retrospective sample - year prior to creation of ERFUT (n=412) Prospective sample – third year that ERFUT was fully functional (n=568) No further participant details provided
Thomas et al. 2018[72] USA Aim To evaluate a videoconference-based psychiatric emergency consultation programme (telepsychiatry)	Participants In early 2015 before implementation, usual care was received by 268 paediatric patients (54%), and after implementation telepsychiatry consultation was received by 226 paediatric patients (46%) Parents/guardians (n=156) Health carer professionals (n=195) Recruitment

Nature of crisis Psychiatric emergency behavioural health complaint that was not immediately life threatening Location of programme Remote	Pediatric patients who presented in 2015 at a network ED with a primary presenting complaint. of an acute behavioural health condition. Age (years) Mean±SD Telepsychiatry 13.1±2.7 Usual care 13.3±2.5 Gender (Female) Telepsychiatry (57%) Usual care (63%) Ethnicity Caucasian (Telepsychiatry 77%; Usual care 69%) Other (Telepsychiatry 23%; usual care 31%)
Maslow et al. 2017[64] USA Aim To describe and evaluate an integrated paediatric evaluation centre designed to prevent the need for treatment in emergency settings by increasing access to timely & appropriate care for acute MH Nature of crisis Acute mental health needs Location of programme Outpatient clinic	Recruitment Patients who had attended the evaluation centre in 2016 and all patients with a visit for social work in the interval from September 2015 (when the clinic opened) to January 2017 Participants CYP aged 2 to 22 years (n =641) with 1447 completed appointments Age (years) Mean±SD 13.01+3.84 Gender ns Ethnicity Ns
Reliford and Adebanjo 2018 USA Aim To evaluate data regarding child psychiatry fellow use of telepsychiatry Nature of crisis Those presenting to PED in need of psychiatric care Location of programme PED	Recruitment CYP aged 3-18 years presenting to PED during study period) in need of psychiatric care Pre implementation of telepsychiatry July 2016 to Dec 2016 Post implementation of telepsychiatry July 2017 to Dec 2017 No further details provided

Key: CAPI: Childhood Acuity of Psychiatric Illness Scale ; CBC: Child behaviour Checklist; CARES: Child & Adolescent Rapid Emergency Stabilisation; CSPI: Childhood Severity of Psychiatric Illness Scale; CSS: Crisis stabilisation services; CYP: children and young people; DCMHS: State of Delaware's Division of Child Mental Health Services; ED: emergency department; IAS: Interdisciplinary Assessment Services; MASC: Multidimensional Anxiety Scale for Children; MH: mental health; MRT: mobile response team; ns: not specified; PED: Paediatric emergency departments; PES Psychiatric Emergency Services; Post-I: post-implementation; Pre-i: pre-implementation; TCS: Transitional Care Services; YSR: Youth Self Report

Appendix 9: Characteristics of descriptive cross-sectional studies included in the review

Author, Year **Country** **Aim** **Nature of crisis** **Type of programme**	**Patient characteristics**
Michael et al. 2015[67] USA Aim The purpose of this paper is to further describe the PEACE protocol (a crisis risk assessment tool) after its initial pilot year (2012–13) and to report the results from the 2013–14 year Nature of crisis Suicidality, homicidally Type of programme Risk assessment and decision-making tool within a school mental health programme	Patient characteristics High school students (n=42) who were involved in 68 separate crisis events Recruitment Referrals to the Assessment, Support and Counselling Centre for crisis events during 2013-14 which services 3 districts are made by professional school counsellors and administrators, peers or by the students themselves Gender Female (52%) Ethnicity Caucasian (90.5%) / Non-Caucasian (9.5%) Age 9th grade (33%) / 10th grade (14%) 11th grade (36%) / 12th grade (17%)
Sale et al. 2014[71] USA Aim Describes the development and implementation of a school MH programme in western rural North Carolina Nature of crisis Suicidality, homicidally Type of programme Risk assessment and decision-making tool within a school mental health programme	Patient characteristics High school students (n=20) who were involved in 33 separate crisis events Recruitment Referrals to the Assessment, Support and Counselling Centre for crisis events in one high school during 2012-13. Students were referred by parents and school personnel Gender Female (65%) Ethnicity Caucasian (100%) Age 9th grade (50%) / 10th grade (20%) 11th grade (20%) / 12th grade (10%)
Capps et al. 2019[58] USA Aim To describe the results of a replication of the PEACE protocol implemented during the 2016–2017 school year Nature of crisis Suicidality, homicidally, self-injury Type of programme Risk assessment and decision-making tool within a school mental health programme	Patient characteristics High school students aged 13 to 18 years (n=58) involved in 78 separate crisis events Recruitment Referrals to the Assessment, Support and Counselling Centre for crisis events during 2016-17 which services 3 districts are made by professional school counsellors and administrators, peers or by the students themselves Gender Females (55.1%) / Transgender (1.3%) Age (years) Mean±SD 15.42±1.22 Ethnicity

	Caucasian (87.2%) / Non-Caucasian (12.8%)
Walter et al. 2019[75] USA Aim To test the ‘‘real world’’ implementation of an Multitiered systems of support model of MH services for elementary through high-school students in urban communities. Nature of crisis Emotional distress, suicidal thoughts or behaviours, and dysregulated behaviours Type of programme School-hospital partnership	Patient characteristics Students (n=ns) who were involved in 491 crisis encounters Recruitment Crisis intervention services were delivered by programme clinicians to individual students in an acute MH crisis who were referred by school staff No further details reported for those in crisis
Baker and Dale 2002[56] USA Aim To document the incidence, frequency and timing of psychiatric crises of youth in residential treatment and to determine whether the on-campus Crisis Residence functioned as an effective alternative to hospitalisation Nature of crisis aged 5 to 17 years Psychiatric crisis (including suicide attempt, fire setting and violence) Type of programme Short term crisis intervention programme The Crisis Residence	Patient characteristics Boys (n=81) aged 5 to 17 years Recruitment All who were treated at the Crisis Residence between January 1995 and December 1997. Referred from the agency’s (The Childrens Village) own RTC and other agency programs such as adoption and foster care Gender Male (100%) Age (years) Range 5.03 to 16.15 Ethnicity African American (56.7%) Hispanic (32.2%) White (7%) Missing data (4%)
Baker et al. 2004[57] USA Aim To provide descriptive information regarding two groups entering a hospital diversion programme for young persons in psychiatric crisis: those who entered the programme from a RTC those who entered the programme as an outside referral (typically young persons living with their own family or a foster family) Nature of crisis Suicidality, homicidally Type of programme/intervention Short term crisis intervention programme The Crisis Residence	Participants Youth (n=103) aged 5 to 17 years Recruitment All who were treated at the Crisis Residence (within a residential treatment centre – The Childrens Village) in fiscal year 2001-02. Patients are referred from three sources: (1) the agency’s (The Childrens Village) own RTC and other agency programs such as adoption and foster care, (2) local and out-of-state social service agencies and departments of MH, and (3) insurance companies and managed care organisations Age (years) Mean±SD RTC sample 14.61 ±2.1 / Outside referral sample 13.52±2.9 Gender RTC sample: Male (100%) / Outside referral sample: Male (42.3%) Ethnicity RTC sample: Ethnic minority (93.8%) Outside referral sample: Ethnic minority (84.3%)
Dion et al. 2010[83] Canada Aim	Participants ED medical staff (n=124, rr70%) Recruitment ED medical staff working on the CIP with the Children’s Hospital of Eastern Ontario.

To explore how capable ED staff feel in managing paediatric mental health issues and what they value in ED crisis intervention Nature of crisis Suicidality, homicidally Type of programme The Crisis Intervention Programme	 Patient characteristics CYP assessed in PED from April 2005 to March 2006 (n=784) classified as having at least one risk behaviour/clinical symptom in the moderate/severe range on the childhood acuity of psychiatric illness (93.1%) Age (years) Mean +SD 14.0+2.36 Gender Female (52.8%) Ethnicity ns
Lee and Korczak 2014[86] Canada Aim To explore parental satisfaction with a paediatric crisis clinic Nature of crisis Suicidality, aggressive behaviour Type of programme Urgent referral model	Participants Parents of CYP (n=124, rr 71%) Recruitment The parents of CYP referred for CAP consultation and seen at the paediatric crisis clinic from May 2007-to April 2008 Patient characteristics Age (years) Mean±SD 12.2 ± 3.2. Gender Female (37%). Ethnicity Ns
Gillig 2004[61] USA Aim To report on 48 adolescents who were admitted consecutively for emergency hospitalisation evaluation Nature of crisis Suicidality, homicidally, self-harm Type of programme/intervention Adolescent crisis service	Participants Adolescents (n=48) aged 12 to 18 years Recruitment Consecutive admissions to an urgent care centre for emergency hospitalisation evaluation. Evaluations were requested by members of the community (police, urgent care physicians, nurses, teachers, or family) Age (years) Mode 16.5 Gender Female (54%)
Muskens et al. 2019[98] Netherlands Aim To investigate treatment outcome of IHT, combined with HIC, by measuring the clinical outcome of adolescents with severe psychiatric crisis Nature of crisis Severe psychiatric crisis (including severe depression, food refusal, disabling obsessive- compulsive disorder, psychosis, suicidal Type of programme Intensive home treatment with and without admission to high and intensive care unit	Participants Children and adolescents aged 11-18 years Recruitment Those admitted with severe psychiatric symptoms in need of acute and intensive treatment Age (years) Mean±SD 14.8±0.3 Gender Female (52%) Ethnicity Ns

Key: CAP: child and adolescent psychiatrists; CIP: Crisis Intervention Programme; CYP: children and young people; ED: emergency department; fu: follow up; HIC: high and intensive care; HoNOSCA: Health of the Nation Outcome Scales for Children and Adolescents; IHT: intensive home treatment; MH: mental health; ns: not specified; PEACE: The prevention of escalating adolescent crisis events; PED: psychiatric emergency department; rr: response rate; RTC: residential treatment centre; SD: standard deviation

Appendix 10: Characteristics of included qualitative studies

Author, Year **Country** **Aim** **Nature of crisis**	**Participant characteristics** **Recruitment**	**Design** **Methodology** **Data collection methods** **Data analysis**
Study 1 Idenfors et al. 2015 Sweden[100] Aim: To explore YP's views of professional care before first contact for DSH, and factors that influenced the establishing of contact Nature of crisis DSH (self-poisoning, cutting, attempted jump, hitting)	Participants YP aged 16 to 24 years presenting with DSH (n=10) Recruitment From the ED, psychiatric emergency services, the child and adolescent psychiatry clinic, or a psychiatric ward Age (years) Mean 20 / Range 17-24 Gender Female (60%) Ethnicity ns	Design Qualitative descriptive Methodology ns Data collection methods Interviews Data analysis Qualitative content analysis
Study 2 Bolger et al. 2004[97] Ireland Aim To review the clinical presentation, and A&E department clinical response to 14-20-year olds in suicidal crisis in inner city Dublin & to carry out a six month follow up of these YP Nature of crisis Suicidal behaviour or ideation	Participant characteristics YP aged 14-20 years (n=31, rr35%) Recruitment Those who had attended the A&E from June 2001 to May 2002 with suicidal behaviour or ideation Age (years) 14-16 (32%) / 17-20 (68%) Gender Female (29%) Ethnicity ns	Design Qualitative descriptive as pa wider mixed methods study Methodology ns Data collection methods Interviews 6 months after A attendance Data analysis Ns
Study 3 Haxell 2015[99] New Zealand Aim To report on the experiences of texting a 24-hour crisis helpline for YP Nature of crisis ns	Participant characteristics Youthline NS counsellors (n=22) 2 YP users of the service (n=2) Recruitment Youthline NS crisis text service. Those who had either used or provided the service participated in semi-structured interviews regarding their experiences in making use of the texting service No further participant details reported	Design Qualitative descriptive as pa wider mixed methods study Methodology ns Data collection methods Interviews Text message conversation Data analysis Analysis of Youthline NS te message conversations wit
Study 4 Garcia et al. 2007[92] UK This report looks at the work of eight voluntary organisations working with YP with mental health and emotional problems, to find out how these organisations work to	Participant characteristics *In-depth consultation* YP aged 16-25 years (n=200) *Interviews or focus groups* YP aged 16-25 years (n=32) Staff members from project sites (n=31) Recruitment	Design Qualitative descriptive Methodology ns Data collection In depth consultation Interviews or focus groups

ensure their services deliver what YP want, particularly as identified on the 'wish list' Nature of crisis Severe distress, including those self-harming and/or with an intention to commit suicide or who had previously made a suicide attempt	Staff from eight different voluntary organisations selected YP who were currently using the service, or who had done in the past, with mental health and emotional problems. No further participant details reported	Data analysis Ns
Study 5 Northern Ireland Commissioner for Children and Young People 2018[93] UK This report looks at the adequacy of mental health services and support for children and young people using a rights based perspective Nature of crisis ns	Participant characteristics YP aged 14-25 with learning difficulties (n=15) or drug/alcohol issues (n=17) Recruitment Engagement with young people was carried out in partnership with three organisations known to work with the groups of young people that met the criteria for inclusion Age (years) Learning disability: mean 21 (range 17-25) Drug & alcohol: mean 19 (range 14- 25) Gender Learning disability: Female (46%) Drug and alcohol: Female (41%)	Design Qualitative descriptive as pa wider study Methodology ns Data collection Interviews Data analysis Thematic analysis
Study 6 Walter et al. 2006[74] USA Aim In order to gain a rich understanding of the circumstances surrounding the admission of children to hospitals, qualitative interviews elicited parents' experiences of the crisis and community-based services preceding their child's admission Nature of crisis Violent behaviour directed at self or others; threats to harm self or others; running away	Participant characteristics Families of children aged 6 to 12 years (n=12) Setting / Recruitment Participants were recruited from a convenience sample of families with children age 12 years old and under who were admitted to or residing at state mental hospitals in Kansas from Nov 2004 to Jan 2005 Age (years) 6 to 12 Gender Female (34%) Ethnicity Caucasian (92%)	Design Qualitative descriptive as pa wider case study evaluation Methodology ns Data collection methods Interviews with family memb (n=13) Data analysis Coding of transcripts with th development of themes
Study 7 Nirui and Chenworth 1999[95] Australia Aim To explore the kind of experiences that suicidees had when seeking support from health care services in the period leading up to their death, as perceived by close family and friends. To find out what type of support was considered helpful to those at risk of suicide,	Participant characteristics People bereaved by suicide (family and close friends of YP) (n=15) Recruitment Advertisements Purposive and snowball sampling Participants mainly recruited from support groups for people affected by suicide. Age (years) Mean 25 years Gender	Design Qualitative descriptive (inter Methodology ns Data collection methods Interviews Data analysis Inductive analysis Constant comparison of coc coding clusters

from the point of view of family and close friends Nature of crisis Suicide	Female (80%) Ethnicity ns	
Study 8 Narendoff et al. 2017[68] USA Aim To explore pathways to crisis service use for uninsured young adults who accessed emergency psychiatric treatment Nature of crisis Suicidal ideation or attempt, anxiety, depression, anger or aggression, psychotic symptoms	Participant characteristics YP aged 18 –25 years who had a current diagnosis of bipolar disorder, a recurrent major depressive disorder, or a schizophrenia spectrum disorder (n=55) Recruitment YP who were admitted to on an inpatient short-term stabilisation unit following a visit to a crisis emergency centre were from July 2013 to March 2014. Enrolled until saturation reached Age (years) mean±SD 21.5±2.3 Gender Female (46%) Ethnicity African American (27%) / White (27%) Hispanic (20%) / Multiracial (20%) Asian/American Indian (5%)	Design Qualitative descriptive Methodology ns Data collection methods Interviews Data analysis Analytic process based on t used in grounded theory
Study 9 Liegghio and Jaswal 2015[88] Canada Aim To explore police encounters in child and youth MH Nature of crisis Harming self or others; accused of committing a criminal act; needing physical interventions such as restraint	Participant characteristics Caregivers (n=7) and siblings (n=7) of CYP aged 13-21 years Recruitment Recruitment occurred through a community-based children's MH service from Jan to Aug 2011. Purposive sampling was used to identify a non-random selection of caregivers with a child between 12 and 22 years old identified as having a MH issue and siblings Characteristics of CYP in crises not provided	Design Qualitative descriptive as pa wider mixed methods study Methodology ns Data collection methods Interviews (n=14) Focus groups (n=2) Data analysis An inductive process consis thematic content analysis a on the principles of grounde
Study 10 Liegghio et al. 2017[89] Canada Aim To present preliminary work in its early stages examining the issue of policing and police encounters in CYP MH Nature of crisis Leaving the home without permission/missing; destroying property; verbal and physical aggression toward family members (parents and siblings); and/ or saying or making suicidal gestures	Participant characteristics CYP (n=1,449) Recruitment All CYP who had experienced police involvement at the time of intake into a community based CYP MH agency Age 2 to 9 (7.7%) / 10 to 13 (24.4%) 14 to 17 (63.8%) / 18 to 24 (5.1%) Gender Females (38%) Ethnicity ns	Design Qualitative descriptive Methodology ns Data collection methods Qualitative memos collected January 2009 to 2011 by th department (n=567) Data analysis Because of time and resour constraints, only one third o complete set of qualitative r was analysed

		Thematic content analysis
Study 11 Royal College of Emergency Medicine 2018 UK Aim To explore what kind of facilities and expertise they had for CYP presenting to ED with MH problems Nature of Crisis All presenting to an ED	Participant characteristics Representatives from EDs in UK (n=93, rr 38%) Recruitment All ED clinical leads, all known ED MH departmental leads who were available at the annual RCEM conference No participant details presented	Design Qualitative descriptive as pa wider study Methodology ns Data collection Open ended questions on c survey Data analysis ns

Key: A&E: accident and emergency department; CYP: children and young people; DSH: deliberate self-harm; MH: mental health; NGO: non-government organisations; ns: not specified; NZ: New Zealand; RCE<: Royal College of Emergency Medicine; YP: young people