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Recognition of risk and prevention in safeguarding of children and young people: a mapping review and component analysis of service development interventions aimed at health and social care professionals

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Abstract

Background: The term ‘safeguarding’ covers the protection of health, wellbeing and human rights. Effective safeguarding enables people (particularly children, young adults and other vulnerable people) to live free from fear of abuse, harm or neglect. The UK Children Act 2004 required key agencies, including health and social care providers, to consider the need to safeguard children and promote their welfare. Within a larger evidence synthesis project, we sought to identify and map service development interventions (excluding provision of training) aimed at improving awareness of safeguarding and identifying at-risk children and young people in health and social care settings.

Methods: We searched fourteen health and social care databases from 2004 (date of Children Act) to October 2019 and updated the review via a citation search in March 2021. Studies of any design were eligible if they described or evaluated an intervention (other than training) aimed at health or social care professionals in the United Kingdom and designed to improve recognition of risk in the context of safeguarding children and young people. Studies with no intervention (e.g. qualitative studies) were included to explain why interventions work or fail to work. Included studies were summarised using narrative synthesis. Risk of bias of included studies and overall strength of evidence were assessed using standard methods. We used a 5-item checklist (“TIDieR-Lite”) to map intervention components.

Results: Thirty-nine publications were included, of which 31 dealt with service developments, six with use of data and two with other initiatives. Promising service development initiatives include liaison nurses, assessment clinics, secondment, joint protocols and a ‘hub and spoke’ model. Initiatives involving use of routine data appeared promising and unlikely to generate significant additional costs. However, the quality of the evidence was generally low, with a shortage of controlled and long-term studies.

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**Conclusions:** Health and social care services wishing to improve awareness of child safeguarding issues may benefit from looking beyond high-quality training provision. Future research should focus on service-relevant outcomes and ensure the active involvement of young people and their families/carers.

**Keywords:** Safeguarding, Mapping review, Component analysis, Inter-professional working, Social care, Child abuse

**Background**

The term ‘safeguarding’ refers to measures designed to protect health, wellbeing and human rights, allowing people (especially children, young people and vulnerable adults) to live without fear of abuse, harm or neglect. The term is primarily used in the UK and Ireland, although the underlying concept is relevant to all health and care systems. The UK Children Act 2004 placed a responsibility on key agencies, including those in health and social care, to consider the need to safeguard children and promote their welfare. It follows that health and social care professionals at all levels need to be aware of safeguarding issues and procedures, although the amount and type of involvement with safeguarding will vary widely between professional groups.

The primary method of promoting safeguarding awareness is through provision of appropriate training, and various risk assessment tools and scales are available to health and social care professionals. However, broader organisational and cultural factors may also help or hinder people in recognising risk of abuse and taking appropriate action. Examples include co-operation between different organisations and professional groups, particularly at the interface of health and social care, and the use of information and data to promote safeguarding.

This paper presents and analyses data from a broader mapping review of research evidence on interventions to promote child safeguarding awareness in health and social care settings [1]. For this review, we aimed to identify organisational interventions and initiatives aimed at health and social care professionals that extended beyond the provision of training. The resulting narrative synthesis should be of value to research commissioners and decision-makers in health, social care and integrated care systems.

**Methods**

Methods are reported in full in the technical report [1]. Briefly, the research was carried out in two stages. We systematically retrieved and coded UK research and policy documents to gain a contemporary picture of safeguarding issues and practice. Similar methods of searching and study selection were used for both stages. We undertook quality assessment of each primary UK study that reported a recognised study design.

We searched fourteen health and social care databases (ASSIA - Applied Social Sciences Index and Abstracts, CINAHL - Cumulative Index to Nursing and Allied Health Literature, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, HMIC - Health Management Information Consortium, IBSS - International Bibliography of the Social Sciences, MEDLINE, PsycINFO, Sociological Abstracts, Social Care Online, Social Policy and Practice, Social Services Abstracts, Social Sciences Citation Index, and Social Work Abstracts from 2004 (date of Children Act) to October 2019. Citation tracking of the included national policy and guidance documents was conducted on Google Scholar. Searches for UK grey literature were conducted within the main database searches given that Social Care Online and Social Policy and Practice index grey literature. We updated the review in March 2021 by performing a citation search of all the originally included studies through Google Scholar.

Search results were uploaded to EPPI-Reviewer 4 (Evidence for Policy and Practice Information and Coordinating Centre, University of London, London, UK) for title and abstract screening. Screening was performed by a team of three reviewers. Individual records were screened by one team member, with a 10% sample being checked by a second reviewer for accuracy and consistency.

To be included in the systematic review, studies had to meet the following inclusion criteria:

**Population** – Children and young adults (aged up to 18) and/or other service users (family members or other carers) in health and social care settings.

**Intervention** – Interventions (other than training and awareness raising) aimed at health and social care professionals looking after children and young adults (aged up to 18) in health and social care settings and aimed at improving recognition of children at risk of physical, sexual or emotional abuse or neglect. Eligible interventions included, but were not limited to, new service models and job roles, and initiatives to improve the use of routinely collected data. Interventions that had training as the exclusive or main component were excluded.

**Outcomes** – Improved knowledge and understanding of (risk factors for) abuse among practitioners. Improved rates of early identification of possible abuse. Qualitative outcomes, including feasibility and acceptability of interventions to professionals and young people. Any reported data on costs, resource use
or cost-effectiveness. Other outcomes of interest included explanatory factors for why interventions are thought to work and findings of relevant cultural/organisational studies.

**Comparator** – no intervention; comparisons with practice as usual were eligible for inclusion.

**Study design** – we included primary literature from the UK (any design either quantitative or qualitative, including local service evaluations that met the eligibility criteria and contained relevant empirical data).

**Other limitations** – For inclusion publications were required to be written in the English language and published since 2004 (the date of the Children Act).

Full papers were reviewed for all references that appeared to meet the inclusion criteria. Screening of full texts followed a similar process to that for title and abstract screening. Queries were resolved by discussion. Systematic and non-systematic reviews were coded for separate analysis.

Data extraction (coding) was completed in EPPI-Reviewer 4. Data from included studies comprised study design, intervention/initiative (where applicable), population/setting, results and key limitations. We extracted details from policy/guidance documents using a separate purpose-designed form. Data extracted were based in part on a safeguarding checklist produced by the National Society for the Prevention of Cruelty to Children (https://learning.nspcc.org.uk/safeguarding-checklist (accessed 4 March 2021)).

We coded all studies that were suitable for quality (risk of bias) assessment, based on use of a recognised design and a corresponding assessment tool. Quality assessments were performed using tools developed by the Joanna Briggs Institute, the CASP tool for qualitative studies and AMSTAR for systematic reviews. Quality assessment was performed by a single reviewer, with a 10% sample checked for accuracy and consistency. Assessment of the overall strength (quality and relevance) of evidence for each research question was incorporated within an accompanying narrative synthesis. The synthesis was descriptive and studies were grouped by intervention type (service development, use of routinely collected data and other) and setting (health care, social care or both).

For studies reporting sufficient details, we used the 5-item TIDieR-Lite checklist (By Whom, What, Where, To What Intensity, How Often) to map intervention components. This modification of the TIDieR framework had been used by the authors in a previous review [2].

**Patient and public involvement**
The Sheffield Evidence Synthesis Centre public advisory group was involved throughout the project. In December 2019, the group discussed:

- which groups of health/social care professionals need to be aware of safeguarding children/young people?
- what might be the barriers to awareness and appropriate action?

Group members identified diverse health (particularly allied health) and care professionals in need of safeguarding awareness beyond those covered by studies included in this review. The Group found it challenging to identify barriers, raising the possibility that this question might be more usefully targeted for consultation with professionals.

**Results**

**Results of literature search**
The PRISMA flow diagram for the review is presented in Fig. 1.

**Study characteristics and risk of bias**
Characteristics of the included studies are summarised in Tables 1, 2, 3 and 4. The majority of studies included in the current analysis used a cross-sectional design, while others were audits or surveys that were not designed as formal research studies. Only one study (two publications) [26, 27] met our criteria for quality assessment. The study lacked a control group and responses to most assessment questions were ‘no’ or unclear, suggesting a high risk of bias (see Appendix 4 of the full report [1]).

**Service development**
The 31 included papers in this group were divided almost equally between health settings (11 papers), social care settings (10) and services integrated across both systems (10). Table 1 summarises papers dealing primarily with the NHS. Two included papers provide overviews of safeguarding in the NHS [7] and of therapeutic services for children who have experienced sexual abuse [3]. Both studies identified areas for improvement in awareness and safeguarding practice. Similarly, interviews with child protection nurses identified pressures in primary care that could reduce the ability of the health system to respond to child protection needs [4]. These studies were published in 2009 to 2012 so may not fully reflect the current situation. Tompsett et al. noted the existence of conflicts around involvement of GPs in child protection and safeguarding, some GPs seeing their role as primarily referral to social services while other stakeholders anticipated a higher degree of involvement [39].

Other papers report specific service development initiatives within primary care or hospital settings. Studies show that specialist health visitors [6] and dentists performing a comprehensive oral assessment [12] have the
potential to contribute to improved awareness and assessment of child protection needs. In the hospital setting, a nurse child protection co-ordinator improved the referral process [5] and an outpatient clinic was established to meet the needs of children with suspected female genital mutilation (FGM) [8, 9]. Finally, Kaye et al. developed a process for increasing awareness of risks associated with parental mental illness and ensuring that children of those presenting with mental illness are assessed for risk and safeguarded as necessary [11].

Ten papers (Table 2) focused on initiatives classified as social care (mainly services provided by local authorities or the voluntary sector, rather than the NHS). These papers described and/or evaluated methods [13–15], service models [17, 22] and initiatives aimed at safeguarding specific groups such as trafficked children or those in local authority care [16, 18–21]. The papers mainly reported cross-sectional evaluations based on qualitative interviews and/or document reviews. Some initiatives appeared promising [14, 17, 22] but problems were also identified, particularly difficulties across agencies with different priorities and world views when working together to improve safeguarding [16, 20].

The ten papers that spanned health and social care (Table 3) reflected similar themes to those from social care. Promising initiatives to promote awareness included local authority partnership child sexual exploitation services (though other related services worked less well) [30]; joint protocols between adult mental health and children’s social services [32]; and a paediatric dentistry liaison service [31] based in a hospital but working between community and social services. In contrast to these positive local examples, studies with a national focus often identified deficiencies in the availability of services and/or training [24, 29] or variations in the delivery of a specific

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**Fig. 1** PRISMA flow diagram
intervention [23]. In one study, integrated working between health and social services was hampered by a lack of compatible record systems [28].

As before, most evaluations in this group were cross-sectional and based on interviews or survey responses rather than numerical data. One exception used long-term data from 1989 onwards to analyse trends in assessment and referral [26]. Only one group of authors included a comparison group, within a study that included routine data on a small number of patients [31].

**Use of data**

Six included studies (Table 4) documented initiatives involving use of routine data to improve awareness of safeguarding at the system level in health and/or social care [33, 35–37]. Studies in primary care settings (a sexual health clinic [35] and several general practices [36]) suggest that it is possible to improve data collection in clinical practice to improve identification of possible safeguarding issues. A community dental service developed and evaluated a pathway to follow up missed appointments and share information with other professionals if necessary [34]. The pathway supported early and consistent sharing of information and improved dental team confidence. The two studies conducted in hospitals revealed variation in the handling of missed appointments [33] and in procedures for referring young children with fractures for paediatric assessment [37]. Although a limited sample, these studies suggest that reduction in variation between hospitals may represent one way of improving use of data that are collected routinely and thus improving outcomes for children experiencing or at risk of abuse.

The most recent study investigated sharing of data between health visitors and emergency department (ED) staff in relation to children under 5 years old attending with burns [38]. This prospective multicentre study found that 59% of children with burns lived in families with risk factors for maltreatment. Many risk factors noted on health visitors’ records were not recorded by ED staff despite being part of a standard form. The study authors concluded that sharing of records between community (health visitor) and acute (ED) services would improve awareness and assessment of safeguarding risks.

**Other interventions**

Only two studies reported other initiatives [40, 41]. One qualitative study explored reporting of possible abuse by primary healthcare professionals [40]. The other study looked at how cases of child neglect are managed over time and concluded that a new approach is needed, involving collection of evidence that could be used in care proceedings if necessary [41].

**Component analysis**

Ten included studies were classified as suitable for component analysis using the TiDIER-Lite checklist:

### Table 1: Service development initiatives mainly in health settings

| Study                  | Setting                        | Professionals involved | Type of service                                           | Type of evaluation | Findings related to awareness                                                                 |
|------------------------|--------------------------------|------------------------|----------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------|
| Allnock 2012           | Hospital and community         | Multiple groups        | Therapeutic services for children who have experienced sexual abuse | Cross-sectional   | Significant shortfall in services relative to demand. Identifies need for relevant professionals to be trained to identify vulnerable children |
| Appleton 2012          | Community                      | Child protection nurses | Primary care child protection services                   | Cross-sectional   | Challenges include child protection moving off primary care agenda, high threshold for referral to social services |
| Bajaj 2006             | Hospital                       | Specialist nurse       | Liaison and discharge coordinator role                   | Before/after      | Recording and analysis of outcomes can improve understanding of important factors affecting outcomes |
| Browne 2013            | Community                      | Health visitors        | Family nurse partnership                                 | Cross-sectional   | Service can be made most efficient by focusing on families with known risk factors            |
| Care Quality Commission | Hospital                       | Multiple groups        | Services provided by NHS Trusts                         | Cross-sectional   | Trusts should review safeguarding arrangements and commissioning organisations need to ensure effective safeguarding in general practices |
| Hodes 2016, 2017       | Hospital outpatient clinic      | Multi-disciplinary team | Clinic for children with known or suspected FGM          | Service description and case series | Availability of specialist service in response to awareness and need |
| Creighton 2010         | Hospital ED                    | ED clinicians          | Risk assessment for children of people presenting with mental health problems | Before/after (audits) | Protocol increased awareness of children potentially needing safeguarding |
| Kaye 2011              | Community                      | Dentists               | Oral assessment as part of comprehensive medical assessment | Cross-sectional   | Oral assessment by a dentist can improve awareness of child protection needs |

As before, most evaluations in this group were cross-sectional and based on interviews or survey responses rather than numerical data. One exception used long-term data from 1989 onwards to analyse trends in assessment and referral [26]. Only one group of authors included a comparison group, within a study that included routine data on a small number of patients [31].
comprising seven studies (eight papers) on service development and three studies on use of data.

Service development
The eight service development interventions suitable for component analysis (Appendix 1, Supplementary Table 1) comprised new roles [5, 22, 28, 31], a new service for children with actual or suspected FGM [9, 10]; and two initiatives aimed at safeguarding specific groups (migrant/trafficked children [19] and children attending the ED with fractures [11]). The new roles all involved liaison between health and social care and are staffed by nurses/health visitors. The TIDieR-Lite framework makes it possible to compare similar roles. For example, a liaison role based in an acute hospital [5] requires higher levels of staffing than a similar post based in a dental hospital [22]. All the interventions in this group are relatively high intensity, reflecting the complex needs of the groups being served, and the frequency of intervention is flexible depending on need. For example, Bajaj et al. reported that monthly meetings are held to discuss child protection concerns but a co-ordinator is available for advice on a daily basis [5].

These findings, though based on a small number of studies, suggest that different services may have identified similar needs for service models that help different
agencies to work together in safeguarding by promoting joint working and information sharing.

Use of data
Component analysis was possible for five studies of initiatives involving better use of data (Appendix 1, Supplementary Table 2). All the initiatives involved data collected in clinical settings and hence required processes to be as simple as possible without sacrificing rigour. Three of the studies reported on development and piloting of the data collection instrument [34–36], which would be important when introducing a new procedure into routine clinical practice.

Evidence of effectiveness, feasibility and acceptability
The nature of the included studies made it difficult to establish evidence of the interventions for raising awareness, let alone longer-term effects on actions to prevent abuse. Interventions were identified as ‘promising’ based mainly on interviews with or surveys of professionals who delivered and/or received them. Interventions supported by relatively stronger evidence from before/after or time series studies were a liaison and discharge co-ordinator role [5]; an ED risk assessment protocol [11]; child protection conferences [13]; and improved data coding in general practice [36]. A case series study of a paediatric liaison nurse service had a comparison group but the main finding concerned its effectiveness in promoting interdisciplinary working [31].

Evidence on feasibility largely identified barriers to the implementation of new interventions in safeguarding. Barriers mainly involved existing pressure on services [4] and difficulties in integrated working between different

| Study | Setting | Professionals involved | Type of service | Type of evaluation | Findings related to awareness |
|-------|---------|-----------------------|----------------|-------------------|-----------------------------|
| Bunn 2013 [23] | Health and social care services in England | Multiple groups Multidisciplinary teams | Signs of Safety model for risk assessment and safety planning | Cross-sectional (survey and interviews) | Local authorities using the model in different ways, need for long-term evaluation of outcomes |
| Care Quality Commission 2016 [24] | Health and social care services in England | Multiple groups | Services for ‘looked after’ children | Cross-sectional | Examples of good and innovative practice but more needs to be done to identify children at risk of harm |
| Daniel 2010 [25] | Health and social care services in England | Multiple groups Multidisciplinary groups of practitioners from all key professions working with children | Action on Neglect educational resource | Cross-sectional | Availability of support and services in response to early signs of problems will often enable parents to provide required care |
| Devine 2015 [26, 27] | Health and social care services in England | Multiple groups | Analysis of trends in assessment and referral | Time series | Trend to increased referral but not increased detection of abuse; possible lower threshold for referral |
| Fifield 2011 [28] | Health and social care in an area of NW England | Multiple groups Multidisciplinary teams Managers | Pilot integrated model involving safeguarding nurses | Cross-sectional (questionnaires) | Model achieved its aim but efficiency was reduced by lack of an integrated IT system |
| Haynes 2015 [29] | Health and social care services in England | Multiple groups Early years practitioners Health visitors Midwives Schools nurses Teachers; GPs | Services for children at risk of neglect | Cross-sectional (interviews, focus groups and surveys) | Shortfalls in services identified, all practitioners have a role in identifying and providing early help for children suffering neglect |
| Kaur 2018 [30] | Five local authorities in England | Multiple groups Commissioners, commissioning partners, service providers and local practitioner experts | Commissioned services to address child sexual abuse and exploitation (CSA and CSE) | Cross-sectional | Local authority partnerships are running well-developed CSE initiatives; CSA and harmful sexual behaviour should be targeted with the same rigour as CSE. Health bodies have a role in addressing all three types of abuse. |
| Spencer 2019 [31] | Dental hospital and local child protection services | Hospital nurse | Paediatric liaison nurse service | Case series with comparison group | Service promotes integrated multidisciplinary working and helps overcome barriers to dentistry’s involvement in safeguarding children. |
| Webber 2013 [32] | London borough: adult mental health and children’s social care | Multiple groups Social workers (52%); managers; nurses; psychiatrists; clinical psychologists; and occupational therapists | Joint protocols to support multiagency working | Cross-sectional (survey) | Practitioners perceived that the protocols had increased awareness of the risk factors for safeguarding children. |
services and/or professional groups [28, 39]. Cost was rarely identified as a barrier because very few studies reported on cost or resource implications. Acceptability was also rarely highlighted but one study reported that some GPs saw their role in safeguarding as limited to referral to social services and had concerns about more active involvement [39].

**Discussion**

**Main findings**

This review sought to establish what interventions (other than those based on provision of training or information) have been evaluated for promoting awareness and supporting prevention of harm in safeguarding children and young people in UK health and social care settings. A further objective was to identify evidence on outcomes related to effectiveness, feasibility and acceptability of the interventions. We defined awareness broadly to include the facility of the wider system, not just individuals, to process relevant information and respond appropriately. The majority of included studies covered development of services (including those spanning health and social care), while just four studies explored more effective use of routinely collected data to support safeguarding.

We identified several promising service development initiatives, particularly involving new roles or processes to promote effective working between health and social care [22, 31, 32]. At the same time, interagency working was frequently identified as a challenge to the successful implementation of initiatives [16, 20].

Only four studies explored initiatives involving use of routine data to improve awareness of potential safeguarding risks, for example identifying children who regularly miss scheduled health appointments [33]. Improved recording or coding of data [36] and reduction of variation between institutions [37] appear to be promising approaches.

**Strengths and limitations**

A key strength of this review is its focus on interventions and initiatives beyond staff training to raise awareness of safeguarding issues. It includes interventions in health, social care and integrated settings, reflecting the diverse services where safeguarding awareness is required and the diverse professional groups who are involved.

We included studies published between 2004 (date of important legislation affecting safeguarding) and 2020. The included studies demonstrate how the evidence base has evolved over time and allow identification of perennial themes. One limitation of this approach is that older papers are likely to be less relevant to current practice. Our inclusion criteria were also broad, with no restrictions on study design and both quantitative and qualitative studies were included. This allowed us to identify potentially promising interventions that might otherwise
have been overlooked or neglected. On the other hand, the weak design of many of the included studies means that further evaluation would be required before considering the interventions for wider implementation.

The review was conducted rapidly by a small team. Methodological strengths include a thorough search, including citation searching, and use of the TiDIE-R-Lite framework to characterise interventions. Study quality was assessed using standard tools when study design and reporting made this possible. Unfortunately, quality assessment was only possible for one of the included studies (two publications) [26, 27] and the results suggested a high risk of bias.

We used several methods to abbreviate the review process, as appropriate for a rapid mapping review of the relevant literature. Verification of items for inclusion/exclusion was limited to a 10% sample and undertaken retrospectively. Inclusion of items was informally checked by team discussion of uncertainties during later stages of the review. A further methodological short-cut was the use of one checklist (the JBI checklist for quasi-experimental studies) to cover several different study designs. This was not a significant limitation for our study given that so few included studies were suitable for formal quality assessment.

Limitations of the evidence base included lack of long-term follow-up, control groups and data on service-relevant outcomes. This may partly reflect different research cultures between healthcare and social care research. None of the included studies reported on costs or value for money. Limitations in reporting constrained our ability to draw conclusions from the component analysis. There was a particular lack of studies on safeguarding in the transition from adolescence to adulthood.

**Relationship to previous research**

We believe this to be the first synthesis of evidence on service development and related interventions aimed at increasing safeguarding awareness in health and social care. Our work also differs from most previous reviews in that it covers the whole range of health and social care settings. The full technical report [1] includes a review of reviews of international evidence on this topic, containing 27 relevant reviews. Many of the reviews deal with safeguarding awareness in specific roles (e.g. school nurse, health visitor, paramedic or GP) or settings (e.g. five reviews covered safeguarding in EDs). Other than these groups, few topics had a significant volume of review-level evidence.

This mapping review is also distinctive in its focus on evidence from the UK. Most research performed in UK settings is of relatively low quality in terms of risk of bias. Higher-level overviews and policy documents produced by government departments, NHS bodies and other stakeholders were included in the full report but few of them included consideration of service development issues [1]. The limited evidence base around safeguarding girls and young women from female genital mutilation was identified as a research priority by the National Institute for Health and Care Excellence (NICE) and was one of the factors underlying the commissioning of this research [1]. This paper extends the information available to decision-makers through the use of systematic searching, quality assessment and component analysis of interventions and initiatives. Despite its UK focus, it may be of interest to decision-makers in other health and social care systems, particularly in the context of efforts to integrate health and social care.

**Implications for service delivery and research**

The findings of this review imply that health and social care services wishing to improve awareness of child safeguarding issues may benefit from looking beyond the most apparent measure of high-quality training provision. While safeguarding is relevant to all staff, roles vary between those who are a first point of contact for identifying safeguarding concerns (e.g. A&E staff, dentists), those for whom safeguarding forms a major background to their daily work (e.g. school nurses, health visitors) and those who provide specialist support within a safeguarding pathway. Promising service development initiatives include liaison nurses [5, 31], assessment clinics [10], secondment [22], joint protocols [32], and a ‘hub and spoke’ model [17]. We identified few studies on the use of data but this approach appears promising and analysis of routinely collected data is unlikely to involve significant costs. However, service providers need to consider the legal and ethical acceptability of data recording and ensure protection of confidentiality for service users.

In terms of research, there is a clear need to continue and extend mapping and evaluation of service initiatives beyond previously reported work [42]. Longer-term studies with outcomes relevant to service users are needed. Research intended to support effective safeguarding is likely to require active inter-agency collaboration. Research to optimise the use of routine data to identify children at risk of abuse could involve the development of innovative analytical tools. However, improvements in the quality and consistency of data coding would also be valuable. Safeguarding of older adolescents has also been identified as a research need.

Although not investigated in our review, involvement of children/young people and families/carers is likely to be essential for successful design and implementation of safeguarding interventions. Evaluations should also
investigate costs/resource use and barriers to successful implementation at different levels of the health and social care system.

**Supplementary Information**
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**Additional file 1.**

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**Authors’ contributions**
DC contributed to the project co-ordination, study selection, data extraction and quality assessment and wrote the first draft of the paper. AC contributed to the information retrieval, study selection, data extraction and quality assessment. AB contributed to the information retrieval, study selection and report writing. All authors commented on drafts of the paper and approved the final version.

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**Availability of data and materials**
Any additional data not included in this report and its supplementary files are available on request. All queries should be submitted to the corresponding author.

**Declarations**

**Ethics approval and consent to participate**
Not applicable.

**Consent for publication**
Not applicable.

**Competing interests**
The authors declare that they have no competing interests.

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