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Effective service provision and partnerships in service providers for children and young people with special educational needs and disabilities: a mixed methods systematic review protocol

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It is widely recognized that provision of services for children and young people (CYP) with Special Educational Needs and Disabilities (SEND) are enhanced when services such as healthcare, social care, and education collaborate and interact effectively, rather than separately. In the UK, while there have been significant changes to policy and provision which support and improve collaboration, professionals responsible for implementing these changes face multiple challenges, including a lack of specific implementation guidance and a logic model or framework to illustrate how effective multi-agency working could, or should, work. This systematic review aims to identify the 'key ingredients' for effective multi-agency working in services for CYP with SEND; and the most effective forms of partnership working in this setting. In addition, the review will highlight interventions that lead to improved service outcomes; and the conditions in the local area (organisational or geographical) that support and encourage success. This protocol has been written following the Preferred Reporting Items for Systematic Review and Meta-Analyses Protocols guidelines. Searches will be conducted on several health, care, education and applied social science databases from the year 2012 onwards. Citation chaining will be undertaken, as will broader grey literature searching to enrich the findings. Qualitative, quantitative, and mixed methods studies will be included, assessed independently and critically appraised or assessed for risk of bias using appropriate tools based on study design. Data will be extracted using a standardized, pre-piloted data extraction form. A convergent segregated approach to synthesis and integration will be used in which the quantitative and qualitative data will be synthesized independently, and then integrated using a joint display integration matrix. Results will be of interest to educators and health and social care professionals that provide services to those with SEND. These will also be used to develop policy recommendations for how UK healthcare, social care, and education services for CYP with SEND aged 0–25 can most effectively collaborate and improve service outcomes. The review will also identify any gaps in the literature to recommend areas for future research. Funding for this review was provided by the Department for Education.

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KEYWORDS

collaboration, partnership, service improvement, service delivery, special educational needs, joint commissioning, systematic review protocol, mixed methods

1. Introduction

1.1. Service provision for children and young people with special education needs and disabilities

Since the publication of Every Child Matters by the government of the United Kingdom (UK) in 2003 (DfES, 2003), local authorities (LAs) in England have been required to better integrate key services for children and young people (CYP) with Special Educational Needs and Disabilities (SEND). In recent years, the Children's and Families Act (DfE, 2014), and the SEND Code of Practice, 2014 (DoH, 2014), emphasize a child-centred approach and re-organising CYP SEND services around the child's needs (Castro and Palikara, 2016; Palikara et al., 2019). This means significant changes for the policy and provision for CYP with SEND in England and Wales, including changes in the process of identifying and supporting children in need of special support. In England, Statements of Special Educational Needs (which are legal documents stating the child's educational needs and requirements to have these needs met) have been replaced with Education, Health, and Care Plans (EHCPs). The intent for EHCPs was to improve the process of accessing SEN provision through the greater participation of families in decision-making processes, and increased collaboration between education, health and care sectors (Boesley and Crane, 2018).

In Scotland, Scottish education provision is referred to as 'Additional Special Needs' (ASN) (Scottish Government, 2021) and is guided by the recent statutory guidance (Scottish Parliament, 2017), updating the Additional Support for Learning Act, 2004 (Scottish Parliament, 2004). Wales has likewise turned from a school-focused Additional Learning Needs (ALN) support into multi-agency collaboration with CYP and their families at the centre of the process (Jones, 2021). The ALN Code for Wales, 2021, and individual learning plan are akin to the SEND Code of Practice (DoH, 2014), and EHCP in England, respectively (Jones, 2021). Northern Ireland follows the Code of Practice on the Identification and Assessment of Special Educational Needs, using Statements of SEN (IENI, 1996).

The World Health Organization's (WHO) International Classification of Functioning, Disability and Health for Children and Youth (ICF-CY) (2007), reconceptualises disability as "a term encompassing impairments, activity limitations and participation restrictions. Environmental factors define barriers or facilitators to functioning" (WHO, 2007, p.vii). 'Disability' is not a medical diagnosis, but an interaction of bodily impairment in particular environments. It is therefore, not enough to address any medical symptoms or needs, but to change environments a person encounters. In this systematic review we draw upon this broader conceptualisation of disability, and consider wider outcomes, including whether CYP with SEND are offered the opportunity for wider participation, such as in social activities, and identifying future employment opportunities. However, Castro and Palikara (2016), argue that the Child and Families Act,

while appearing "to present a holistic, biopsychosocial, and multidimensional approach to disability, in practice, it still restricts service provision to actions that are based on an essentially medical model of SEND" (Castro and Palikara, 2016, p. 2). Consequently, we will explore both the explicit and implied models and frameworks that are identified in the reviewed literature.

1.2. The importance of partnership working

Multi-agency working is consistently recommended as crucial to integrated holistic assessments, and organisation of services. This approach recognizes each child's needs in all areas of life, from education to health, and social care and seeks to provide integrated services to children and families (Castro and Palikara, 2016). There is evidence that collaboration between services such as education, health and social care, is important for effective service provision, as well as promoting "holistic development across life domains" (Castro-Kemp and Samuels, 2022). This approach is echoed in recent National Institute for Health and Care Excellence (NICE) guidelines which state that for CYP with severe, complex needs, all "education, health and social care practitioners should collaborate to develop a positive working culture and take time to develop positive relationships with each other" (NICE, 2022a, p.147). Improved collaboration and partnership between services may avoid duplication of efforts by different service providers; enhance sharing of information; and result in more coordinated support; and better continuity for each CYP. Therefore, avoiding CYP "slip[ping] through the net," or only receiving services when problems are severe (DfE, 2014, p. 68).

Professionals responsible for implementing changes in the assessment and identification of children in need of special support are faced with implementation challenges such as short timelines, restricted budgets, and difficulties with collaboration between education, health and care partners (Palikara et al., 2019). For example, while the high needs budget for LAs has been increased by £2.5 billion in England since 2020 (now up to £9.1 billion), a significant proportion of LAs are struggling to deliver services within their budgets (DfE, 2022a). Research suggests a correlation between LAs that placed higher value on collaboration or have a stronger collective culture, and those that manage their budgets effectively (DfE, 2022a). Nevertheless, we lack specificity in understanding the key ingredients for effective partnership working and how to implement changes in provision of services for CYP with SEND (Palikara et al., 2019).

Our systematic review aims to identify the key ingredients for effective partnership in services for CYP with SEND; and the most effective forms of this. In addition, we aim to highlight interventions that have led to improved service outcomes in this setting. We will explore the conditions in the local area (whether this is at the level of the organisation, or the local geographical area, such as demographics) that best support successful interventions in the UK and its constituent nations.

1.3. Searches

Initial scoping searches were undertaken in Google Scholar and the register of ongoing systematic reviews, PROSPERO (CRD, 2011) to ensure that there were no identical reviews undertaken for those questions. Searches were conducted in Scopus (Elsevier) and Google Scholar in March 2022, using search terms related to the key concepts of SEND and improved service outcomes. Internet searches were also conducted using the carrot2 clustering engine (Etools.ch, 2022), enabling the team to view results in topic "clusters." Findings from initial scoping searches were presented to members of the RISE Partnership (CDC, 2022), on May 10, 2022, and their feedback used to inform the review scope and questions.

We found that NICE has undertaken a number of systematic reviews in order to develop recent guidelines (NG213) on integrated service delivery and organisation for those with complex needs aged 0-25 years (NICE, 2022b). The population of focus in these reviews was disabled CYP with severe complex needs from the UK, who required health, social care and education support (NICE, 2019). After examination, we concluded that disabled CYP with less severe needs, or CYP that required educational support though were without disabilities, such as those with autism, mental health issues, or those who speak English as a second language, would have been excluded in the NICE reviews. Therefore, the gap in the literature remains. Additionally, as the NICE searches were run between 6/10/2019 (NICE, 2022c) and 17/07/2020 (NICE, 2022d), they were outdated for our needs. For example, these reviews did not include the recent green paper for CYP with SEND (DfE, 2022b).

Furthermore, we found a recent scoping review (Castro-Kemp and Samuels, 2022), which identified eight relevant studies on crosssector collaborative working practices in member countries of the Organisation for Economic Co-operation and Development (OECD, 2021). However, "cross-sector" in this review referred to at least two of health, education, or social care collaborating, and would exclude collaborations between, e.g., two services within the branch of the health sector. This again, was likely to focus on services for those with more complex needs. In addition, none of the studies identified were undertaken in the UK, or its constituent nations. Consequently, specific ways to improve service provision and enhance collaboration in services for CYP with SEND in the UK were lacking.

Our review will fill gaps in understanding about SEND provision for CYP. We will identify the key ingredients that result in improved service outcomes, as well as improved partnerships within, as well as across, the sectors of health, social care, and education sectors – mainstream and special schools. We aim to identify what works for effective multi-agency working (or "partnership") in services for CYP with SEND, whether independent services working together for particular CYP, objective or task, or fully integrated services. We also seek to identify interventions that lead to improved service outcomes; and the conditions in the local area that best supported these.

1.4. Review questions

The research questions were developed iteratively in collaboration between the research team and the Council for Disabled Children (CDC), the Centre for Educational Development, Appraisal and Research (CEDAR), members of the RISE Partnership (CDC, 2022), and with patient and service user input via the RISE Partnership, using the PICOSS framework (Cherry and Dickson, 2017). Two final research questions were co-created which we aim to answer in our review:

- 1. In relation to health, social care, and education services for those aged 0–25 years with SEND, what are:
 - a. effective interventions that lead to improved service outcomes, and
 - b. the conditions for success in the local area?
 - a. What are the key ingredients for effective partnership, or joint commissioning, of health, social care, and education services to those aged 0–25 years with SEND?
 - b. Where these services are provided for those aged 0–25 years with SEND, what are the most effective ways of achieving improved outcomes (as defined by the individual literature, for example, co-location of services, or an explicit, documented process) when working together?

2. Methods and analysis

2.1. Search procedure and inclusion criteria

As each review question addresses different dimensions of a common phenomenon (the effects as well as perceptions), a convergent segregated approach will be used (Stern et al., 2020). By independently synthesising the quantitative and qualitative data, prior to integration, we will achieve a more complete overarching picture of the inherent complexities than either set of findings alone (Stern et al., 2020, p.2109). Our study will be conducted and reported in line with the updated Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement guidelines (Page et al., 2021).

2.2. Information sources

We will identify relevant literature from multiple databases, drawn from a range of disciplines: health, nursing, education, sociology, social care, social policy, and management. The following databases will be searched for documents published from 2012 onwards:

- Scopus (Elsevier) (excluding MEDLINE records)
- MEDLINE All (Ovid)
- Cinahl (Ebsco)
- British Education Index (Ebsco)
- Education Research Complete (Ebsco)
- ERIC (Ebsco)
- ASSIA (ProQuest)
- Sociological Abstracts (ProQuest)
- Social Services Abstracts (ProQuest)
- Sociology Database (ProQuest)
- Social Care Online (Social Care Institute for Excellence)
- King's Fund Library database (via King's Fund website)

Dissertations and Theses Global (Proquest), and Google Scholar will also be searched, as will websites of organisations such as Ofsted,

TABLE 1 Inclusion criteria

Populations	• CYP from birth to 25 years of age, with SEND who require health, social care, or education support in the UK, and/or their families.
	• People who provide, or work in, health care, social care, or educational services for CYP with SEND in the UK, and those commissioning or providing these services.
Intervention/exposure	• Any commissioning, practice, and service delivery models (approaches, configurations of resources and services) delivering health, social care, or education services for CYP with SEND.
Comparator/control	Any other service delivery models.
Outcomes	• Improvement in services as reported in the literature. e.g., (though not limited to):
	• Extent to which the needs of CYP and their family are met (including changing and evolving needs) (e.g., as measured by validated scales or whether EHC plans are met)
	Educational needs (e.g., communication aids, reasonable adjustment)
	• Health needs (e.g., mobility, pain, temperament, emotional and mental wellbeing, sleep)
	• Social care needs (e.g., self-care, safety, toileting)
	• Quality of life
	Waiting time and access to services
	Level of parental engagement, satisfaction, and co-production with family
	Level of engagement and satisfaction from CYP
	Level of exclusion from education
	Level of entering employment for young people
	Cost saving
	• Effective service delivery and coordination.
Setting	• United Kingdom, or any of the four constituent nations - England, Scotland, Wales, and/or Northern Ireland.
Study design	Primary research - qualitative, quantitative, and mixed methods
	Systematic reviews*

*We define "systematic reviews" as those that: report a search strategy and/or inclusion/exclusion criteria; report an appraisal of the quality of the studies they include; and provide a systematic presentation and summaries of the characteristics and findings of the included studies/reviews.

Care Quality Commission, the UK government and the Local Government Association.

Sensitive search strategies will be developed by an information specialist (AB), in collaboration with the project team, utilising both free text keywords and thesaurus (e.g., MeSH) terms (where available), based around the PICOSS concepts (see 3.3). A set of key papers found during the scoping searches will be used to help identify relevant search terms and to test the search strategies. Search filters will be used to identify UK studies, and searches will be limited to documents published from 2012 to ensure relevance to contemporary services. Search strategies will initially be developed in both MEDLINE and Scopus, due to the differing subject coverage, then adapted to other databases as appropriate. The initial Scopus and MEDLINE search strategy can be found as Supplementary Table S1.

Reference list checking, sometimes referred to as citation chaining or citation snowballing (Dundar and Fleeman, 2017; Booth et al., 2022) and forward citation tracking from key papers, including systematic reviews, will be used to identify further relevant literature. The wider RISE Partnership will assist in a 'Call for evidence', asking the community of researchers, practitioners and policy-makers involved with CYP with SEND for suggestions of relevant papers.

2.3. Inclusion criteria – PICOSS

Studies will be included in the review if they include criteria specified in Table 1.

2.3.1. Database searches

The focus of our review is empirical studies, which we define as quantitative, qualitative, and mixed methods studies and systematic reviews that answer the research questions (2.3). No language restrictions will be used, as it seemed likely that few studies in the UK would be in other languages. For exceptions not written in English, we will use Google Translate (Google, 2006) to translate into English and cite the number of such articles in the review (Odukoya et al., 2022). In the included studies, it will be possible for collaboration or partnership to be either an exposure or part of an intervention/service model that is evaluated, or an outcome to be assessed. In cases where there is more than one publication from the same study, this will be recorded as one study and the most appropriate publication(s) will be used, and referenced if necessary, to answer each review question.

2.3.2. Grey literature

Descriptions of what constitutes grey literature can vary wildly depending on academic and practitioners' disciplines. A widely accepted definition is "*information produced on all levels of government, academia, business and industry in electronic and print formats not controlled by commercial publishing*" (University of Exeter, 2022). However, for this review, we add to 'grey literature' any literature that has not undergone peer-review during commercial publishing. Relevant grey literature identified from sources such as government websites, Ofsted, guidelines, and third sector reports, will be included in the review, though reviewed and reported separately from the peer-reviewed literature.

2.4. Exclusion criteria

- 1. Opinion pieces, letters, or any other publications lacking primary data and explicit descriptions of methods will be excluded, though may be used to find related studies.
- 2. Studies undertaken in countries other than the UK will not be considered due to differences in health, social care, and education services to those implemented in the UK.
- 3. Published prior to 2012 was agreed in collaboration with the wider RISE Partnership to ensure relevance to the current UK context.

2.5. Screening and selection of studies

2.5.1. Records retrieved from database searches

All references identified by the database searches will be uploaded into EndNote, and de-duplicated. Remaining results, along with references from other sources (e.g., from the 'call for evidence'), will be transferred into Rayyan software (HBKU Research Complex, 2016) for managing and coordinating screening.

The research team includes experienced systematic reviewers of both intervention-based (quantitative) and qualitative studies in medical sociology, health policy and public health service delivery (NT, AG, YC, JF) and an information specialist (AB). YC has experience in systematic reviews researching SEND.

The titles and abstracts of all references will be independently screened by two reviewers (of NT, JP, AG) for studies that potentially meet the inclusion criteria. When both screeners agree, the study will be included or excluded. Any disagreements will be resolved by a third reviewer (AG, YC).

Each study that is included after the screening of the titles and abstract will undergo full-text reading by the same independent reviewer team. Each study which fails to meet the inclusion criteria will be excluded with reasons provided. If further information or data is required to determine this, or should details provided in the publication be unclear, study authors may be contacted for clarification. Any disagreements will be resolved by a third reviewer (AG, YC).

2.5.2. Grey literature screening

All potentially relevant grey literature identified through searching will be transferred into Rayyan. The titles and abstracts of all references will be independently screened by two reviewers of (NT, JP, AG) for literature that would be of relevance to the review questions, and to the wider understanding of effective service provision for CYP with SEND, such as guidelines, legislation, and government and third sector reports. When both screeners agree, the study will be included or excluded. Any disagreements will be resolved by a third reviewer (AG, YC).

Relevant grey literature will be read, and insights drawn, to contrast, support, or supplement, main findings as appropriate. If research reports and theses are identified, further searches will be undertaken to identify journal articles that report on these studies, and any found will undergo the same title and abstract screening process as those identified through database searches. Where a study is only reported via grey literature, data extraction will not be undertaken, and this will be treated as any other grey literature.

2.6. Risk of bias/critical appraisal of selected studies

Following the full text screening, individual studies will be critically appraised using an appropriate tool for the specific study design – a risk of bias tool for quantitative studies, or a quality critical appraisal for qualitative studies. We decided that specific tools tailored to the individual study design were likely to be more nuanced than those aiming to cover a range of different designs, such as the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018). Critical appraisal and risk of bias assessments will be performed by one reviewer (NT) and the accuracy will be checked by a second reviewer (JP). The results will not inform the inclusion or exclusion of studies but will help to describe the trustworthiness/quality of the data and discussions of bias in the literature.

2.7. Data extraction

A standardized data extraction form developed for the review will be piloted, and then used to extract data from the studies selected for inclusion (see Supplementary Table S2). In cases where there are separate publications, relevant data will be extracted from the most appropriate paper(s) and referenced appropriately in the data extraction forms. The form will include such details as year, authors, setting, study design, use of PPIE (Patient and Public Involvement and Engagement) (University of Warwick, 2019), participant characteristics, and relevant outcome data. For qualitative and mixed methods studies, data will be extracted from any relevant section; not just the Findings. One reviewer will extract the relevant data into this form, and this will then be accuracy checked by another reviewer.

2.8. Synthesis

Studies will be grouped according to study design (Popay et al., 2006), as appropriate, for example, interview study, or randomized controlled trial. The data extracted from each study will be presented in tables, for example data on outcomes and costs of interventions will be reported. A textual description will also be produced for each study to present the same descriptive information for each study (Popay et al., 2006). A narrative synthesis will be conducted for the quantitative and the qualitative data. We will synthesize primary data

from primary studies, and secondary data from systematic reviews. Primary and secondary data will be synthesized together, though qualitative and quantitative data will be analysed separately. If studies are included in a systematic review, then we will exclude the individual studies, so as not to 'double count' these.

For quantitative studies, effect sizes for interventions will be reported and meta-analysed when appropriate. However, early scoping searches undertaken suggest that outcomes identified will be too heterogenous for this (Morte-Nadal and Esteban-Navarro, 2022), as outcomes from these studies were diverse.

To integrate the quantitative and qualitative data a joint display technique will be used. The Pillar Integration Process (PIP) aims to systematically integrate qualitative and quantitative findings during analysis using a joint display format (Grove et al., 2016; Johnson et al., 2019). During the integration process, thematic analysis will be used to create new constructs from concepts which are related. We will gather feedback and insights from the research PPIE group (a group of service users and parents of service users). We will rework and group findings under thematic category headings, for example, this may be the frameworks identified, or antecedent organisational conditions for successful collaborations, ultimately working to bring together the qualitative and quantitative data into a cohesive set of findings (Grove et al., 2016; Johnson et al., 2019).

Using the emergent categories from the data integration stage, we will develop a final narrative synthesis which examines and explains the relative themes whilst simultaneously exploring the relationships and findings both within and between the included studies (Grove et al., 2016; Johnson et al., 2019).

This review will identify specific strategies for improved service outcomes, and integral components for effective multi-agency working invaluable in services that are so vital to these recent changes. These will be used to develop policy recommendations for how UK healthcare, social care, and education services for CYP with SEND aged 0–25 can most effectively collaborate and achieve improved service outcomes. The review will also identify any gaps in the literature to recommend areas for future research.

3. Discussion

This review aims to synthesize findings on the most effective ways to collaborate, and achieve improved service outcomes, as well as interventions to best deliver these. This review has the potential to offer a valuable contribution to the provision of services to CYP with SEND services, by identifying specific strategies that result in improved service outcomes, as well as improved partnerships within, as well as across, the sectors of health, social care, and education that provide invaluable care and support for CYP with SEND. These findings will also be used to develop policy recommendations for how UK healthcare, social care, and education services for CYP with SEND aged 0–25 can most effectively collaborate and achieve improved service outcomes.

3.1. Strengths and limitations

Differences in culture and geopolitical and policy environment can have a large effect on the external validity, or applicability of the findings to different contexts (Porritt et al., 2014). This is poignant for our review which focuses on the UK over the last 10 years. In this context we have seen many national policy changes and variation in how CYP with SEND services are constructed and delivered. However, we aim to synthesize the findings to abstract beyond individual interventions or country-level initiatives. We aim to identify the overarching components or models of service delivery which appeared more likely to lead to improvements across diverse contexts.

We will include only studies from the UK and its constituent nations. Thus, the results of our review may not be transferable to the educational contexts of lower-and-middle-income countries (LMICs), or perhaps even other high-income countries, which is a limitation. While we will not filter for language, which may bias the results identified (Song et al., 2010), we have limited to studies undertaken in the UK. Therefore, there may an indirect filter applied, as our findings will mostly be written in English. However, given the focus of the review was solely on the UK context, this is unavoidable.

A limitation of our proposed systematic review will be the difficulties in locating relevant literature. For example, the definition of SEND is still "broad and still difficult to narrow down" (Hassani and Schwab, 2021, p.15). The term is complex and diverse, ranging from those diagnosed with autism, to CYP with hearing impairment, to those with mental health issues, to those who speak English as a second language. Service delivery and improved service outcomes are 'slippery' concepts and so, despite our best efforts, our searches may not identify relevant publications where these were conceptualised differently and / or reported using different terminology. This challenge will be further compounded if we are correct in suspecting that much relevant literature will be 'grey', and therefore not so easily searched and located as that stored within research databases. However, consulting those with expertise in the area, and a wider consultation with the wider RISE Partnership - a 'call for evidence' was undertaken to find these hard-to-find studies.

A further limitation is that this review will likely not extend to undertake a meta-analysis of quantitative data due to the heterogenous nature of study designs, populations, interventions / exposures and when appropriate, comparators. Despite these limitations, the proposed protocol will adopt a well-established methodology and reporting standards using PRISMA (Page et al., 2021).

We will ensure credibility of our findings through engaging multiple reviewers during article screening, selection, and data extraction processes. Such strategies serve to enhance confidence that the outcomes of our synthesis will not be based on any single reviewer's particular viewpoints or preferences but will be clearly derived from the data. The strength of our review is our collaborative approach with the RISE partnership, in additional to drawing on insights from a project-wide advisory group (consisting of academic experts), as well as a research PPIE Group. Our review questions were co-created with the funders, and findings will be discussed with the wider RISE Partnership prior to final review write up.

4. Conclusion

This review aims to synthesize findings on the most effective ways to improve partnerships within, as well as across, the sectors of health, social care, and education, and to achieve improved service outcomes, as well as interventions and conditions to best deliver these. The

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review has the potential to offer a valuable contribution to the provision of services to CYP with SEND services, by identifying specific strategies that result in improved service outcomes, as well as improved partnerships within, as well as across, the sectors of health, social care, and education that provide invaluable care and support for CYP with SEND. In a time of much legislative change, and a lack of specific detail about implementation, this will identify a number of specific strategies for improvements highly relevant to the current UK context of SEND provision for CYP.

Data availability statement

The original contributions presented in the study are included in the article or Supplementary material. Further inquiries can be directed to the corresponding author.

Ethics statement

Since all the data will be obtained from publications and openly accessible sources, no formal ethical approval will be required. The Research and Improvement for SEND excellence (RISE Partnership) (CDC, 2022) and the funder will receive a final review report, in addition to a presentation on our findings. We will ensure the final report and a plain English summary publicly available on the research team's website (Warwick Evidence) and the RISE Partnership website. In addition, a paper will be submitted to a leading journal in this field. Furthermore, should the findings of the review warrant a change in practice, a one-page summary report will be prepared and sent to lead clinicians and healthcare professionals in the National Health Service.

Author contributions

AG obtained the study funding. NT-M, AB, Y-FC, JP, and AG conceptualised the study, developed the study design and questions, and contributed to the study methods and protocol development. NT-M initiated the manuscript draft. All authors contributed to editing and reviewing the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2023.1124658/ full#supplementary-material

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