

1 How do hospitals address health inequalities experienced by children
2 and young people: A grey literature scoping review protocol

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1 **ABSTRACT**

2 **Introduction:** Health inequalities are unfair, systematic differences in health between
3 people. In the UK, the Health and Social Care Act 2012 recognised health inequalities as a
4 responsibility of the National Health Service (NHS). Health inequalities were foregrounded in
5 the publication of 2019 NHS Long Term Plan and during the SARS-CoV-2/COVID-19
6 pandemic. Hospitals are well-placed to address health inequalities through their role as
7 anchor institutions. Whilst many hospitals have begun to address inequalities, children are
8 often overlooked, or assumed to have the same needs as adult populations. This grey
9 literature scoping review aims to identify, collate and present approaches taken by hospitals
10 to address health inequalities in children and young people.

11 **Methods and analysis:** This scoping review will follow Joanna Briggs Institute guidance. A
12 four-step approach to identifying grey literature will be used. Literature will be examined to
13 identify approaches that aim to address health inequalities. Literature must describe the
14 health inequality they aim to address and be initiated by the hospital. It will exclude literature
15 not available in English and published before 2010. Two reviewers will independently review
16 results of the searches using the inclusion and exclusion criteria. Data will be extracted using
17 a data extraction tool. Study findings will be presented in tabular form detailing the
18 interventions identified.

19 **Dissemination:** The review will synthesise information on worldwide hospital approaches to
20 addressing child health inequalities. The findings will be used to inform guidelines for
21 children's hospitals in the UK and will be disseminated through national and international
22 professional bodies, conferences and research papers.

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24 **Keywords:** *Inequality; scoping review; hospital; children/ young people; grey literature*

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1 ARTICLE SUMMARY

2 Strengths and Limitations of this study:

- 3 • The search strategy focuses solely on grey literature.
- 4 • Grey literature is appropriate for exploring this topic due to the fast-paced, changing nature
- 5 of the field and a dearth of peer-reviewed literature on this specific subject.
- 6 • Literature will be considered from across the globe, if published in English, post-2010.
- 7 • The four-step approach we will use to identify literature has been successfully applied in
- 8 previous grey literature studies.

1 INTRODUCTION

2 Health inequalities are systematic differences in health between people, that are both unfair
3 and avoidable (1). The link between socioeconomic deprivation (a multidimensional concept
4 referring to the disadvantage in access and control of social, economic or material resources
5 and opportunities (2)) and health inequalities is well evidenced (3-6). Whilst intertwined with
6 socioeconomic status, other types of social inequalities also predict health inequalities, for
7 example those based around disability (7), race (8), religious beliefs (9) and sexual
8 orientation (10).

9 A commonly used measure of health inequalities is life expectancy. In the UK, people living
10 in the most deprived areas of England have a life expectancy of 14 years shorter than
11 people living in the least deprived areas (11). For healthy life expectancy – a measure of
12 how much time people spend in good health during their lives – the differences are even
13 more stark, with an 18-year difference (12). These inequalities present worldwide. Children
14 born in sub-Saharan Africa are 14 times more likely to die before the age of five than the rest
15 of the world (13).

16 Health inequalities start before birth, with children and young people born into, and living in,
17 more socioeconomically disadvantaged areas experiencing worse health outcomes than
18 their peers (14). Research in the US observed ethnic disparities in the birthweight of infants.
19 Low birth weight rates were three times higher in Black mothers with low education
20 compared to babies born to white, mothers with College education (15). In the UK, children
21 living in areas of deprivation are more likely to suffer from conditions such as asthma, tooth
22 decay, obesity and diabetes, as well as a higher risk of accidents and accidental death (16).
23 A recent study found that 36% of children treated in intensive care units for asthma were
24 from the most deprived neighbourhoods, compared to 11% from the least deprived
25 neighbourhoods (17).

26 However, inequalities are not just measured in health outcomes; patterns in how people
27 access care are also different across the socioeconomic gradient, with children from the
28 most deprived areas of the UK less likely to be brought for outpatient appointments (18), but
29 more likely to attend the Emergency Department than those from the least deprived areas
30 (19,20).

31 In the UK, the NHS, (a Government-funded free at the point of access, universal medical
32 and health care service) has a legal duty to address health inequalities. The Equality Act
33 2010 (21) defined nine protected characteristics (age, sex, race, disability, sexual
34 orientation, gender reassignment, marriage and civil partnerships, pregnancy and maternity,
35 religion or belief discrimination) but excluded deprivation. However, the Health and Social

1 Care Act 2012 recognised reduction of health inequalities in access to care and outcomes as
2 a responsibility of the NHS (22).

3 In 2019, the NHS Long Term Plan (23) committed to tackling health inequalities, setting
4 requirements for local areas to agree goals to narrow health inequalities. During the SARS-
5 CoV-2/COVID-19 pandemic, health inequalities were forced to the forefront of strategic
6 thinking and greater emphasis was given to the urgent need to address the widening gap in
7 healthcare and its outcomes (24). However, critics have argued that the lack of clarity in the
8 UK, and an absence of a national health inequalities strategy, has led to local healthcare
9 systems, including hospitals, struggling to develop their own approach to addressing health
10 inequalities (25).

11 Rationale

12 As we begin to emerge from a global health crisis, where health inequalities have been
13 foregrounded and exacerbated, it is of vital importance that recovery work looking at
14 inequalities does not forget children. Although less affected by COVID-19 related mortality
15 and morbidity than adults, children living in poverty have been disproportionately affected by
16 the pandemic (26) and will have to live the longest with the long-term impacts on healthcare
17 provision and health outcomes (27). It is therefore imperative that efforts are made to reduce
18 inequalities in health for children at this time.

19 Interventions to address child health inequalities are traditionally based in the community
20 (e.g. English SureStart Children's Centres (28) or led by primary care settings (29) (such as
21 interventions based on proportionate universalism and incentives linked to Quality Outcomes
22 Framework [QOF] scores). However, children's hospitals may be well-placed to address
23 health inequalities through their role as anchor institutions (large public sector organisations
24 whose long-term sustainability is intricately linked with the wellbeing of the populations they
25 serve (30)). As large local employers and providers of care to local, regional and national
26 populations, hospitals have the potential for intervention at multiple levels as employers and
27 care providers.

28 Aim

29 This scoping review aims to identify and collate information on how hospitals that deliver
30 care to children, address health inequalities.

31 METHODS AND ANALYSIS

32 Scoping reviews are a method of systematic evidence synthesis, useful for mapping the
33 breadth of research in a field, but not limited to detailed interventions or phenomena of
34 interest like a traditional systematic review (31).

1 This protocol follows the JBI methodology for conducting scoping reviews (32-33) and will
2 adhere to gold standard reporting guidelines (PRISMA-ScR) (34). Initially a comprehensive
3 review of peer-reviewed and grey literature was planned, however, after testing multiple
4 search strategies it was concluded that very little, if any, published literature would meet our
5 review aims. We therefore moved to a strategy that focuses on comprehensive reviews of
6 grey literature. Grey literature can be defined as sources of literature that have not been
7 formally published. Grey literature scoping reviews are becoming more common (35), and
8 could be more appropriate for complex, multi-stakeholder interventions that lack robust data
9 and predictability (36). Grey literature could also be more specific for topics that are under
10 current review and moving at a fast pace, as is the case with interventions to address health
11 inequalities following the COVID-19 pandemic.

12 A preliminary search of MEDLINE, the Cochrane Database of Systematic Reviews and JBI
13 Evidence Synthesis was conducted and no current or underway systematic reviews or
14 scoping reviews on the topic were identified.

15 [Review questions](#)

- 16 1) What approaches do hospitals take to address health inequalities in children and
17 young people?
- 18 2) What health inequalities do the approaches focus upon?
- 19 3) How is effectiveness measured and demonstrated?

20 [Inclusion and exclusion criteria](#)

21 This proposed scoping review will include items published in all countries, from 2010
22 onwards; this date range was agreed upon to ensure that the review would be manageable,
23 whilst also ensuring that included interventions reflected the shift to an inequalities focus in
24 the early 2010s. Publications in English will be included only, due to limited resources.

25 The intended beneficiaries of approaches will be children and young people up to the age of
26 25 (to include countries where systems continue care into adulthood). Settings will be
27 hospitals where children and young people are cared for. Approaches will be led/ designed/
28 initiated by the hospitals, but could be delivered elsewhere, e.g. in the community, satellite
29 clinics or online. Analysis will consider context, based on available evidence of health
30 inequalities in different countries. Considering good practice in addressing health inequalities
31 will need to be sensitive to specific challenges faced by each country, but analysis will focus
32 on broad principles that may be transferrable beyond the immediate context where the
33 intervention is delivered.

34 This review will consider literature if it addresses our research questions. In other words, we
35 will consider grey literature where the purpose is to address health inequalities experienced

- 1 by the children and young people attending their settings, and the health inequality/
2 inequalities that the approach aims to address are clearly described.
- 3 Approaches may include hospital policies written as statements, intentions or strategies and/
4 or interventions/ initiatives designed to reduce inequalities relating to health.
- 5 Inequalities relating to health may encompass (but are not confined to) ease of access to the
6 setting and its appointments/ care, mortality rates, other health outcomes (such as treatment
7 outcomes), or quality of care.
- 8 A detailed explanation of the inclusion and exclusion criteria is presented in table 1.
- 9

1 **Table 1: Inclusion and exclusion criteria**

Inclusion Criteria	Exclusion Criteria
Approaches that state reducing health inequalities/ disparities/ inequities in their aim/ focus.	Approaches that do not explicitly state that reducing health inequalities/ disparities/ inequities is their aim/ focus.
Approaches that have been designed/ commissioned/ initiated/ led by the hospital setting.	Approaches that the hospital are involved in but have not been designed/ commissioned/ initiated/ led by the hospital e.g. reports solely describing membership of partnerships addressing health inequalities will not be included unless initiated by the hospital themselves.
Approaches that clearly describe what inequality it aims to address and how this inequality impacts health.	Approaches that do not describe the health inequality it aims to address, e.g. interventions to reduce poverty (without an explanation of how this impacts health inequalities) will not be included.
Literature published post-2010.	Literature published pre-2010.
Approaches that are aimed at reducing health inequalities for children and young people aged 0-25.	Approaches that are aimed at antenatal/ prenatal services and young people over the age of 25. Whole hospital approaches (without a specific focus on children).
Literature aiming to reduce/address health inequalities.	Literature that does not aim to reduce/ address health inequalities, e.g. studies that identify inequalities but do not take approaches to address them will not be included.

2

3 [Search strategy](#)

4 Due to the limited returns from published databases our search strategy focuses on detailed
5 searches of grey literature sources. Grey literature will be explored extensively for suitable
6 strategies, policies and documents pertaining to approaches to address health inequalities,
7 many of which will originate from healthcare organisations.

1 Grey literature, reporting scientific quantitative and qualitative study designs will also be
2 reviewed, regardless of whether the studies they describe are published (the original
3 published study will not be sourced).

4 To identify relevant documents in the grey literature, we will take a 4-step process adapted
5 from previous grey literature review studies (37); using key-words (appendix 1).

6 1) Grey literature databases, including The Healthcare Management Information
7 Consortium (HMIC) Database (containing the UK Department of Health Library and
8 King's Fund Library), policy database Overton (international coverage of 182
9 databases), OpenGrey (European database of grey literature pre-2021), Trip Medical
10 Database (global database of medical information).

11 2) Google search engines using the anonymous function in web browsers – a review of
12 the first ten pages of Google search results generated from key words will be
13 screened. Relevancy ranking will be relied upon and results from the first ten pages
14 will be screened.

15 3) Targeted websites – American Public Health Association (APHA), World Health
16 Organization (WHO), Office for Health Improvement and Disparities, NHS England.

17 4) Snowballing – any literature identified from the above methods will be screened for
18 further references.

19 The keywords outlined in appendix 1 will be used to run the initial search in steps 1-3,
20 however, keywords will be adjusted iteratively, depending upon the database and results
21 from the initial search. The full search strategy will be described in the final review paper.

22 Study selection

23 Step one of selection will involve recording screening the titles and extracting all potentially
24 relevant literature retrieved by the four searches; this will be done by one reviewer. For each
25 step of the search a sheet will be created within Excel to record the title, source organisation
26 and URL for the literature identified.

27 Next, the full text of all items identified in step one will be independently reviewed by two
28 reviewers. Any that do not fit with the aims of the scoping review will be discussed and, if
29 necessary, removed. Reasons for excluding full text literature will be documented and
30 reported in the review. The results of the search will be reported in full in the final scoping
31 review and presented in a Preferred Reporting Items for Systematic Reviews and Meta
32 analyses for Scoping Reviews (PRISMA-ScR) flow diagram (34).

1 Data Extraction

2 Data will be extracted from papers included in the scoping review by two independent
3 reviewers using a data extraction tool developed by the reviewers, based on JBI
4 recommendations (Appendix II). The data extracted will include details about the source,
5 target population, approach and outcomes. It will also record details of context to account for
6 the potentially diverse locations of intervention delivery. The draft data extraction tool will be
7 modified and revised as necessary during the process of extracting data from each included
8 paper. Modifications will be detailed in the full scoping review. Any disagreements that arise
9 between the reviewers will be resolved through discussion, or with a third reviewer. Authors
10 of papers will be contacted to request missing or additional data, where required.

11 Data Analysis and Presentation

12 Study findings will be presented in tabular form detailing the interventions identified in the
13 literature and the corresponding outcomes. If appropriate, a diagrammatic chart will be used
14 to describe themes derived from the literature. Possible themes could explore type of
15 inequality e.g. access and/ or outcome; or type of intervention e.g. support provision and/ or
16 educational. Data will be presented alongside a narrative summary of the findings. Expert
17 methodological advice and input will be sought if necessary.

18 Patient and public involvement

19 This study is a review of the literature and there are no study participants. Patients and
20 public are not involved in this research.

21 ETHICS AND DISSEMINATION

22 This study is a synthesis of published literature and does not involve identifiable information,
23 patients or members of staff, therefore no ethical review is required. The results of this
24 scoping review will be submitted for publication in a peer reviewed journal and scientific
25 meetings and conferences. The findings will be used to inform best practice guidelines for
26 addressing health inequalities to be used by Children's Hospitals in the UK.

27 FOOTNOTES

28 Author contributions

29 L Brennan has developed the research question, study methods and lead on drafting and
30 editing the final manuscript. RI and L Brewster aided in developing the research question
31 and study methods, contributed to the drafting and editing and approved the final

1 manuscript. JL, FE, DPS and PP aided in developing the research question, search
2 methodology and approved the final manuscript.

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5 [Competing interests](#)

6 The authors declare no conflict of interest.

7 [Data sharing statement](#)

8 No additional data are available

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