

# BMJ Open Health professional's implicit bias of adult patients with low socioeconomic status (SES) and its effects on clinical decision-making: a scoping review protocol

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## ABSTRACT

**Introduction** Despite efforts to improve population health and reduce health inequalities, higher morbidity and mortality rates for people with lower socioeconomic status (SES) persist. People with lower SES are said to receive worse care and have worse outcomes compared with those with higher SES, in part due to bias and prejudice. Implicit biases adversely affect professional patient relationships and influence healthcare-related decision-making. A better understanding of the relationship between SES and healthcare-related decision-making is therefore essential to address socioeconomic inequalities in health.

**Aim** To scope the reported impact of health professionals bias about SES on clinical decision-making and its effect on the care of adults with lower SES in wider literature.

**Methods** This scoping review will use Joanna Briggs Institute methods and will report its findings in line with Preferred Items for Systematic Reviews and Meta-Analyses for Protocols and Scoping Reviews guidelines. Data analysis, interpretation and reporting will be underpinned by the PAGER (*Patterns, Advances, Gaps, Evidence for Practice and Research* recommendations) framework and input from a patient and public interest representative. A systematic search for literature will be conducted on various, pertinent databases to identify relevant literature such as peer-reviewed articles, editorials, discussion papers and empirical research papers. Additionally, other sources of relevant literature such as policies, guidelines, reports and conference abstracts, identified through key website searches will be considered for inclusion.

**Ethics and dissemination** Ethical approval is not required for this scoping review. The results will be disseminated through an open access peer-reviewed international journal, conference presentations and a plain language summary that will be shared with the public and other relevant stakeholders.

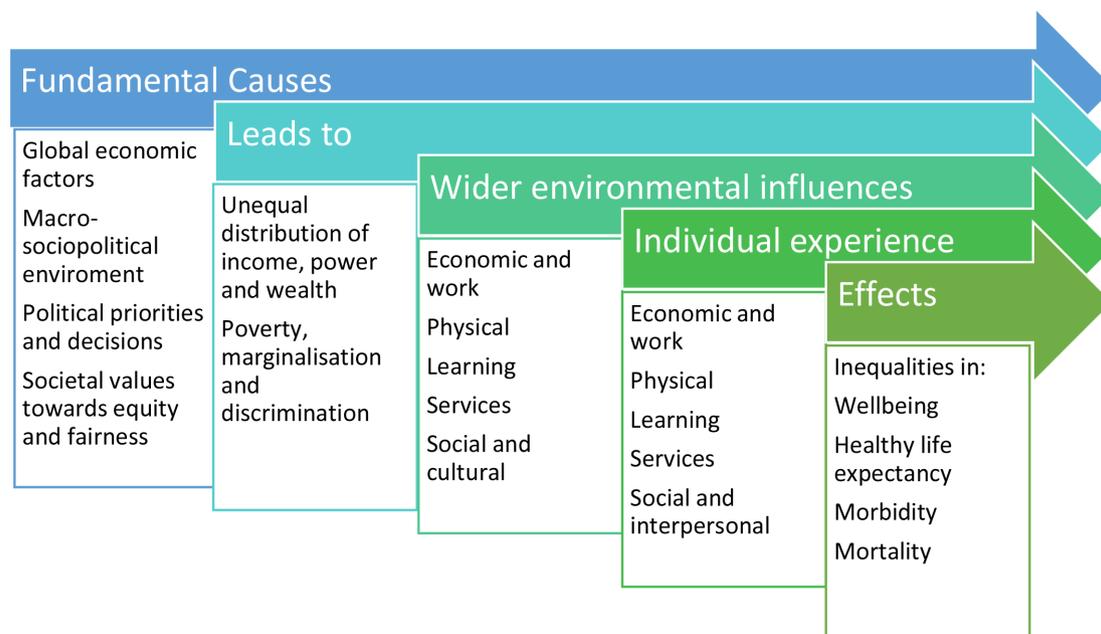
## INTRODUCTION

People with higher socioeconomic status (SES) thrive more than other socioeconomic groups in both life chances and health.<sup>1-3</sup> This means that the lower a person's SES, the

## STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ To the best of our knowledge, this the first scoping review exploring health professional (HP) implicit bias of socioeconomic status and its influence on HP decision-making.
- ⇒ This scoping review will be conducted in line with international standards for best practice to ensure rigour and transparency.
- ⇒ The inclusion of a patient and public representative adds quality, through ensuring the review is relevant, meaningful and informed by the patient's voice.
- ⇒ Only studies published in English are included and therefore this scoping review may exclude relevant evidence published in other languages.
- ⇒ In keeping with the nature of a scoping review, the quality of evidence collected will not be evaluated.

worse their health.<sup>1-3</sup> This disparity in health, means that people who are poorer and less privileged, die much younger than wealthy and more privileged people.<sup>1 3</sup> The inequalities between socioeconomic groups in health and mortality are considerable, and internationally documented.<sup>3</sup> The reasons behind the social gradient in health are complex, and the full extent of the relationship difficult to establish, the association is informed by both individual and neighbourhood factors associated with economic wealth.<sup>4-9</sup> The gradient in health and SES, however, is also influenced by a person's power and prestige, and the social connections these enhance. Healthcare disparities are therefore influenced by how a person's SES is perceived by themselves and by others.<sup>1 3</sup> These perceptions affect people's attitudes and beliefs, and these subsequently emerge as implicit biases, which are held by patients and health professionals (HP) equally.<sup>1 3 10</sup> These implicit biases have been shown to influence a range of HP decision-making, for instance, when making



**Figure 1** Causes of health inequalities. Adapted from Public Health Scotland.<sup>17</sup>

an assessment, deciding on investigations and when treatment planning.<sup>10</sup> This scoping review protocol aims to clarify concepts, consider operational definitions and set the methodological parameters for a scoping review, that maps the relevant literature and research, exploring the impact of implicit bias on HP clinical decision-making.

### Health inequalities

Reducing health inequalities is a key priority for governments in the UK and in other countries across the world.<sup>6-9 11 12</sup> Health inequalities persist, despite efforts to address them and this poses significant challenges to policy-makers, researchers and communities globally.<sup>13</sup> Addressing health inequalities is a challenge for many countries across the world irrespective of how healthcare is funded. In the USA, where the healthcare system is primarily funded through insurance, improvement efforts in terms of policy have focused on improving insurance coverage and expanding access to Medicaid.<sup>14</sup> Health disparities however are not unique to countries that organise healthcare via a private insurance system, health inequalities also exist in countries that have a national or universal healthcare system.<sup>15 16</sup> Consequently, a better understanding of the complex relationship between health and SES is needed to ensure that initiatives designed to reduce health inequalities have the desired effect.<sup>1</sup> The complex impact of low SES on health has been captured and summarised in [figure 1](#) which is based on the work of Public Health Scotland.<sup>17</sup>

### Contemporary perspectives

The ‘Theory of Fundamental Causes’ developed by Phelan *et al*<sup>18</sup> provides an insight into how people’s economic resources may impact on health inequalities. The theory explains how the prestige and power associated with a person’s wealth, benefits their social connections and how

these connections can aid in the protection of health.<sup>3 18</sup> Simply put, people with more resources have greater flexibility to deploy health mechanisms that they use at will, to offer themselves protection.<sup>18</sup> Those without (or with limited) sufficient resources, typically do not have this same flexibility; they have less opportunity to adapt, change, seek help or deploy protections, which often puts people who are at risk, at even greater risk.<sup>3 18 19</sup>

Luftey and Freese<sup>20</sup> investigated ‘the fundamental causes theory’ using an ethnographic study of people attending diabetes care in the USA. They highlight the link between SES, poor health outcomes and higher mortality.<sup>20</sup> They also agree that the association between SES and health goes beyond economic conditions, and any understanding of the relationship therefore needs to be informed by the disparity in people’s ‘life chances’.<sup>18 20-23</sup> Luftey and Freese<sup>20</sup> acknowledge the possibility that implicit biases might be a contributing factor mediating the link between SES and health outcomes. Thus, implicit bias of people with low SES may be a factor that further impacts on the already complex relationship between SES and health.<sup>24</sup> There is evidence to suggest that HPs can be unwittingly biased or discriminatory when caring for, or when making healthcare decisions about people, based on their gender, age, race, ethnicity or SES.<sup>20 25-27</sup>

### Implicit bias

Humans are shaped and constructed by lived experiences.<sup>25 28</sup> Every person is shaped differently by what they perceive to be their own ‘real world,’ and these implicit cognitions are developed over an evolving lifespan.<sup>24 29</sup> Consequently, the sense we make of the world feeds into our own thoughts and actions. Interacting with people whose lived experience more closely reflects our own, can lead to us using a favourable bias. In the same way,

unfavourable bias can be attributed to a person or group of people whose life experience differs from ours.<sup>29</sup> Freese and Lutfey<sup>20</sup> link this to fundamental causes theory and describe how our lived experience is a ‘habitus’, which determines how we perceive and act in our world.<sup>20</sup> Our habitus can lead to unconscious bias, stereotyping or prejudice of others, who we perceive as having different habitus to ourselves.<sup>13 30</sup> These biases are often subconscious or implicit, and manifest in unthinking actions or ill-considered behaviour. These biases can lead to different groups being stigmatised, or preconceived positive or negative notions of ‘their lived experience’ can influence our behaviour and attitudes.<sup>26 27</sup> Implicit bias of SES is not a linear, or top-down process, that is, implicit biases are not held only by those with power or privilege. Implicit biases are held by people in all socioeconomic groups and are manifest in dynamic interactions which affect everyone’s actions and behaviours.<sup>20 31</sup>

### Health and implicit bias SES

HPs have a responsibility to contribute towards reducing health inequalities experienced by the population.<sup>32</sup> HPs however, cannot individually rectify the gap in wealth between rich and poor people in the community. They can, however, better understand the impact of a person’s prestige and power on their health, and explicitly consider equitable care. HPs do therefore have opportunities to change the way in which clinical practice and/or research operate.<sup>13</sup> Thus, being knowledgeable about health inequalities, as well as self-awareness of stereotypes, stigma and discrimination, could aid individual attempts to provide health services more equitably.<sup>13</sup> Tackling health inequalities, when in direct contact with the public, should be about social justice and the provision of care that is based on the principles of dignity and fairness, and these principles are everyone’s responsibility.<sup>32 33</sup>

To date, research exploring implicit bias in healthcare has predominantly focused on exploring gender or ethnicity, and in some cases how they intersect.<sup>27</sup> A specific focus on SES bias is necessary because people’s socioeconomic position pervades all aspects of bias, for example, poor people from an ethnic minority background are more likely to experience prejudice or bias resulting in poor quality care than rich people from an ethnic minority background.<sup>24</sup> There is, however, a lack of research exploring the relationship between SES bias and healthcare, with little consensus on key concepts or the terminology that facilitates the coordination of relevant evidence in this area. Existing research has varied in focus from doctor–patient communication,<sup>34</sup> patient experience of quality,<sup>10</sup> HPs’ perception and attitudes<sup>27 35 36</sup> and decision-making.<sup>24</sup> There is however a critical gap in our understanding of how implicit bias of SES may contribute to health inequalities.

It is therefore important that a synthesis of this evidence is conducted to attempt to provide a more complete picture of available evidence, identify potential gaps and explore the boundaries of implicit bias of

SES literature. One systematic review has been located. Willems *et al*<sup>34</sup> conducted a review of SES and healthcare; however, the review had an exclusive focus on exploring doctor–patient communication. They discovered the patients with lower SES had a less positive dialogue with their doctor, which was due to lower levels of information giving, less interactive discourse and a lower level of doctor advice/instruction. This review concluded that patients with lower SES were disadvantaged because of the doctor’s misperception of their information needs and their desire or ability to participate in their own care planning.<sup>34</sup> Arpey and Gaglioti<sup>10</sup> maintain that physicians are less likely to perceive people with low SES as intelligent, or rational, and that they often perceive them as less likely to heed healthcare related advice, which affects care decisions.<sup>10</sup> Anastas *et al*<sup>35</sup> investigated the impact of SES on HP decision-making about chronic-pain management and identified disparities in decisions made about treatment that were in part driven by HP attitudes about SES.<sup>35</sup>

A better understanding of what impact SES has on healthcare decisions could therefore be a new focus in tackling socioeconomic inequalities in health.<sup>24 27 34</sup> Consequently, it is imperative that a systematic scoping search is undertaken as a first step in mapping the existing, relevant evidence, using a wide-angle lens to pull together what is currently known about this topic area, to assess what evidence is available and clarify key concepts.

To progress, it is important that this scoping review protocol clearly defines the Population, Context and Concept of the searching criteria.

### Operational definitions

#### Healthcare professionals

This scoping review intends to explore implicit bias in the healthcare setting. Decision-making often involves multi-professional team members. In the context of this review, these will include any member of medical, nursing, midwifery or professionals allied to medicine, whose primary occupation is that of practising healthcare. Publications that focus on Dentistry, and HPs caring for children and young people under the age of 18 years, will be excluded from this scoping review as they are not in keeping with its focus.

#### Clinical decision-making

A decision that influences the progress or discharge of healthcare is made by the HP. This includes decisions about the assessment of a presenting health need, decisions in the selection of diagnostic tests, decision about referral to other specialists or specialist services and decisions about surgical procedures or about the prescription of medications. It also includes decisions to stop or withdraw treatment.

#### Socioeconomic status (SES)

SES is complex and challenging to define. Internationally, typically countries measure SES using Multiple Indices



of Deprivation (sometimes called Multidimensions of Deprivation), which include economic factors such as income but also factors such as education, physical environment (sometimes known as neighbourhood quality) and health.<sup>37 38</sup> Papers will be included in this scoping review when the connection between SES of the patient (or one of its discrete measures, eg, income, unemployment and education) and healthcare decisions, made by a HP is explored. Our inclusion of papers with a single discrete measure, such as income, may be contested, as SES is complex and multidimensional.<sup>39 40</sup> There has long been a lively debate among scholars, especially social scientists, replete with differing views about the utility of different measures, including those that are discrete such as income as proxy measure for SES.<sup>39–43</sup> We acknowledge that there are some limitations to the use of discrete measures like income as proxies for SES. However, it is long been established that the judgements and decisions that people make are subject to intellectual shortcuts called heuristics and biases, which often result in inappropriate or incorrect decision-making, and can have deleterious consequences for the individual in question and/or relevant others.<sup>44–46</sup> Heuristics, biases and their sequelae have also been identified in relation to shortcomings in the quality and safety of care, caused by shortcomings in healthcare professionals' clinical decision-making in the praxis of their work.<sup>47–51</sup>

Given what is known about human decision-making, especially with regard to heuristics and biases, we feel that it is prudent to include papers which include proxy measures of SES that have limitations from an empirical perspective, as this is more likely to reflect the way healthcare professionals make decisions, as they encounter people in their practice. In other words, we assert that healthcare professionals are more likely to use discrete measures of SES, rather than more robust empirical measures to inform their perceptions of patients in everyday practice. Our view is augmented by a wide range of evidence from different contexts, which indicates that healthcare professionals often make subconscious assumptions and exhibit implicit bias based on their own perceptions about another person because of their sexual orientation, perceived race, culture, religion or wealth.<sup>52–55</sup>

Therefore, we contend that it is apposite to include papers with discrete measures that may be limited in their utility as proxy measures of SES in this scoping review, because they provide an important insight into factors relating to healthcare implicit SES-related bias(es) and how they affect HPs decision-making about different facets of patient care in the reality of everyday practice. In other words, we feel that excluding papers that use discrete measures would diminish the scope of the review, by limiting and/or failing to map the extent of this problem, in a manner which best reflects the praxis of modern healthcare. Articles specifically assessing interaction with other factors such as race, gender or disability will be excluded, as our sole focus is on SES, rather than

how it interacts with other factors in relation to bias and healthcare professionals' decision-making. A paper that includes analysis of SES as well as interaction with other factors such as race will be included, but only data linked to SES and HP decision-making will be extracted. It is important to include articles that explore intersectionality between SES and other factors as they could depict a particular pattern of research that may help identify gaps and recommendations for future inquiry.<sup>56</sup>

### Aim

To scope the reported impact of HP bias about SES on clinical decision-making and its effect on the care for people with lower SES in the wider literature.

We intend to answer three related research questions to achieve this aim:

- ▶ RQ1: What has been published about implicit SES bias and HP attitudes or behaviours when deciding and providing care?
- ▶ RQ2: How does SES effect the dynamics of the HP and patient relationship?
- ▶ RQ3: What recommendations for practice have been postulated, implemented or evaluated to address HP implicit bias related to SES?

## METHODS AND ANALYSIS

### Design

We will conduct a scoping review using Joanna Briggs Institute (JBI) methodology,<sup>56–58</sup> which provides a structured and rigorous approach to conducting each phase of a scoping review from designing a systematic search for pertinent literature, to data analysis and presentation.<sup>57</sup> The efficacy, utility and methodological rigour of the JBI methodology process is evidenced by its increasing use in scoping reviews on various facets of health and social care.<sup>57 58</sup>

### Methodology

Our methodological approach is apt because scoping reviews, such as those undertaken using JBI methods, help to identify patterns, advances and gaps in what is known about a topic, which in turn highlights what evidence is needed to improve practice.<sup>57 58</sup> A scoping review is particularly helpful when attempting to investigate a phenomenon that has not been widely explored.<sup>58–61</sup> Scoping reviews, such as this proposed study, seek to summarise and disseminate research findings to find critical gaps in the research and make recommendations for future study.<sup>57–62</sup> Our use of JBI methodology<sup>57</sup> and the Preferred Items for Systematic Reviews and Meta-Analyses for Protocols and Scoping Reviews (PRISMA-ScR) guidelines<sup>63–65</sup> will enhance the methodological rigour and reporting transparency of this scoping review.

The PRISMA guidelines are evidence-based guidelines designed to encourage complete, transparent reporting of key aspects of the design, conduct and results/findings in different types of systematic reviews. Like any other form of research, the transparent and complete

reporting of key aspects of the study is a fundamental requirement, because it enables others to ascertain the methodological rigour of a systematic review and the extent to which it is replicable. Scoping reviews are a type of systematic review, so use of the PRISMA-ScR guidelines<sup>63–67</sup> is apt as it will enable us to report key aspects of our work in a complete and transparent manner that will make it easier to evaluate in terms of methodological and replicability. We will also use the PAGER framework<sup>68</sup> (Patterns, Advances, Gaps, Evidence for Practice and Research recommendations) to augment methodological rigour of the charting, analysis, synthesis and reporting in this scoping review. The PAGER framework<sup>68</sup> is designed to provide detailed guidance on charting and synthesising data in a scoping review, as these aspects are not included in the PRISMA-ScR guidelines. In other words, the PAGER framework<sup>68</sup> is designed to be used alongside the PRISMA-ScR guidelines<sup>68</sup> to enhance the methodological rigour, quality of reporting and utility of scoping reviews. Therefore, we will use the PAGER framework<sup>68</sup> as a tool, in a reflective manner, to inform charting and data synthesis, as well as how we report the results/findings of this scoping review.<sup>64 65</sup>

### Search strategy and information sources

The search will be conducted in three stages, as recommended by JBI methodology.<sup>57 69</sup> The first stage will be undertaken on Medline to identify and refine search terminology and consider Medical Subject Headings to ensure a comprehensive strategy that selects all the relevant papers published related to HP implicit bias of SES and its impact on healthcare. The Medline search strategy will be tested, and the first 100 references scanned to ensure relevant papers are retrieved. Key papers will be checked to confirm they were being retrieved by the search. In addition, the indexing of key papers will be examined for any additional relevant terms. Any amendments required will be implemented and the previous steps rerun.

In the second stage of the search strategy, the Medline search strategy will be translated for the other databases (Medline, Embase, ASSIA, Scopus and CINAHL) (see [table 1](#)) to account for differences in controlled vocabulary and database functionality. Hand searching of the

reference lists of included papers will also be conducted as well as the websites of any identified key organisations. The final stage of searching will include back and forward chaining, to identify any additional relevant literature. Our full, detailed search strategies are appended as ‘online supplemental material 1’.

### Screening and selection

All retrieved citations will be exported to the Rayyan systematic review software package and duplicates removed. In the first filter, the titles and abstracts of the included papers will be assessed against the inclusion criteria (see below) and independently filtered by two members of the scoping review team (CJ and RS). The project team will meet at regular intervals, notably, every 500 articles/papers filtered, to assess and consider any disagreements regarding inclusion or exclusion criteria. Any differences with regard to the inclusion or exclusion will be resolved through discussion and after reviewing the full text of the papers in question. Any unresolved differences of opinion will be resolved by the third member of the scoping team (BA). In the second filter, the full text of the selected papers will be assessed against the inclusion and exclusion criteria independently by two reviewers in the scoping team. Papers excluded at the second filter because they do not meet the inclusion criteria will be recorded and reasons for exclusion reported in the scoping review.<sup>56 57</sup>

### Inclusion and exclusion criteria

Only English language papers will be included as there is no funding or facility for translation. We will include studies of all designs, as the focus of this study is on mapping the evidence about the impact of HP bias about SES on clinical decision-making and its effect on the care for people with lower SES. The scope of this systematic search will not be limited by a start date. The search will include all literature available from the inception of the specified databases. This will increase the breadth of the scope and allow a wide lens approach to the search for relevant literature. [Table 2](#) displays the population, concept and context of the problem explored.

The total number of studies included from the search will be identified and a search decision flowchart (PRISMA) included to ensure transparency and auditability of the search and filtering process.<sup>42</sup>

### Data extraction

Data extraction will be completed using the JBI data extraction template for scoping systematic reviews. Please see ‘online supplemental material 2’ to view the data extraction tool.<sup>70</sup> In line with our aim and research questions, we will summarise key patterns in the literature, report any advances, identify critical gaps in knowledge, indicate what evidence is needed to inform practice and aim to make recommendations for future research. The extraction tool will be tested on the first five papers and then adapted, as per JBI guidance, to ensure that the tool

**Table 1** Table of databases to be searched

Date restriction: none	Language restriction: English only
Database name	Dates covered
Medline (OVID) & Epub & Medline in process (OVID)	1947–present
Embase (OVID)	1946–present
ASSIA (ProQuest)	Inception–present
Scopus (Elsevier)	1960–present
CINAHL (EBSCO)	1976–present

**Table 2** Identification of the population, concept and context

Population	Concept	Context
People aged 18+ globally.	1. SES 2. Papers that discuss a contributing factor of SES (such as education or income) as defined in the operational definitions. Please see the search strategy detailed in the online supplemental material attached.	1. Health professional implicit bias or unconscious bias and interactions with healthcare clinical decision-making. 2. A Health Professional's 'attitude' that connects SES and decision-making.
Design	Setting	
1. Studies of all designs that include primary data including case studies. 2. Editorials. 3. Opinion papers.	Any healthcare setting where a person is assessed and/or care planned by a health professional including: <ul style="list-style-type: none"> <li>▶ Doctors</li> <li>▶ Nurses</li> <li>▶ Physiotherapist</li> <li>▶ Occupational therapists</li> <li>▶ Speech and language therapists</li> <li>▶ Prenatal midwifery</li> </ul>	
SES, socioeconomic status.		

collects all the relevant information required to address the review questions.<sup>67 70</sup> In concordance with the JBI scoping systematic review guidance, the quality of the papers will not be assessed, and data will be extracted from all papers that meet the inclusion criteria.<sup>57 67</sup> The decision not to critically appraise the literature retrieved is also consistent with our objective, to map the literature relating to the focus of this scoping review. All data extraction will be undertaken by two members of the scoping team (CJ and RS). Disagreements will be resolved in consultation with the third member of the team (BA).

### Patient, public involvement and engagement

This scoping review protocol has been developed with a member of the public (BA). The design of this scoping review draws on BA's personal experience of living with, and beyond a cancer diagnosis, which entails regular contact with health services and healthcare professionals. Therefore, BA's lived experience and perspective has directly shaped this protocol and will inform the way we conduct the scoping review, to ensure that our results are pertinent and relevant to patients, and the public, as well as healthcare professionals. We will draw on BA's perspective and expertise to ensure that we map and report our results in a methodologically robust way, with due consideration of what matters to patients and the public. The input of a member of the public as a person and public involvement representative, is in line with best practice in systematic reviews, which is integral to the dissemination and use of the resultant findings.<sup>71</sup> Ideally, we would like to have had a larger and more diverse group of people in the research team as person and public involvement representatives, but this was not possible as this study is unfunded.

### ETHICS AND DISSEMINATION

This systematic scoping review will not collect personal, sensitive or confidential information from participants or include the collection of original/primary research data. Literature will be retrieved from publicly available information, research papers and documents. This scoping review, therefore, does not require approval from an institutional ethics committee. This systematic scoping review proposal has been submitted through a Cardiff University School of Healthcare Sciences internal research review process. The ethical governance of the primary research studies will be mapped as part of the data analysis process. Where papers, are retrieved with ethical issues, these will be considered in line with the standards for ethical conduct in research and professional practice. This will be integral to the design of subsequent research or improvement efforts to overcome any reported disparities in patient care. The results of the scoping review will be disseminated widely through publication and presentation at conferences.

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**Contributors** CJ, RS, AC and BA discussed and refined ideas regarding the search strategy. AC developed the search strategy and will conduct the database searches. CJ and RS adapted the JBI data extraction tool. CJ is lead author and guarantor. CJ drafted the first submission of the paper with contribution from RS, AC and BA. CJ, RS, AC revised the paper and table of corrections for all resubmissions.

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**Competing interests** None declared.

**Patient and public involvement** Patients and/or the public were involved in the design, or conduct, or reporting or dissemination plans of this research. Refer to the Methods section for further details.

**Patient consent for publication** Not required.

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