# Considering and reporting methods for investigating health equity issues in systematic reviews and other evidence syntheses

## How to cite this document

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## Background

[Health inequities](https://www.who.int/health-topics/health-equity) are unfair, systematic disparities in health outcomes between population subgroups, arising from the social conditions in which people live, and they are therefore associated with people’s social, economic or personal characteristics. Health inequities are closely related to (and reflect) issues of [equality, diversity and inclusion](https://www.abdn.ac.uk/hsru/what-we-do/research/projects/tools-to-help-reviewers-make-equity-diversity-and-inclusion-assessments-339), as they are most often experienced by marginalised, at-risk and/or socially excluded people, members of [inclusion health group(s)](https://www.england.nhs.uk/about/equality/equality-hub/national-healthcare-inequalities-improvement-programme/what-are-healthcare-inequalities/inclusion-health-groups/), and/or those with [protected characteristics](https://www.gov.uk/discrimination-your-rights). People in equity-related subgroups may be identified in terms of a range of personal characteristics, reflecting multiple dimensions of health inequity, including (but not limited to): age; sex; gender; sexual identity; race, ethnicity and ancestry, socio-economic status; level of education; disability; and/or location (country).

## About this guidance

The primary purpose of this guidance and suite of tools is: to provide a flexible template for promoting routine consideration and reporting of methods and processes for incorporating health equity perspectives and/or investigating health equity issues in protocols and full reviews or maps conducted by the UK National Institute of Health Research (NIHR) Policy Research Programme (PRP) Reviews Facility. It aims to draw together several relevant strands of methods guidance and tools for systematic reviews [1-9].

This guidance is intended for users with advanced expertise in applying systematic review and related evidence synthesis methods. To be able to apply this guidance, users will need to be familiar with details of the wider sources of methods guidance and tools it draws together and signposts [1-9] and their implications for conducting reviews. Therefore, although our aim is to make this guidance as easy as possible to use, it will inevitably remain a moderately difficult task.

More specifically, this guidance and suite of tools draw upon, and are intended to be compatible with, and complementary to using, other more established methods guidance and tools designed, or otherwise applicable for use, to support investigations of health equity in systematic reviews and other forms of evidence synthesis (see Figures 1, 2 and 3 and ‘References’). They are also intended to be applicable for use within and across the range of evidence synthesis projects undertaken by the NIHR PRP Reviews Facility, encompassing reviews and maps, and using a broad spectrum of evidence synthesis strategies and methods (contingent on the aims of the project and the research questions being addressed).

In developing these materials, we have adopted the premise that health equity issues will invariably be relevant, to at least some degree, to all systematic reviews, maps and related forms of evidence synthesis conducted by the NIHR PRP Reviews Facility. This does not imply that all NIHR PRP Reviews Facility projects should incorporate health equity perspectives and/or formal investigations of health equity. However, we would like to adopt a common framework (flexible and adaptable template) for considering - and making decisions about - whether and (if so) how to incorporate perspectives and investigations of this kind, along with a more consistent approach to reporting both the decisions and (when applicable) the methods and processes to be used.

Provisionally, we plan: (1) to iteratively develop and (pilot) test this methods guidance and suite of tools using selected [NIHR PRP Reviews Facility](https://eppi.ioe.ac.uk/cms/Projects/DepartmentofHealthandSocialCare/tabid/73/Default.aspx) (and possibly other [EPPI Centre](https://eppi.ioe.ac.uk/cms/) and/or externally-led) evidence synthesis projects; and (2) to (continue to) collaborate with other interested researchers, groups and networks, to formally develop the methods guidance and tools to make them broadly applicable for wider use by the international systematic reviews and evidence synthesis communities.

## How to use this guidance

### Overview

This guidance is based around a series of six signalling questions that we have formulated to prompt review teams to consider health equity aspects of the intervention(s), population(s) and outcomes under investigation. The assessment is comprised of two stages. First, the review team completes a three-part checklist by responding to each of the signalling questions with respect to each specified equity-related population subgroup. The aim of this stage is to understand which equity issues and related groups of people are important to be considered in the review[[1]](#footnote-1). In the second stage, the review team is directed to a series of decision trees, which are designed to inform decisions about which methods and tools will be used to investigate the identified equity issues in the review. In many projects, the checklist and decision trees will be straightforward to apply because responses to signalling questions in the first stage will invariably be ‘no’ or ‘not applicable’, obviating the need to consider incorporating methods aimed at investigating health equity issues.

### Signalling questions

The figure on page 4 - ‘Overview of signalling questions’ - presents a top-level summary of a series of six sequential signalling questions (1a, 1b, 2a, 2b, 2c and 3). These signalling questions are intended for use by review teams to help guide consideration and reporting of decisions about the use of methods for incorporating health equity perspectives and/or formally investigating health equity issues, when: (i) planning the review or map and developing its *protocol* including a new standard section (level 2 heading) on ‘Equity Issues’; and (ii) conducting/ producing and reporting the *full review* or *map*. When developing the protocol for a map and/or review, users of this guidance should ask each of these six signalling questions in sequence.

Signalling questions 1a and 1b relate to aims and targeting of the intervention(s) under investigation (if applicable). Signalling questions 2a, 2b and 2c relate to issues of between groups differences in prevalence or severity, or access, participation and/or involvement to/in interventions and/or potentially eligible studies[[2]](#footnote-2). Signalling question 3 relates to the potential differential impacts of the intervention(s), or phenomena, under investigation.

### Tables / Checklist

Tables A, B and C are three parts of the same checklist. Each of these tables features the same six signalling questions (1a, 1b, 2a, 2b, 2c and 3) in its rows, along with the available response options for each question. However, each table has a different set of equity-related dimension(s) /participant characteristic(s) in its columns. These checklists are intended for use to help guide consideration of - and record responses to - the six signalling questions across various dimensions of health equity; in conjunction with using each of the decision trees (flow charts) in Figures 1, 2 and 3 (see below for further details). Relevant equity-related dimension(s) / participant characteristic(s) are expected to vary between reviews/ maps. Completed checklists (Tables A, B and C) can be included as an appendix to *protocols* and *full reviews* (or *maps*).

### Figures / Decision Trees / Flowcharts

Figures 1, 2 and 3 show a series of decision trees (flow charts). Figure 1 incorporates signalling questions 1a and 1b; Figure 2 incorporates signalling questions 2a, 2b and 2c; and Figure 3 incorporates signalling question 2 (only).

These decision trees (flow charts) are intended to prompt consideration of various potential *optional* methods or processes that could be planned (*protocol*) and applied (*full review* and/or *map*) to incorporate relevant health equity perspectives and/or to investigate relevant health equity issues, which can be identified in conjunction with using the checklists (Tables A, B and C). The decision trees (flow charts) also show when an option applies to *protocols*, or to *full reviews* (or *maps*)*,* and when an option applies to *reviews only*, or to both *maps and reviews*.

Users (review teams) are intended to work through each of these decision trees (flow charts) and their signalling questions in numerical order. That is, when users have worked through Figure 1, and therefore considered signalling questions 1a and 1b, they should go to Figure 2, and work through it to consider signalling questions 2a, 2b and 2c; and then go to Figure 3, and work through it to consider signalling question 3. In each decision tree (flow chart), the starting point (node) is the signalling question listed in a grey diamond: that is, Q1a in Figure 1; Q2a in Figure 2; and Q3 in Figure 3).

Users of this guidance are not intended to find or summarise complete bodies of supporting evidence for their responses to these signalling questions. For example, if users of this guidance judge that aspects of the delivery of the intervention under investigation are expected to make it harder for women to access the intervention, and to take part in eligible studies, than men, this does not imply that they should aim at the protocol development stage, to identify and/or synthesise multiple studies that have investigated this potential inequity of access. However, this does not preclude including one or two selected citations, identified using non-systematic searches, for evidence and/or theory to support any equity-related claims being made in the ‘Background’ and/or ‘Equity Issues’ section(s) of a protocol and/or full review.

Alongside using this guidance, colleagues in the NIHR PRP Reviews Facility are also encouraged to consult with members of relevant DHSC policy teams, when possible, as some are keen to discuss and address equity issues; and this may provide a useful steer in early discussions, to help inform the scope of any formal investigations of equity issues. Consultation with policy teams, as well as with patient and/or public involvement partners and/or co-producers and other stakeholders, may also be useful to help guide decisions in projects with a major focus on health equity; for example, to help prioritise and select equity-related dimensions or personal characteristics for formal investigation, when multiple candidate dimensions/ characteristics are judged relevant.

## Overview of signalling questions

A diagram of a diagram

Description automatically generated with medium confidence

## Table A

* Age •  Socio-economic status
* Sex •  Level of education
* Gender • Disability
* Sexual identity • Location (country)
* Race, ethnicity and ancestry

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Signalling question*** | ***Response options*** | ***Equity-related dimension(s) / participant characteristic(s)*** | | | | | | | | |
| *Age* | *Sex* | *Gender* | *Sexual identity* | *Race, ethnicity and ancestry* | *Socio-economic status (SES)*[[3]](#footnote-3) | *Level of education*3 | *Disability* | *Location (country)* |
| 1a. Is the intervention under investigation targeted at specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people? (e.g. interventions for  reducing social isolation and loneliness among older adults) [1] | *Yes* |  |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |  |
|  | *N/A* |  | | | | | | | | |
| 1b. Is the intervention under investigation aimed at reducing social gradients across populations or among subgroups of the population? (e.g. interventions to reduce the SES gradient in smoking) [1] | *Yes* |  |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |  |
|  | *N/A* |  | | | | | | | | |
| 2a. Is the health condition, public health issue, or phenomenon, being addressed by the review (and/or map) more likely to be experienced by one or more specific marginalised, socially excluded and/or inclusion health group(s) of people? [4] | *Yes* |  |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |  |  |  |
| 2b. Are aspects of the intervention(s) and/or comparator(s), including how they are provided, expected to make it harder for some specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people to take part in eligible studies? [4] | *Yes* |  |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |  |  |  |
|  | *N/A* |  | | | | | | | | |
| 2c. Are elements of study design, such as eligibility criteria or recruitment and consent processes, expected to make it harder for some specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people to take part in eligible studies? [4] | *Yes* |  |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |  |  |  |
| 3. Are the impacts of, or responses to, the intervention(s), or the experiences of the phenomenon, under investigation, expected to differ among specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people *in important or meaningful ways*? [5] | *Confident that effects differ* |  |  |  |  |  |  |  |  |  |
| *Confident that effects do not differ* |  |  |  |  |  |  |  |  |  |
| *Unsure whether effects differ* |  |  |  |  |  |  |  |  |  |
| *N/A* |  | | | | | | | | |

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## Table B

* Religion • People experiencing homelessness
* Social hierarchy (caste, tribes) • Drug or alcohol dependence
* Place of residence • Language minority groups
* Wealth / economic capital • Vulnerable migrants, or internally displaced people

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Signalling question*** | ***Response options*** | ***Equity-related dimension(s) / participant characteristic(s)*** | | | | | | | |
| *Religion* | *Social hierarchy (caste, tribes)* | *Place of residence* | *Wealth / economic capital* | *People experiencing homelessness* | *Drug or alcohol dependence* | *Language minority groups* | *Vulnerable migrants, or internally displaced people* |
| 1a. Is the intervention under investigation targeted at specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people? (e.g.  interventions for  reducing social isolation and loneliness among older adults) [1] | *Yes* |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |
|  | *N/A* |  | | | | | | | |
| 1b. Is the intervention under investigation aimed at reducing social gradients across populations or among subgroups of the population? (e.g. interventions to reduce the SES gradient in smoking) [1] | *Yes* |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |
|  | *N/A* |  | | | | | | | |
| 2a. Is the health condition, or public health issue, being addressed by the review (and/or map) more likely to be experienced by one or more specific marginalised, socially excluded and/or inclusion health group(s) of people? [4] | *Yes* |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |  |  |
|  | *N/A* |  | | | | | | | |
| 2b. Are aspects of the intervention(s) and/or comparator(s), including how they are provided, expected to make it harder for some specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people to take part in eligible studies? [4] | *Yes* |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |  |  |
|  | *N/A* |  | | | | | | | |
| 2c. Are elements of the design of eligible studies, such as their eligibility criteria, or their recruitment and/or consent processes, expected to make it harder for some specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people to take part in eligible studies? [4] | *Yes* |  |  |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |  |  |
| 3. Are the impacts of, or responses to, the intervention(s), or the experiences of the phenomenon, under investigation, expected to differ among specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people *in important or meaningful ways*? [5] | *Confident that effects differ* |  |  |  |  |  |  |  |  |
| *Confident that effects do not differ* |  |  |  |  |  |  |  |  |
| *Unsure whether effects differ* |  |  |  |  |  |  |  |  |
| *N/A* |  | | | | | | | |

### Table C

* Gypsy, Roma and Traveller communities • People in contact with the justice system
* Slum dwellers / vulnerable tribal group(s) • Victims of modern slavery
* Sex workers • Other marginalised, at-risk, socially excluded and/or inclusion health group(s)

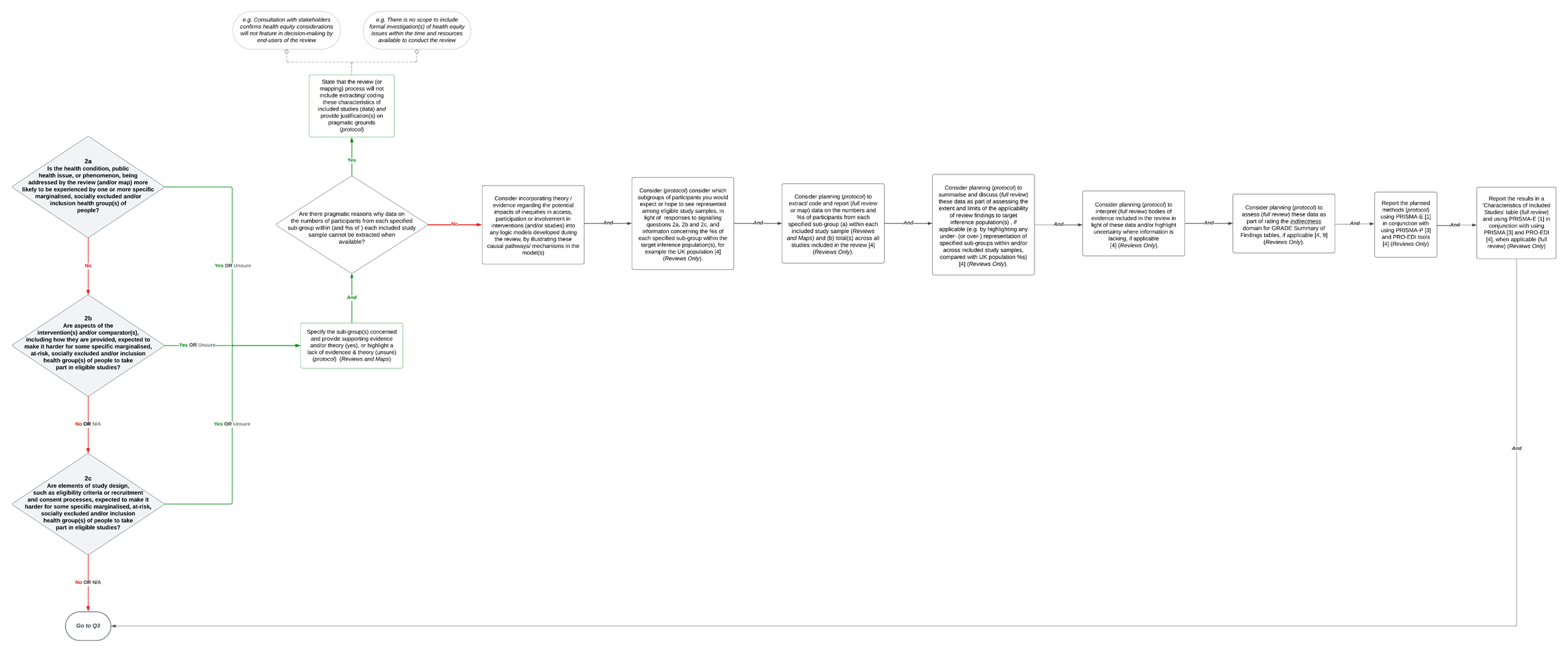
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Signalling question*** | ***Response options*** | ***Equity-related dimension(s) / participant characteristic(s)*** | | | | | |
| *Gypsy, Roma and Traveller communities* | *Slum dwellers / vulnerable tribal group(s)* | *Sex workers* | *People in contact with the justice system* | *Victims of modern slavery* | *Other marginalised, at-risk, socially excluded and/or inclusion health group(s)* |
| 1a. Is the intervention under investigation targeted at specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people? (e.g. interventions for  reducing social isolation and loneliness among older adults) [1] | *Yes* |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |
|  | *N/A* |  | | | | | |
| 1b. Is the intervention under investigation aimed at reducing social gradients across populations or among subgroups of the population? (e.g. interventions to reduce the SES gradient in smoking) [1] | *Yes* |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |
|  | *N/A* |  | | | | | |
| 2a. Is the health condition, or public health issue, being addressed by the review (and/or map) more likely to be experienced by one or more specific marginalised, socially excluded and/or inclusion health group(s) of people? [4] | *Yes* |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |
|  | *N/A* |  | | | | | |
| 2b. Are aspects of the intervention(s) and/or comparator(s), including how they are provided, expected to make it harder for some specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people to take part in eligible studies? [4] | *Yes* |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |
|  | *N/A* |  | | | | | |
| 2c. Are elements of the design of eligible studies, such as their eligibility criteria, or their recruitment and/or consent processes, expected to make it harder for some specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people to take part in eligible studies? [4] | *Yes* |  |  |  |  |  |  |
| *No* |  |  |  |  |  |  |
| *Unsure* |  |  |  |  |  |  |
| 3. Are the impacts of, or responses to, the intervention(s), or the experiences of the phenomenon, under investigation, expected to differ among specific marginalised, at-risk, socially excluded and/or inclusion health group(s) of people *in important or meaningful ways*? [5] | *Confident that effects differ* |  |  |  |  |  |  |
| *Confident that effects do not differ* |  |  |  |  |  |  |
| *Unsure whether effects differ* |  |  |  |  |  |  |
| *N/A* |  | | | | | |

## Figure 1. Decision tree for signalling questions 1a and 1b

A diagram of a process flow

Description automatically generated

## Figure 2. Decision tree for signalling questions 2a, 2b and 2c



## Figure 3. Decision tree for signalling question 3

A diagram of a diagram

Description automatically generated

## References

[1] Welch V, Petticrew M, Petkovic J, Moher D, Waters E, White H, Tugwell P, et al. (2016). Extending the PRISMA Statement to Equity-Focused Systematic Reviews (PRISMA-E 2012): Explanation and Elaboration. *Journal of Clinical Epidemiology* 70: 68–89. https://doi.org/10.1016/j.jclinepi.2015.09.001

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[4] Trial Forge (2023). *PRO EDI: Improving How Equity, Diversity And Inclusion Is Handled In Evidence Synthesis* (Web page). Aberdeen: University of Aberdeen, Health Services Research Unit. Available from: https://www.trialforge.org/trial-diversity/pro-edi/ (Accessed: September 2024).

[5] Guyatt G, Zhao Y, Mayer M, Briel M, Mustafa R, Izcovich A, Hultcrantz M, et al. (2023). GRADE Guidance 36: Updates to GRADE’s Approach to Addressing Inconsistency. *Journal of Clinical Epidemiology* 158: 70–83. https://doi.org/10.1016/j.jclinepi.2023.03.003

[6] Thomas J, O’Mara-Eves A, Kneale D, Shemilt I. (2017). Chapter 9: Synthesis Methods for Combining and Configuring Quantitative Data. In: Gough D, Oliver S, Thomas J (editors). *An Introduction to Systematic Reviews* (2nd Edition), pp. 211-250. London: Sage.

[7] Thomas J, O’Mara-Eves A, Harden A, Newman M. (2017). Chapter 8: Synthesis Methods for Combining and Configuring Textual or Mixed Methods Data. In: Gough D, Oliver S, Thomas J (editors). *An Introduction to Systematic Reviews* (2nd Edition), pp. 181-210. London: Sage.

[8] Thomas J, O’Mara-Eves A, Brunton G. (2014). Using Qualitative Comparative Analysis (QCA) in Systematic Reviews of Complex Interventions: A Worked Example. *Systematic Reviews* 3(1): 67. https://doi.org/10.1186/2046-4053-3-67

[9] Guyatt GH, Oxman AD, Kunz R, Woodcock J, Brozek J, Helfand M, Alonso-Coello P, et al. (2011). GRADE Guidelines: 8. Rating the Quality of Evidence—Indirectness. *Journal of Clinical Epidemiology* 64 (12): 1303–1310. https://doi.org/10.1016/j.jclinepi.2011.04.014

1. Many people may have a combination of characteristics that interact in complex ways to lead to worse (or better) health outcomes than if that individual had just one of the characteristics, known as ‘intersectionality’ [4]. [↑](#footnote-ref-1)
2. There may be differences between those who are recruited into eligible studies and those who are not; as well as differences between those who uptake/partake of an intervention (when implemented) and those who do not. [↑](#footnote-ref-2)
3. See *References* [4] ‘PRO EDI characteristics of included participants table’ for an elaboration of how this tool conceptualises the relationship between ‘SES’ and ‘level of education’ (the same consideration applies to ‘income’ and ‘employment status’). [↑](#footnote-ref-3)