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Health equity in systematic reviews

Trusted evidence.
Informed decisions.
Better health.

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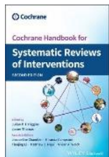
Session outline

- **Introduction to health equity**
- Equity in all reviews
- Equity-focused reviews
- What to include in your protocol



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What is health equity?

- Health equity is the absence of avoidable and unfair differences in health outcomes

- Whitehead, 1991

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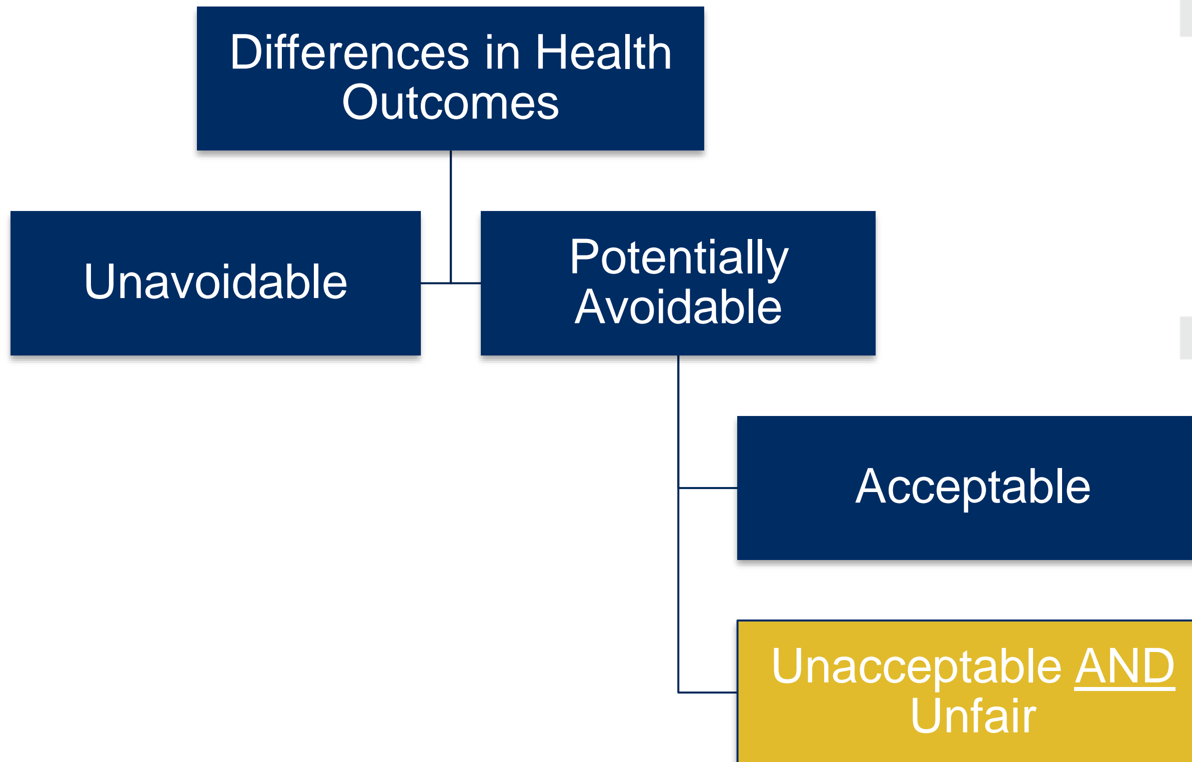
Health inequity



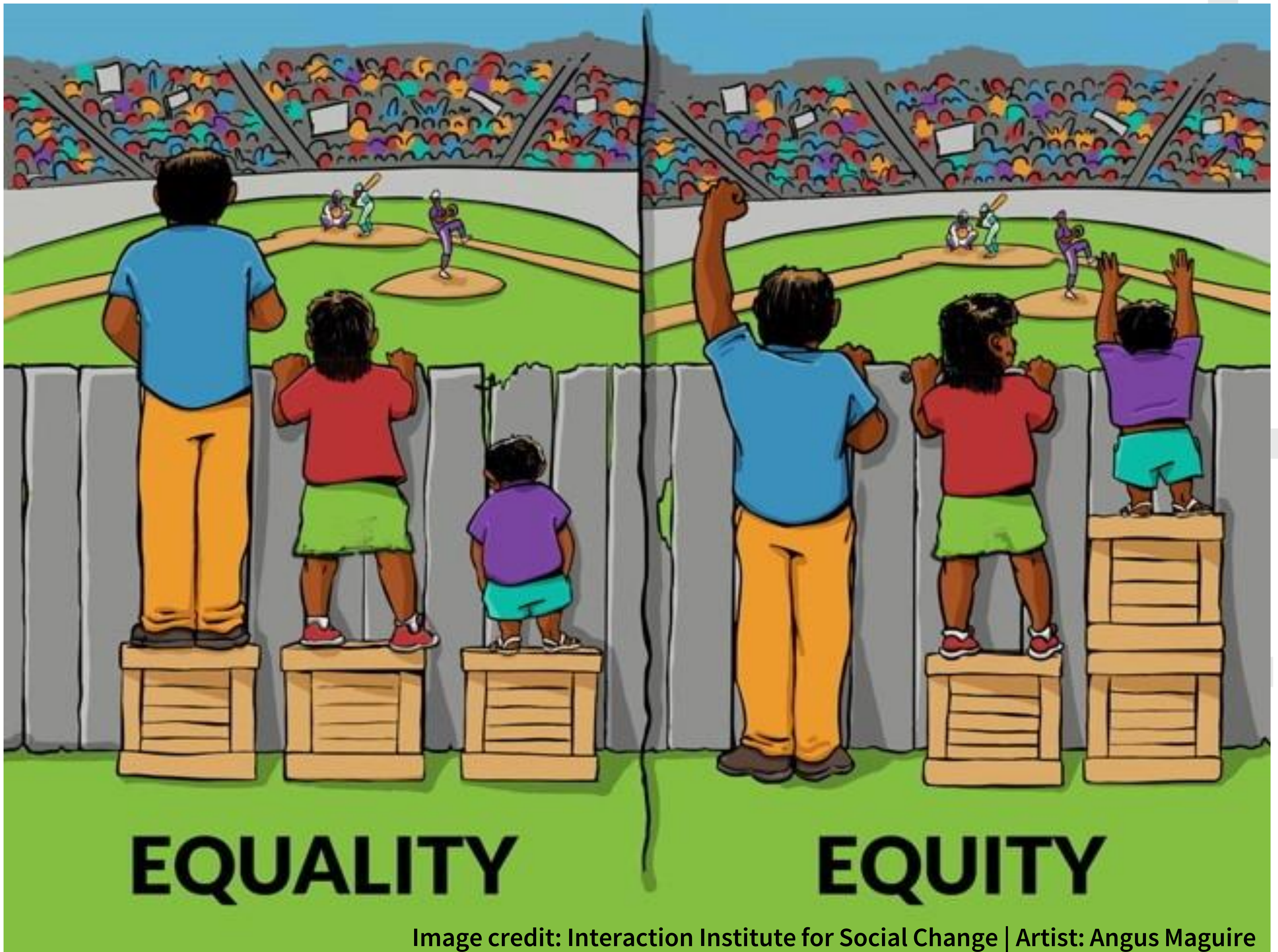


Image credit: Interaction Institute for Social Change | Artist: Angus Maguire

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PROGRESS

Place of residence

Race/ethnicity/culture/language

Occupation

Gender/sex

Religion

Education

Socioeconomic status

Social Capital

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PROGRESS-Plus

1. **Personal characteristics** associated with discrimination and/or exclusion (e.g. age, disability);
2. **Features of relationships** (e.g. smoking parents, excluded from school);
3. **Time-dependant relationships** (e.g. leaving the hospital, respite care, other instances where a person may be temporarily at a disadvantage).

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Who might be concerned about health equity

1. Patients and caregivers
2. Public
3. Providers
4. Purchasers
5. Payers (of health care and of research)
6. Policy makers
7. Product makers
8. Program managers
9. Principal investigators
10. Press, Publishers and other media

(Sources: Concannon et al. 2011, Tugwell et al. 2006)

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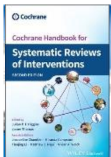

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Considering equity in your systematic review of interventions

- Is everyone receiving the same benefit from the intervention?
- Does the intervention work in the disadvantaged?

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Why is equity important for your review?

- Need to consider applicability of results to other settings
- Identifying and analysing the differences between population groups help us understand who really benefits from an intervention

Important:

- Plan and report that you have tried to assess health equity even if data is not available from the primary studies. No available data is a useful finding.
- If you are able to assess health equity and differences are identified this is also an important finding

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All Cochrane authors can consider health equity in their reviews

Consider health equity when:

1. formulating the question (e.g. use a logic model);
2. planning the methods (how the evidence related to equity and specific populations will be identified and appraised);
3. creating ‘Summary of findings’ tables (e.g. separate tables for disadvantaged populations, separate rows for differences in risk of events); and
4. interpreting findings (in relation to health equity).

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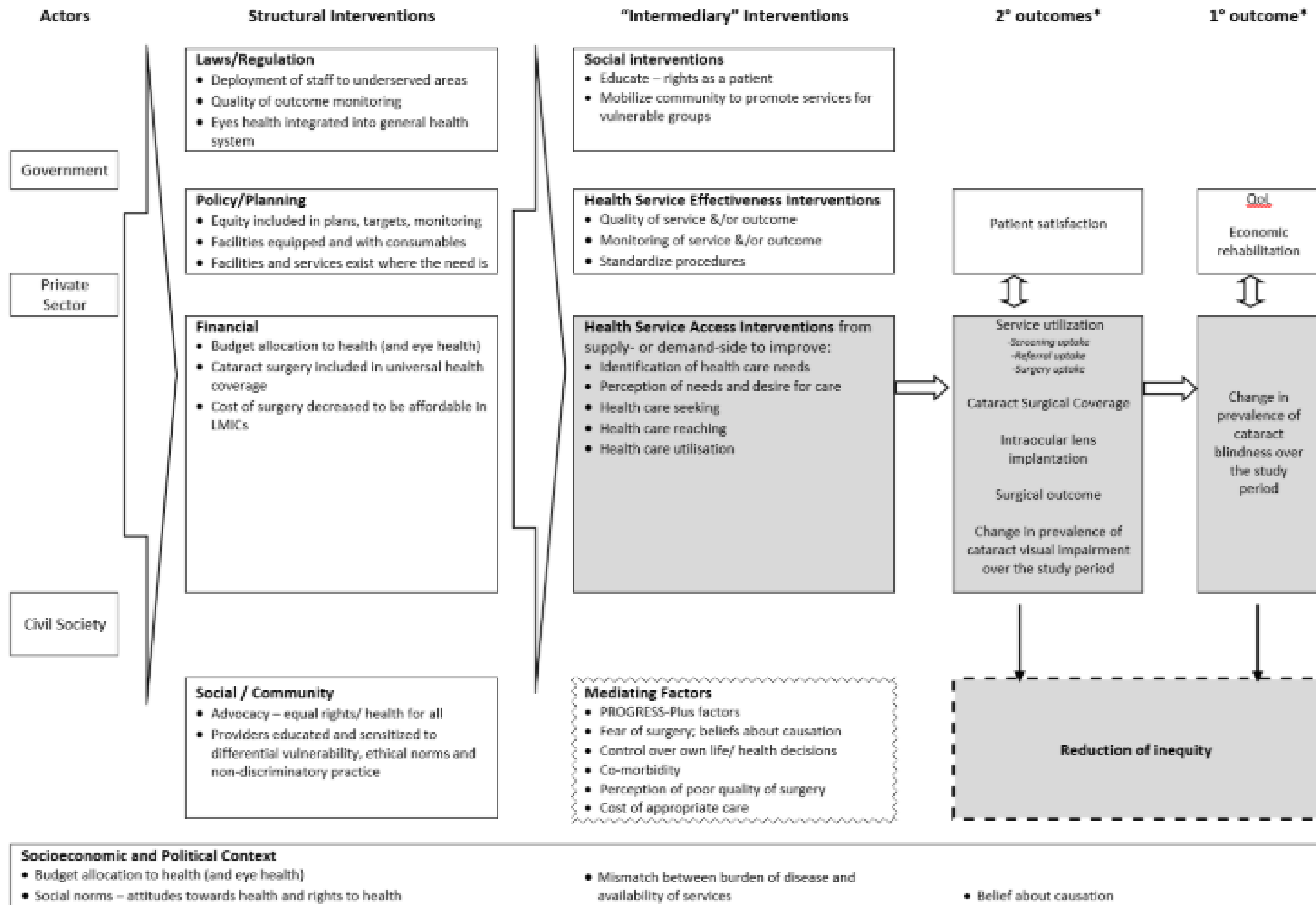
1. Logic model

Logic model



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2. Methods

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2. Methods

Consider

- Are there populations experiencing health inequities from the condition or problem in which you are interested?
- Are there populations who might experience disadvantage related to the intervention you are assessing?
- Are there social gradients in the burden of disease? Are there likely to be different absolute or relative effects of the intervention for different populations?

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3. ‘Summary of findings’ table

Vaccines for preventing rotavirus diarrhoea: vaccines in use

Soares-Weiser et al. 2019

Patient or population: children
Setting: low-mortality countries (WHO strata A and B)
Intervention: RV1
Comparison: placebo

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	Number of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Placebo	RV1				
Severe cases of rotavirus diarrhoea Follow-up: up to 1 year	**13 per 1000**	**2 per 1000** (1 to 3)	**RR 0.16** (0.09 to 0.26)	43,779 (7 studies)	⊕⊕⊕⊕ **high**[a]	RV1 reduces severe rotavirus diarrhoea compared to placebo at up to one year follow-up. One study (RV1 Vesikari 2007a-EU) reported higher efficacy compared to the pooled data. When we excluded this study from the analysis, there was no heterogeneity observed in the pooled data

Patient or population: children
Settings: high-mortality countries (WHO strata D and E)
Intervention: RV1
Comparison: placebo or no intervention

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	Number of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Placebo or no intervention	RV1				
Severe cases of rotavirus diarrhoea Follow-up: up to 1 year	**60 per 1000**	**22 per 1000** (14 to 36)	**RR 0.37** (0.23 to 0.60)	6114 (3 studies)	⊕⊕⊕⊕ **high**	RV1 reduces severe rotavirus diarrhoea compared to placebo or no intervention at up to one year follow-up. We did not downgrade for inconsistency as the heterogeneity observed in the pooled data (I^2 statistic = 57%) was due to within-study heterogeneity (RV1 Madhi 2010-AF results split by country)

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4. Interpret findings related to health equity in the discussion

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Discuss implications for equity

- Applicability to other settings and population groups
  - E.g. context in which the studies were conducted
- The burden of the intervention for the patient and the provider
  - E.g. inconvenience, cost, time

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Example:

Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases

- *"A substantial proportion of the included studies (33%, n = 27) were conducted in LMICs or were directed at low income groups in high income countries… it may be concluded that these interventions could potentially be extrapolated to other settings, be effective in reaching low income groups, and contribute to reducing health inequalities. However, the degree to which the findings from studies in high income settings can be generalised to low income settings remains unclear and requires further empirical research. This is a particularly important consideration in the context of the two subgroups (LHWs providing support to mothers of sick children; and LHWs to prevent child abuse), where all of the studies were conducted in the United States"*

Lewin et al. 2010

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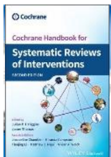

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What is an 'equity-focused' systematic review?

Those designed to:

- Assess effects of interventions targeted at disadvantaged or at-risk populations (e.g., school feeding for disadvantaged children).
  - These may not include equity outcomes but by targeting disadvantaged populations will reduce inequities.
- Assess effects of interventions aimed at reducing social gradients across populations or among subgroups of the population (e.g., interventions to reduce the social gradient in smoking, obesity prevention in children, interventions delivered by lay health workers)

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Additional considerations for equity-focused reviews

- Include relevant study designs to address health equity
- Identify information sources for health equity questions
- Assess the influence of context and process on health equity outcomes

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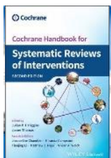

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What to include in your protocol

- Create a heading for a section in your background on health equity in which you can describe whether:
  - certain population groups experience a greater burden of disease from the condition under study
  - the intervention has differential effectiveness for specific population groups (e.g. literacy issues, adherence, etc.)
  - the outcomes have different importance for specific populations (e.g. inconvenience, stigma, return to work).
- If you identify important considerations in the background section, describe in your methods section how you will assess these differences (e.g. through sensitivity or subgroup analyses).

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Take home message

- Think about equity early in the review process
- Plan how you will address four considerations
  - 1. question formulation (logic model)
  - 2. methods for assessing equity
  - 3. ‘Summary of findings’ tables
  - 4. Implications for equity

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Additional Resources

Visit https://methods.cochrane.org/equity/resources-review-authors for additional resources, including:

- Equity Checklist for planning to incorporate equity in your review
- PROGRESS-Plus
- PRISMA-Equity
- Chapter 16 of the Cochrane Handbook
- Interactive Learning Module 11

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References

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