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Introduction to Health Equity

February 2, 2018
Jennifer Petkovic
Peter Tugwell
Vivian Welch

Trusted evidence.
Informed decisions.
Better health.

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Objectives

1. Who we are: Campbell and Cochrane Equity Methods
2. Define health equity and its relation to social determinants of health - never accept ‘means’ without distribution
3. Appreciate that Health Inequity is much more a ‘Rich-Poor’ Gap : Other aspects: PROGRESS-Plus
4. Describing the problem is not enough ! Examples of interventions to reduce health inequities across PROGRESS-Plus dimensions
5. Learn how to report equity in systematic reviews
6. Learn about GRADE equity

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Poll 1:

Have you heard of Campbell Cochrane Equity Methods Group

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Poll 2:

Have you ever worked on an equity-focused systematic review?

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Objectives

- Who we are: Campbell and Cochrane Equity Methods

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http://methods.cochrane.org/equity

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Past Issues of Newsletter

The Campbell and Cochrane Equity Methods Group is registered with Cochrane and the Campbell Collaboration.

Cochrane's purpose is to ensure that relevant, accurate, and current research about health interventions is available worldwide. To meet this objective, Cochrane contributors conduct and distribute systematic reviews. Similarly, the Campbell Collaboration produces reviews with an aim to "help people make well-informed decisions about the effects Group is registered with the Campbell and Cochrane. Both Collaborations are international, not-for-profit, and independent organizations.

Our aim is to encourage authors of Campbell and Cochrane reviews to include explicit descriptions of the effect of the interventions not only on the whole population but to describe their effect upon the disadvantaged and/or their ability to reduce socioeconomic inequalities in health and to promote their use to the wider community. Ultimately, this will help build the evidence base on such interventions and increase our capacity to act on the health gap between rich and poor.

Attention review authors!

Are you interested in incorporating equity in your review? The **Equity Checklist** is a tool that can help!

Writing up your equity-focused review? Use the **PRISMA-E 2012 Reporting Guidelines**

Download a printable version of the PRISMA-E checklist, reporting guidelines for equity-focused systematic reviews: **here**

Latest tweets from @CochraneEquity

Tweets by @CochraneEquity

Cochrane Equity
@CochraneEquity

GESI and Cochrane Learning Live - next webinar on"Introduction to health equity" on Wed 2 Feb 2018 13:00 UTC
Register here: goo.gl/tSCZZB

2h

Cochrane Equity Retweeted

The Campbell Collaboration
@campbellreviews

Looking for #research #evidence on improving outcomes for #women in low- and middle-income countries? See these three #systematicreviews by @IDCG_Campbell in the Campbell online library: bit.ly/2mlvfXH #LMIC

Embed | View on Twitter

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Campbell and Cochrane Equity Methods Group

- Apply an ‘Equity Lens’ to Campbell, Cochrane and other systematic reviews
- Encourages authors of Campbell and Cochrane systematic reviews to consider equity
- Increase consideration of equity in systematic reviews
- Would like to establish links with the GESI network

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Objectives

- Who we are : Campbell and Cochrane Methods
- Define health equity and its relation to social determinants of health-never accept ‘means’ without distribution

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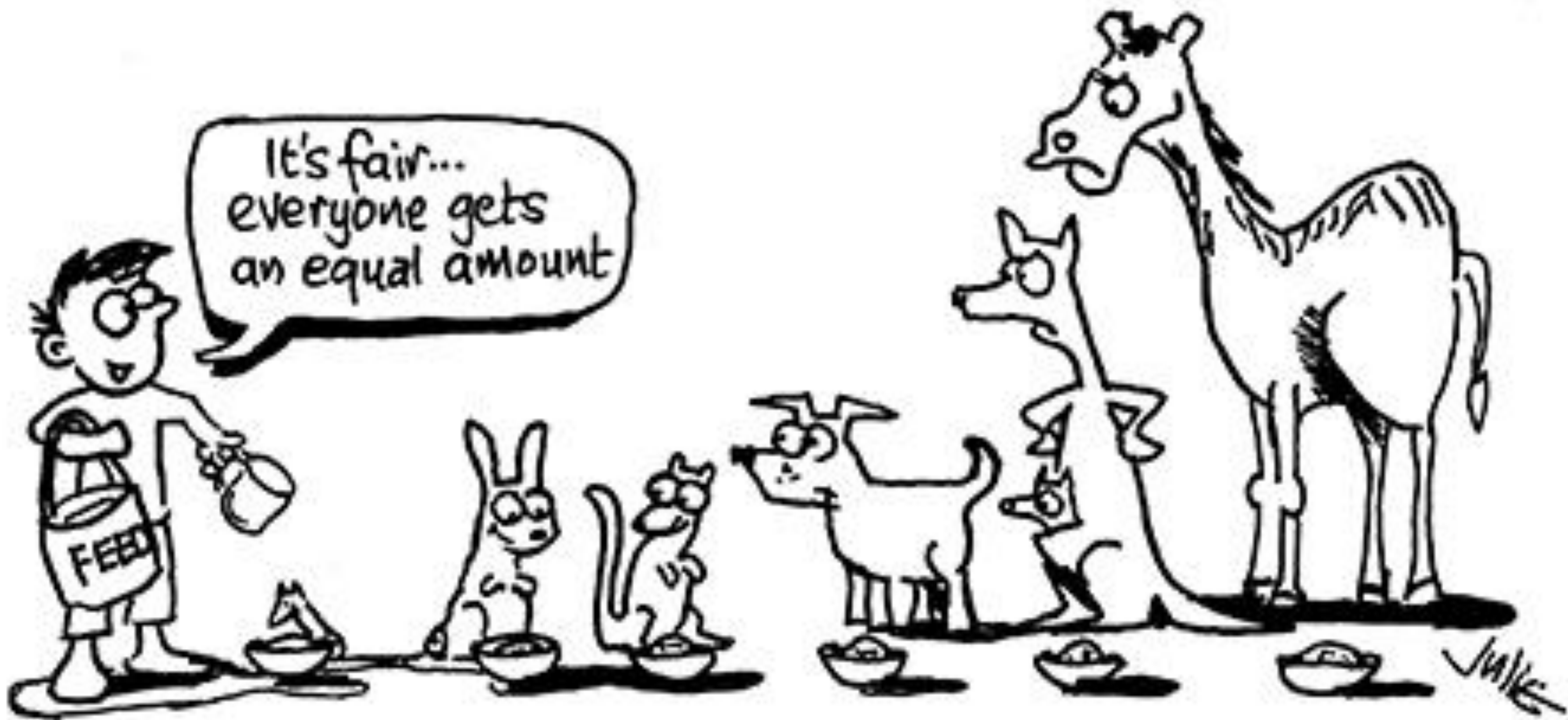

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Two monkeys were paid unequally

https://www.youtube.com/watch?feature=player_embedded&v=meiU6TxysCg

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What is health inequity?

" The term 'inequity' has a moral and ethical dimension. It refers to differences [in health outcomes] which are unnecessary and avoidable but, in addition, are also considered unfair and unjust."

- Whitehead, 1991

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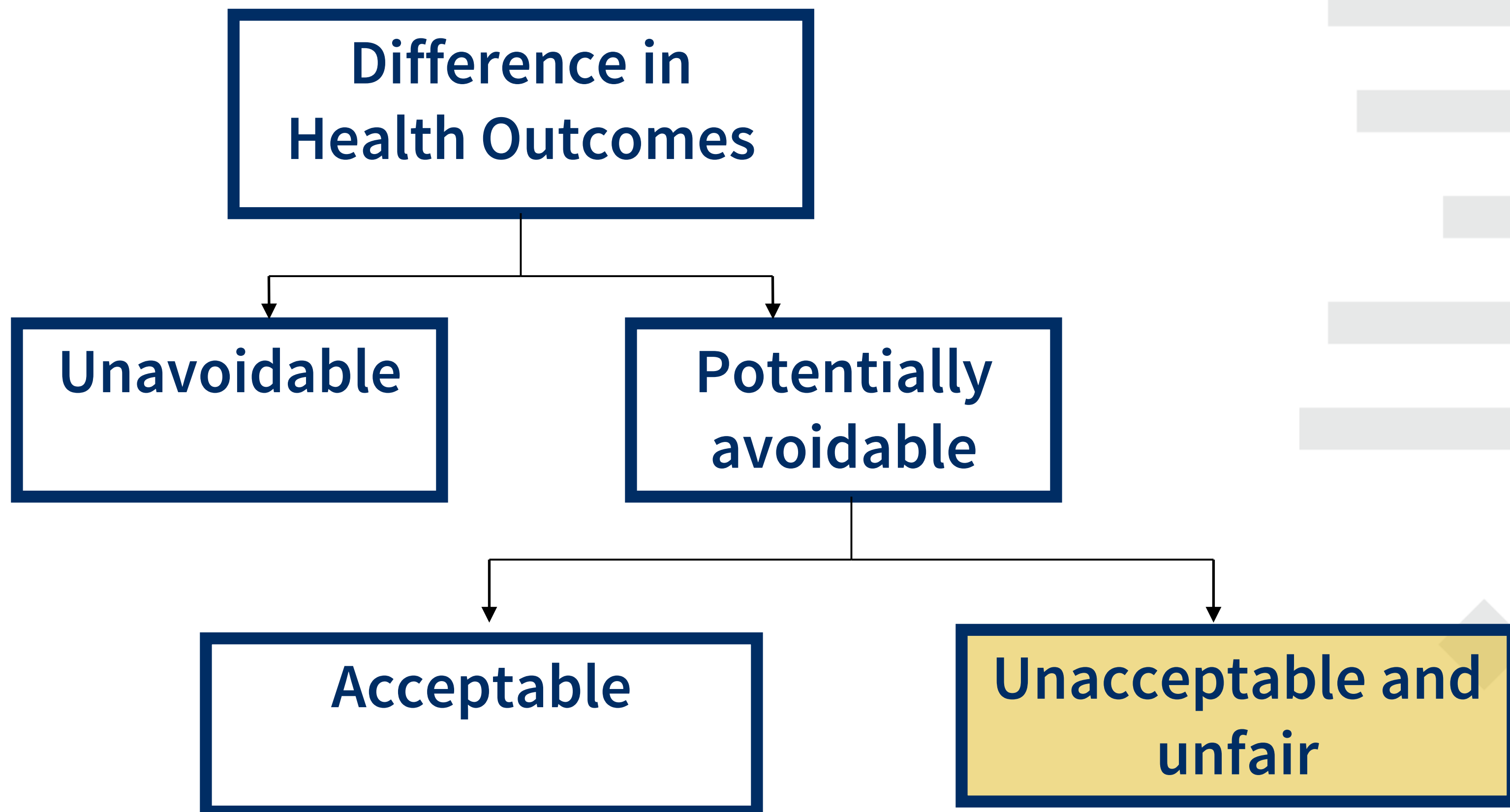
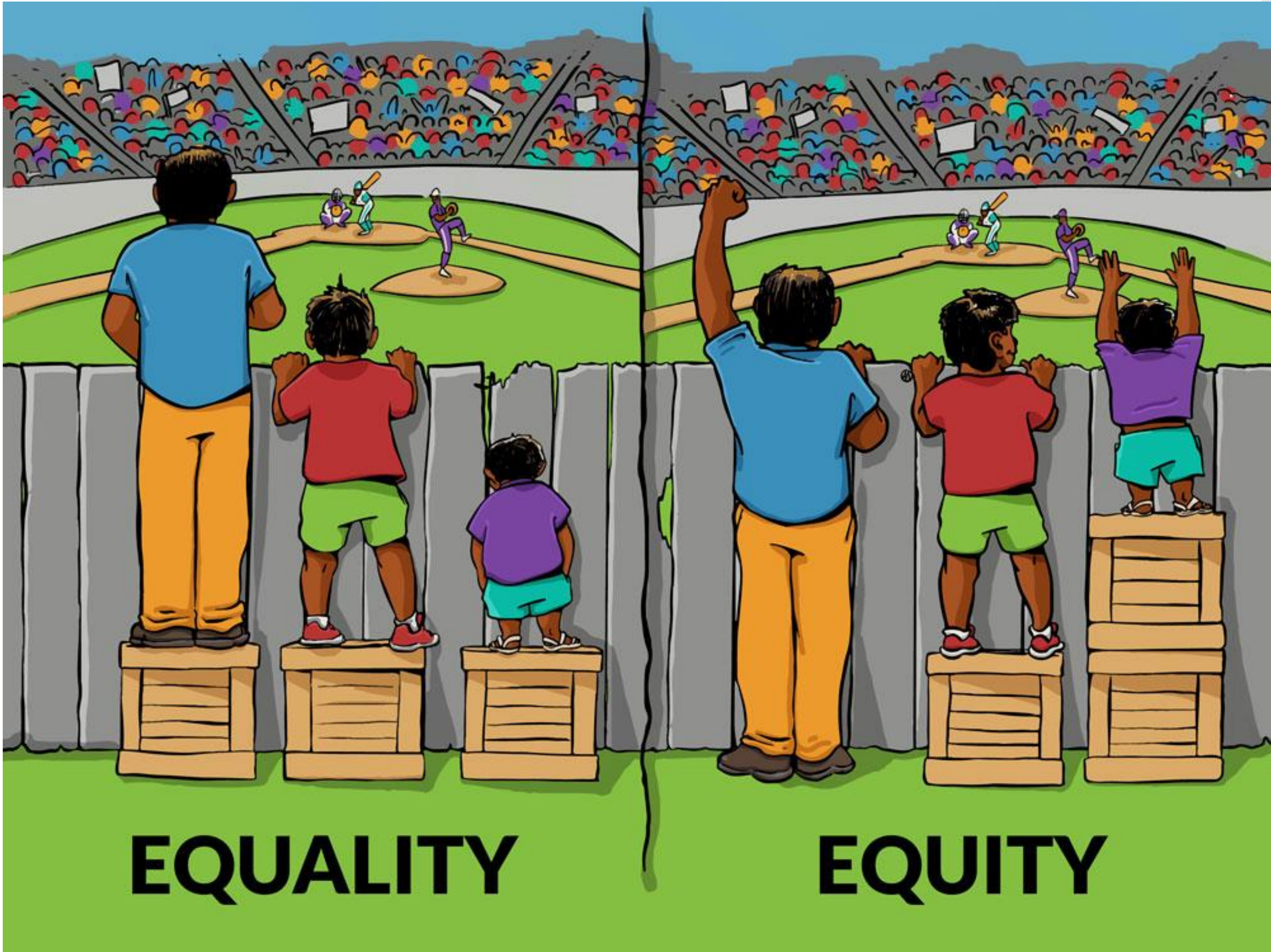
What is health inequity?





Interaction Institute for Social Change | Artist: Angus Maguire

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Context is important!

Handwashing prevents diarrhea

– but only if the clean water is available

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Investigación original / Original research

A cluster-randomized controlled trial of handrubs for prevention of infectious diseases among children in Colombia

Juan C. Correa,[1] Diana Pinto,[2] Lucas A. Salas,[1] Juan C. Camacho,[1] Martín Rondón,[3] and Juliana Quintero[4]

Suggested citation Correa JC, Pinto D, Salas LA, Camacho JC, Rondón M, Quintero J. A cluster-randomized controlled trial of handrubs for prevention of infectious diseases among children in Colombia. Rev Panam Salud Publica. 2012;31(6):476–84.

ABSTRACT

Objective. *To evaluate the effectiveness of alcohol-based handrubs (ABH) in reducing acute diarrheal diseases (ADD) and acute respiratory infections (ARI) among children 1–5 years of age in childcare centers with limited tap water.*

Methods. *This was the first cluster-randomized controlled trial in a developing country. The study took place at 42 childcare centers with sporadic and limited water availability in six towns in Colombia. Participants were randomly assigned to use ABH as a complement to handwashing (intervention arm: 21 centers/794 children); or to continue existing hand-*

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Context matters

In this population there is limited access to clean tap water so they assessed hand rubs/sanitizer

--- Interventions that we know to be effective, such as hand washing, may not be appropriate in all contexts

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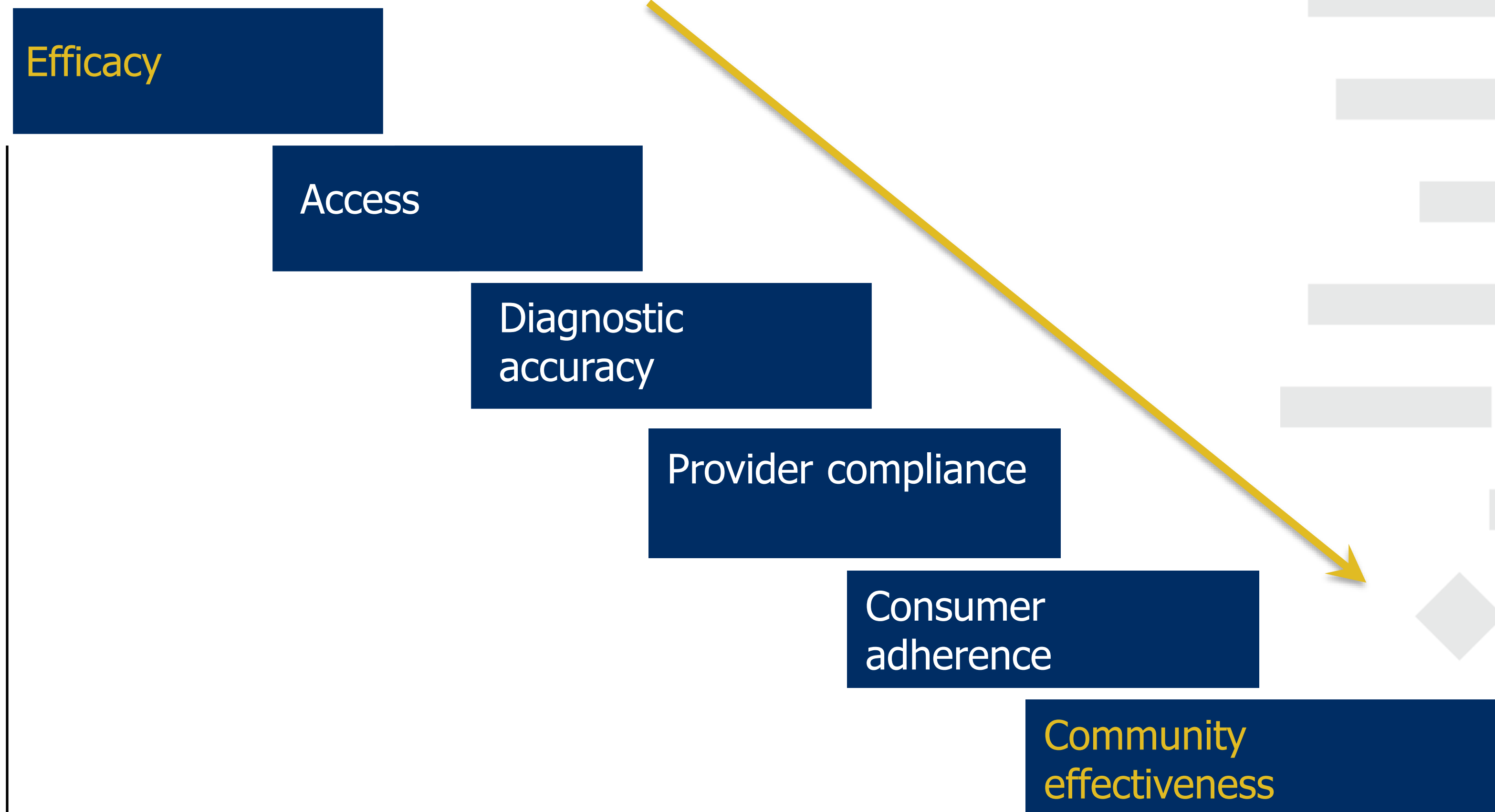
Equity Effectiveness



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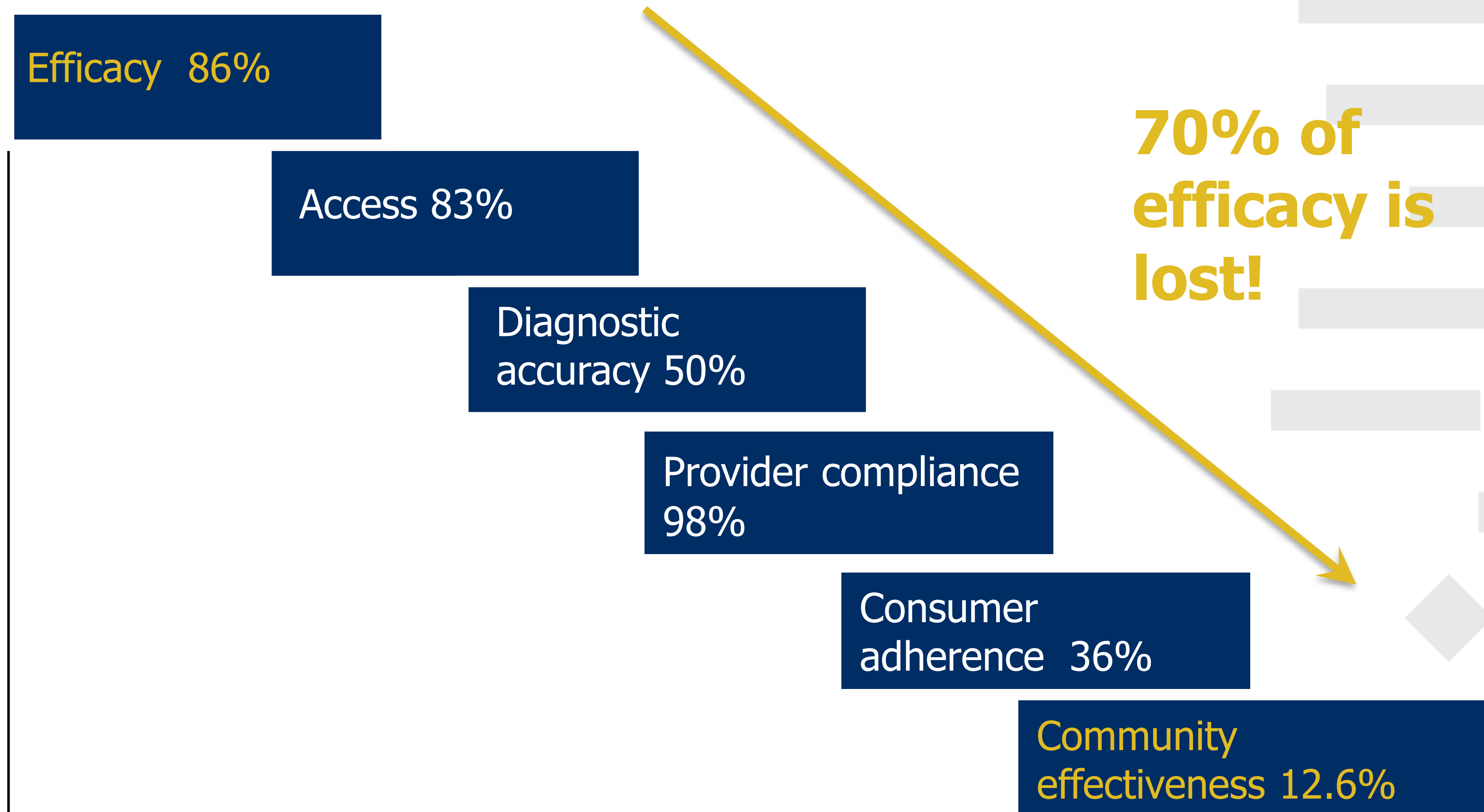
Staircase Effect



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Most of the economic papers focus on Income - the Rich-Poor Gap

Health Equity is not only related to income!

What other characteristics might contribute to disadvantage?

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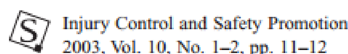
Burden of Illness
PROGRESS
Evans and Brown - 2003

"**Variations in health** *can be seen across a number of socially stratifying forces captured by the acronym PROGRESS, standing for place of residence, religion, occupation, gender, race/ethnicity, education, socioeconomic status, and social networks and capital.*"



Injury Control and Safety Promotion
2003, Vol. 10, No. 1–2, pp. 11–12

1566-0974/03/1001–2-011$16.00

© Swets & Zeitlinger

SHORT REPORT

Road traffic crashes: operationalizing equity in the context of health sector reform

Tim Evans[1] and Hilary Brown[2]

[1]Director, Health Equity Program, The Rockefeller Foundation, New York, NY, USA and [2]Program Coordinator, Health Equity Program, The Rockefeller Foundation, New York, NY, USA

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PROGRESS

Place of residence

Race/ethnicity/culture/language

Occupation

Gender/sex

Religion

Education

Socioeconomic status

Social capital

Evans and Brown 2003; O'Neill et al, 2014

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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).

Oliver S, Dickson K, Newman M. 2012.

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3. Appreciate that Health Inequity is much more a 'Rich-Poor' Gap : Eight other aspects: PROGRESS-Plus
4. **Describing the problem is not enough ! We need to do something about it. Examples of interventions to reduce health inequities across PROGRESS-Plus dimensions**

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PROGRESS

Place of residence

Evans and Brown 2003; O'Neill et al, 2014

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Place of residence

Burden of disease	Intervention
Most of the population in Ghana lives over 8km from the nearest health care facility.	Initiation of the Community-based Health Planning and Services program in rural areas in Ghana has reduced child mortality by removing geographic barriers to health care through mobile community-based care with resident nurses.

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PROGRESS

Race/ethnicity/culture/language

Evans and Brown 2003; O’Neill et al, 2014

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Race, ethnicity, culture, language

Burden of disease	Intervention
In India, children from certain castes are less likely to be immunized.	Mass polio immunization campaigns have reduced caste-based differentials in immunization rates.

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PROGRESS

Occupation

Evans and Brown 2003; O'Neill et al, 2014

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Occupation

Burden of disease	Intervention
Workers in certain occupations such as coal mining are at higher risk of occupation-related injury or death.	Legislation to improve safety for coal miners has contributed to reduced frequency of coal mining disasters in the United States.

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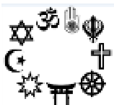
PROGRESS

Gender/sex


Evans and Brown 2003; O'Neill et al, 2014

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Gender/sex

Burden of disease	Intervention
In many cultures, having a son is preferable to a daughter and over centuries, this has resulted in infanticide of baby girls, neglect, and, with diagnostic ultrasound, sex-selective abortions.	Incentives (i.e. pensions for parents of girls) and poster/media campaigns to promote daughters have helped reduce expressions of son preference.

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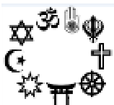
PROGRESS


Religion

Evans and Brown 2003; O’Neill et al, 2014

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Religion

Burden of disease	Intervention
Lower immunization rates among Amish populations lead to outbreaks of disease	Vaccine information provided by trusted medical providers leads to increased immunization rates

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PROGRESS

Education

Evans and Brown 2003; O'Neill et al, 2014

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Education

Burden of disease	Intervention
Prevalence and length of childhood diarrhoea episodes are inversely related to mothers' education	Educating girls and mothers can improve food safety and reduces the risk of diarrhoea for infants

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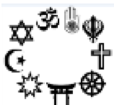
PROGRESS



Socioeconomic status

Evans and Brown 2003; O'Neill et al, 2014

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Socioeconomic Status

Burden of disease	Intervention
Ownership of malaria bednets decreases with decreasing household wealth	Distribution of free bednets or vouchers for bednets increases ownership

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PROGRESS

Social capital

Evans and Brown 2003; O'Neill et al, 2014

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Social Capital

Burden of disease	Intervention
Socially isolated people have two to three times higher death rates than people with a social network or social relationships and sources of support	The Poder es Salud/Power for Health study resulted in an increased number of people available for support, improved self reported health, and reductions in depressive symptoms

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5. Learn how to report equity in systematic reviews - PRISMA-Equity

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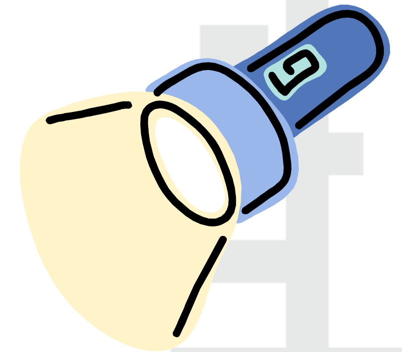
Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)



The PRISMA Statement aims to help authors improve the reporting of systematic reviews (SR) and meta-analyses by promoting transparency of reporting for methods and results.

http://www.prisma-statement.org/

PRISMA

TRANSPARENT REPORTING of SYSTEMATIC REVIEWS and META-ANALYSES

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A B C D
Multiple choice

Poll 3

What characteristics of a systematic review would make it 'equity-focused'?

a) Where there are likely to be important equity effects

b) Targeted at a disadvantaged population

c) Aimed at reducing the gradient across populations

d) All of the above

e) None of the above

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An equity-focused SR is one designed to:

1. Assess effects of interventions targeted at disadvantaged or at-risk populations. These may not include equity outcomes but by targeting disadvantaged populations will provide evidence about reducing inequities.
2. 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). This includes those that are not aimed at reducing inequities but where there may be important equity effects (e.g. interventions delivered by lay health workers).

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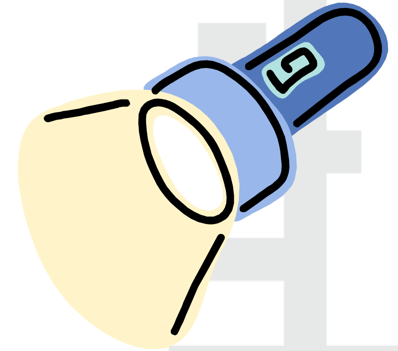
PRISMA-Equity 2012

Improve evidence-base for equity-oriented policy by :

- Providing clear guidance on reporting equity-focused systematic review methods
- Emphasizing the importance of reporting health equity results



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PRISMA-E 2012

OPEN ACCESS Freely available online

Guidelines and Guidance

PRISMA-Equity 2012 Extension: Reporting Guidelines for Systematic Reviews with a Focus on Health Equity

Vivian Welch[1]*, Mark Petticrew[2], Peter Tugwell[1,3], David Moher[1], Jennifer O'Neill[4], Elizabeth Waters[5], Howard White[6], the PRISMA-Equity Bellagio group[¶]

1 Ottawa Hospital Research Institute, Ottawa, Canada, **2** London School of Hygiene & Tropical Medicine, London, United Kingdom, **3** Department of Medicine, University of Ottawa, Ottawa, Canada, **4** University of Ottawa, Institute of Population Health, Ottawa, Canada, **5** University of Melbourne, McCaughey Centre, Melbourne School of Population Health, Melbourne, Australia, **6** International Initiative for Impact Evaluation (3ie), Washington, D.C., United States of America

Introduction

Health equity and social determinants of health remain high on international and national agendas. Recently, the report of the World Conference on Social Determinants of Health (October 2011) recognized the need for increased availability of data on

For example, vitamin A has the largest absolute impact on mortality reduction for children with lowest nutritional status [18]. However, few systematic reviews assess effects on health equity and those that do often provide insufficient detail to allow replication, including poor reporting of some population characteristics, subgroup analyses, and applicability judgments [19].

PRISMA-E: Reporting guidelines for equity-focused SRs

Section	Item	Standard PRISMA Item	Extension for Equity-Focused Reviews
Title			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Identify equity as a focus of the review, if relevant, using the term equity
Abstract			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	State research question(s) related to health equity.
	2A		Present results of health equity analyses (e.g. subgroup analyses or meta-regression).
	2B		Describe extent and limits of applicability to disadvantaged populations of interest.
Introduction			
Rationale	3	Describe the rationale for the review in the context of what is already known.	Describe assumptions about mechanism(s) by which the intervention is assumed to have an impact on health equity.
	3A		Provide the logic model/analytical framework, if done, to show the pathways through which the intervention is assumed to affect health equity and how it was developed.
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Describe how disadvantage was defined if used as criterion in the review (e.g. for selecting studies, conducting analyses or judging applicability).
	4A		State the research questions being addressed with reference to health equity

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Health equity can be considered at ten steps in the systematic review process.

1) Define conceptual approach to health equity;
2) Develop a theory-based approach, which may include an analytic framework which identifies health equity as an outcome;
3) Frame the equity questions (PICO-C);
4) Include relevant study designs to assess equity questions;
5) Identify information sources for equity questions;
6) Define search terms for health equity questions
7) Develop data extraction tools for health equity
8) Assess the influence of context and process on equity questions;
9) Use synthesis approaches to assess equity; and
10) Collect data related to applicability and equity questions.

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GRADE Equity

JCE series on Health Equity in guideline development

Process, Akl et al

1. Setting priorities
2. Guideline group membership
3. Identifying target audience
4. Generating PICO questions
5. Considering importance of outcomes and interventions
6. Deciding what evidence to include and searching
7. Summarizing the evidence
8. Wording of recommendations
9. Evaluation and use

Evidence synthesis and rating certainty Welch et al

1. Health equity as an outcome
2. Patient-important outcomes
3. Relative effects: separate SoF
4. Baseline risk and absolute events
5. Assessing directness

Evidence to recommendation, Pottie et al

Evidence to Decision

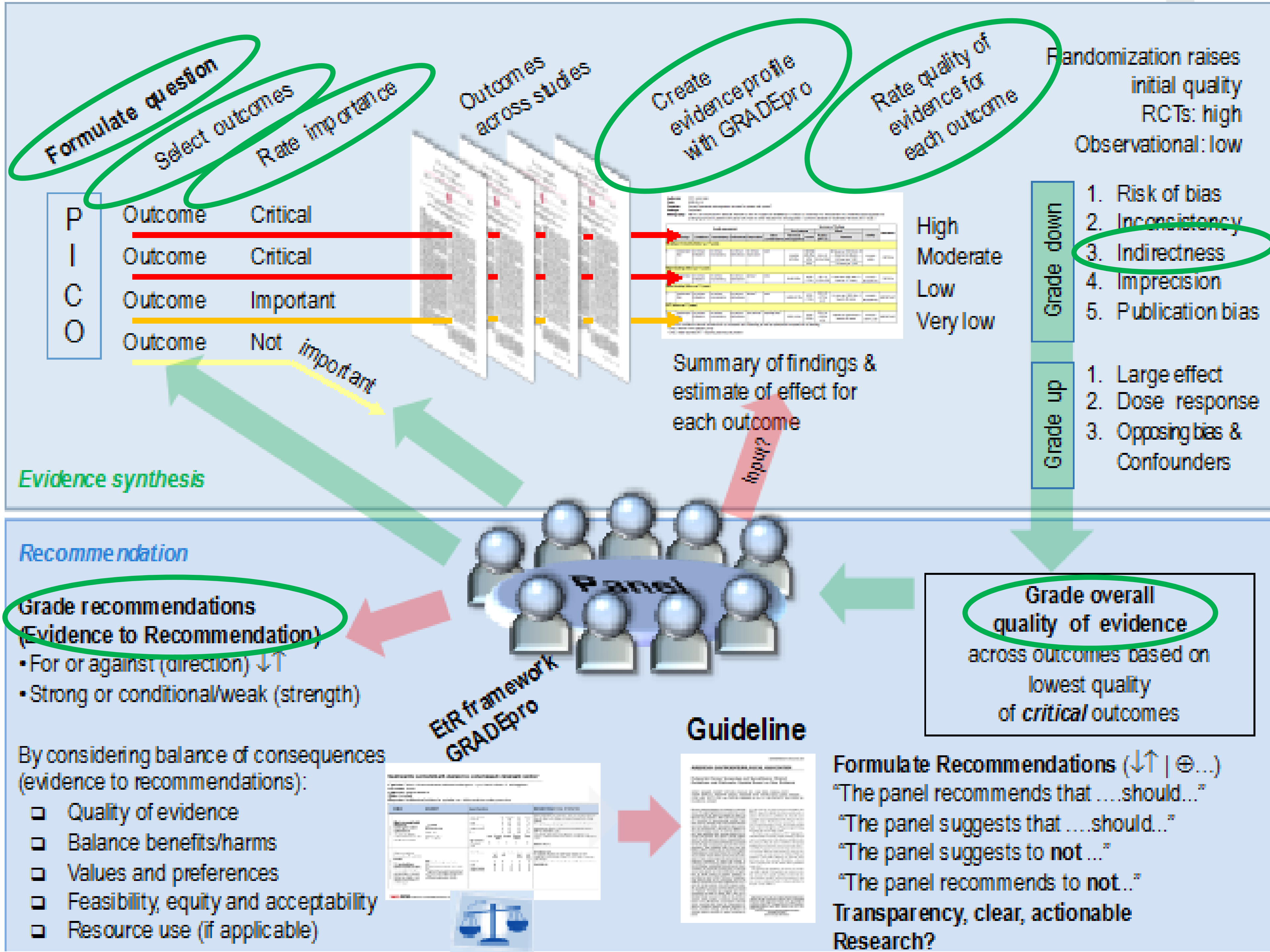
1. Assessing the potential impact of interventions on equity and
2. Incorporating equity considerations when judging or weighing each of the evidence to decision criteria

Welch V et al, GRADE Equity Guidelines 1: Introduction and rationale

Akl E et al 2017 GRADE Equity Guidelines 2: Considering health equity in the GRADE guideline development process

Welch V et al 2017, GRADE Equity Guidelines 3: Considering health equity in rating the certainty of synthesized evidence

Pottie K et al 2017, GRADE Equity Guidelines 4: Considering health equity in the evidence to decision process



Formulate question
Select outcomes
Rate importance
Outcomes across studies
Create evidence profile with GRADEpro
Rate quality of evidence for each outcome
Randomization raises initial quality
RCTs: high
Observational: low
P
I
C
O
Outcome Critical
Outcome Critical
Outcome Important
Outcome Not important
High
Moderate
Low
Very low
Grade down
1. Risk of bias
2. Inconsistency
3. Indirectness
4. Imprecision
5. Publication bias
Grade up
1. Large effect
2. Dose response
3. Opposing bias & Confounders
Summary of findings & estimate of effect for each outcome
Evidence synthesis
Panel
Recommendation
Grade recommendations (Evidence to Recommendation)
• For or against (direction) ↓↑
• Strong or conditional/weak (strength)
Grade overall quality of evidence across outcomes based on lowest quality of *critical* outcomes
EtR framework GRADEpro
Guideline
By considering balance of consequences (evidence to recommendations):
Quality of evidence
Balance benefits/harms
Values and preferences
Feasibility, equity and acceptability
Resource use (if applicable)
Formulate Recommendations (↓↑ | ⊕...)
"The panel recommends that ....should..."
"The panel suggests that ....should..."
"The panel suggests to not ..."
"The panel recommends to not.."
Transparency, clear, actionable
Research?

5 Knowledge Translation Questions for equity-focused systematic reviews

Question 1:
What should be transferred?

- Evidence Products emanating from up-to-date systematic reviews may include
  - structured and/or tailored summaries,
  - patient decision aids,
  - clinical practice guidelines and
  - policy briefs.
- Evidence Products should include a consideration beyond "what works" to consider for whom interventions work (or not), why and at what cost.
  - E.g. equity aspects such as context

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Question 2: To whom should research knowledge be transferred?

- Equity-focused systematic reviews could be relevant to many different stakeholders including
- 6 ‘P’s
  - Patients
  - Providers/practitioners
  - Policymakers - national/provincial
  - Product makers
  - Payers/purchasers of healthcare goods and services
  - Press

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Question 3:
By whom should research knowledge be transferred?

- To address inequities, different messengers who are credible with the target stakeholder(s) are needed depending on the nature of the message, especially in a field where the political dimension of the message is an issue to be considered.

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Question 4: How should research knowledge be transferred?

- Targeted and tailored messages addressing inequities are critical.
- Include an assessment of the likely barriers and facilitators

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Question 5: With what effect should research knowledge be transferred?

- Appropriate outcomes for evaluating a specific KT strategy should be selected
  - Explicit use of evidence on inequities in policymaking
- Outcomes may vary across different stakeholder groups
  - Disadvantaged groups may differ in the outcomes they value compared to the more advantaged.

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Take home messages

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Contact us

http://methods.cochrane.org/equity

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Thank you!