Cochrane Review Group Networks' Equity Priority Setting Pilot

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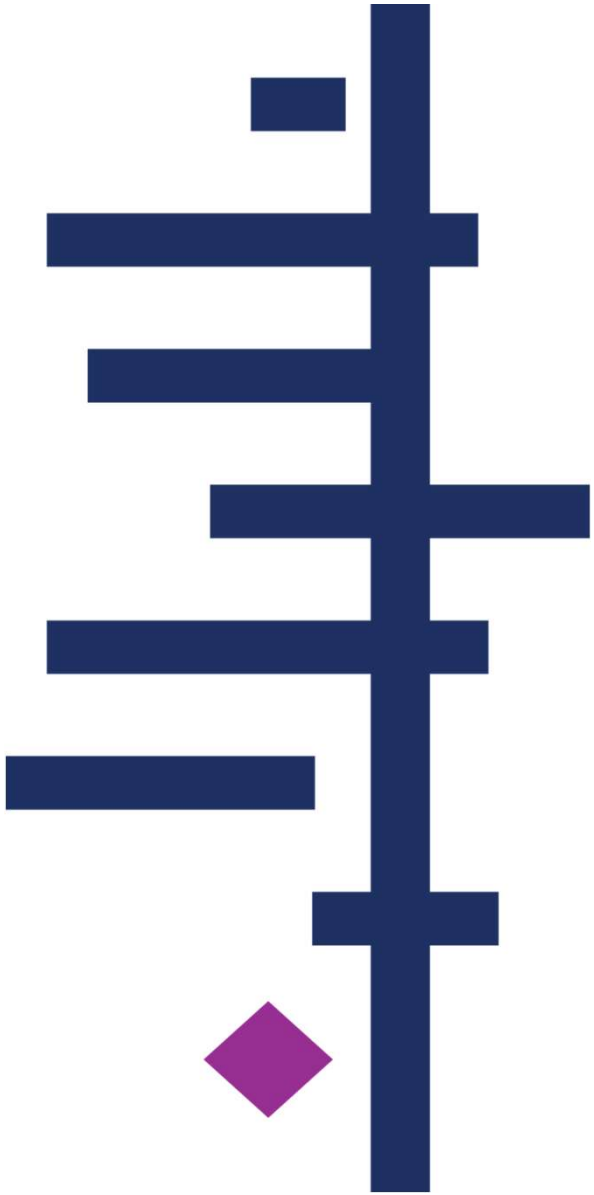
Trusted evidence.
Informed decisions.
Better health.



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Project team

Eve Tomlinson, Peter Tugwell, Ruth Foxlee, Nicole Skoetz, Michael Brown, Jordi Pardo Pardo, Robert Dellavalle, Mindy Szeto, Torunn Sivesind, Melissa Laughter, Vivian Welch, Jennifer Petkovic, George Wells.

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Background

- Substantial progress with priority-setting at Cochrane Review Group (CRG)-level in the last 5 years; CRGs post their priority setting process on their websites.
- Nevertheless, Cochrane's partners and stakeholders continue to raise awareness of key topics not captured using current approaches.
- Proposed solution
  - Annual CRG Network-led prioritisation exercise on a specific topic/theme that complements the priority-setting work done by individual CRGs.
  - Aiming to take a broad perspective to ensure that gaps in coverage are minimized.

Pilot project

- Theme for pilot is health equity - ‘the absence of avoidable and unfair differences in health’ (Welch et al, 2020).
- Pilot aimed to identify 10 priority Cochrane reviews to update with a ‘health equity lens’, from a priority setting exercise involving representatives from CRG Networks, Cochrane Fields, Cochrane Geographic Groups and key external stakeholders.

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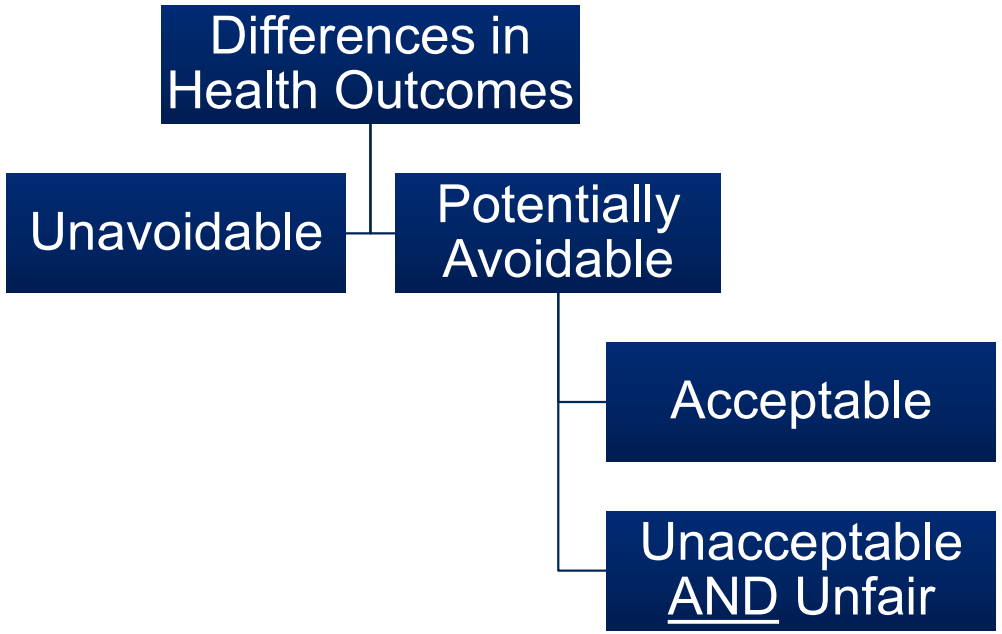
Health inequity



Pilot project

- Limited resources so made a few decisions to ensure we could get some ‘quick wins’!
  - Focused on finding Cochrane reviews to update, rather than new review titles.
  - Interested in reviews showing beneficial interventions and a meaningful impact on **mortality** specifically.
  - Keen to explore morbidity in the future.
  - Based on the Equity Effectiveness Loop.

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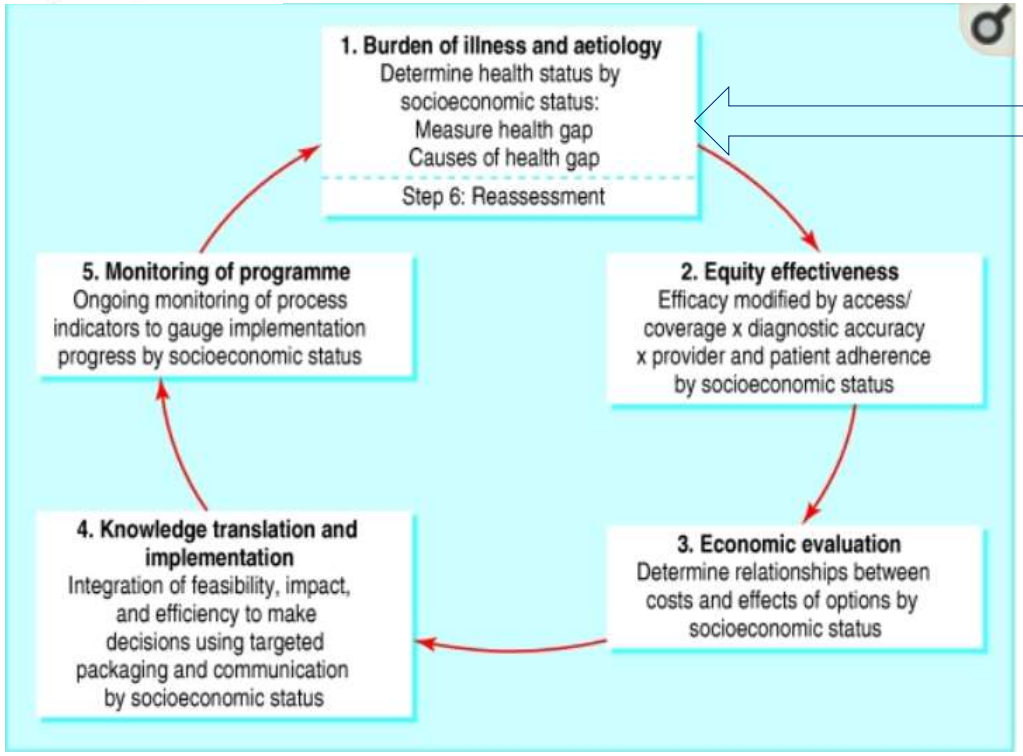
Applying clinical epidemiological methods to health equity: the equity effectiveness loop

BMJ 2006;332:358–61



1. Burden of illness and aetiology
Determine health status by socioeconomic status:

Developed by the Campbell and Cochrane Equity Methods Group

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	**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

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)

Differences in Baseline Risk associated with poverty between High Income and Low/Middle Income Countries

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High income Countries

11/1000 fewer children with severe diarrhoea

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

Outcomes	Illustrative comparative risks* (95% CI)	
	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)

Low income LMIC Countries

38/1000 fewer children with severe diarrhoea

Method

- Use Equity-Effectiveness Loop Framework i.e.

1. **Focus on Global Burden of Disease – Focus on Universal Health Coverage Indicator conditions**
2. Apply an ‘Equity Lens’ to Cochrane Reviews in these Indicator Conditions - Equity extension of MECIR
3. Produce tailored Summary of Findings tables for Equity/ Diversity/ Inclusion - Priority Populations.

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Measuring universal health coverage based on an index of effective coverage of health services in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019 Lancet 2020; 396: 1250–84

- The Universal Health Coverage Framework is based on the World Health Organisation Global Burden of Disease data.
- The framework outlines needed health services across the life course, while accounting for potential health gains delivered to populations.
- The framework has mapped 23 effective coverage indicators, or conditions, across health service types and population age groups for 204 countries and territories from 1990 to 2019.
- Includes infectious diseases, chronic diseases, maternal health.
- Focuses on mortality.

Lancet 2020; 396: 1250–84

To construct the UHC effective coverage index, we weighted each effective coverage indicator relative to their health gain weights, a metric approximating the population health gains potentially deliverable by health systems for each location-year. More detail is provided in the appendix 1 (pp 32–35), but in brief, calculations were based on three inputs for each effective coverage indicator and corresponding population-age group: estimates on the 0–100 scale, targeted disease burden, and effectiveness categories of associated interventions or services (table 1). For effectiveness, incremental values were assumed by category (ie, 90% effectiveness for category 1, 70% for category 2, 50% for category 3, and so on), as informed by studies published in the Cochrane Database of Systematic Reviews, the Tufts Cost-Effectiveness Analysis Registry and Global Health Cost-Effectiveness Analysis Registry, and Disease Control Priorities, third edition (DCP3); sensitivity analyses on shifting each effective coverage indicator by one category (ie, moving each category 2 indicator up to category 1 and then down to category 3) showed high correlations with current assignments (appendix 1 p 35).

Uses Cochrane Library

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Method

Mapped Cochrane reviews to the Universal Health Coverage measurement framework indicator conditions.

Identified 359 reviews that had assessed mortality and had at least one Summary of Findings table.

Too many! So decided to focus on those showing a clinically important reduction of mortality: 33 Reviews.

13 conditions for which we found Cochrane reviews	33 reviews	CRG
Antiretroviral therapy coverage	2	Infectious Diseases
Breast Cancer	2	Breast Cancer
Cervical Cancer	3	Gynaecological, Neuro-oncology and Orphan Cancers
Chagas Disease	1	Heart
Chronic kidney disease	3	Kidney and Transplant
Chronic obstructive pulmonary disease treatment	5	Airways
Colon and rectum cancer treatment	2	Gut, Colorectal
Diphtheria-tetanus-pertussis vaccine coverage	1	Pregnancy and Childbirth
Ischaemic heart disease	2	Heart
Lower respiratory infections	3	Infectious Diseases (1), Acute Respiratory Infections (2)
Malaria	5	Infectious Diseases
Stroke	2	Stroke
Tuberculosis	2	Infectious Diseases

Prioritisation

- We wanted to identify 10 priority Cochrane Reviews to be updated with an equity focus to assess whether the intervention of interest will:
  1. truly benefit ‘priority populations‘ (those at increased risk of inequity, lack of diversity, failure of inclusion);
  2. reduce or increase inequities - will it have a bigger/same/smaller benefit in the priority populations?

Prioritisation

- **The assessment panel consisted of representation from:**
  - 8 Cochrane CRG Networks
  - 1 Cochrane Field and 1 Cochrane Geographic Group
  - Cochrane partners – Pan American Health Organisation, Evidence Aid and the Campbell Collaboration.
  - Health equity experts and stakeholders, informed by links with the Campbell and Cochrane Equity Methods Group.

Prioritisation

- Used a modified version of the SPARK tool for priority setting

1. Addressing this question responds to a problem that is of ***large burden.***
2. Addressing this question responds to a problem that is ***persistent.***
3. Addressing this question responds to the ***needs of the population***.
4. Addressing this question responds to the ***needs of decision-makers.***
5. Addressing this question responds to ***global health priorities.***
6. Addressing this question is a ***moral obligation***.
7. Addressing this question is expected to positively ***impact health equity***.
8. Addressing this question is expected to positively ***impact population health.***
9. Addressing this question is expected to positively ***impact patient experience of care.***
10. Addressing this question is expected to positively ***impact health care expenditures.***
11. Using the research evidence for this question ***is critical to inform decision-making***.
12. Using the research evidence for this question is expected to be ***supported by political actors***.

Akl, E. A., Fadlallah, R., Ghandour, L., Kdouh, O., Langlois, E., Lavis, J. N., ... & El-Jardali, F. (2017). The SPARK Tool to prioritise questions for systematic reviews in health policy and systems research: development and initial validation. Health research policy and systems, 15(1), 1-7.

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Results

- We collated stakeholders' final score for each review into a table.
- We ordered the reviews by CRG and ranking (lower score = higher priority), to highlight the highest priority reviews for each listed CRG.
- We planned to then assess the feasibility of updating the reviews but we lacked resources to complete this step.

Review Title	Condition	Cochrane Review Group	Total ranking score (lower score = higher priority)
Corticosteroids for pneumonia	Lower respiratory infections	Acute Respiratory Infections Group	**24**
Prophylaxis for Pneumocystis pneumonia (PCP) in non-HIV immunocompromised patients	Lower respiratory infections	Acute Respiratory Infections Group	**63**
Hospital at home for acute exacerbations of chronic obstructive pulmonary disease	Chronic obstructive pulmonary disease treatment	Airways Group	**49**
Antibiotics for exacerbations of chronic obstructive pulmonary disease	Chronic obstructive pulmonary disease treatment	Airways Group	**55**
Non-invasive ventilation for the management of acute hypercapnic respiratory failure due to exacerbation of chronic obstructive pulmonary disease	Chronic obstructive pulmonary disease treatment	Airways Group	**68**
Indacaterol, a once-daily beta2-agonist, versus twice-daily beta2-agonists or	Chronic obstructive	Airways Group	**71**

placebo for chronic obstructive pulmonary disease	pulmonary disease treatment		
Oxygen therapy in the pre-hospital setting for acute exacerbations of chronic obstructive pulmonary disease	Chronic obstructive pulmonary disease treatment	Airways Group	**87**
Trastuzumab containing regimens for early breast cancer	Breast Cancer	Breast Cancer Group	**54**
Primary prophylactic colony-stimulating factors for the prevention of chemotherapy-induced febrile neutropenia in breast cancer patients	Breast Cancer	Breast Cancer Group	**82**
Second-line systemic therapy for metastatic colorectal cancer	Colon and rectum cancer treatment	Colorectal Group	**66**
Strategies for detecting colon cancer in patients with inflammatory bowel disease	Colon and rectum cancer treatment	Gut Group	**78**
Extended-field radiotherapy for locally advanced cervical cancer	Cervical Cancer	Gynaecological, Neuro-oncology and Orphan Cancer Group	**68**
Comparison of different human papillomavirus (HPV) vaccine types and dose schedules for prevention of HPV-related disease in females and males	Cervical Cancer	Gynaecological, Neuro-oncology and Orphan Cancer Group	**71**
Adjuvant platinum-based chemotherapy for early stage cervical cancer	Cervical Cancer	Gynaecological, Neuro-oncology and Orphan Cancer Group	**75**

Exercise-based cardiac rehabilitation for coronary heart disease	Ischaemic heart disease	Heart Group	**49**
Trypanocidal drugs for chronic Trypanosoma cruzi infection	Chagas Disease	Heart Group	**57**
Hyperbaric oxygen therapy for acute coronary syndrome	Ischaemic heart disease	Heart Group	**73**
Intermittent preventive treatment for malaria in children living in areas with seasonal transmission	Malaria	Infectious Diseases Group	**11**
Antiretroviral therapy (ART) for treating HIV infection in ART-eligible pregnant women	Antiretroviral therapy coverage	Infectious Diseases Group	**16**
Isoniazid for preventing tuberculosis in HIV-infected children	Tuberculosis	Infectious Diseases Group	**20**
Artesunate versus quinine for treating severe malaria	Malaria	Infectious Diseases Group	**26**
Home- or community-based programmes for treating malaria	Malaria	Infectious Diseases Group	**29**
Insecticide-treated nets for preventing malaria	Malaria	Infectious Diseases Group	**42**
Optimal time for initiation of antiretroviral therapy in asymptomatic, HIV-infected, treatment-naive adults	Antiretroviral therapy coverage	Infectious Diseases Group	**54**
Artemether for severe malaria	Malaria	Infectious Diseases Group	**58**
Adjunctive corticosteroids for Pneumocystis jiroveci pneumonia in patients with HIV infection	Lower respiratory infections	Infectious Diseases Group	**63**

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Method

- Use Equity-Effectiveness Loop Framework i.e.

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Methodological Expectations of Cochrane Intervention Reviews (MECIR)

Equity extension of MECIR

MECIR conduct standard 4:
Consider in advance whether issues of equity are important to the review, and plan for appropriate methods to address them such as those relating to particular participant groups (low-socioeconomic groups, low- or middle-income regions, women, children and older people), intervention comparisons or outcome

MECIR Standard	Equity Extension Standard
Research PICO Question	Formulation of the question and logic model across PROGRESS-Plus Priority Populations [Place,Race/culture,Occupation,Gender/Sex,Religion,Education,Social Capital, SES Status, Plus]
Eligibility Criteria	Including RCT and NRS study designs to capture effectiveness in 'Priority Populations'
Outcomes	Include outcomes of importance to Priority Populations
Review Methods	Include Methods for estimating effects within 1 or more PROGRESS-Plus Priority Populations
Searching	Include a search strategy that will identify PROGRESS-Plus Priority Populations
Selecting Studies	Nothing extra
Collecting Data	Nothing extra
Assessing ROB of individual studies	Nothing extra
Synthesizing results	Describe methods for describing relative and absolute differences between overall and priority PROGRESS-Plus groups
Creating 'Summary of findings' tables	Draft SOFs showing relative and absolute estimates for different prevalences relevant to different priority PROGRESS-Plus Groups
Conclusions Interpreting findings (in relation to health equity)	Describe applicability to 'priority populations'

Method

- Will use Equity-Effectiveness Loop Framework i.e.

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3. **Produce tailored Summary of Findings tables for Equity/ Diversity/ Inclusion - Priority Populations.**

Method

3. Produce tailored Summary of Findings tables for Equity/Diversity/Inclusion - Priority Populations.

Looking for differences in **baseline risk** or intervention effectiveness and implementation using PROGRESS-Plus to identify characteristics across which the intervention may behave differently (Cochrane Handbook, 2019).

Differences in Baseline Risk associated with poverty between High Income and Low/Middle Income Countries

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What did the pilot achieve?

- Identified 33 Cochrane reviews concerning topics with a high global burden of disease – providing CRG Networks with information that could inform the prioritisation of review updates, specifically with the aim of updating the reviews ranked as high priority with a health equity lens.
- Provided a forum for thinking through the process of how to set priorities across Networks.
- Showed we can usefully engage a diverse group of stakeholders

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Looking to the future

- Discuss at a senior level whether resources can be allocated to this effort and further work e.g. exploring morbidity
- Cochrane and Campbell Equity Methods Group keen to work with the new Cochrane Evidence Synthesis Units and other CRGs to implement this for their specific scope
- Ensure consideration of equity is a priority in Cochrane reviews!

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Thank you for listening!

and thanks to the following people for their work on this pilot:

Peter Tugwell, Ruth Foxlee, Nicole Skoetz, Michael Brown, Jordi Pardo Pardo, Robert Dellavalle, Mindy Szeto, Torunn Sivesind, Melissa Laughter, Vivian Welch, Jennifer Petkovic, George Wells.