JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

Section D

Refining of the Question

Chapter 5 *Cochrane Handbook*—Participants

Box 5.2.a: Factors to consider when developing criteria for 'Types of participants'

- How is the disease/condition defined?
- What are the most important characteristics that describe these people (participants)?
- Are there any relevant demographic factors (e.g. age, sex, ethnicity)?
- What is the setting (e.g. hospital, community etc)?
- Who should make the diagnosis?
- Are there other types of people who should be excluded from the review (because they are likely to react to the intervention in a different way)?
- How will studies involving only a subset of relevant participants be handled?

Chapter 5 *Cochrane Handbook*—Interventions

Box 5.3.a: Factors to consider when developing criteria for 'Types of interventions'

- What are the experimental and control (comparator) interventions of interest
- Does the intervention have variations (e.g. dosage/intensity, mode of delivery, personnel who deliver it, frequency of delivery, duration of delivery, timing of delivery)?
- Are all variations to be included (for example is there a critical dose below which the intervention may not be clinically appropriate)?
- How will trials including only part of the intervention be handled?
- How will trials including the intervention of interest combined with another intervention (co-intervention) be handled?

Chapter 5 *Cochrane Handbook*—Outcomes

Box 5.4.a: Factors to consider when developing criteria for 'Types of outcomes'

- Main outcomes, for inclusion in the 'Summary of findings' table, are those that are essential for decision-making, and should usually have an emphasis on patient-important outcomes.
- Primary outcomes are the two or three outcomes from among the main outcomes that the review would be likely to be able to address if sufficient studies are identified, in order to reach a conclusion about the effects (beneficial and adverse) of the intervention(s).
- Secondary outcomes include the remaining main outcomes (other than primary outcomes) plus additional outcomes useful for explaining effects.
- Ensure that outcomes cover potential as well as actual adverse effects.
- Consider outcomes relevant to all potential decision makers, including economic data.
- Consider the type and timing of outcome measurements.

Outcomes—ClinicalTrials.gov

- Each outcome has five elements:

Source: Zarin et al. (2011). *NEJM, 364*:852-60; Examples courtesy of Ian Saldanha

Outcomes—ClinicalTrials.gov

- Each outcome has five elements:

I. Domain (for example, anxiety)

Source: Zarin et al. (2011). *NEJM, 364*:852-60; Examples courtesy of Ian Saldanha

Outcomes—ClinicalTrials.gov

- Each outcome has five elements:

I. Domain (for example, anxiety)

II. Specific measurement(s) (for example, Hamilton Anxiety Rating Scale)

Source: Zarin et al. (2011). *NEJM, 364*:852-60; Examples courtesy of Ian Saldanha

Outcomes—ClinicalTrials.gov

- Each outcome has five elements:

I. Domain (for example, anxiety)

II. Specific measurement(s) (for example, Hamilton Anxiety Rating Scale)

III. Specific metric(s) (for example, change from baseline)

Source: Zarin et al. (2011). *NEJM, 364*:852-60; Examples courtesy of Ian Saldanha

Outcomes—ClinicalTrials.gov

- Each outcome has five elements:

I. Domain (for example, anxiety)

II. Specific measurement(s) (for example, Hamilton Anxiety Rating Scale)

III. Specific metric(s) (for example, change from baseline)

IV. Method(s) of aggregation (for example, mean, median)

Source: Zarin et al. (2011). *NEJM, 364*:852-60; Examples courtesy of Ian Saldanha

Outcomes—ClinicalTrials.gov

- Each outcome has five elements:

I. Domain (for example, anxiety)

II. Specific measurement(s) (for example, Hamilton Anxiety Rating Scale)

III. Specific metric(s) (for example, change from baseline)

IV. Method(s) of aggregation (for example, mean, median)

V. Time point(s) (for example, 3 months, 6 months)

Source: Zarin et al. (2011). *NEJM, 364*:852-60; Examples courtesy of Ian Saldanha

Components of Well-Constructed and "Answerable" Clinical Questions

P	Patients or populations
I/E	Intervention/exposure
C	Comparison group(s)
O	Outcome

PICO vs PICOTS

- Some groups add “TS” to PICO
- T = Timing (duration of minimum follow-up)
- S = Setting (primary care, specialty, inpatients)

A Combined Effectiveness and Harm Therapy Question

- Effectiveness—best answered with an RCT
- Harm—best answered with an RCT, but usually more practical to use observational data (rare events, occurring after follow-up completed in an RCT)

Refinement of Question

- Generally not possible to formulate an answerable question without knowing a bit about what data are available
- Need to guard against testing a post hoc hypothesis