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Reviewing and interpreting bodies of evidence for preparing practice recommendations

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Reviewing and Interpreting Bodies of Evidence for Preparing Practice Recommendations

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What types of evidence / knowledge to include in a review?

A Framework for Thinking About Evidence

Best Available Research Evidence

Evidence Based Decision Making

Experienctial Evidence

Contextual Evidence

Figure 1

Puddy, R. W. & Wilkins, N. (2011). *Understanding Evidence Part 1: Best Available Research Evidence. A Guide to the Continuum of Evidence of Effectiveness.* Atlanta: CDC

Research

Organizational

User & Provider

Expert

Policy
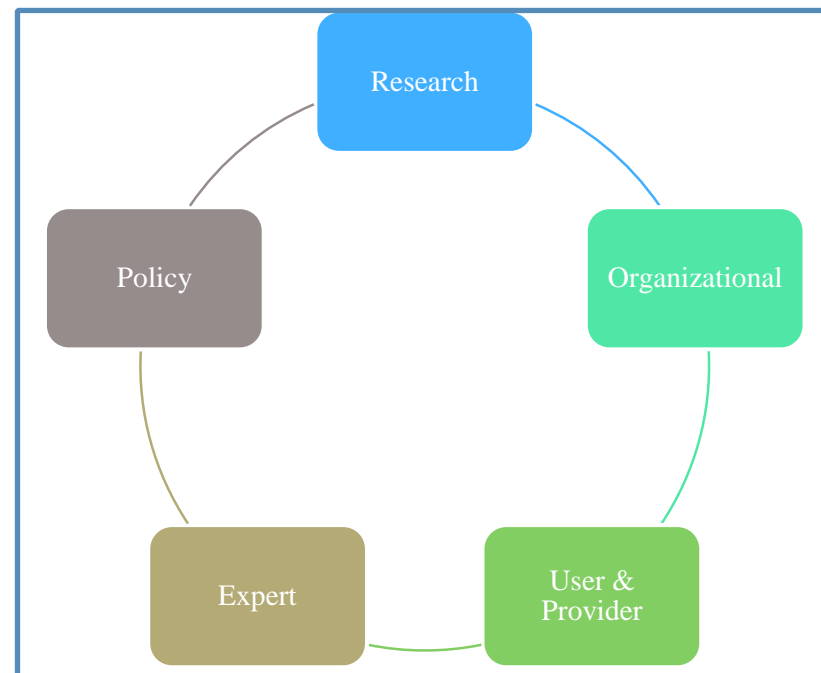
Rutter et al (2010). *SCIE Systematic Research Reviews: Guidelines.* London: Social Care Institute for Excellence

Consider also:
- "Practice enquiry"
- Economic consequences

UKaid
from the British people

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Systematic Reviews

"A systematic review is a scientific investigation that focuses on a specific question and uses explicit, pre-specified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data"
(Institute of Medicine, US National Academy of Sciences)

"A systematic review can be defined as a summary of the literature that uses explicit and systematic methods to identify, appraise and summarise the literature according to predetermined criteria. If this description (of the methods) is not present, it is not possible to make a thorough evaluation of the quality of the review"
(UK National Institute for Health & Clinical Excellence)

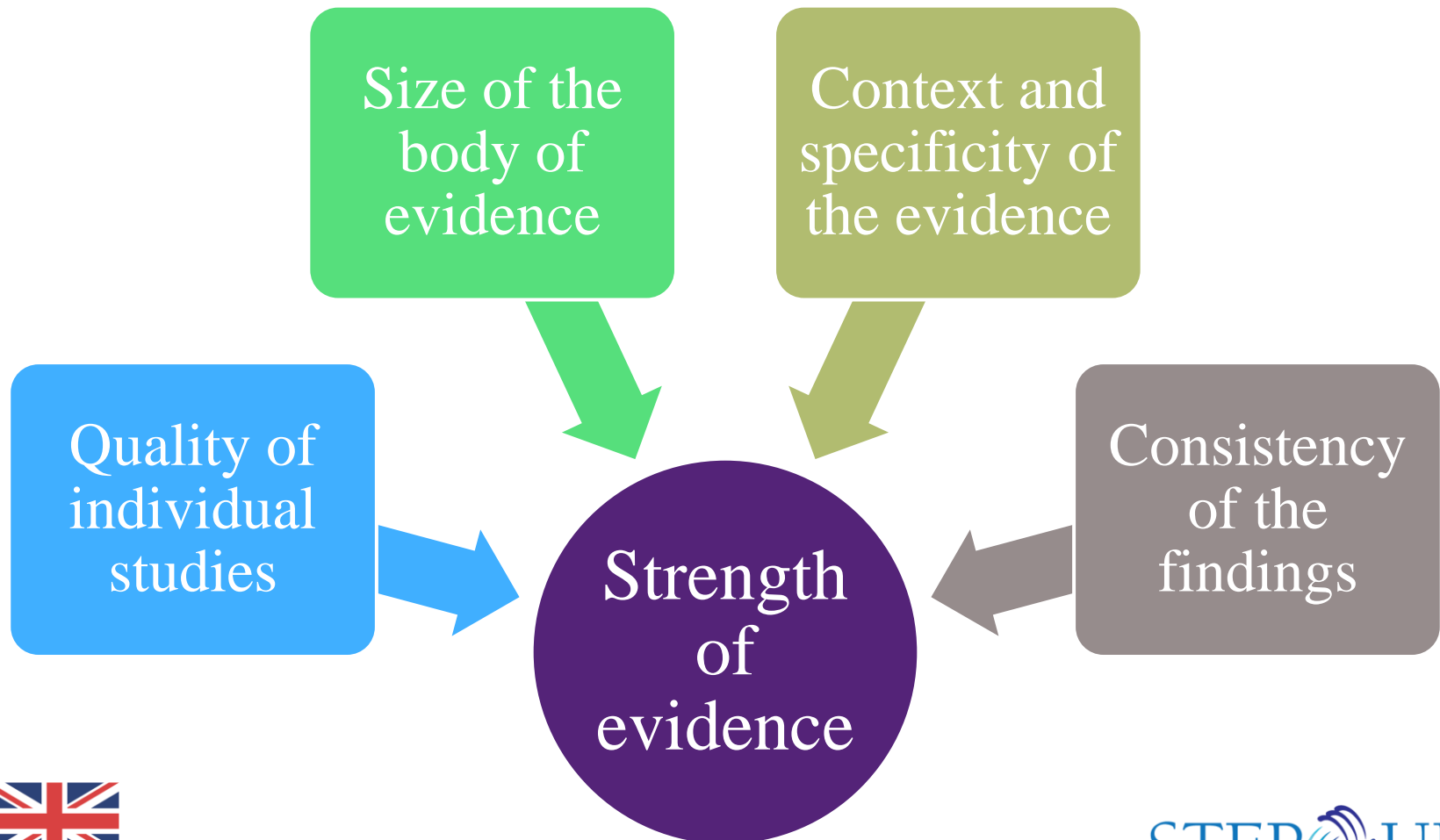### The key characteristics of a **systematic** review are:

- A clearly stated set of objectives with pre-defined eligibility criteria for including studies;
- An explicit, reproducible methodology;
- A systematic search that attempts to identify all studies that would meet the eligibility criteria;
- An assessment of the validity of the findings of the included studies;
- A systematic presentation, and synthesis, of the characteristics and findings of the included studies.

(Cochrane Review)

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Systematic review process

- **Step 1:** Initiate the process:

- **Step 2:** Develop the review protocol:

- **Step 3:** Systematically locate, screen, and select the studies for review

- **Step 4:** Appraise the risk of bias in the individual studies and extract the data for analysis

- **Step 5:** Synthesize the findings and assess the overall quality of the body of evidence

- **Step 6:** Prepare a final report and have the report undergo peer review

Institute of Medicine 2011. *Finding what works in health care: standards for systematic reviews*, National Academy of Sciences

Criteria when assessing the overall strength of a body of evidence

Size of the body of evidence

Context and specificity of the evidence

Quality of individual studies

Strength of evidence

Consistency of the findings

DFID. 2013. Assessing the Strength of Evidence, DFID: London

Categorizing the strength of evidence

Categories of Evidence	Combinations of Criteria	Body of Evidence includes…
Very Strong	High quality body of evidence, large in size, consistent, and closely matched to the specific context of the intervention	Studies based on experimental designs (including impact evaluations), as well as systematic reviews and/or meta-analysis
Strong	High quality body of evidence, large or medium in size, generally consistent, and matched to the specific context of the Intervention	Experimental or quasi-experimental designs, observational research designs that attempt counterfactual analysis, systematic reviews.
Medium	Moderate quality studies, medium size evidence body, generally consistent, which may or may not be relevant to the intervention. Limited number of high quality studies.	Multiple designs, but which have been assessed as being of moderate quality. The studies do not offer robust findings that can be derived and replicated across a range of contexts.
Limited	Moderate or low quality studies, small or medium size body, inconsistent, not matched to intervention	Varied designs and methodologies, which do not meet minimum standards. Includes causal inference from single case studies in limited contexts, and cross-sectional analysis without baseline data.

DFID. 2013. <u>Assessing the Strength of Evidence</u>, DFID: London

Using evidence to develop practice recommendations

- GRADE emphasizes importance of separating quality of evidence from strength of recommendation

➢ Strong recommendation for / against

➢ Conditional recommendation
  ▪ Unanswered questions relating to effectiveness, safety, feasibility, acceptability: ➡ "with rigorous research"

  ▪ Uncertainties about the intervention in certain conditions or contexts or populations: ➡ "with targeted M&E"

Key issues

➢ Agreeing on types of knowledge to include and exclude

➢ Agreeing on standards for a process of reviewing bodies of evidence

➢ Hierarchy or matrix of evidence

➢ Deriving strength of recommendation from quality of evidence

➢ Terminology for describing evidence quality and strength of recommendation

    ➢Messaging, especially for "conditional" recommendations

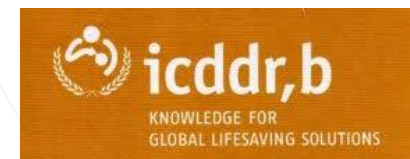The **STEP UP (Strengthening Evidence for Programming on Unintended Pregnancy) Research Programme Consortium** is coordinated by the Population Council in partnership with the African Population and Health Research Center; icddr,b; the London School of Hygiene and Tropical Medicine; Marie Stopes International; and Partners in Population and Development. STEP UP is funded by UK aid from the UK Government.