What could Cochrane do better for guideline developers?

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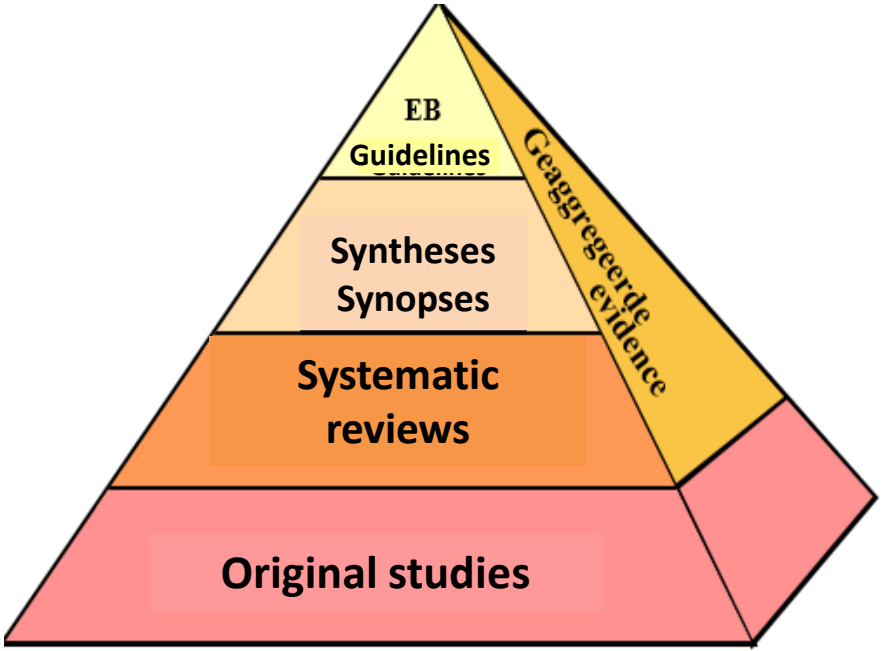
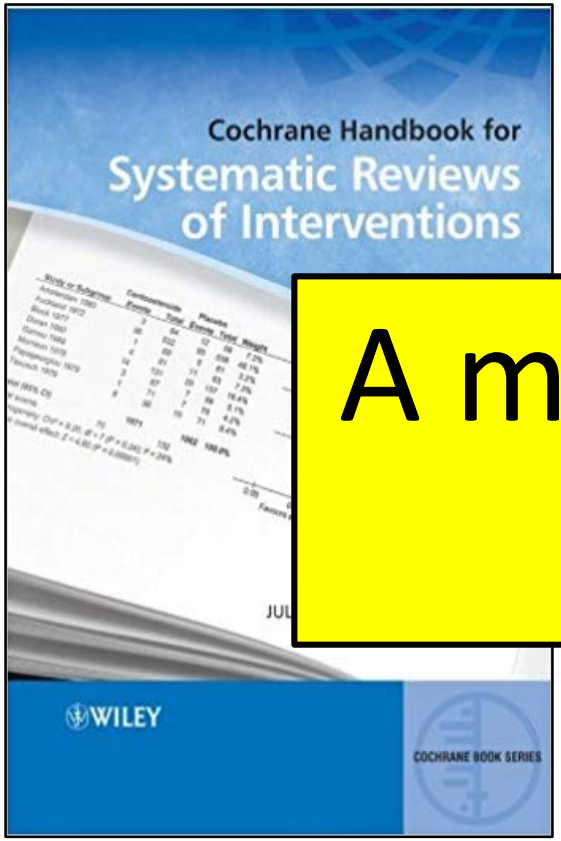
I declare no conflict of interest

The evidence pyramid





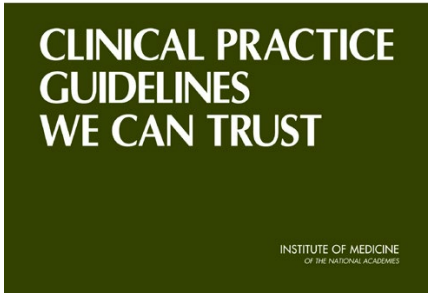
A match re-made in heaven?

What is an evidence-based guideline?

- A document with recommendations to support practitioners and care users, aimed at improvement of the quality of care,based on evidence, expertise and experiences of practitioners and care users

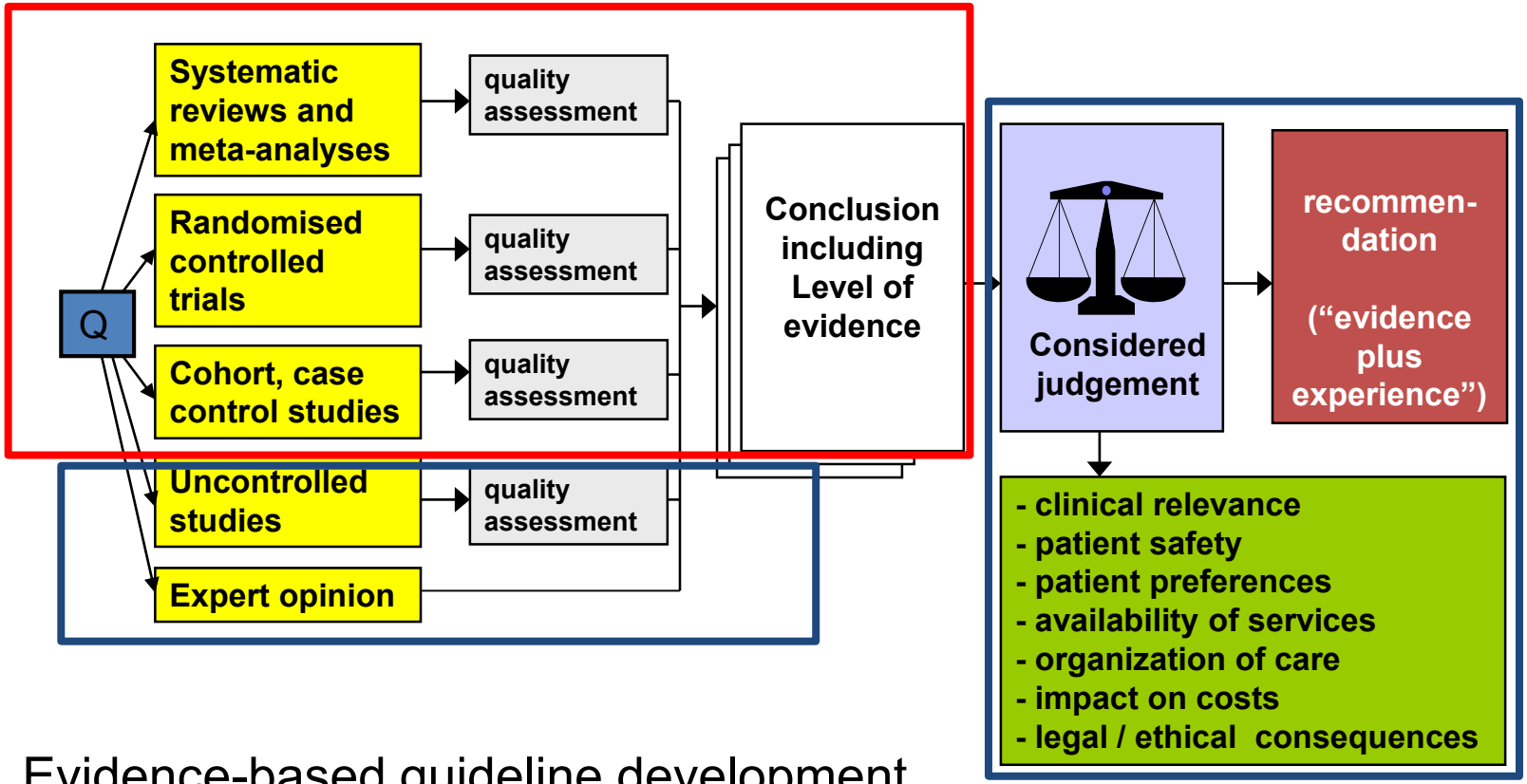
(Working Group Guideline for Guidelines, Regieraad 2011)

Institute of Medicine 2011



Guidelines should be:

- based on a systematic review of existing evidence;
- developed by a multidisciplinary panel of experts and key representatives;
- considering patient preferences, as appropriate;
- based on an explicit and transparent process that minimizes biases, and conflicts of interest;
- providing quality of evidence and strength of recommendations;
- reconsidered and revised as appropriate when important new evidence warrants it



Evidence-based guideline development

Our vision

Our vision is a world of improved health where decisions about health and health care are informed by high-quality, relevant and up-to-date synthesized research evidence.

To promote evidence-informed health decision-making by producing high-quality, relevant, accesible reviews & other synthesized research evidence

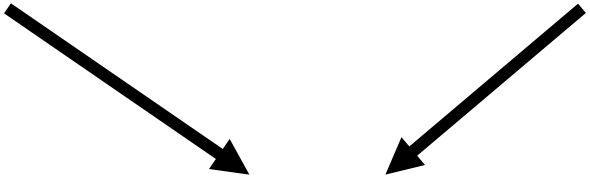
Our work is internationally recognized as the benchmark for high-quality information about the effectiveness of health care.

Range of knowledge used by NICE

	MSCC*	Advanced Breast Ca
Consensus alone	32%	44%
Observational studies	40%	16%
RCTs	7%	37%
Other guidance	17%	-
'Extrapolation'	3%	-
Health economic studies	1%	2%
Audit data	1%	-

*= metastatic spinal cord compression

CG75. November 2009
www.nice.org.uk/CG75.



GRADE

- Level of evidence
- Strengths of recommendations
- Evidence to decision frameworks

Future developments in guidelines

- Inclusion and appraisal of other forms of knowledge
  (G-I-N AID knowledge working group)
- Development of different cliënt or situational profiles (personalized medicine)
  - subgroup or sensitivity analyses in SR's
- Shared decision making
  - More options in recommendations
  - "decision aids"

Introducing other kinds of evidence?

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EdM analysis

OPEN ACCESS

Different knowledge, different styles of reasoning: a challenge for guideline development

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Introduction: the challenge of knowledge inclusion in guidelines

Evidence-based guidelines whether national, regional or developed by specialty groups, must search for, and explicitly consider, evidence from sources other than conventional clinical trials and their quantitative data. This need for appraising and including knowledge from a wide variety of sources in guideline development is well recognised.[1–3]

Although evidence on statistical association—usually from randomised controlled trials (RCTs)—is commonly thought to be the dominant type of knowledge appraised and included, guideline developers frequently use a range of other types of knowledge including the views and experiences of those using and providing health services, understanding of how interventions work (eg, from logic models or realist evaluations), and other information, such as aetiology and the context of care (online supplementary text box 1).

These different types of knowledge are used and needed in many situations, for example, when evidence from RCTs is not available, impossible to obtain, contradictory or inappropriate. They can also be used in conjunction with knowledge from RCTs to provide context, to assess relevance and to understand bias. Furthermore, explicit (written or spoken) knowledge and the more intricate forms of knowledge like experiential and contextual knowledge can help guideline makers to take an approach consistent with the intentions of early evidence-based medicine (EBM) proponents: namely, that best evidence is not restricted to evidence from RCTs and meta-analyses alone.[4]

However, how to properly appraise (judge) and include (integrate) different kinds of knowledge remains unclear. Agreed methods are not yet available or are in the early stages of development and the need for and use of different kinds of knowledge is not always explicitly acknowledged, which affects the use of guidelines in practice.[5 6] International and cultural differences in guideline production practices may further impede developments in appraising and including a broader range of types of knowledge (online supplementary text box 2).

In this paper, we discuss four specific aspects of guideline development to highlight the main challenges identified by the AID Knowledge Working Group through discussions and workshops with guideline developers and users (online supplementary text box 3):

1. the purpose of guideline development;
2. the problem of induction;
3. the dominance of frequency based reasoning;
4. the challenge of integrating different sources of knowledge.

In order to do this, we refer to some philosophical concepts around knowledge creation.

The purpose of guideline development

The efforts of the pioneers of the EBM movement were primarily in response to the discovery of the variation problem in population studies. Reducing variation of the care provided at a population level was considered to be an important way to achieve improved quality for individual patients.[7] Hence, epidemiology, the science of studying *populations*, gained prominence in guidelines, the aims of which are to support decisions for *individual* patients. Classic epidemiology became clinical epidemiology when introduced to the bedside and the dominance of RCTs as the gold standard for intervention studies to assess causal relation between interventions and effect followed in this construct of epidemiology as used in EBM. The underlying—yet little explored—assumption is that guidelines based on population studies provide the best advice to inform clinical decisions for individual patients or situations.

However, reducing variation is not the only reason for developing guidelines; they are developed for several reasons, of which the most important one is to improve the quality of care. In order to meet the range of needs, guidelines may need different approaches, such as summarising large quantities of knowledge for practising healthcare professionals, serving as an intermediate product for other tools or applications (such as clinical decision support software) or providing implementation guidance. Although not primarily developed for this purpose, guidelines can also serve as tools to legally shield both patients and professionals, to help governments and health

Type of reasoning	Short description
Bayesian evasion (Hacking)	learning from experience
Abduction (Peirce)	to the best explanation
Mechanistic/deterministic	how things appear to work
Falsification (Popper)	trial and error
Precautionary principle	uncertainty→prevent harm
Logic of care (Mol)	healthcare is a practice
Non-analytical (Gigerenzer)	using intuition

Future developments in guidelines

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  (G-I-N AID knowledge working group)
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  - More options in recommendations
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Selection and frasing of clinical questions

- *“We wanted to find out if vocational rehabilitation can help workers return to work after injuring their fingers, hand or arm”*
- Based on coincidence, a research project, enthusiasm, availability of resources or on important bottlenecks in clinical care…….?

➢ Involving guideline developers and stakeholders more systematically at the start

➢ GL’s present gaps in knowledge →input for Cochrane

Timing and planning of updates

- Increasingly a modular approach in updating of guidelines is /will be used
- Gives opportunities for a better match between guideline topics and Cochrane reviews

➢ Active role of Coordinator and Editorial Board

➢ More direct contact between review groups and guideline developers

What could Cochrane do better?