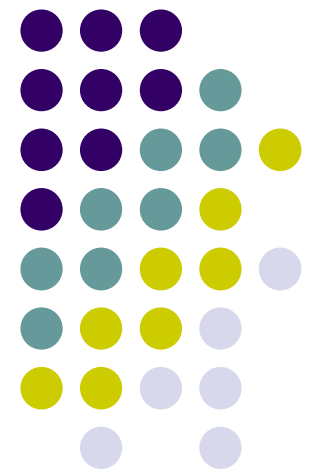
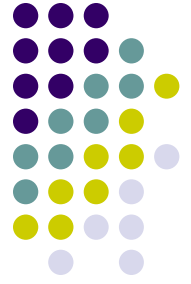


Synthesising evidence

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Systematic reviews

- Conventionally understood to be characterised by:
 - An explicit study protocol
 - Pre-specified, highly focused question
 - Explicit methods for searching
 - Explicit methods for appraisal
 - Explicit methods for synthesis of studies



Systematic reviews

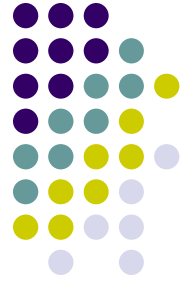
- Routinisation of processes of review – searching, selection, appraisal, synthesis
- Advantages seen to lie in rigour and transparency of process
- Address the fallibilities of informal reviews

Systematic reviews challenge “the author” and emphasise procedure



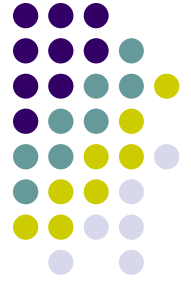
- Weakness of informal review seen to derive from failures in procedural specification and tendency of reviewer to
 - Be chaotic or negligent in identifying and assessing relevant evidence
 - Construct idiosyncratic theories and marshal evidence in support of these

The rise of the evidence-based policy and practice movement



- The Antman moment – 1992
- Dramatically illustrated how informal reviews led to ineffective treatments being recommended for MI and effective treatments going unrecognised
- Among a series of “shocks and crises” relating to evidence

Conventional systematic review



- Is a very good thing
- But only when used for the right questions
- Many of the criticisms apply only when it is inappropriately used for the wrong questions
- Or when it is valorised as the only legitimate way of doing any review
- Public health questions in particular often require a different approach

Sources of frustration with SRs in public health



- Tendency to see systematic reviews as the only authoritative source of “the evidence”
- Proceduralisation of review processes very appropriate and necessary for some types of question – not others
- Scientific credibility seen to derive from displays of compliance with procedures
- Procedures can involve suppression of “the author” (critique, creativity, interpretation)
- Constructs the thing “to be known” in a limiting way

Why is a problem that qualitative research tends to be excluded from systematic reviews?

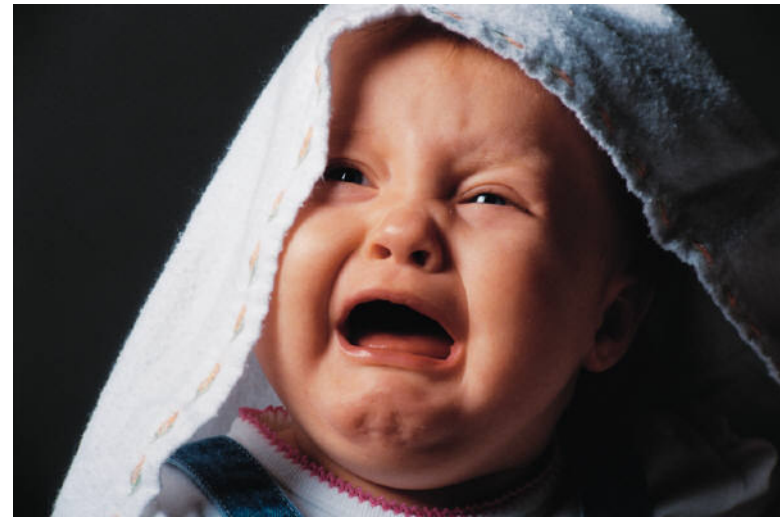


- Inappropriate definition of the question
- Inappropriate specification of the outcomes
- Inappropriate selection of variables for study
- Exclusion of potentially relevant data
- Inappropriate conclusions and indications for future research

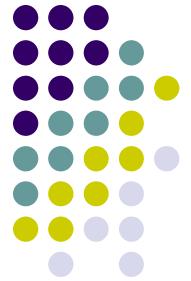
Safe havens for abandoned babies



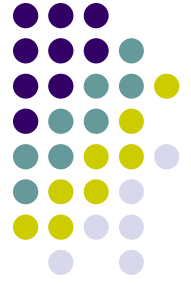
- Do want to be able to inform policy and law
- Can't do a trial
- Direct evidence hard to get
- Need to interrogate ethical and legal literatures
- Need to be able to draw on adjacent, not obviously "relevant" literatures – eg harm reduction
- Need to offer sophisticated, critical analysis



There are different types of review question



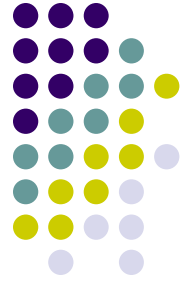
- Review questions are of different types and demand different forms of answers
- Review methods need to be matched to the type of questions
- Broadly, review methods are either *interpretive* or *aggregative*, though most contain elements of both



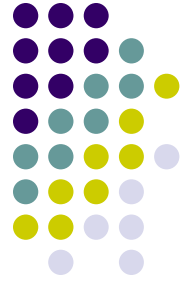
Some types of questions

- Listing
- Estimating
- Establishing relationships (esp of causality)
- Finding factors implicated in relationships
- Identifying causal chains
- Identifying conditions of causality
- Creating taxonomies
- Describing and characterising
- Determining stages
- Theorising and explaining

Systematic reviews typically produce aggregative syntheses



- Focus on summarising data
- Categories under which data are to be summarised are assumed to be secure and well-specified



Interpretive syntheses

- Sees the generation of the concepts of the analysis as one of its tasks - category specification therefore deferred til end of process

Methods for synthesis of qualitative and quantitative evidence



Primarily interpretive

- Critical interpretive synthesis
- Realist synthesis
- Narrative summary
- Meta-narrative mapping
- Grounded theory
- Meta-ethnography
- Meta-synthesis
- Meta-study
- Miles & Huberman's data analysis techniques
- Realist synthesis

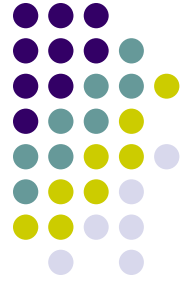
Primarily aggregative

- Content analysis
- Case survey
- Qualitative comparative analysis
- Bayesian meta-analysis

Dixon-Woods M, Agarwal S, Young B, Jones D, Sutton A. (2004) Integrative approaches to qualitative and quantitative evidence. London: Health Development Agency

<http://www.nice.org.uk/page.aspx?o=508055>

Why we need critical interpretive synthesis



- Situations where what is required is a theorisation of the evidence
- Encourage critique of literatures, questioning of taken-for-granted assumptions about concepts and methods

Why we need critical interpretive synthesis



- Situations where what is required is a *theorisation* of the evidence
- Where critique of literatures, questioning of taken-for-granted assumptions about concepts and methods is needed

Examples

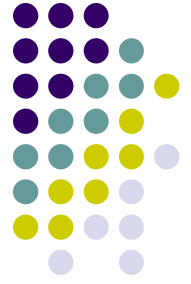
- Why are rates of breast-feeding so low among the socio-economically deprived?
- Is the “inverse care law” true?

Critical Interpretive Synthesis



- Conducts critique rather than critical appraisal – treats literature as an object of inquiry
- Questions “normal science” conventions and what influences choice of proposed solutions
- Embraces all types of evidence (qual, quan, theoretical) and is attentive to procedural defects in primary studies
- Acknowledges relevance of adjacent literatures
- Explicitly oriented towards theory generation
- Dixon-Woods M, Cavers D, Agarwal S, Annandale E, Arthur A, Harvey J, Hsu R, Katbamna S, Olsen R, Smith LK, Riley R, Sutton AJ (2006) Conducting a critical interpretive review of the literature on access to healthcare by vulnerable groups. *BMC Medical Research Methodology* 6: 35

Critical interpretive synthesis

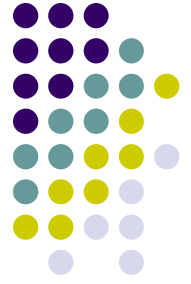


- Start with a review topic; formulate the question more precisely after scoping stage and remain open to possibility of modification
- Document searches, but draw creatively on literatures that don't fit precise search criteria
- Formal "critical appraisal" may be necessary for some, but not all, papers
- *Critique* is a key element of the process
- Synthesis is at the level of concepts
- Sampling and theory generation proceed concurrently

Critique of literature on access to healthcare

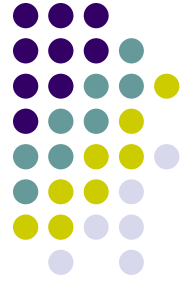


- “Inverse care law” is by no means proven
- Tendency to identify certain groups as likely victims of poor access
- Invoke normative assumptions about “need” relative to some apparently privileged group
- Tendency to assume lower use reflects discrimination
- Access is an emergent, not a fixed property
 - Utilisation studies very limited



CIS of access to healthcare

- Focus on how features of “the case” are orchestrated and how resources are mobilised around it
- Aspects of social and technical eligibility
- Influence of “operating conditions”



Outcomes of a CIS

- A review with fuzzy boundaries
- A mid-range theory
- Voice of “the author” is explicit and reflexively accounted for



Conclusions

- Review questions must be analysed to determine what type of answer they demand
- Method for synthesis should be matched to question
- Now a portfolio of methods for synthesis, many requiring further evaluation



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