

# The GRADE-CERQual approach for assessing how much confidence to place in the findings of qualitative evidence syntheses



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# What questions are decision makers asking?

Evidence of effectiveness is now seen as an important basis for health and social care decisions

Is the intervention effective and safe?

But decision makers are also asking other questions:

Will it be acceptable to patients and others?

Will it be feasible to implement?

Is it cost-effective?

# Example 1

- The government is re-organising care in children's institutions, including staffing arrangements
- They are uncertain whether staff should follow eight-hour shifts or week-long shifts

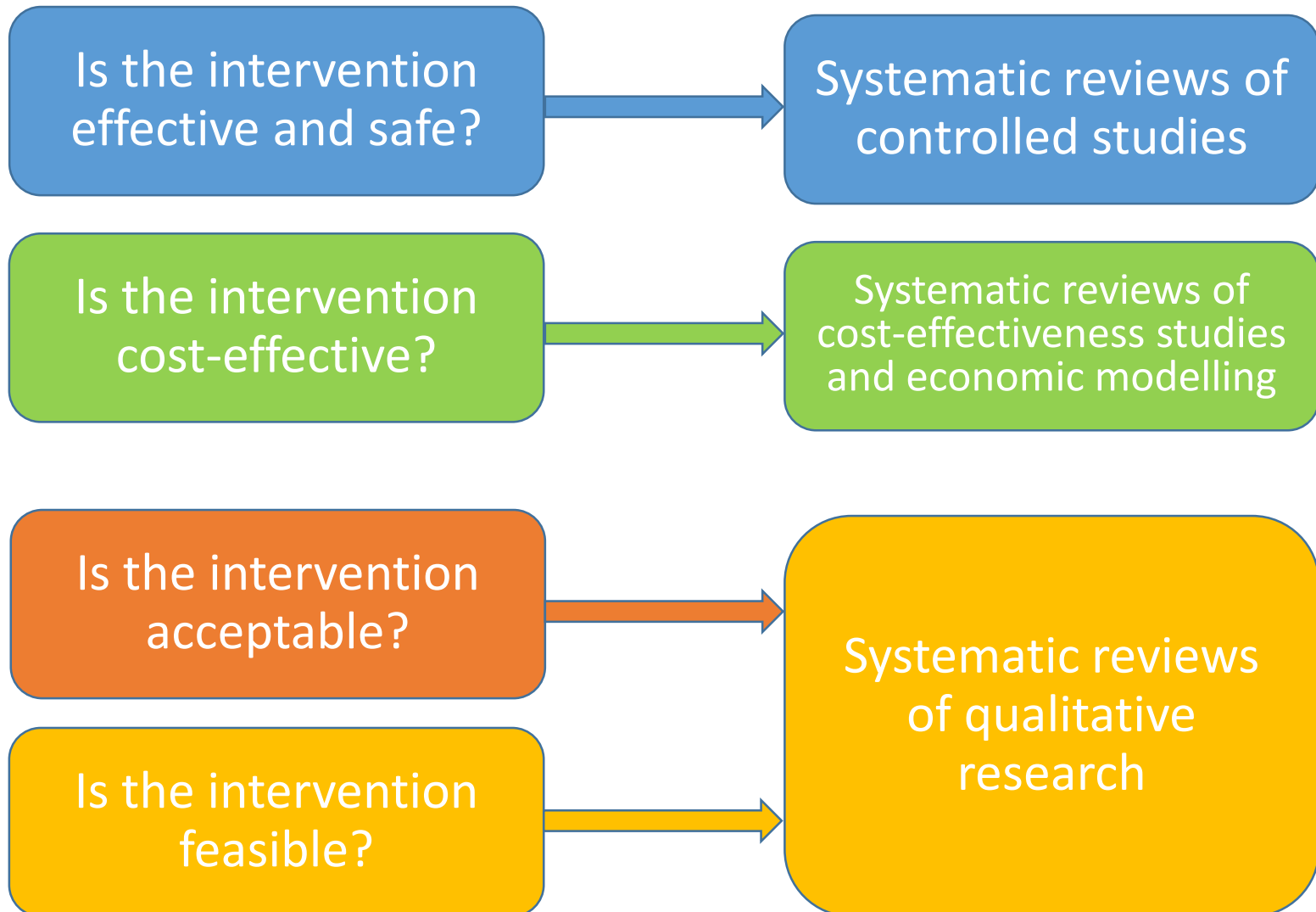


# The government asks you to assess the following:

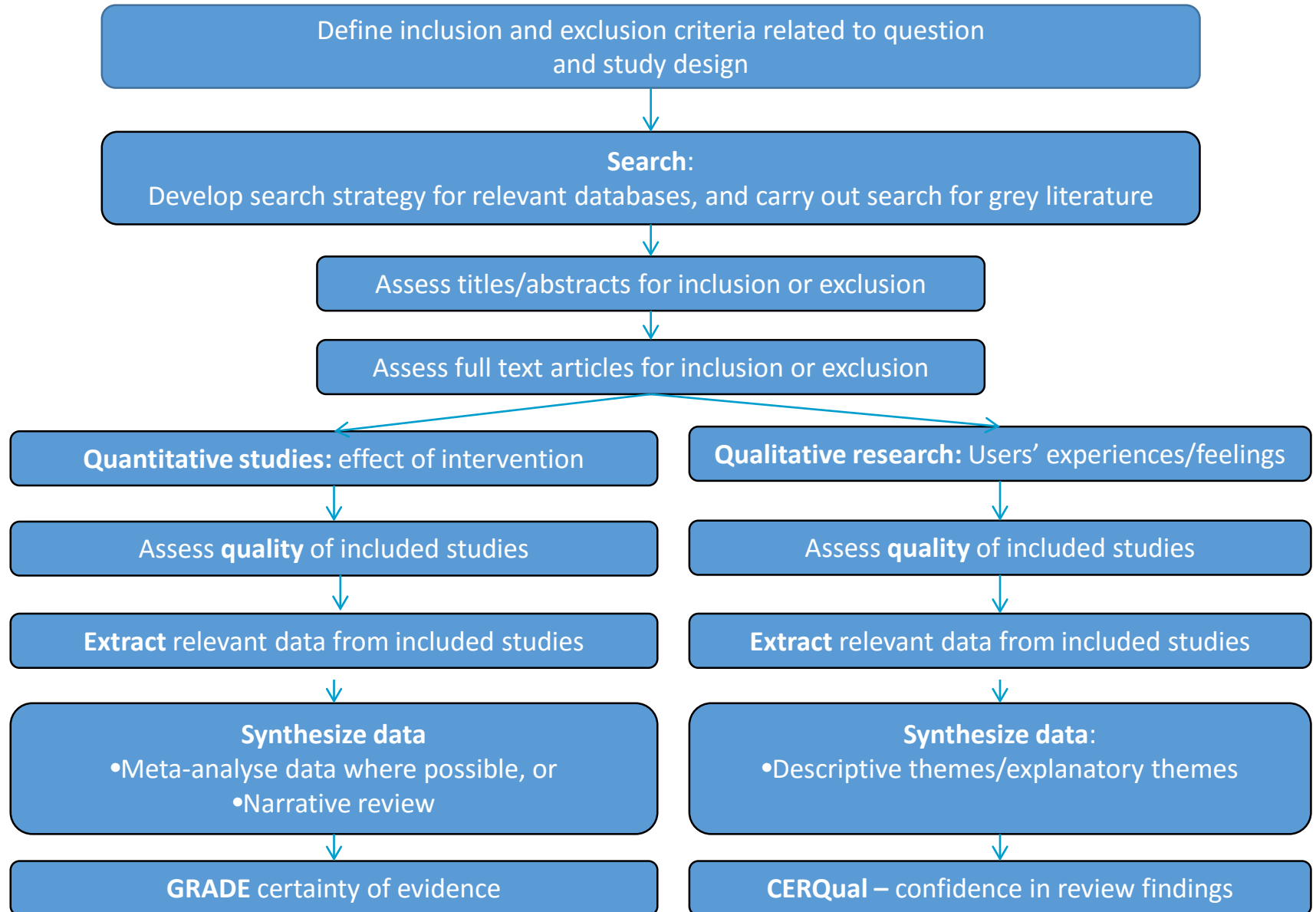
- Is one option more effective than the other, e.g. with regard to behavioural problems and cognitive development?
- How do children and staff experience the two options? Is the one more acceptable than the other?
- How feasible are the two options? What are the implications for pay, insurance, staff sleeping arrangements, etc.



# Evidence about acceptability and feasibility



# What is a qualitative evidence synthesis?



# What did the systematic reviews find?

- The assessment of *effectiveness* concludes that there is no difference between the two options with regard to cognitive development, while the effect on behavioural problems is uncertain
- However, the assessment of *acceptability* shows that children say that they prefer it when staff have week-long shifts. They like the stability and structure, the opportunity to form attachments. They also like relating to fewer caregivers

# What do you tell the government?

- How certain are you that the *acceptability* finding is a reasonable representation of the experiences of children living in institutions?
- What aspects of the research might make you less confident in these findings?



The CERQual approach: Assessing confidence in findings from a review of qualitative research

**GRADE** CERQual

# In developing CERQual, we needed an approach that:

- Could be applied to the typical types of qualitative study approaches (e.g. ethnography,) and data (e.g. from interviews, focus groups etc.)
- Was easy to use
- Allowed judgements to be reported transparently
- Allowed the judgements to be understood, including by users without an in-depth understanding of qualitative methods

# CERQual is not a tool for:

- Assessing how well an individual qualitative study was conducted
- Assessing how well a systematic review of qualitative studies was conducted
- Assessing quantitative studies of quality of care
- Assessing confidence in ‘narrative’ or ‘qualitative’ summaries of the effectiveness of an intervention, where meta-analysis is not possible
- Assessing confidence in the overall findings of a qualitative evidence synthesis or providing a composite assessment of all of the findings of a review – the focus is on individual review findings



# What does the CERQual approach do?

- CERQual aims to transparently assess and describe how much confidence to place in findings from qualitative evidence syntheses



Remember:

- Your starting point is «high confidence» in the finding
  - Then look for *concerns*, not *perfection*
- GRADE-CERQual helps you *structure* your assessment of confidence, but ultimately it is a *judgement*
  - This judgment needs to be *transparent*
- Your main aim is to support *decision-makers*
  - By indicating concerns, you are warning decision makers that they should not be completely confident in the finding

# CERQual is applied to individual synthesis findings

- In the context of a qualitative evidence synthesis, a finding is...:

...an analytic output that describes a phenomenon or an aspect of a phenomenon

- Findings from qualitative evidence syntheses can be presented as:
  - themes, categories or theories
  - As both descriptive or more interpretive findings

# What do we mean by 'confidence in the evidence'?

An assessment of the extent to which a review finding is a reasonable representation of the phenomenon of interest

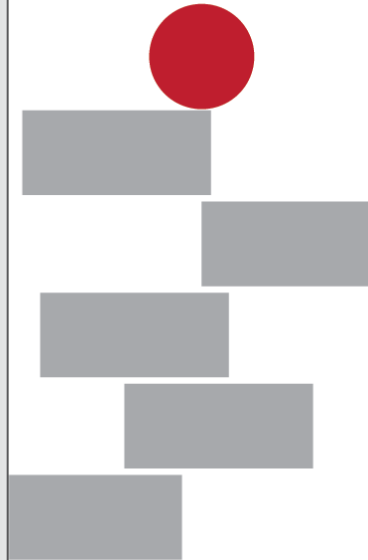
- i.e. the phenomenon of interest is unlikely to be substantially different from the research finding

# The CERQual approach

Methodological  
limitations  
component



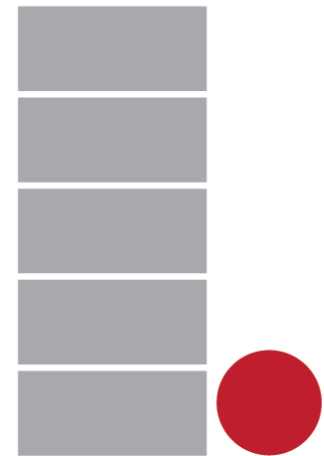
Coherence  
component



Adequacy  
component



Relevance  
component





# What skills do you need to apply CERQual?

- An understanding of systematic review methodology
- An understanding of the principles of qualitative research

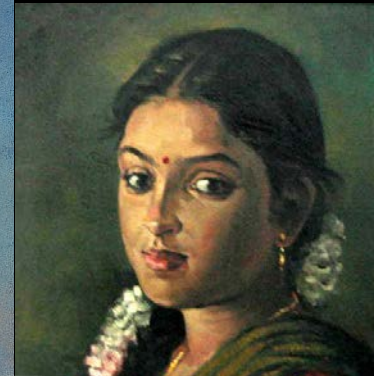
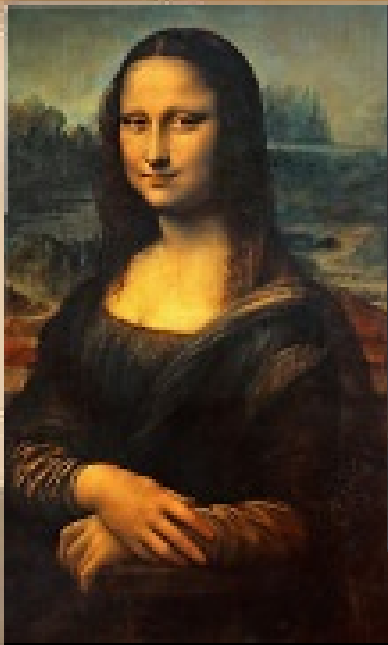
CERQual made easy

## Scenario:

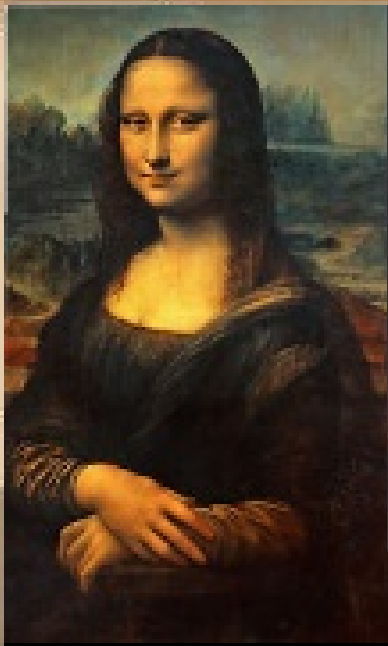
Decision makers are considering a new intervention

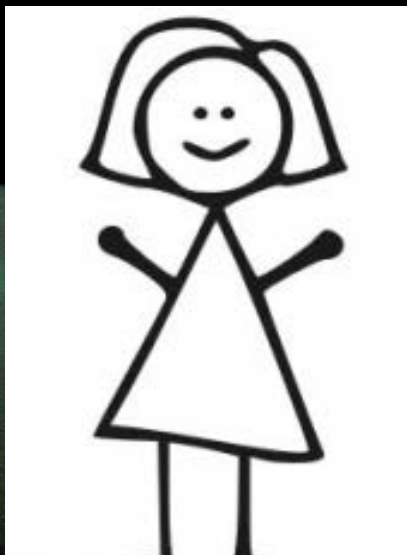
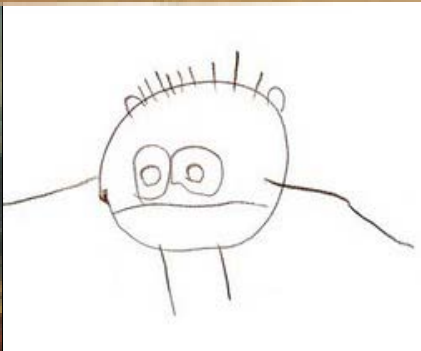
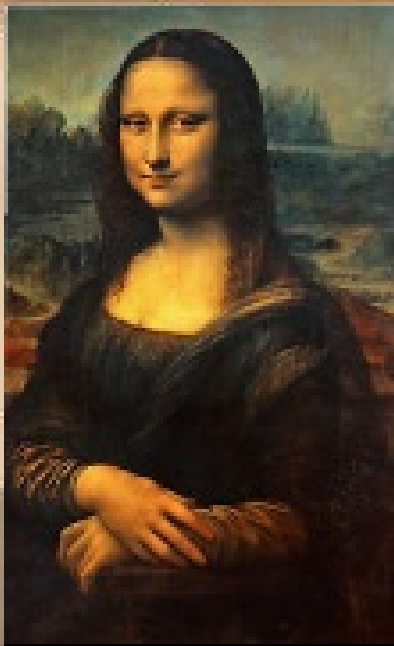
- But how are female patients likely to experience it?

Review of qualitative research is carried out –findings describe women's experiences of the intervention

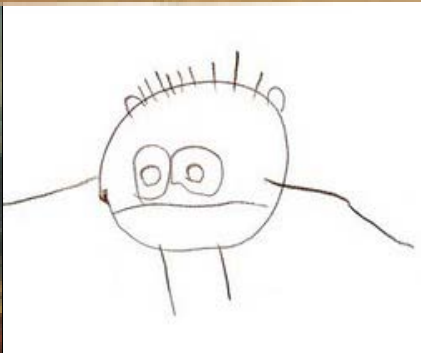
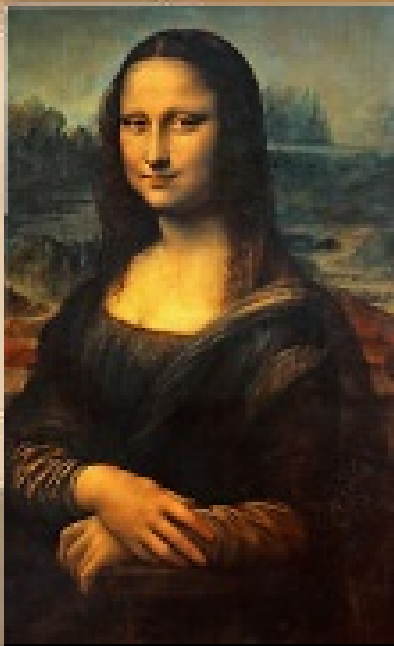


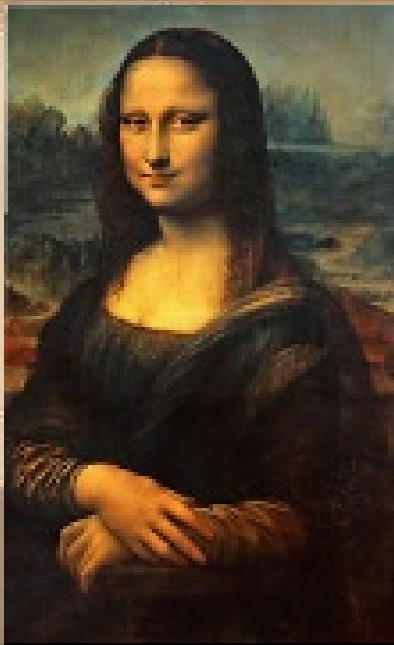




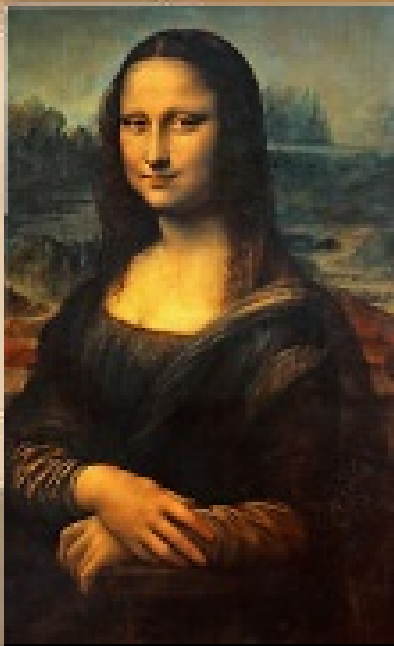








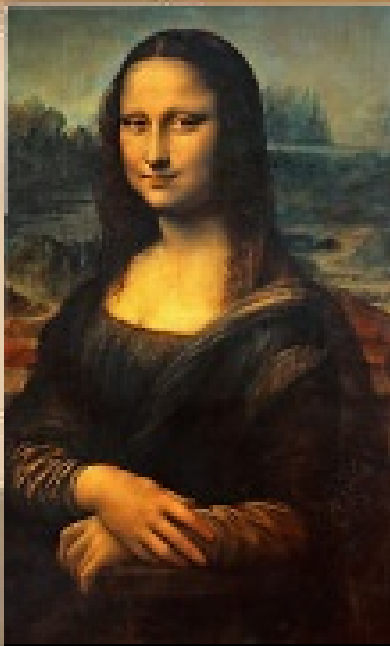










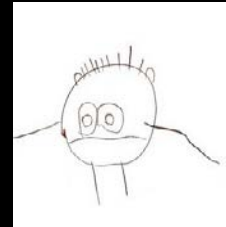




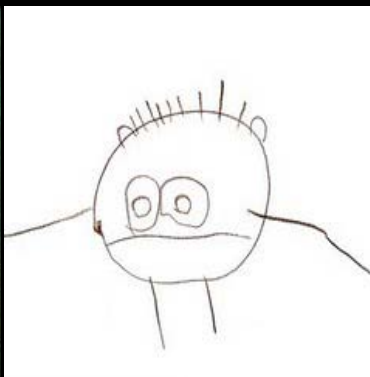
For each component, make an assessment.

This is expressed as:

- No or few concerns
- Minor concerns
- Moderate concerns
- Serious concerns







After assessing all four components an overall assessment is made, expressed as either:

- High confidence
- Moderate confidence
- Low confidence
- Very low confidence

# Group exercises



# Scenario

- You are carrying out an evaluation of how to best support individuals who are or could be diagnosed with different conditions within foetal alcohol spectrum disorder (FASD)
- As part of this work, you carry out a systematic review of qualitative research



# Scope of the review

- The review aims to explore the experiences of parents of children with FASD in living day to day with the conditions
- The review includes studies:
  - from any country
  - that explore parents' experiences of raising children with FASD
  - That use qualitative methods for data collection and qualitative methods for data analysis

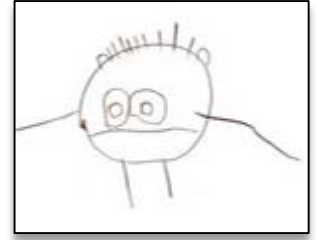
# The review findings

- The review includes 11 qualitative studies.
- The review presents a number of findings, including the following:

*Parents experience a lack of understanding and knowledge about FASD among professionals*

This finding was based on data from six of the included studies. The remaining five studies did not offer any data on experiences of understanding and knowledge among professionals

# Component 1: Methodological limitations



The extent to which there are *concerns about the design or conduct* of the primary studies supporting a review finding

# Concerns about methodological limitations

- We are less confident that the finding reflects the phenomenon of interest when:

the primary studies underlying a review finding are shown to have **problems in the way they were designed or conducted**

- A critical appraisal tool for qualitative studies should be used to make this assessment
  - Typically includes appraisals of how the participants and settings were selected, how data was collected and analysed, researcher reflexivity etc
- Currently no widespread agreement about the best tool – research agenda in place



# Group work (methodological limitations)

1. Look at the assessments that have been made in Table 1
2. Decide whether any concerns you have are serious enough to reduce your confidence in the review finding
3. Note your provisional assessment in Table 3
4. If time, discuss how these concerns could be addressed in future research

Tips 

# Group work (methodological limitations)

## ***Tips***

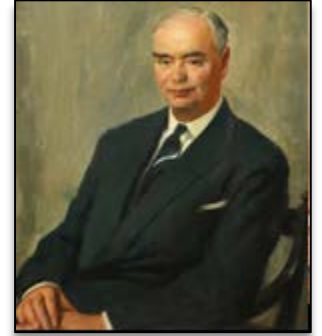
Where methodological limitations have been identified:

- Is this limitation likely to have had a serious impact on the review finding? Some limitations may be more serious than others. For instance, the use of some methods of data collection may be particularly inappropriate for some review findings but not for others.
- Where some of the studies have serious limitations, what is the relative contribution of these studies to the review finding? If these studies are key studies, this is of more concern. *(NB! This may be difficult to assess at this stage)*

## **Rate your assessment as:**

- **No or few concerns**
- **Minor concerns**
- **Moderate concerns**
- **Serious concerns**

# Component 2: Relevance



The extent to which the body of data from the primary studies supporting a review finding is *applicable to the context* specified in the review question



# Concerns about relevance

We are less confident that the finding reflects the phenomenon of interest when:

the contexts of the primary studies underlying a review finding are **substantively different from the context** of the review question



# Assessing relevance - examples

- **Indirect relevance, example:** One included study in the review on children's institutions focused on children from 3-5 years while the review was interested in on age group 10-18 years
- **Partial relevance, example:** Several of the included studies in the review on children's institutions focused on girls/asylum seekers, while the review was interested in all children
- **Uncertain relevance, example:** The ages of the children in the studies was unclear

# Group work (relevance)

1. Assess the relevance of the studies based on the information in Table 2
2. Decide whether any concerns you have are serious enough to reduce your confidence in the review finding
3. Note your provisional assessment in Table 3
4. If time, discuss how these concerns could be addressed in future research

Tips 

# Group work (relevance)

## *Tips*

Is there anything about the studies that raises concerns about relevance? For example:

- Time (for example, were the studies conducted too long ago to be relevant?)
- Setting (for example, country of the study, place of care, rural vs. urban)
- Treatment (for example, is the treatment in the study different from the one specified in the review question?)
- Perspective (for example, do we only have information about a subset of the population of interest?)

**Rate your assessment as:**

- **No or few concerns**
- **Minor concerns**
- **Moderate concerns**
- **Serious concerns**

# Component 3: Coherence



An assessment of how clear and cogent the fit is between the data from the primary studies and the review finding\*

\*Has been updated since PLOS article

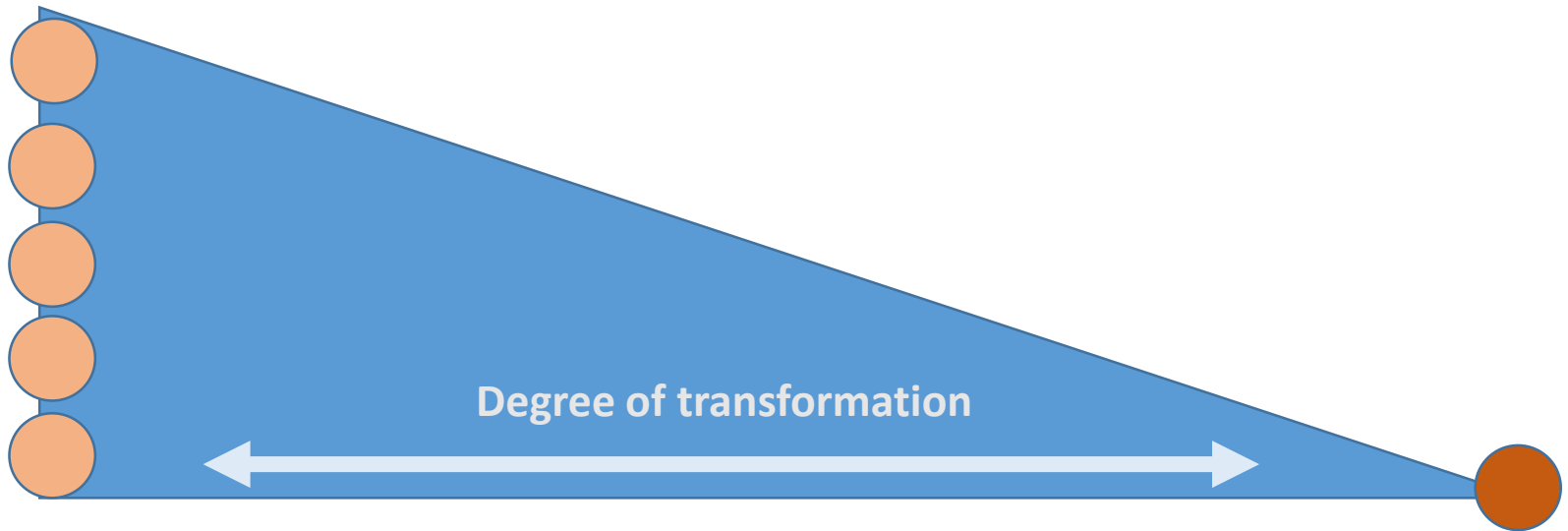
# Concerns about coherence

We are less confident that the finding reflects the phenomenon of interest when:

- Some of the data contradicts the finding
- Some of the data is ambiguous



# Assessing coherence – transformation of the data



# Assessing coherence of the review finding: Dealing with variation or ambiguity in the data

Review finding

## Option 1:

*Most children preferred staff to have week-long shifts because they liked the stability and structure and the opportunity to form attachment. Children in one study preferred short shifts, but these children had poor relationships with their caregivers. In one study the experiences of the children were unclear.*

## Option 2:

*In situations where children have good relations with their caregivers, they prefer longer shifts because these provide stability and structure and opportunities to form attachment.*

Coherence

**No** concerns about coherence

Minor concerns about **coherence**. The finding is broadly supported by the data. However, one study gave a contradictory account of children's experiences, although this may be explained by their poor relationship with caregivers. In another study, children's experiences were unclear.



# Assessing coherence of the review finding: Dealing with variation or ambiguity in the data

Review finding

## Option 1:

*Most children and preferred staff to have week-long shifts because they liked the stability and structure and the opportunity to form attachment. Children in one study preferred short shifts, but these children had poor relationships with their caregivers. In one study the experiences of the children was unclear.*

## Option 2:

*In situations where children have good relations with their caregivers, they prefer longer shifts because these provide stability and structure and opportunities to form attachment.*

- Why would you choose to write a finding in the format of option 1 rather than option 2?

# Group work (coherence)

1. Assess the coherence of the finding based on the information in Table 2
2. Decide whether any concerns you have are serious enough to reduce your confidence in the review finding
3. Note your provisional assessment in Table 3
4. If time, discuss how these concerns could be addressed in future research

Tips 

# Group work (coherence)

## Tips:

- Consider the following threats to coherence:

- Varied data - Some elements of the underlying body of evidence might not fit the description of the key patterns captured in the review finding.
- Ambiguous data - Key aspects of the underlying body of evidence may be vaguely defined or described, or defined in different ways.

- Varied data or ambiguous data must either be reflected in the review finding or discussed and represented in the assessment of coherence.

## Rate your assessment as:

- No or few concerns
- Minor concerns
- Moderate concerns
- Serious concerns

# Component 4: Adequacy of data



The degree of *richness* and *quantity of data* supporting a review finding

# Concerns about adequacy of data

We are less confident that the finding reflects the phenomenon of interest when:

the data underlying a review finding are not sufficiently rich or only come from a small number of studies or participants

- Review authors need to make a judgement on what constitutes data that are not sufficiently rich or too small a number in the context of a specific review finding



# Assessing adequacy of data: Examples

- Example 1: The finding was based on very thin data, with very little explanation of the reasons behind this preference
- Example 2: The finding was based on only one study, although this study was very detailed with thick description

# Group work (adequacy)

1. Assess the richness and quantity of the data that is presented in Table 2
2. Decide whether any concerns you have are serious enough to reduce your confidence in the review finding
3. Note your provisional assessment in Table 3
4. If time, discuss how these concerns could be addressed in future research

Tips 

# Group work (adequacy)

## ***Tips***

You may have concerns regarding the adequacy of the data if:

- there are insufficient details to gain an understanding of the phenomenon described in the review finding
- the review finding is supported by data from only one or very few studies, participants or observations

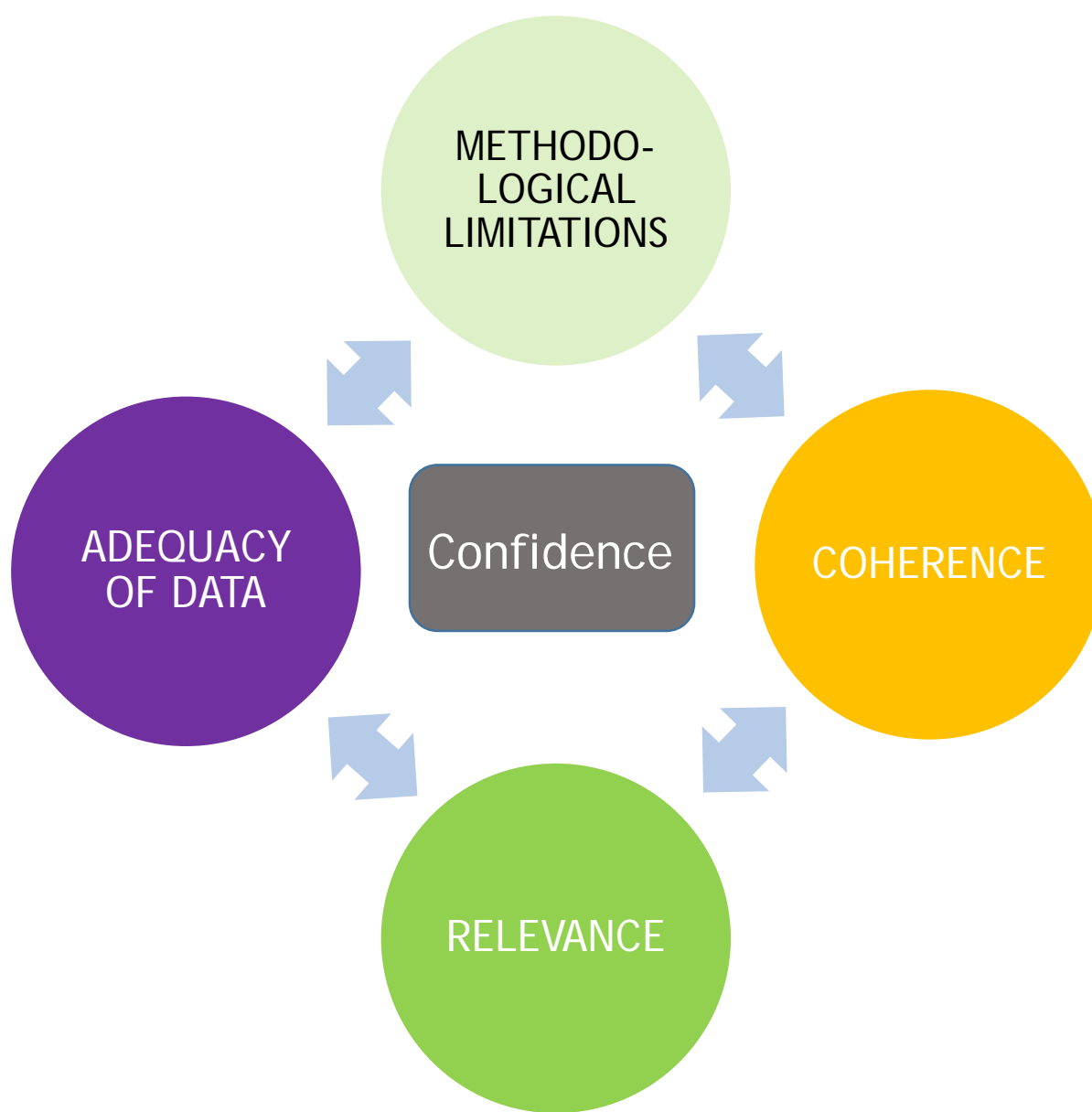
## **Rate your assessment as:**

- **No or few concerns**
- **Minor concerns**
- **Moderate concerns**
- **Serious concerns**

- Review findings that are simple and primarily descriptive: relatively superficial data may be sufficient.
- Review finding that are complex or explanatory: you may have concerns if the finding is based on data that is too superficial to allow a sufficient exploration of the phenomenon



# Making an overall assessment



After assessing each of the separate components, we make an overall judgement of the confidence in each review finding

# Confidence can be assessed as high, moderate, low or very low

- **High confidence:** It is highly likely that the review finding is a reasonable representation of the phenomenon of interest
- **Moderate confidence:** It is likely that the review finding is a reasonable representation of the phenomenon of interest
- **Low confidence:** It is possible that the review finding is a reasonable representation of the phenomenon of interest
- **Very low confidence:** It is not clear whether the review finding is a reasonable representation of the phenomenon of interest

# Summary of qualitative findings tables

**Objective:** To identify, appraise, and synthesise qualitative research evidence on the barriers and facilitators to the implementation of lay health worker programmes for maternal and child health<sup>#</sup>

**Perspective:** Experiences and attitudes of stakeholders about lay health worker programmes in any country

**Included programmes:** Programmes that were delivered in a primary or community health care setting, that intend to improve maternal or child health, and that had used any type of lay health worker, including community health workers, village health workers, birth attendants, peer counsellors, nutrition workers, and home visitors

Review Finding	CERQual Assessment of Confidence in the Evidence	Explanation of CERQual Assessment	Studies Contributing to the Review Finding
While regular salaries were not part of many programmes, other monetary and nonmonetary incentives, including payment to cover out-of-pocket expenses and “work tools” such as bicycles, uniforms, or identity badges, were greatly appreciated by lay health workers.	Moderate	This finding was graded as moderate confidence because of minor concerns regarding methodological limitations, relevance, coherence, and adequacy.	Studies 2; 5; 11; 12; 22; 29
Some unsalaried lay health workers expressed a strong wish for regular payment.	Low	This finding was graded as low confidence because of moderate concerns regarding relevance and substantial concerns regarding adequacy of data.	Studies 5; 13

# Evidence profile

Summary of review finding	Studies contributing to the review finding	Methodological limitations	Coherence	Adequacy	Relevance**	CERQual assessment of confidence in the evidence	Explanation of CERQual assessment
1. Use of force: Women across the world reported experiencing physical force by health providers during childbirth. In some cases, women reported specific acts of violence committed against them during childbirth, but women often referred to these experiences in a general sense and alluded to beatings, aggression, physical abuse, a rough touch and use of extreme force. Pinching, hitting and slapping, either with an open hand or an instrument were the most commonly reported specific acts of physical violence.	6, 9, 10, 13, 21, 61, 67, 68, 73, 75, 77, 80, 84, 86, 87, 91, 96, 97	Moderate methodological limitations (6 studies with minor, 6 studies with moderate (unclear recruitment and sampling), and 3 studies with serious methodological limitations (unclear reflexivity, insufficiently rigorous data analysis))	No or very minor concerns about coherence  (Good fit between data from primary studies and the review finding)	No or very minor concerns about adequacy  (15 studies total from 10 countries. Rich data.)	Minor concerns about relevance  (5 studies with direct relevance, 8 studies with partial relevance, and 1 study with unclear relevance. 15 studies total from 10 countries, including 1 high income, 2 middle income and 7 low income countries. Geographical spread: 2 studies in Asia, 1 study in Europe, 1 study in LAC, 1 study in MENA, 1 study in South America, and 8 studies from sub-Saharan Africa.)	High confidence	15 studies with moderate methodological limitations. Thick data from 10 countries across all geographical regions, but predominantly sub-Saharan Africa. No or very minor concerns about coherence.

# Group work (overall assessment)

- Make an overall assessment based on your assessment of the four components.
- We start with having “high confidence” in a review finding. Downgrade your confidence if you have serious concerns about one or more of the components.
- This assessment is a judgement. Be transparent and explain your assessment.
- If time, specify how any concerns could be addressed in future research

# Group work (overall assessment)

## *Tips*

- While you may have concerns about a single component, you may be uncertain about whether these concerns are serious enough to lower your confidence. Where you have some (but not very serious) concerns about more than one component, one option is to downgrade once (i.e. from “high confidence” to “moderate confidence”) to reflect your concerns with several CERQual components.



# CERQual wrap-up & questions

1. Methodological limitations
2. Relevance
3. Coherence
4. Adequacy

- Which component did you find the easiest /most difficult to use?
- Which component did you find the most / least enjoyable?

# To learn more about CERQual

- Join the mailing list
- Join the project group

[www.cerqual.org](http://www.cerqual.org)

**GRADE CERQual**

# Data adequacy and data saturation

Two definitions of data saturation:

1. Often used to refer to the point in data collection and analysis when “**no new themes, findings, concepts or problems were evident in the data**”

This definition different from the concept of data adequacy - the former focuses on identifying new themes while the latter concept focuses on the extent to which an individual theme or finding is adequately supported by the data

# Data adequacy and data saturation

Within grounded theory, the concept of data saturation is more ambitious. Relates not merely to “no new ideas coming out of the data” but to the notion of a:

**“conceptually dense theoretical account of a field of interest in which all categories are fully accounted for, the variations within them explained, and all relationships between the categories established, tested and validated for a range of settings”**

**Similarities:** Both concepts focus on the extent to which the data has allowed us to explore the topic in sufficient depth

**Differences:** Researchers applying the concept of data saturation in primary research use this concept as an *ideal* or *goal* when collecting and analysing data, and strive to collect new data until saturation has been met. When applying the concept of data adequacy in the context of a review, researchers assess data that has already been collected, and focus on identifying *concerns* with this data.