

# Framing Options Using Patient-Oriented Research

Masterclass on the Conduct and Use of Patient-Oriented Research  
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# Objectives for this Session

- To appreciate
  - Questions to ask about options to address a problem
  - Types of research evidence needed to answer these questions (and related research terminology)
  - Appropriate sources of key types of pre-appraised research evidence
  - What an AMSTAR score means
  - Questions to ask about local applicability considerations
- To understand the importance of
  - Working iteratively to understand options
  - Using economic ways of thinking
  - Being systematic and transparent in finding and using research evidence as one input to the decision-making process
  - Finding and using the best available (i.e., highest quality, most locally applicable, synthesized) research evidence in the time you have available
  - Looking first for a perfect match in the available research evidence (to support an instrumental use) and then looking more broadly (to support a conceptual use)
- To develop skills in
  - Framing options to address the problem
  - Searching appropriate sources of pre-appraised research evidence
  - Using AMSTAR to describe the quality of a systematic review
  - Conducting a local applicability assessment



## Key Resources for this Unit

- Finding and Using Research Evidence summary sheet – second box only
- HSE taxonomy



## Questions to Consider

1. What is an appropriate set of options to address the problem?
2. What benefits are important to those who will be affected and which benefits are likely to be achieved with each option?
3. What harms are important to those who will be affected and which harms are likely to arise with each option?
4. What are the local costs of each option and is there local evidence about their cost-effectiveness?
5. What adaptations might be made to any given option and might they alter its benefits, harms and costs?
6. Which stakeholders' views and experiences might influence the acceptability of an option and its benefits, harms and costs?



## Q1: What is an Appropriate Set of Options to Address the Problem?

- Identify options that relate to the key features of the problem (and its causes)
  - Introducing, changing or discontinuing a program, service or drug
  - Introducing, changing or discontinuing a health system arrangement that contributes to whether the right mix of programs, services and drugs get to those who need them
    - Governance arrangements
    - Financial arrangements
    - Delivery arrangements
  - Implementing an agreed course of action (e.g., a policy)



## Q1: What is an Appropriate Set of Options? Example 1

- **To address the problem of low rates of childhood immunization**
  1. Establish accountability among primary care practices for registering all children in their catchment area and for achieving a target immunization coverage rate (**governance arrangement**)
  2. Remove all out-of-pocket charges for childhood immunization (**financial arrangement**)
  3. Undertake a mass-media campaign to correct a celebrity's assertions about the safety and effectiveness of childhood immunization (**program change**) and to raise awareness about a new immunization schedule (**implementation strategy**)



## Q1: What is an Appropriate Set of Options? Example 2

- **To address the problem of many citizens not having a primary care physician**
  1. Increase the supply of primary care physicians by raising medical school enrolment (**delivery arrangement**)
  2. Improve the distribution of primary care physicians by enforcing return-of-service agreements signed by physicians (**implementation strategy**)
  3. Change the dominant physician-remuneration mechanism from fee-for-service payment to capitation (**financial arrangement**)



## Q1: What is an Appropriate Set of Options?

- This is a ‘brainstorming’ step about an appropriate set of options, and later questions will require searching for research evidence to describe what’s known about each option (i.e., this is the first step in an iterative process of framing the options)
- If you are unfamiliar with how to identify health system arrangements that contribute to whether the right mix of programs, services and drugs get to those who need them, consider spending time learning the taxonomy of health system arrangements used by Health Systems Evidence
- If you are uncertain what might be considered an appropriate set of options, you may want to consider these criteria
  - Technically feasible
  - Fits with dominant values and the current national / provincial mood
  - Acceptable in terms of budget workability and likely political support or opposition





## Q1: What is an Appropriate Set of Options? Your Example

- Describe your example of an appropriate set of options using the task sheet (#4), which uses the following prompts
  - Does an appropriate set of options for addressing your problem involve introducing, changing or discontinuing a program, service or drug?
  - Does an appropriate set of options for addressing your problem involve introducing, changing or discontinuing a health system arrangement?
  - Does an appropriate set of options for addressing your problem involve implementing an agreed upon course of action (e.g. a policy)?
  - Are the options you have described appropriate in terms of technical feasibility, fit with dominant values and the current national / provincial mood, and budget workability and likely political support or opposition?



## Additional Questions (2-6)

- **For each option**
  2. What **benefits** are important to those who will be affected and which benefits are likely to be achieved with each option?
  3. What **harms** are important to those who will be affected and which harms are likely to arise with each option?
  4. What are the local **costs** of each option and is there local evidence about their **cost-effectiveness**?
  5. What **adaptations** might be made to any given option and might they alter its benefits, harms and costs?
  6. Which **stakeholders' views and experiences** might influence the acceptability of an option and its benefits, harms and costs?



## Research Evidence can Help to Respond to these Additional Questions

- What **benefits** are important to those who will be affected and which benefits are likely to be achieved with each option? (question 2)
  - Systematic reviews of effectiveness studies (e.g., randomized controlled trials)
- What **harms** are important to those who will be affected and which harms are likely to arise with each option? (question 3)
  - Systematic reviews of effectiveness studies or observational studies
- What are the local costs of each option and is there local evidence about their **cost-effectiveness**? (question 4)
  - Local cost-effectiveness analysis
- What **adaptations** might be made to any given option and might they alter its benefits, harms and costs? (question 5)
  - Systematic reviews of qualitative studies (process evaluations)
- Which **stakeholders' views and experiences** might influence the acceptability of an option and its benefits, harms and costs? (question 6)
  - Systematic reviews of qualitative studies (e.g., acceptability studies)



# Appropriate Sources of Research Evidence to Respond to the Questions

- **If your option involves clinical programs and services or drugs**
  - **Cochrane Library**
    - Systematic reviews of effects – both those produced by the Cochrane Collaboration and by others (question 2 – benefits and possibly question 3 - harms)
    - Protocols of reviews of effects – produced by the Cochrane Collaboration (as above)
    - Economic evaluations – produced by others (question 4 – cost effectiveness)
  - **PubMed**
    - Qualitative studies (question 5 – process evaluations, question 6 – acceptability studies) using the ‘hedge’ for qualitative studies



## Appropriate Sources of Research Evidence to Respond to the Questions (2)

- **If your option involves public health programs and services**
  - Health Evidence
    - Systematic reviews of effects (question 2 – benefits and possibly question 3 - harms)
  - Cochrane Library
    - Economic evaluations (question 4 – cost effectiveness)
  - PubMed
    - Qualitative studies (question 5 – process evaluations, question 6 – acceptability studies) using the ‘hedge’ for qualitative studies



# Appropriate Sources of Research Evidence to Respond to the Questions (3)

- **If your option involves health system arrangements or implementation strategies**
  - Health Systems Evidence
    - Systematic reviews of effects (question 2 – benefits and possibly question 3 - harms)
    - Systematic reviews addressing other questions (question 3 – harms, question 5 – process evaluations, and question 6 – acceptability studies)
    - Economic evaluations (question 4 – cost effectiveness)

Note that Health Systems Evidence

- Is available in English and French, as well as Chinese, Portuguese and Spanish
- Includes links to user-friendly summaries of systematic reviews written by any of the 10 groups in the world writing such summaries
- Also contains ‘Health system descriptions,’ which can be used to conduct local applicability assessments



# Appropriate Sources of Research Evidence to Respond to the Questions (4)

- Considerations to keep in mind for conducting searches
  - Being systematic means undertaking the searches of these databases with close attention to detail
  - Being transparent means documenting all searches and the results so there is a clear record trail of what was done, what was found and when the work was done



## How to Search Appropriate Sources: Cochrane Library

- Steps on the internet for systematic reviews addressing clinical programs and services or drugs (and for economic evaluations addressing clinical and public health programs and services)
  1. Go to [www.cochrane.org](http://www.cochrane.org), and click on 'The Cochrane Library' in the top right corner
  2. Copy and paste the search into the open search field
  3. Click 'go'
  4. Read the first one, two or three screens of results
  5. If you're looking for a systematic review of effects and couldn't find a Cochrane review or Cochrane review protocol (which is the database to which the search defaults), click on 'Other reviews' and repeat steps 2-4
  6. If you're looking for a cost-effectiveness analysis, click on 'Economic evaluations' and repeat steps 2-4
  7. Document your search then repeat using different search terms in step 2





## How to Search Appropriate Sources (2): Health Evidence

- Steps on the internet for systematic reviews addressing public health programs and services
  1. Go to Health Evidence ([www.healthevidence.org](http://www.healthevidence.org)), click on 'Search healthevidence.org,' and log in (or register)
  2. Copy and paste the search into the open search field
  3. Click 'Search'
  4. Read the first one, two or three screens of results
  5. Document your search then repeat using different search terms in step 2

Note that neither the Cochrane Library nor Health Evidence contain systematic reviews of qualitative studies so PubMed must be searched to identify qualitative studies about how and why an option works, and about stakeholders' views and experiences with an option



## How to Search Appropriate Sources (3): PubMed

- Steps on the internet for qualitative studies addressing clinical and public health programs and services
  1. Go to [www.PubMed.org](http://www.PubMed.org) and then click on “Topic-specific queries”
  2. Click on ‘Health services research (HSR) queries’
  3. Copy and paste the search into the open search field
  4. Select the appropriate ‘hedge’
    - Qualitative research
  5. Select ‘narrow specific search’
  6. Select ‘Go’
  7. Read the first one, two or three screens of results, looking carefully for the right type of study for the question you posed
  8. Document your search then repeat using different search terms in step 3



## How to Search Appropriate Sources (4): Health Systems Evidence

- Steps on the internet for systematic reviews addressing health system arrangements and implementation strategies
  1. Go to 'Health Systems Evidence' ([www.healthsystemsevidence.org](http://www.healthsystemsevidence.org)) and log in (create an account if you don't already have one)
  2. Click on 'Advanced search'
  3. Copy and paste the search terms into the search field (and/or select an appropriate health system arrangement in the taxonomy)
  4. Select the appropriate document type filter (systematic reviews of effects, systematic reviews addressing other questions, economic evaluations)
  5. Read the results, looking carefully for the right type of review for the question you posed
  6. Document your search then repeat using different search terms in step 3



## How to Search Appropriate Sources (5) – Your Turn

**Describe what you did (each source and how you searched it), what you found, and when you did the work using the task sheet (#5), which uses the following prompts to search for systematic reviews about benefits, harms, costs, what adaptations might be made, and stakeholders' views and experiences for your options**

### 1. What you did

- a. Source (and purpose) – *e.g., Health Systems Evidence for systematic reviews of effectiveness studies (question 2)*
- b. Search details – *e.g., boxes ticked, search terms entered and number of 'screens' read*

### 2. What you found – *e.g., three relevant reviews, each with full citation*

### 3. When you did it – *e.g., today's date*



## Summing Up

- Options framing involves
  - Brainstorming about an appropriate set of options to address a problem (question 1)
  - Search for research evidence about each option in turn
    - Benefits (question 2) – Cochrane Library, Health Evidence or Health Systems Evidence depending on whether it's a clinical, public health or health system issue, respectively
    - Harms (question 3) – same as 2
    - Cost-effectiveness (question 4) – Cochrane Library or Health Systems Evidence depending on whether it's a clinical / public health issue or a health system issue
    - Adaptations (question 5) – PubMed for clinical / public health issues and Health Systems Evidence for a health system issue
    - Stakeholders' views and experiences (question 6) – same as 5
  - Iteratively framing the options in light of the research evidence found



# Understanding what an AMSTAR Score Means

- AMSTAR
  - Criteria for assessing the quality of a systematic review
  - Used in several one-stop shops (e.g., Health Systems Evidence) to rate the quality of systematic reviews so users don't have to apply the criteria themselves
  - For each criterion
    - Yes (Y) = 1 point
    - No (N) or can't answer (CA) = 0 points
    - Not applicable = removed from numerator and denominator
  - For all applicable criteria taken together
    - High quality = 8-11
    - Medium quality = 4-7
    - Low quality = 0-3



## Understanding what an AMSTAR Score Means (2)

1. An 'a priori' design provided?
2. Duplicate study selection and data extraction?
3. Comprehensive literature search performed?
4. Status of publication NOT used as an inclusion criterion?
5. List of studies (included and excluded) provided?
6. Characteristics of included studies provided?
7. Scientific quality of included studies assessed?
8. Scientific quality of included studies used appropriately in formulating conclusions?
9. Methods used to combine study findings appropriate?
10. Likelihood of publication bias assessed?
11. Conflict of interest stated?



## Understanding what an AMSTAR Score Means (3)

- A high AMSTAR score means the systematic review was conducted to a high standard, however, the evidence summarized in the review may still cause concern
  - There may be no eligible studies (i.e., it's an 'empty' review)
  - The included studies may be of low quality (i.e., methodologically weak)
  - GRADE is an example of a system that rates the quality of the evidence (as opposed to the quality of the systematic review)
    - GRADE is used in some of the user-friendly summaries of systematic reviews (e.g., SUPPORT summaries) that are linked to from one-stop shops such as Health Systems Evidence (so if you want to see the quality of evidence, look for a link to a SUPPORT summary)
- Readers of a systematic review will also need to ask themselves whether they are likely to get similar findings in their own organization or system (i.e., whether the review is locally applicable)





## Questions to Ask about Local Applicability

1. Were the studies included in a systematic review conducted in a different setting or were the findings not consistent across settings or time periods?
2. Are there important differences in on-the-ground realities and constraints that might substantially alter the feasibility and acceptability of a policy or program option?
3. Are there important differences in health system arrangements that may mean an option could not work in the same way?
4. Are there important differences in the baseline conditions that might yield different absolute effects even if the relative effectiveness were the same?
5. What insights can be drawn about scaling up, implementation and monitoring and evaluation?



# Assessing the Quality and Local Applicability of a Systematic Review

Assess the quality and applicability of the Gruen review using the task sheet (#8)

