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# The International School on Research Impact Assessment

## Compare and contrast: Methods

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Hosted by:



In partnership with:



# Learning outcomes

- **Compare** the methods we've been learning about
- **Select** which method is best for a given purpose or context
  - Understand when to use what methods
  - Know how many methods you need for an RIA
  - Know how to partition your methods in the RIA



# Overview

- What have we heard?
- How can I choose?
- How many is right?
- Are there other things I can explore?



# What have we heard?

- Four different methods
  - Case studies
  - Questionnaires
  - Bibliometrics
  - Economic returns



# Case studies

## Key messages

- Narratives have power in reporting to stakeholders
- Qualitative methods and case studies are more important to 'downstream' impacts
- Strike the right balance between depth of detail and available time and resources
- All data collection and analysis needs to be guided by an analytical or conceptual framework



### Strengths

- Data rich
- Narrative
- Easily understood
- Good news stories



### Weaknesses

- Can be expensive
- Time consuming
- Can be seen as subjective



# Questionnaires

## Key messages

- Worry about who will respond
- Ask people to do as little as possible
- Test understanding



### Strengths

- Can capture a lot of data
- Can access wide stakeholders
- Visualization



### Weaknesses

- Can be misunderstood
- Can be complex
- Can miss context



# Bibliometrics

## Key messages

- Be careful with non-normalized indicators
  - E.g. papers, citations, impact factor, H-Index
- Be critical of database coverage
  - design/ convenience
- Use with great care outside the natural and health sciences
- Bibliometrics is a complex technological undertaking

	
<b>Strengths</b> <ul style="list-style-type: none"><li>• Established impact approach</li><li>• Good data</li><li>• Well understood</li></ul>	<b>Weaknesses</b> <ul style="list-style-type: none"><li>• Subject to being done badly</li><li>• Can be seen as reductive</li><li>• Has caveats</li></ul>

• BANFF, CANADA 2011

Don't be afraid to ask for expert help

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# Economic returns

## Key messages

- Major GDP and health-related returns have been and can in future be demonstrated
  - They involve substantial data, analysis and assumptions
  - Are at aggregate levels
- Studies can help protect medical research funding streams
- Analysis of net health gains provides insights as to how/where greater benefit of research could be achieved
  - But the past may be a poor indicator of the future



### Strengths

- Excellent for understanding
- Clear link to costs/benefits
- Single unit of analysis



### Weaknesses

- Complex
- Assumptions
- Data intensive
- Tend to be aggregate

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# How can I choose?

- Methods are a tool – they are there to help you answer your assessment questions
- Identify which questions need which types of data to answer
  - Link the appropriate method for providing that data
- Consider the cost and practicality of the method
  - Do I do it in-house, contract out, collect data now, use other's data?
- Think about your stakeholders
  - What methods and data might they need/understand?



# Case example: arc

- The arc study used a number of methods
  - Bibliometrics, case studies, questionnaires
- Methods were identified based on which questions the methods were best suited to answering for arc's overall assessment
- Methods linked to questions...
  - Which linked to assessment approach...
    - Which linked to stakeholders



# Learning activity 1

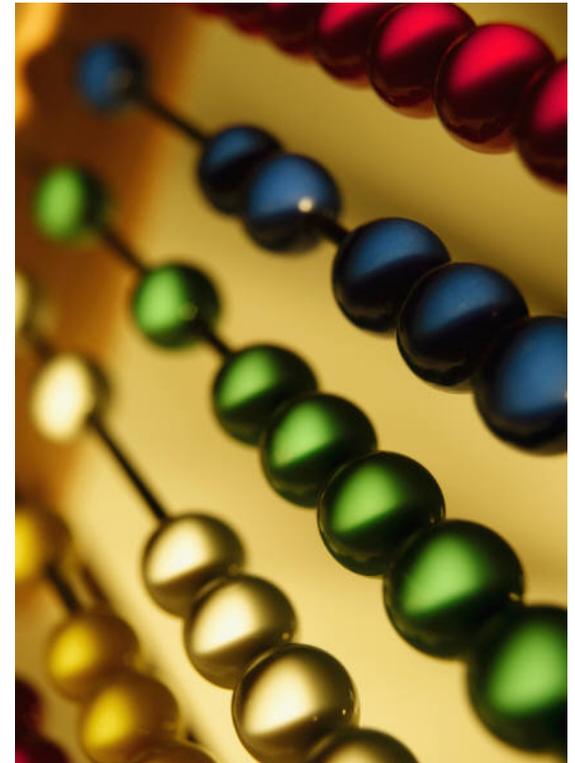


- On the exercise sheet for activity 1 of this presentation, individually look at the methods and the questions in the two columns
- Draw lines linking the appropriate method(s) to the appropriate questions
- 5 minutes



# How many is right?

- In short – more than one...
  - Need for ‘triangulation’
  - Need to answer different questions with different methods
  - Need to provide data and evidence that is relevant to stakeholders
  - Need to fit methods with the RIA resources



# What should the balance be?

- Knowing how much effort to put into different methods can be tricky
  - By linking questions that methods answer to strength of strategic goals / strength of stakeholder need for answers
  - By internally assessing capacity and budget
  - By knowing which methods will speak to your stakeholders
  - By looking at other assessments



# Learning activity 2



- On your table you should have 10 ‘poker chips’ – each of these is one unit of effort for a method
- Look at the exercise sheet for activity 2, read through the scenario and as a table consider which methods you would want to use to address the scenario, how much of your 10 units should go to each method and why
- 10 minutes



# Is there anything else I can explore?

- RAND Europe identified eleven tools:
  - 5 are different to the described methods
    - Peer review
    - Data mining
    - Interviews
    - Site visits
    - Document review
  - One is a tool for organizing assessments
    - Logic modeling
  - One is a tool for communicating findings
    - Data visualization



# Other methods

## Qualitative methods

- Peer review
  - Often subjective review of qualitative value of impacts
- Interviews
  - Mostly qualitative and data rich
- Site visits
  - Often by experts and can be data rich
- Document review
  - Analysis of existing documentation

## Quantitative methods

- Data mining
  - Accessing large data sets to search for impact data (e.g. electronic medical records)
- Scoring of qualitative methods
  - e.g. peer review in arc Phase 1; case studies in Retrosight; site visits in NIHR BRC
- Quantitative questions
  - e.g. Likert scales etc.



# Key messages

- Methods are good at answering different types of questions
- Knowing which methods to use will depend on your questions, your expertise and your budget
- Use multi-method approaches to triangulate your findings
- Know how to balance your methods to achieve your goals on budget and on time



# Further reading

- Morgan Jones, M and Grant J (2013). *Making the Grade. Methodologies for Assessing and Evidencing Research Impact. 7 Essays on Impact.* DESCRIBE Project Report for Jisc. University of Exeter / Dean et al. (eds.) (Exeter, UK : University of Exeter, 2013), p. 25-43.  
[[http://www.exeter.ac.uk/media/universityofexeter/research/ourresearchexcellence/describeproject/pdfs/2013\\_06\\_04\\_7\\_Essays\\_on\\_Impact\\_FINAL.pdf](http://www.exeter.ac.uk/media/universityofexeter/research/ourresearchexcellence/describeproject/pdfs/2013_06_04_7_Essays_on_Impact_FINAL.pdf) ]
- Guthrie, S, Wamae, W, Diepeveeen, S, Wooding, S and Grant, J (2013). *Measuring Research: a guide to research evaluation frameworks and tools.* RAND Europe, Cambridge (MG-1217-AAMC).  
[<http://www.rand.org/pubs/monographs/MG1217.html>]
- CAHS (2008). *Making an Impact: A Preferred Framework and Indicators to Measure Returns on Investment in Health Research: Appendix C- Evaluation Frameworks and Methods.* Canadian Academy of Health Sciences [[www.cahs-acss.ca/wp-content/uploads/2011/09/ROI\\_Appendices.pdf](http://www.cahs-acss.ca/wp-content/uploads/2011/09/ROI_Appendices.pdf)]

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# Thank you!

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