

Economic approach to priority setting and the need for further development in health and social care



Marissa Collins
Research Fellow
Yunus Centre for Social Business and Health



University for the Common Good

Context

- Legislation for integration was passed 2016
- Created 31 Health and Social Care Partnerships responsible for certain delegated functions
- Joint working between health boards and local authorities with shared budgets, managing approx. £8.5billion
- National Health and Wellbeing Outcomes:
 - Number 9: “Resources are used effectively and efficiently in the provision of health and social care services.”

The challenge

- Resource scarcity is a global phenomenon
- Fixed funding envelope – not enough to meet all needs
- Integration of resources will not solve this basic problem
- Still a need to manage scarcity of resources
- Economics perspective
 - Economics is generally viewed as the science of *choice*
 - Can offer some practical tools to help

The challenge

- How will Health and Social Care Partnerships prioritise investment decisions which will underpin their strategic commissioning plans?
 - And which meet national outcomes?
- What is the process for deciding where resources are allocated?
- What are the key characteristics required by such a priority setting process?

Can economics offer a way out of these dilemmas?

Economic approach

- Economic principles to underpin the process
 - Opportunity Cost
 - The margin
- Key questions to answer
 - 5 questions from the perspective of resources
- Stages to follow
 - Key activities

Economic Principles

- **Opportunity cost**

- Every time we use resources to meet one need, we give up the opportunity to use those resources to meet some other need

- **The margin**

- Technically, the extra cost/benefit associated with one more unit of production

Marginal Analysis

- The “margin” is concerned with change
- Start with a given mix of services
- What are important are costs and benefits of changes in that mix
- If the mix of services can be changed to produce more benefit overall, this should be done

Economic approach

Opportunity cost and marginal analysis: an example

- Stool is tested for the presence of occult blood
- Proposal was for six sequential tests
- Neuhauser and Lewicki analysed the proposal, on the basis of:
 - a population of 10,000 of whom 72 have colonic cancer
 - each test detects 91.67 per cent of cases undetected by the previous test.

Screening for cancer of the colon

Cases detected and costs of screening with six sequential tests

<u>No. of tests</u>	<u>No. of cases</u>	<u>Total costs (\$)</u>	<u>Av. cost (\$)</u>
1	65.9469	77,511	1175
2	71.4424	107,690	1507
3	71.9003	130,199	1811
4	71.9385	148,116	2059
5	71.9417	163,141	2268
6	71.9420	176,331	2451

Screening for cancer of the colon

Incremental cases detected and incremental (and marginal) costs of screening with six sequential tests

No. of tests	Incremental cases detected	Incremental cost (\$)	Marginal cost (\$)
1	65.9469	77,511	1175
2	5.4956	30,179	5494
3	0.4580	22,509	49,150
4	0.0382	17,917	469,534
5	0.0032	15,024	4,724,695
6	0.0003	13,190	47,107,214

What does this mean?

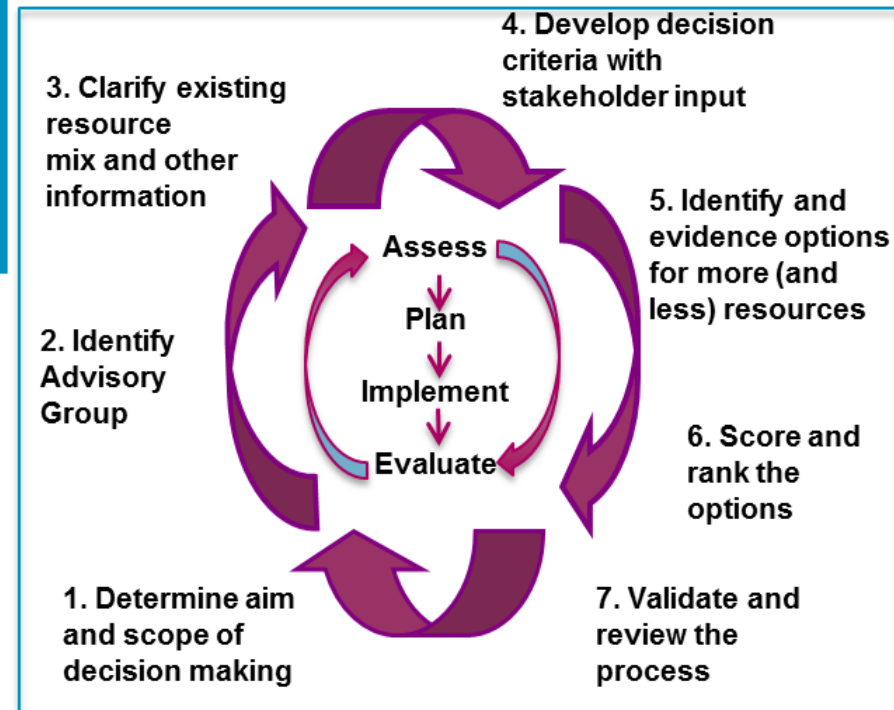
- To do more of some things, we have to take resources from elsewhere:
 - by doing the same things at less cost (technical efficiency)
 - by taking resources from an effective area of care because a new proposal is more effective per £ spent (allocative efficiency)
- Measure costs and benefits of health and social care
- Often about how much rather than whether

Economics framework

5 questions & 7 steps for project management

Addresses priorities from the perspective of resources:

1. What resources are available in total?
2. In what ways are these resources currently spent?
3. What are the main candidates for more resources and what would be their effectiveness?
4. Are there any areas of care within the programme which could be provided to the same level of effectiveness but with fewer resources, so releasing those resources to fund candidates from (3)?
5. Are there areas of care which, despite being effective, should have fewer resources because a proposal (or proposals) from 3. is (are) more effective for the resources spent?



Economics and Disinvestment

- To do more of some things, we have to take resources from elsewhere
- Shifting the balance of services from acute to community
- Need to consider investment alongside disinvestment
- But efficiency savings need to be made (and made first)

How do we balance savings with reinvestment?

Economics and....?

- Is an economics framework on it's own enough?
- Health and social care environments are complex and it is not just about resources and process (although it is a good start!)
- There are other principles that should be considered
- Can they be considered together in one combined framework?

Project overview

- Funded by Chief Scientist Office
- Started 1st May 2017, for 3 years

Two main aims:

- Aim 1: develop a framework and implement in Health and Social Care Partnerships
- Aim 2: evaluate the impact of using such a framework both within and between HSCPs

Aim 1: Partnerships

- Falkirk – action research site
- Clackmannanshire & Stirling, Western Isles and North Lanarkshire – advice only

Different viewpoints

Economics

- Principles of opportunity cost and 'the margin'
- Starts from a perspective of resources

Multi-criteria decision analysis (MCDA)

- Provide support to decision makers to make decisions in the face of conflicting objectives
- Key idea is to model decision makers' values in numerical form
- What do you want to achieve?

Multi-criteria decision analysis (MCDA)

Figure 6.1 Applying MCDA: Detailed steps

- 1. Establish the decision context.**
 - 1.1 Establish aims of the MCDA, and identify decision makers and other key players.
 - 1.2 Design the socio-technical system for conducting the MCDA.
 - 1.3 Consider the context of the appraisal.
- 2. Identify the options to be appraised.**
- 3. Identify objectives and criteria.**
 - 3.1 Identify criteria for assessing the consequences of each option.
 - 3.2 Organise the criteria by clustering them under high-level and lower-level objectives in a hierarchy.
- 4. 'Scoring'. Assess the expected performance of each option against the criteria. Then assess the value associated with the consequences of each option for each criterion.**
 - 4.1 Describe the consequences of the options.
 - 4.2 Score the options on the criteria.
 - 4.3 Check the consistency of the scores on each criterion.
- 5. 'Weighting'. Assign weights for each of the criterion to reflect their relative importance to the decision.**
- 6. Combine the weights and scores for each option to derive an overall value.**
 - 6.1 Calculate overall weighted scores at each level in the hierarchy.
 - 6.2 Calculate overall weighted scores.
- 7. Examine the results.**
- 8. Sensitivity analysis.**
 - 8.1 Conduct a sensitivity analysis: do other preferences or weights affect the overall ordering of the options?
 - 8.2 Look at the advantage and disadvantages of selected options, and compare pairs of options.
 - 8.3 Create possible new options that might be better than those originally considered.
 - 8.4 Repeat the above steps until a 'requisite' model is obtained.

Figure 2: Example of a performance matrix

	Purchase price (£)	Convenience	Stairs	Drive time to children
House 1	220	1 km from town centre	no	30 minutes
House 2	180	5 km from town centre	no	30 minutes
House 3	130	>10 km from town centre	yes	20 minutes
House 4	120	5 km from town centre	yes	40 minutes
House 5	180	>10 km from town centre	yes	30 minutes

Different viewpoints

Ethics

- Main ethical principle for priority setting is justice – cases which are the same should be treated the same and cases which are not the same should be treated different
- Accountability for Reasonableness (A4R)
- Health inequalities

Law

- Key objective is procedural justice
- Establish principles of lawful and legitimate decision making
- Working towards a good procedure, e.g. documenting the process

Ethics

Accountability for Reasonableness (A4R)

- (a) Ensure publicity for the priority setting process.
- (b) Ensure relevance of the priority setting process
- (c) Establish an appeals mechanism
- (d) Establish an enforcement mechanism

If we can agree on the process for priority setting, we can overcome disagreements in the outcomes

Law

Procedural justice is important:

- Raising issues such as transparency, explanation, participation and appeals (as embodied in frameworks like A4R)
- Courts have an oversight role:
 - Seeking to ensure that decisions are based upon relevant criteria
- It is important (of course) to comply with the law:
 - Priority-setting is a lawful activity
 - Exceptions would be exclusion of whole categories of people and in the absence of process
- The law (in the UK) is not prescriptive:
 - So access to public resources is not a right

Combined framework

- Literature review of priority setting processes from the different viewpoints
- Project team to look at combining the different aspects of each viewpoint
- Stakeholder workshop to gather views on what a combined framework might look like

Combined framework

- Framework underpinned by principles from:
 - economics (opportunity cost)
 - decision science (making good decisions and thinking about what we want to achieve)
 - Ethics and Law (fairness, justice and good procedure)
- Key activities such as:
 - Framing the question
 - Resources
 - Criteria and options
 - Evaluation/sensitivity analysis
 - Review

Next Steps

- Implementation of the framework in 4 health and social care partnerships: Falkirk, Clackmannanshire & Stirling, Western Isles and North Lanarkshire
- Looking at the outcomes and impact on how resources are allocated
- Comparison with other sites: what difference did the framework make compared with sites that did not use the framework?

Thank you