Appropriate perspectives for health care decisions

Karl Claxton, Simon Walker, Steve Palmer and Mark Sculpher,

Centre for Health Economics,

University of York.

www.york.ac.uk/inst/che

The problem

- Costs and benefits fall on different sectors
- Budget set by a socially legitimate higher authority
- No consensus on how trade off
  - Health, consumption and other social arguments
  - No complete, legitimate and explicit SWF
- Even if willing to impose a SWF
  - Non marginal effects
  - Displaced wider effects
  - Dynamic effects
  - Social consensus and other social objectives

Conceptual framework

- Two sectors
  - Budget constrained Health system
  - Rest of the economy
- Impacts on the health care system
  - Health gained Δh
  - Costs falling on the health care system Δc_h
  - Health forgone $\frac{\Delta c_h}{k}$
- Wider impacts
  - Costs falling on patients carers Δc_c^c
  - External effects on the wider economy Δc_c^e
  - Net consumption costs/benefits $\Delta c_c = \Delta c_c^c + \Delta c_c^e$
- Social values
  - $k =$ Cost effectiveness threshold (how much health give up within HCS)
  - $v =$ How much (individual) consumption willing to give up to improve their health

Spectrum of policies

Possible Policy	Net health benefit	ICER
A. Ignore effects (NICE 2008)	$\Delta h - \frac{\Delta c_h}{k} > 0$	$\frac{\Delta c_h}{\Delta h} < k$

Biases of policies (marginal changes)

Type of Technology	A. Ignore wider costs		B. Costs on budget		C. Ignore constraint	
	Bias	Decision	Bias	Decision	Bias	Decision
More effective						
Net consumption costs						
Positive costs (NHS)	+	FP	-	FN	+	FP
Cost saving (NHS)	+	FP	-	FN	-	FN
Net consumption benefits						
Positive costs (NHS)	-	FN	+	FP	+	FP
Cost saving (NHS)	-	D	+	D	-	D
Less effective						
Net consumption costs						
Positive costs (NHS)	+	D	-	D	+	D
Cost saving (NHS)	+	FP	-	FN	-	FN
Net consumption benefits						
Positive costs (NHS)	-	FN	+	FP	+	FP
Cost saving (NHS)	-	FN	+	FP	-	FN

- Bias in different directions depending on context
- Lead to false positive (FP) or false negative (FN) decisions
- So why not just use policy D ?

Non marginal changes

- Incentive for technologies to have positive health care costs
- Sequence of decisions displace increasingly valuable health care

- Bias due to non marginal change
  - Impose costs - underestimate health forgone
  - Reduce costs - overestimate the value of health gained
  - Always a positive bias

- Policy D may no longer be the best
  - Always a possibility of false positive decisions
  - What circumstances will each policy be best?

Ranking alternative policies

Type of Technology	Ranking of extent of bias
More effective	
Net consumption costs	
Positive costs (NHS)	$D < A$, $D < B$, $D < C$ and $A < B$
Cost saving (NHS)	$D < A$, $D < B$, $D < C$ and $A < B$
Net consumption benefits	
Positive costs (NHS)	$D < A$, $D < B$, $D < C$ and $A < B$
Cost saving (NHS)	$D < A$, $D < B$, $D < C$ and $A < B$
Less effective	
Net consumption costs	
Positive costs (NHS)	$D < A$, $D < B$, $D < C$ and $A < B$
Cost saving (NHS)	$D < A$, $D < B$, $D < C$ and $A < B$
Net consumption benefits	
Positive costs (NHS)	$D < A$, $D < B$, $D < C$ and $A < C$
Cost saving (NHS)	$D < A$, $D < B$, $D < C$ and $A < C$

- Non marginal effect is small relative to external effects - 'Take into account' (D)
- Non marginal effect on NHS large relative to external effects
  - Ignore any consumption benefits (A) but treat any consumption cost as if on constraint (B)
- Never ignore the constraint and use (c)

Implications for policy

- Questions of value
  - Formal prescription
    - Requires specification of a complete SWF
    - v is the measure of social welfare and presupposes a complete SWF
    - k is simply an inefficient nuisance preventing welfare maximisation
  - Deliberative approach
    - Trade-offs still need to be made
    - k is an expression of social value of collective health care
    - v is how much of their consumption individuals are willing to give up to improve their own health
    - So good reasons why $k \neq v$

Implications for policy

- Questions of fact
  - Cost-effectiveness threshold
  - Is a change non marginal?
    - Impact relative to budget (single and a series of decisions)
    - How does k change with budget impact?
  - Consumption value of health
    - Requires social and scientific value judgements
  - Net consumption benefits
    - Cost of care not borne by NHS
    - Effects on wider economy (external to patient and carers)
    - Measurement and valuation requires social and scientific value judgements

Other critical considerations

- Displaced external effects
  - Compare to external benefits forgone
  - Improved heath on average offers benefits to the wider economy
  - On average a HCS perspective is sufficient!
  - Is a proper assessment of exceptions possible?
- Dynamic effects
  - Price to appropriate any net consumption benefits
    - External benefits become internal costs
  - Investment Incentives (technologies, disease and populations)
    - Impact relative to budget (single and a series of decisions)
  - Spend less of on health care more on payment of rent (reduce health)
- Social consensus
  - Potential conflict and long run credibility
  - Static and dynamic conflicts with social policies and NHS principles

Judgement of scientific and social values

- Complete and legitimate specification of SW is not possible
- Budget reveals a legitimate (partial) expression of value
- HCS perspective is appropriate
  - HCS perspective in many circumstances will be wholly appropriate
  - Likely damaging consequences of extending perspective far outweigh any potential for benefit
- One thing we do know
  - Never use a societal perspective without proper consideration of budget constraints
  - Policy C - the common approach to societal perspective in health and elsewhere should not be used