

PITHIA – Economics Components

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How medics see economists



How economists see medics

Economics - why

Resources are scarce



Wants are unlimited



Need to make choices



Opportunity Cost

= rationing / prioritisation

Economics is the study of how society decides:

- WHAT to produce
- HOW to produce it, and
- FOR WHOM to produce it

In the Health Sector

- Finite resources
- Unlimited
- ...difficult



So: Daily Mail

Economic evaluation - what

- “Comparative analysis of different courses of action in terms of both their costs and consequences in order to assist policy decisions.”
- For a new treatment:
 - What is the added cost (compared with what we're currently doing)?
 - What is the added benefit?
 - Is the added benefit worth the added cost?
 - (Does the added benefit to our patients exceed the loss to others from reallocating the resources?)

$$\frac{C_2 - C_1}{B_2 - B_1} \leq \lambda$$

Proposal for PITHIA study 1: Within-trial analysis

- What does it cost and what do we get for it?

• Costs:

Cost item	Source	Notes
Digital scanners	Trial billing records	Cost will vary depending on contract, eg outright purchase vs lease with maintenance contract. Base case is likely to be lease
Training	Trial billing records	Note is fixed cost – will be allocated eg on a per unit per year basis. This includes training of pathologists at each reading site, and of biomedical scientists at each retrieval site.
Transportation	NHSBT records? Transplant registry	Records needed of mode of transport and distance. Timing is also valuable, although can be inferred from relevant fields in Tx reg.
Prepare and read biopsy	Trial / NHSBT records?	RBMS to take and prepare biopsy, histopathologist to read. These will be costed on the basis of staffing needs to provide the national service. Eg. BMS staff in each retrieval centre and central D&T histopathologist service...
Dialysis	Renal registry	Numbers of patients on dialysis (including type and frequency) in each centre throughout data collection period (ideally monthly or min 4 monthly time slots).
Transplant surgery & outcomes	Individual centres Study records Transplant registry	Flag for transplant undergoing pre-implantation biopsy (relating to donor rather than recipient).

Proposal for PITHIA study 1: Within-trial analysis

- What does it cost and what do we get for it?
- Outcomes:
 - Numbers of transplants performed?
 - Functioning kidneys after X months?
- Incremental cost per functioning kidney at 12m post-transplant at centre-level
- Exact format to be confirmed in analysis plan

Proposal for PITHIA study 2: Decision modelling

- Simulation of (a few years in the life of) the UK renal transplant service.
 - Status quo
 - With pre-implantation biopsy service
- Possible structure:

