

Value for Money, a Health Economics Perspective

Presented by Stuart Keeping



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Session overview

- Criteria for economic considerations in IPFR decision making
- Identify challenges to IPFR decision making
- Identify which factors should be considered when assessing value for money
- Identify where 'missing' information can be sourced to crudely assess value for money



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IPFR decision-making factors

- Significant clinical benefit
- Evidence based considerations
- Ethical considerations
- **Health economic considerations**



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IPFR criteria for economic considerations

IPFR panel decision-making factors:

- What is the **cost of the treatment?**
- Is the cost of the treatment likely to be reasonable?
- Is the cost of the treatment in balance with the expected clinical benefits?

Evidence for consideration in decision-making:

- What is the specific cost of the treatment for this patient?
- What is the cost of this treatment when compared to the alternative treatment they will receive if the IPFR is declined (i.e. the comparator)?
- Has the concept of proportionality been considered? (striking a balance between the rights of the individual and the impact on the wider community)
- Is the treatment reasonable **value for money?**



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Challenges to IPFR decision making?

When compared with HTA appraisals, IPFRs differ significantly in terms of the quality and availability of evidence to judge value for money:

- Effectiveness data
- Effectiveness evidence for the sub-group/patient of interest
- Safety data
- Published health economic evaluations
- Resource use evidence
- Health related quality of life (HRQoL) data (e.g. EQ5D scores)



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Crude estimates of value for money

- Gathering as much information together to compare costs and health gains between interventions helps assess value for money – ask the clinician to provide as much as possible
- You have probably already been weighing up the relationship between costs and benefits in your heads to make past decisions - this is what assessing value for money is all about!
- The following approaches should help you to make future value for money decisions in a more transparent, consistent way



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Is an intervention value for money?

- The **incremental cost effectiveness ratio (ICER)** is used in health economics to assess value for money (i.e. cost effectiveness):

$$\text{ICER} = \frac{\text{Difference in costs between interventions (A-B)}}{\text{Difference in benefit (QALYs) between interventions (A-B)}}$$

- The ICER
 - captures the **relationship** between costs and health benefits
 - allows **comparison versus next best alternative intervention**
 - use of QALYs (quality-adjusted life years) enables comparison of different types of intervention using a '**common currency**'



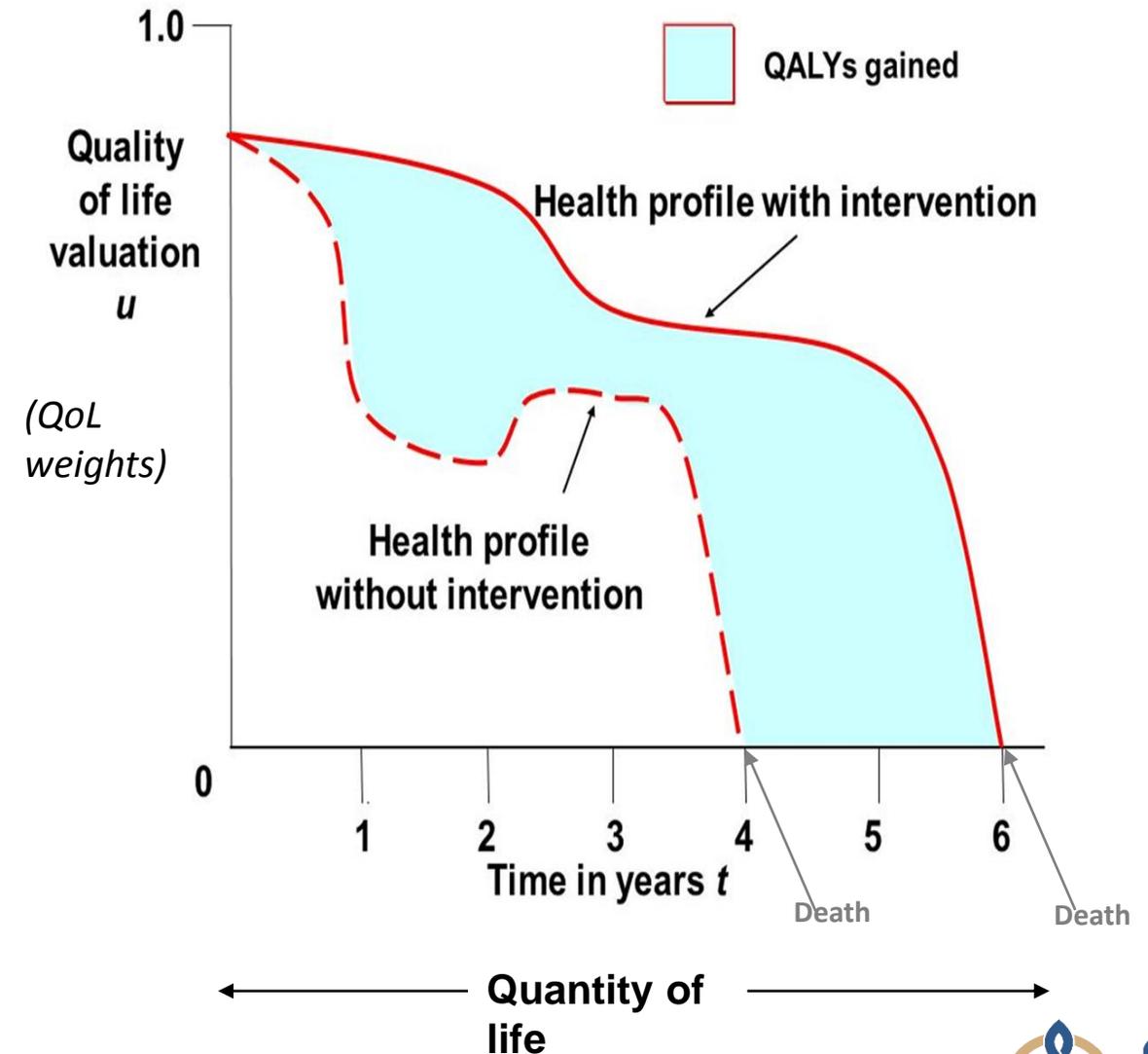
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Quality Adjusted Life Years (QALYs):

- measure the health benefits of treatments in terms of quality of life and survival (length of life)
- *QALY = quality of life x quantity of life*
- 1 year in perfect health = 1 QALY
- 1 year with quality of life at 50% perfect health = 0.5 QALY



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Measuring and valuing quality of life:

using the EQ-5D questionnaire

EQ5D calculator generates HRQoL values, e.g.:
(https://www.economicsnetwork.ac.uk/health/EQ_5D_index_calculator.xls)

e.g. **12311** = **0.452**

- Perfect health = 1.0
- Death = 0
- States worse than death <0
- Reduces naturally with age, e.g. age 75 = 0.73



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EQ-5D Questionnaire

Mobility

1. I have no problems in walking about **1**
2. I have some problems in walking about
3. I am confined to bed

Self Care

1. I have no problems with self care
2. I have some problems washing or dressing myself **2**
3. I am unable to wash or dress myself

Usual Activities (e.g. work, study, housework, family or leisure activities)

1. I have no problems with performing my usual activities
2. I have some problems with performing my usual activities
3. I am unable to perform my usual activities **3**

Pain / Discomfort

1. I have no pain or discomfort **1**
2. I have moderate pain or discomfort
3. I have extreme pain or discomfort

Anxiety / Depression

1. I am not anxious or depressed **1**
2. I am moderately anxious or depressed
3. I am extremely anxious or depressed

Cost of treatments

- It is important to consider wider resource use to take into account opportunity costs (*i.e. the benefits forgone from using resources in an alternative way*)
- An intervention may have a relatively low acquisition cost, but have a high impact on other NHS resource use, or ongoing long-term associated costs
- It's important to explore the patient pathway and consider:
 - intervention acquisition costs
 - administration costs (self, health professional at home, clinic etc.)
 - monitoring costs (GP, specialists, scans)
 - costs of adverse events
 - primary/secondary care requirements (outpatient follow-ups, etc.)



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Cost estimate sources

- IPFR document - [ask clinician to provide](#)
- Acquisition costs:
 - MIMS, NHS Drug Tariff, BNF
 - manufacturer of devices
 - Local Health Board formulary lists (e.g. stoma products)
- NHS & Social Services resource use :
 - Personal Social Services Support Unit costs
 - <https://www.pssru.ac.uk/project-pages/unit-costs/unit-costs-2017/> (updated annually)
 - or
 - NHS References Costs
 - <https://www.gov.uk/government/collections/nhs-reference-costs> (updated annually)
- *We have included a common cost list in your packs*



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Estimating QALY benefits

- RCT study paper may report survival and/or disease progression data
- If unavailable work down hierarchy of evidence: observational, case study, expert opinion, etc.
- Pivotal studies do not always collect HRQoL data – other studies?
- Other sources of HRQoL data include:
 - Sheffield utility data base <https://www.scharrhud.org/>
 - Electronic databases - embase, medline
 - Contact the clinician to provide estimates of impact of intervention and comparator on EQ5D – *this can provide a very crude estimate if struggling to find published utilities (patient or carer reports preferred)*



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AWMSG/NICE thresholds

- **£20,000 - £30,000 per QALY gained** for **'normal'** medicines
 - Closer to £30K/QALY gained requires lesser uncertainty around ICER estimates
- **NICE threshold of up to £50,000 per QALY gained** for **end-of-life** medicines, *defined as:*
 - life expectancy <24 months (median survival in control group of pivotal study)
 - medicine offers an extension to life, normally \geq three months, compared to current NHS treatment. The estimates of the extension to life should be robust and shown (or reasonably inferred) from either progression free survival or overall survival
- **Rare conditions:** AWMSG and NICE tend to accept higher ICERs



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IPFR considerations

- **No formal threshold**
- Important to consider the magnitude of benefit and the context of the decision making:
 - is the intervention life transforming or life extending?
 - is it curative?
 - does it bridge a gap to other therapies?
 - length of treatment – is it one-off, on-going, life-long?
 - how does this intervention fit into the patient pathway. For example, is this just a starting therapy, which is followed by a wider range of therapies?



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Summary: To assess **value for money** it is important to

- consider the relationship between the costs and benefits of alternative interventions
- compare the intervention with what would otherwise be available – the next best alternative treatment or best supportive care
- consider more than acquisition costs for the intervention under review and for the comparator
- consider the impact on wider NHS resource use – which results from the changed pathway or associated adverse events
- compare effects of the treatment in terms of quality of life and survival – estimate plausible QALYs if feasible
- assess the relationship between costs and benefits – produce a crude plausible ICER if feasible
- assess if the ICER is acceptable (i.e. does the intervention offer value for money?) – take into account the magnitude of benefits and context



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	IPFR intervention	Comparator
Cost of intervention		
Cost difference		
Life Years gained		
QALYs gained		
QALY difference		
ICER		



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Any questions?



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