TACKLING SOCIO-ECONOMIC INEQUALITIES IN HEALTH:
WHAT CAN ECONOMICS BRING TO THE TABLE?

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Overview

• Why economics?
• Economic arguments
• Economic tools
WHY ECONOMICS?
Why economics?

• Health inequalities are a fundamental matter of social justice

• What does this have to do with economics?
  • Economic arguments are persuasive and carry sway with decision makers
  • Economics provides tools to help understand and quantify inequalities
  • Economics can be used to identify policy options that tackle inequalities efficiently
ECONOMIC ARGUMENTS
Economic Arguments

- Ill health has several negative economic impacts
  - In childhood linked to worse life outcomes
  - Can lead to increased health care costs
  - Years of life and quality of life lost
  - May result in lower productivity
Heckman Curve

ECONOMIC TOOLS 1

Cost-Effectiveness Analysis
The Economic Problem

• Resources are scarce
• Decision makers need to prioritise
• Cost-effectiveness analysis is about doing as much good as possible with fixed budget
• In this case maximise overall health benefits
Cost-Effectiveness Analysis

- More effective, less costly
- Less effective, more costly

- More effective, more costly
- Less effective, less costly
Cost-Effectiveness Analysis

\[ \Delta \text{Cost} \]

\[ \Delta \text{Effectiveness} \]

Accept

Reject

Opportunity Cost of Health Budget
Cost-Effectiveness Analysis

• Cost of funding one health policy is the health we lose by not funding an alternative health policy

• CEA only focusses on maximising total health – has nothing to say on the distribution of health
ECONOMIC TOOLS 2
Inequality Analysis
Economics and Inequality

• Tools developed in economics and epidemiology to measure inequality
• Some were developed to study income so should be interpreted with care
  • Income is unbounded health is bounded
  • Equality of income theoretically possible
Equality versus Equity

• Allows us to isolate ‘fair’ inequalities from ‘unfair’ inequalities
  • Adjust health distributions on multiple dimensions for fairness
  • Shifting focus from equality to equity
Distinguishing Inequality Concepts

• Absolute
  
  inequality between a life of 100 years and 110 years equivalent to inequality between a life of 50 years and 60 years

• Relative
  
  inequality between a life of 100 years and 110 years equivalent to inequality between a life of 50 years and 55 years
ECONOMIC TOOLS 3
Combining Equity and Efficiency
Equity versus Efficiency

• Social welfare functions combine concern for maximising health and minimising health inequality
• Bring together cost-effectiveness analysis and inequality analysis
• When these objectives conflict there is a need to trade off
Social Welfare Analysis

More equitable
less efficient
?

Less equitable
less efficient
❌

More equitable
more efficient
✔️

Less equitable
more efficient
?
Social Welfare Analysis

Equity efficiency trade off

Δ Equity

Accept

Reject

Accept

Reject

Δ Efficiency
ECONOMIC TOOLS 4

Distributional Cost-Effectiveness Analysis
NHS Bowel Cancer Screening Programme

• Bowel cancer is the second most common cause of cancer death in the UK – more than 16,000 in 2010
• Free national screening programme rolled out in 2006 to all 60-74 year olds in England
• Those who attend screening have a 25% reduction in their risk of dying from bowel cancer
• Less than 60% of those eligible for screening participate
Inequality in Health

- Male: 68
- Female: 71

- Most Deprived: 62
- IMD 4: 68
- IMD 3: 70
- IMD 2: 72
- Least Deprived: 74
Inequality in Screening Uptake

<table>
<thead>
<tr>
<th>gFOBT Uptake (%)</th>
<th>Male</th>
<th>Female</th>
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<tbody>
<tr>
<td></td>
<td>55%</td>
<td>63%</td>
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<table>
<thead>
<tr>
<th>IMD Level</th>
<th>gFOBT Uptake (%)</th>
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</thead>
<tbody>
<tr>
<td>Most Deprived</td>
<td>45%</td>
</tr>
<tr>
<td>IMD 4</td>
<td>55%</td>
</tr>
<tr>
<td>IMD 3</td>
<td>61%</td>
</tr>
<tr>
<td>IMD 2</td>
<td>65%</td>
</tr>
<tr>
<td>Least Deprived</td>
<td>69%</td>
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Redesign Options

• Two redesign options considered both having same total cost
• Option A: additional reminder sent by doctor targeted at the most deprived areas – increase in uptake 12%
• Option B: a standard reminder sent to everybody – increase in uptake 6%
Impact of Redesign on Health

Incremental Per Person QALYs

- Male
  - Targeted
  - Universal

- Female
  - Targeted
  - Universal

Incremental Per Person QALYs

- Most Deprived
  - Targeted
  - Universal

- IMD 4
  - Targeted
  - Universal

- IMD 3
  - Targeted
  - Universal

- IMD 2
  - Targeted
  - Universal

- Least Deprived
  - Targeted
  - Universal
Distributional Cost Effectiveness Analysis

- Underpinning value judgements to move from CEA to DCEA
  - which inequalities are fair and which unfair – in this example all assumed unfair
  - form of social welfare function – in this example we use an Atkinson function
  - level of inequality aversion
DCEA Results

Universal EDE - Targeted EDE (Population QALYs)

Constant Relative Inequality Aversion (Atkinson $\varepsilon$)

Universal Better

Targeted Better
CONCLUSION
Conclusion

• Tackling health inequalities is a matter of social justice
• Economics can help provide tools to think about and quantify health inequality
• Economics can help identify efficient policies to address inequalities and make trade-offs if and when necessary
• Economic arguments can provide further support for reducing health inequality