Individual Decisions and Social Value

Alternative decision making approaches and the value of heterogeneity in the era of individualized care

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INTRODUCTION

• Decisions about reimbursement of new technologies are supported by evidence of effectiveness and cost-effectiveness.
• Subgroup analysis is appropriate to make decisions in a centralized decision making process (e.g. NICE in the UK).
• Central role of Individualized Care in the health policy agenda.
• Unrestricted choices are central to the Individualized Care model.
• Potential conflict between a socialized NHS and Individualized Care.
• Individualized Care in the policy agenda due to social values (e.g. autonomy).
• It is not clear the extent to which the arguments to implement Individualized Care are purely normative.
PURPOSE

• To study the extent to which a decision making approach that incorporates Individualized Care conflicts with the objective of a National Health System

• To examine which normative judgments should be considered by a social decision maker when this is interested in implementing Individualized Care (unrestricted choices)
CENTRALIZED OR DEVOLVED DECISIONS?:
Understanding the conflict between the society and the individual

Conflict when a centralized system rejects a new treatment because is not cost-effective

Assumptions:
- An adequate estimation of the joint distribution of potential outcomes is made
- Patients will choose in order to maximise their health

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<th>Rejection from a centralized decision making process</th>
<th>Decentralized (individualized) decision making process</th>
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# CENTRALIZED OR DEVOLVED DECISIONS?:
The conflict between the society and the individual

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<th><strong>Net gain due to centralized decisions</strong></th>
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<td>(A+B+D) − (E+F+C)</td>
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A decentralised process is consistent with the objective of the health system if:

\[ \text{Eq2} \geq \text{Eq1} \]
\[ E+F \geq D \]

There might be additional costs derived from rejection \( (C_r) \) but also from implementing decentralized decisions \( (C_d) \):

\[ E+F - C_d \geq D - C_r \]
\[ E+F - D \geq C_d - C_r \]
INDIVIDUAL DECISIONS AND SOCIAL VALUE: A stylized example

NSE (39%) 1.36 net QALY/person
NNE (27%) 0.89 net QALY/person
NSE-NNE
• (1.36x0.39) – (0.89x0.27) = 0.28

Assuming population 100,000
• The value of decentralized decisions is 28,000 net QALYs (assuming $C_d = C_r$)
SOCIAL VALUE ORIENTATION

- A purely normative social value judgment is made on the health outcome
- Welfarist (Individualist value orientation)
  - Anchored on the principles of welfarism
  - Outcome as utilities elicited from patients
- Paternalistic (cooperative value orientation)
  - Anchored in principles of extra-welfarism
  - Outcomes are not utilities (e.g. QALYs constructed from community values)
  - QALYs interpreted as capabilities related to health
- Altruist (altruist value orientation)
  - Anchored in principles of extra-welfarism
  - QALYs constructed from patients values (e.g. time trade-off)
INDIVIDUAL DECISIONS AND SOCIAL VALUE: A FRAMEWORK

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<th>Solution responds to a value orientation to health outcomes criterion</th>
<th>Paternalistic (extra-welfarist, cooperative) e.g. Community health state values</th>
<th>Paternalistic decision maker and centralized decisions</th>
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<td>Centralized</td>
<td>Mandatory guidelines produced at central level</td>
<td>Restriction to interventions that are not cost-effective</td>
<td>Heterogeneity is taken into consideration providing different recommendations for different subgroups</td>
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<td>Devolved</td>
<td>Devolved decisions at individual level using as much observable information as possible</td>
<td>Patients allowed to choose between all alternatives</td>
<td>Choices are assumed to be revealed from a shared decision making process</td>
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<td>Altruistic (extra-welfarist, altruist) e.g. Patient health state values (not utilities)</td>
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INDIVIDUAL DECISIONS AND SOCIAL VALUE: A CASE STUDY

- RITA-3: Conservative versus invasive management for NSTE-ACS
- Paternalistic value orientation
- Invasive strategy is not cost-effective when $\lambda$ is £20,000/QALY

Average iNHB

NNE (58%) = 0.099 net QALY
NSE (33.7%) = 0.146 net QALY

Relevant population: 76,829

Difference NNE – NSE

= 3,788.72 – 4,447.15 = -658.43 net QALY
= -£13,168,602
CONCLUDING REMARKS

• Individualized care has become a central policy issue in many health policy agendas around the world
• Implementation of unrestricted choices should be evaluated in terms of net health benefits forgone
• A purely normative social value judgment must be made to define the maximand
• The analytical approach presented relies on a robust estimation of the joint distribution of potential outcomes and the capacity of patients and doctors to predict his/her position in the cloud.
• This approach can be extended to compare the scenario when the maximand of the patients is different to the maximand of the social planner