Methods of preference elicitation

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What is preference elicitation and why do we talk about it?

- It is valuation of benefits in health economic analysis.
- Alternative valuation techniques are used to place values on benefits.
- These values differ according to the method of preference elicitation resulting in different results of economic analysis and having further implications for decision making.

If preference elicitation cause so much trouble why are we still eliciting them?

- To be able to perform certain types of economic analyses (CUA, CBA).
Differences on benefit side: CBA, CEA, CUA

- CUA guides resource allocation decision making by maximizing utility (expressed in eg. QALYs)
- CBA guides resource allocation decision making by maximizing welfare gains (expressed in monetary terms)
- Only in a case when cost-utility framework (CUA) is adopted, the focus of preference elicitation is on health states (utilities are values that represent individuals' preferences for specific health related outcome - health state). Measuring utilities involves defining health states and valuing them.
- As we are interested in preferences towards health states or utilities or values of health states, we are here interested only in CUA.
Choice based and not-choice based methods

Choice based methods:
TTO, SG, PTO

Non-choice based methods:
VAS, RS
TTO task
PTO task

At what number of patients of type B would you be indifferent between both treatments?

Health state A: can move about without difficulty at home, but has problems with stairs and outdoors. Treatment would move people to "no problems walking".

10 people in health state A

? People in health state B

Health state B: to some degree bedridden. Can sit in a chair if helped up by others. Treatment would move people to "no problems walking".
SG task

Probability $p$ is varied
At the point of indifference $\rightarrow p = \text{value for state } i$

Choice 2

Probability $p$
Healthy

Probability $\{1-p\}$
Dead

Choice 1

Guaranteed state
EUnetHTA guideline based on current practices for methods for economic evaluation

- based on common denominators
- in the internal review process
- includes chapter on preference elicitation
- divides direct and indirect preference elicitation methods
DIRECT METHODS without using a questionnaire. Most common:
- SG, TTO and VAS
- PTO and DCE

INDIRECT METHODS are based on health state questionnaires that are completed by patients or general population. Most common:
- EQ-5D (EuroQol),
- HUI (Health Utilities Index Mark II/Mark III),
- SF-6D (based on a selection of questions from the SF-36),
- 15D,
- QWB (Quality-of-Well Being Scale) and
- AQoL (Assessment of Quality of Life).
Under each heading, please tick the ONE box that best describes your health TODAY

**MOBILITY**
- I have no problems in walking about □
- I have slight problems in walking about □
- I have moderate problems in walking about □
- I have severe problems in walking about □
- I am unable to walk about □

**SELF-CARE**
- I have no problems washing or dressing myself □
- I have slight problems washing or dressing myself □
- I have moderate problems washing or dressing myself □
- I have severe problems washing or dressing myself □
- I am unable to wash or dress myself □

**USUAL ACTIVITIES** (e.g. work, study, housework, family or leisure activities)
- I have no problems doing my usual activities □
- I have slight problems doing my usual activities □
- I have moderate problems doing my usual activities □
- I have severe problems doing my usual activities □
- I am unable to do my usual activities □

**PAIN / DISCOMFORT**
- I have no pain or discomfort □
- I have slight pain or discomfort □
- I have moderate pain or discomfort □
- I have severe pain or discomfort □
- I have extreme pain or discomfort □

**ANXIETY / DEPRESSION**
- I am not anxious or depressed □
- I am slightly anxious or depressed □
- I am moderately anxious or depressed □
- I am severely anxious or depressed □
- I am extremely anxious or depressed □
Variation in responses to define preferences

Responses presenting preferences for health states vary across individuals due to many factors such as:
- experience with ill-health state
- life stage of the respondent
- employment status
- education etc.
+ other factors such as:
- perspective (individual, social)
- degree of discussion (context)
- reference points
- prospect theory
- scales themselves
Variation resulting from duration in TTO

Scores from a TTO exercise are likely to reflect the combination of preferences to avoid the ill-health state in question and time preferences at an individual level. Discounting?
Variation resulting from equity concerns in PTO

Is it appropriate for the valuations resulting from PTO to be a combination of preferences for the avoidance of the health scenario and concerns for distribution of health benefits?
Variation resulting from risk in SG

It is the case that scores from a SG exercise are likely to reflect the combination of preferences to avoid the ill-health state in question and to avoid the risk of death. This is where its attractiveness lies. BUT: risk modeled by the usual SG is the result of a unrealistic situation in which the individual faces instant death as a possible outcome from one of the two choices.
Conclusions

- Preference elicitation enables most common forms of economic analysis in health care (CUA, CBA).

2. Preference elicitation has important implications for decision making.

3. There are many methods for preference elicitation (direct, indirect; choice based, not-choice-based). It is important to know which method of preference elicitation we choose as there are variations depending on technique.
Thank you for your attention!

Photo: Slovenija, Prekmurje, wineyard
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