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Nancy J. Devlin, PhD
ISPOR President-Elect 2018-2019
Office of Health Economics
London, England, UK

Novel Approaches to Value Assessment, Within the Cost-Effectiveness Framework

Extending the scope of patient reported outcomes and QALYs

Professor Nancy Devlin
Office of Health Economics

ISPOR Summit, Washington October 19th 2018.
Novel approaches to value assessment within the cost effectiveness framework

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Limitations of QALYs as a unit of outcome

- Health related quality of life (HRQoL)
  - What is '*health related*', and what isn't?
  - eg. mixed evidence on extent to which standard generic PROs capture wider impacts (productivity; income)
- By convention, analysis focuses on HRQoL and QALYs of *patients*
  - But family, carers and others also impacted by illness and treatment (negative and positive externalities)
- Focus on health and health care misses impacts and outcomes from *social care* needs and care services.

Utility and income/productivity

- Do respondents consider lost income when valuing health states? (mixed evidence)
- How well does individual lost income reflect societal productivity? (probably not very well)
- But to the extent income *is* considered, potential for double counting. 2nd: Washington Panel: capture 'pure' effects on HRQoL.


Do Utility Values Reflect Lost Income And The Full Opportunity Cost Of Work Loss?

K. Fust, M. Kohli, G. Ball, K. Kawai, C.J. Acosta, M.C. Weinstein

Open Archive PlumX Metrics

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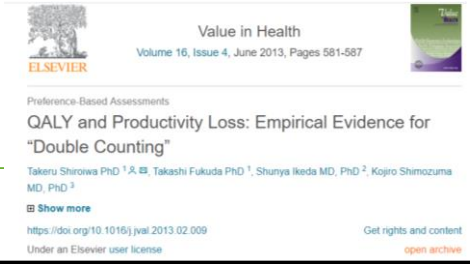
Abstract | Full Text

ISPOR Washington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Value in Health

Volume 16, Issue 4, June 2013, Pages 581-587

Preference-Based Assessments

QALY and Productivity Loss: Empirical Evidence for "Double Counting"

Takeru Shiroiwa PhD [1], Takashi Fukuda PhD [1], Shunya Ikeda MD, PhD [2], Kojiro Shimozuma MD, PhD [3]

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Limitations of HRQoL utilities

- By convention, based on average stated preferences of the general public
  - Who is the general public?
  - Average value of people or value of the average person?
- Alternative normative arguments e.g. in favour of considering patients' preferences (eg Sweden's TLV)
  - But are 'patients' a homogeneous group?
  - Brouwer and Versteegh (2016): *both* perspectives are relevant.
  - Reconciling systematic differences?
  - Fundamental questions about the maximand; allocative efficiency; opportunity cost.

Example of research to address limitations

Extending the QALY

…developing a broad measure of quality of life for use in economic evaluations across health and social care…

The University Of Sheffield.

Aim: to develop a new quality of life instrument

1. A questionnaire that picks up the impact of health treatments and social care interventions on
   - physical and mental health
   - and broader quality of life aspects as judged to be important by service users (and those who are impacted such as carers)
2. Amenable to
   - use in economic evaluation
   - being included in trials
   - (ideally) being translated to other languages and used internationally

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Extending the QALY
May 2017- Oct 2019

Funders

- CLAHRC
- UK Medical Research Council (MRC)

Project partners

- **ScHARR**
  - John Brazier (Lead)
  - Julie Johnson (Project Co-ordinator)
  - Tessa Peasgood
  - Clara Mukuria
  - Donna Rowen
  - Aki Tsuchiya
  - Jill Carlton
  - Janice Connell
  - Mark Clowes
  - Ben van Hout
  - Monica Hernandez
- **NICE**
  - Bhash Naidoo
  - Juan Carlos Rejon
- **University Of Kent**
  - Karen Jones
  - Stacey Rand
- **Office of Heath Economics (OHE)**
  - Nancy Devlin
- **EuroQol Research Foundation**
  - Descriptive systems & valuation working groups

Governance groups

- Advisory Group – academics, wide range stakeholders
- Steering Group – key stakeholders & academics
- Public Involvement Group – members of the public
- NICE Citizen's Council

International teams

- China/Singapore
- Germany
- USA
- Argentina
- Australia

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Stage I: Identify Domains / Themes (May - Feb 2017)

Literature review of qualitative research on wellbeing and quality of life

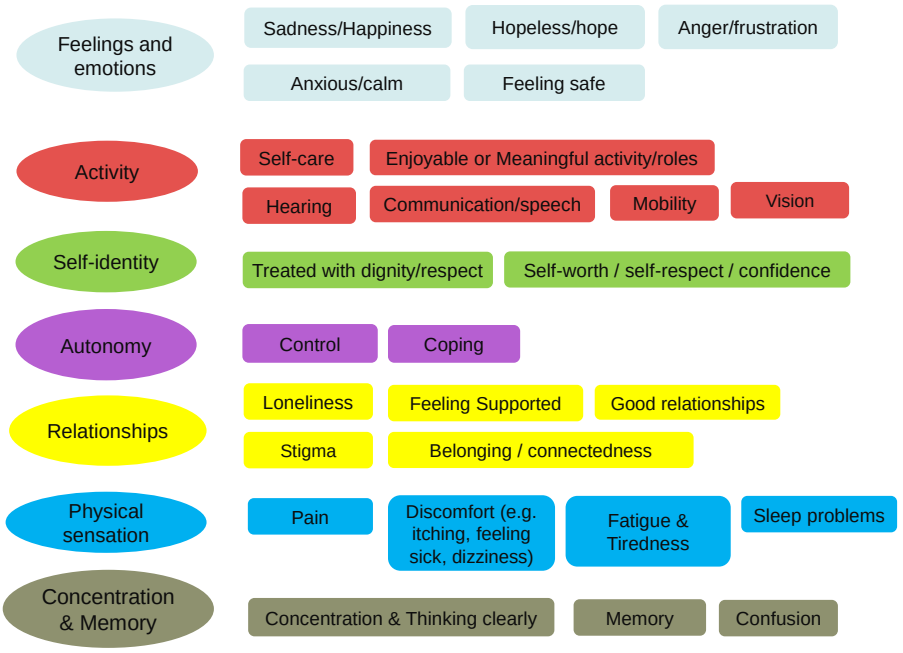
Psychometric analysis of existing patient data set (MIC)

Stage II: Generate potential questions to measure each theme (Feb / March 2018)

Using other instruments & new questions based on the literature review

Items required to meet specified criteria

~100 items identified



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Stage III: Face Validation Interviews (March - Aug 2018)

Aim:

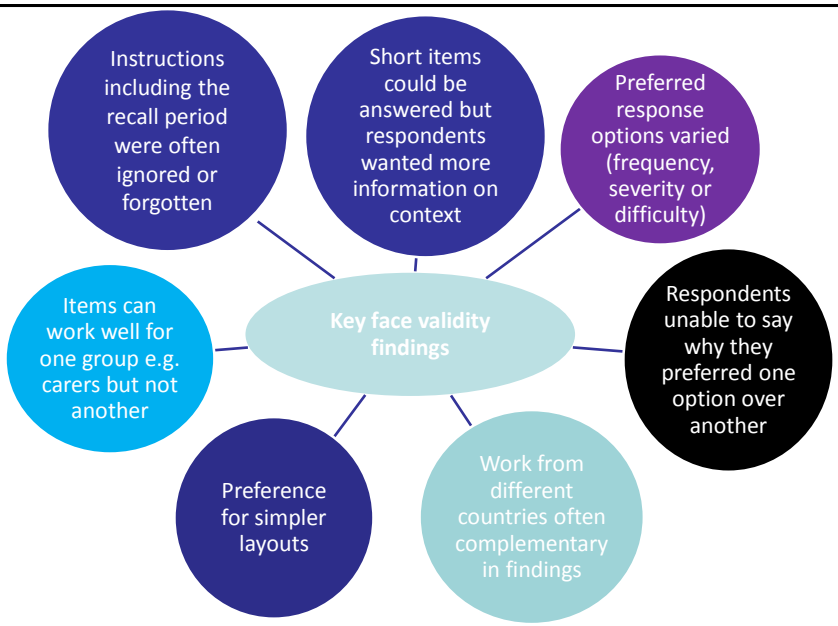
- check interpretation of items
- explore alternative wording and response options
- identify embarrassing items

Interviews in England (n=45) (social care users, carers & patients).

Repeated in 5 other countries

- China, Germany, Australia, Argentina, USA

Select and refine questions for psychometric survey in England (~70 items)



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Stage IV: Select questions for the instrument (Sept 2018 - Jan. 2019)

Conduct survey in England (n=2000, patients/carers/social care users)

Include EQ-5D-5L, EQ-5D-3L, WEMWBS and ASCOT

Psychometric and IRT analysis – to test dimensionality and item performance

Select items for a profile measure and a classification system using all face validity and psychometric evidence

Stage V: Valuation (Jan – Sept 2019)

Face to face TTO interviews with general public in UK (n~600)

& 'deliberative' valuation exercise with NICE Citizen's Council

Stage VI: What difference would the new measure make? (July- October 2019)

Compare to other instruments (EQ-5D, WEMWBS, ASCOT)

Potential mapping

Apply to existing cost effectiveness studies – what difference would using it make to resource decisions

Concluding remarks

- The QALY and existing measures of HRQoL can be extended in various ways to capture problems and outcomes not conventionally taken into account
- There is also scope to incorporate, more systematically, patients' preferences regarding HRQoL into HTA (although issues remain about how best to do that)
- If the E-QALY is measuring different things, that will also have implications for an (E-) QALY-based threshold
- Ultimately, there is a limit to what can be included within the QALY - other considerations are already taken into account in HTA alongside QALYs. Not *whether* to consider other factors but *how best* to do that.

To find out more about the E-QALYs project:

See https://scharr.dept.shef.ac.uk/e-qaly/

If you would like to join the E-QALY on-line Advisory Group please contact Julie.Johnson@Sheffield.ac.uk

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Limitations of PROs

- Ability of the individual to self-complete the instrument can be a limiting factor.
  - age; disability; cognitive impairment
  - Chronic diseases of unconsciousness; young children (eg < 8)
- Proxy completion
- Can only capture 'felt' problems eg not high blood pressure
- PROs may not always adequately capture particular kinds of health problems (eg hearing/vision) or inadequately capture mild problems ('ceiling effects')