

# VALUING EQ-5D-5L HEALTH STATES USING A COMPOSITIONAL APPROACH: A NEW TOOL FOR ELICITING PERSONAL UTILITY FUNCTIONS ONLINE (OPUF)

Paul Schneider<sup>1</sup>, Ben van Hout<sup>1,2</sup>, Marieke Heisen<sup>3</sup>, John Brazier<sup>1</sup>, Nancy Devlin<sup>4</sup>

<sup>1</sup>University of Sheffield, UK; <sup>2</sup>OPEN Health, York, UK;

<sup>3</sup>OPEN Health, Rotterdam, NL; <sup>4</sup>University of Melbourne, AU

## THE PROBLEM

- Standard preference elicitation techniques (time trade-off, standard gamble, discrete choice experiments, etc) are inefficient.
- They require hundreds if not thousands of participants to estimate a social value set for the EQ-5D-5L (= QALY-weights)

## THE 'OPUF' SOLUTION

- We developed a new type of online survey, the **OPUF Tool**, for valuing EQ-5D-5L health states.
- The tool is based on a study by Devlin et al. (2018), which pioneered the 'PUF' method in face-to-face interviews.
- We used an iterative design approach to refine the PUF method and adapt it for online use.
- The OPUF tool allows us to construct EQ-5D-5L value sets for small groups and on the individual personal level.

## PILOT STUDY

- We recruited **50 participants** from the UK through prolific.co to pilot the OPUF Tool.
- It took participants about **6 minutes**, on average, to complete all exercises.
- We were able to construct personal utility functions for the for all 50 participants.
- Participants' utility function were consistent with the choices they made in a DCE validation task (consistency: 78%).
- We also aggregated preferences across participants to derive a group-level EQ-5D-5L value set.
- The figure on the right illustrates the group (thick line) and all 50 personal utility functions (thin lines). 

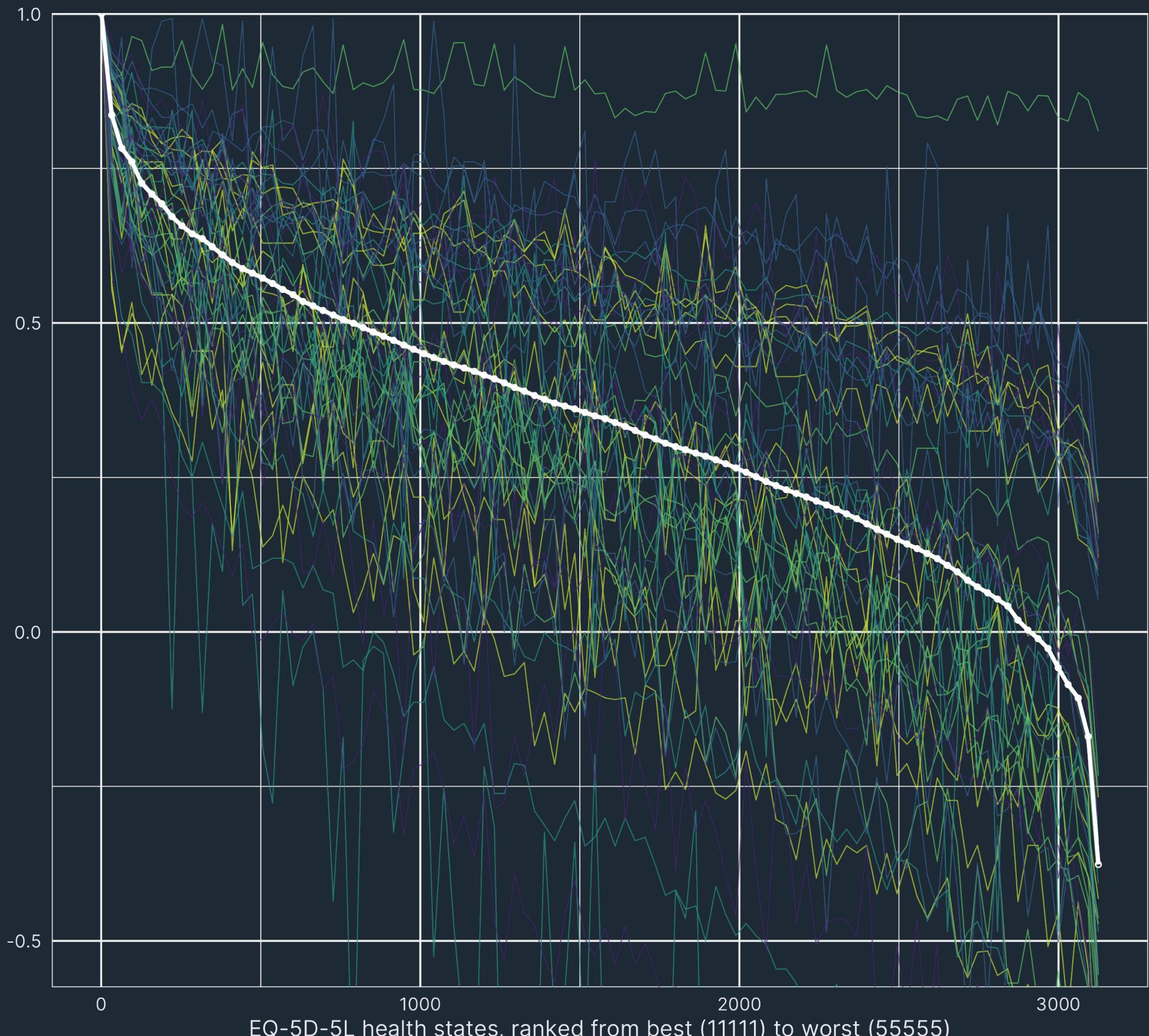
## FUTURE APPLICATIONS

In the future, the **OPUF Tool** could be used:

1. to elicit preferences from small groups (e.g. patients, carers, etc.)
2. to derive value sets on a small budget
3. as a patient decision aid in clinical practice

Try the **OPUF Tool** yourself:

<https://eq5d5l.me>



Paul Peter Schneider

University of Sheffield, UK

p.schneider@sheffield.ac.uk

@waq0r



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Of  
Sheffield.



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Paul Schneider<sup>1</sup>, Ben van Hout<sup>1,2</sup>, Marieke Heisen<sup>3</sup>, John Brazier<sup>1</sup>, Nancy Devlin<sup>4</sup>

<sup>1</sup>SCHARR, University of Sheffield, UK; <sup>2</sup>OPEN Health, York, UK; <sup>3</sup>OPEN Health, Rotterdam, NL;

<sup>4</sup>School of Population and Global Health, University of Melbourne, AU

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- Standard preference elicitation techniques (time trade-off, standard gamble, discrete choice experiments, etc) are inefficient
- Hundreds if not thousands of participants are required to estimate a social value set (= QALY-weights)

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- We developed a new type of online survey, the **OPUF Tool**, for valuing EQ-5D-5L health states

The tool allows us to construct value sets for small groups and on the personal level

Try the **OPUF Tool** yourself:  
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Paul Peter Schneider

University of Sheffield, UK

[p.schneider@sheffield.ac.uk](mailto:p.schneider@sheffield.ac.uk)

[@waq0r](https://twitter.com/waq0r)



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## THE COMPOSITIONAL APPROACH

A compositional preference elicitation approach broadly consists of three steps:

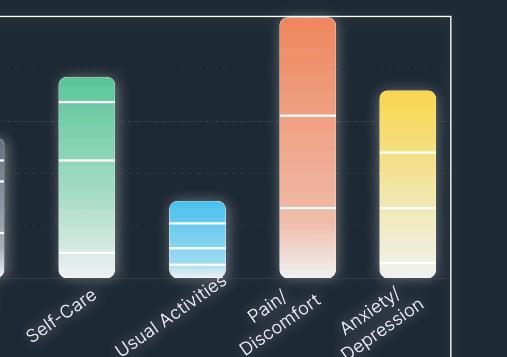
### 1. Dimension weighting

Determines the relative importance of the five EQ-5D dimensions.



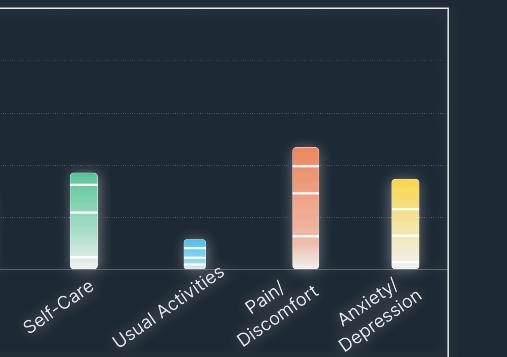
### 2. Level rating

Places slight, moderate, and severe problems within each dimension.



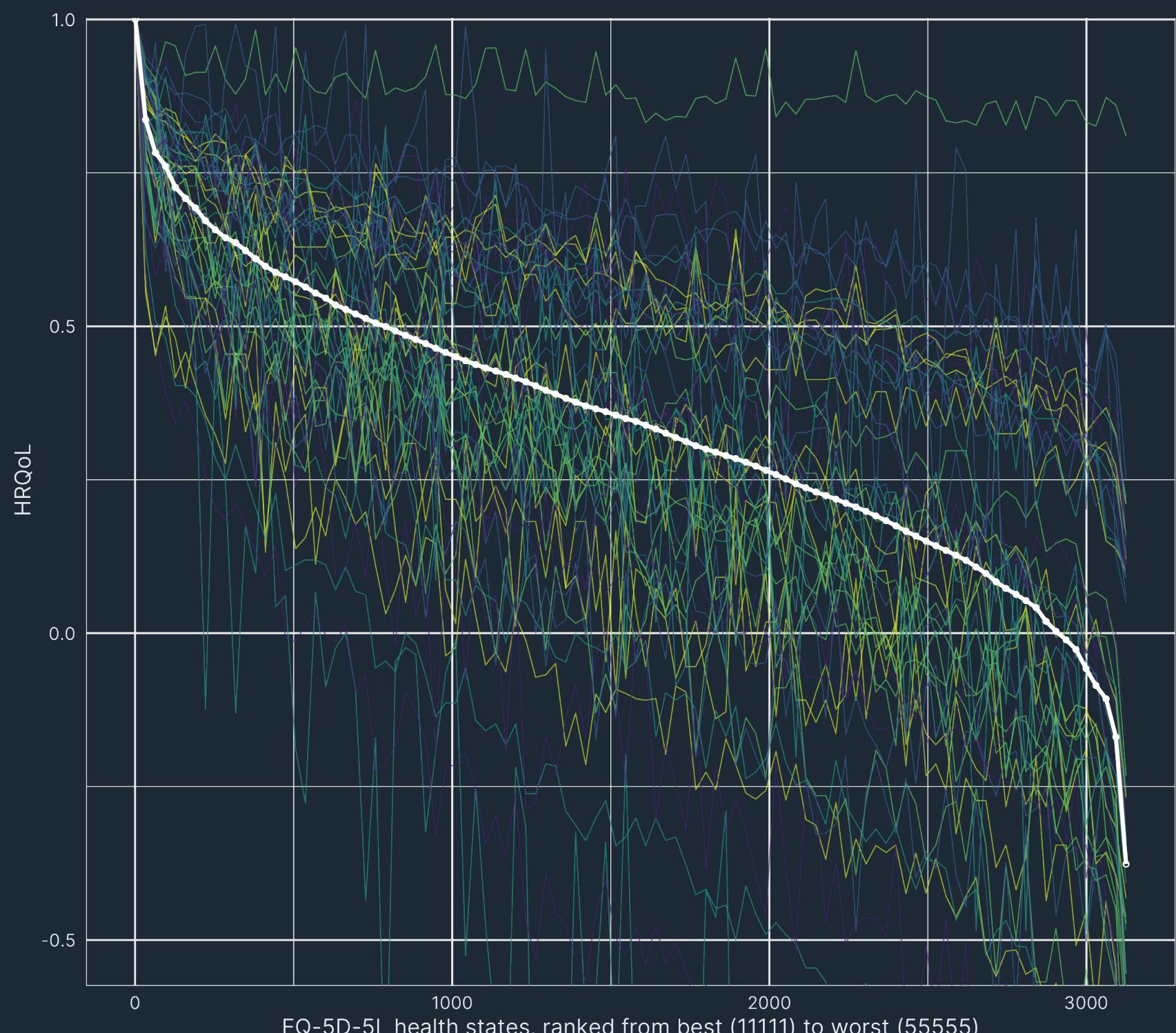
### 3. Anchoring

Rescales weights and ratings and maps them onto the QALY-scale.



## PILOT STUDY

- We recruited a sample of **50 participants** from the UK through prolific.co to pilot the OPUF Tool.
- On average, it took participants about **6 minutes** to complete all valuation exercises.
- We were able to construct personal utility functions for the for all 50 participants.
- Participants' utility function were consistent with the choices they made in a DCE validation task (78.5%).
- We also aggregated preferences across participants to estimate a group-level EQ-5D-5L value set.
- The figure below illustrates the group (thick line) and all 50 personal utility functions (thin lines).



## FUTURE APPLICATIONS

We think, we **OPUF Tool** could be used:

1. to elicit preferences from small groups (e.g. patients, carers, etc.)
2. to derive value sets on a small budget
3. as a patient decision aid in clinical practice