

Drop Dead



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20 MAY 2020

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Conflicts of interest

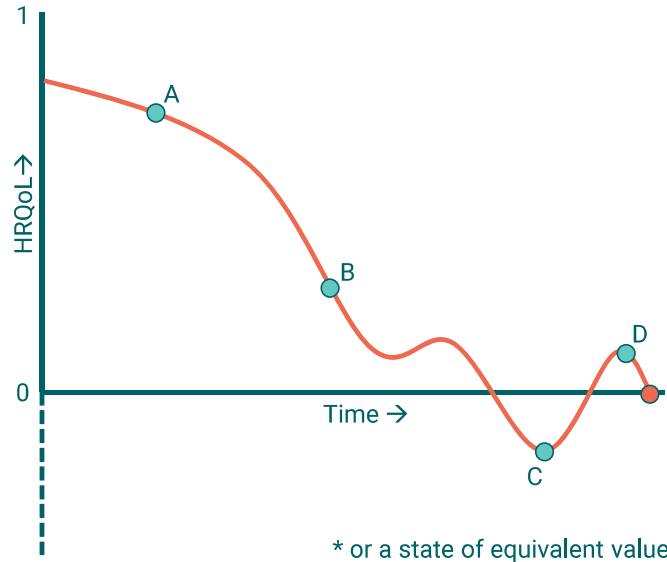
- I declare that I have no known conflicts of interest, financial or otherwise.
- I am an employee of the Office of Health Economics, a registered charity, which receives funding from a variety of sources including the EuroQol Research Foundation and the Association of the British Pharmaceutical Industry.
- I received no specific funding in relation to this presentation.

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Dead plays an important role

1 = full health*
0 = dead*

- Anchoring is necessary to identify the relative value of different health states
 - A defining feature of TTO
 - An awkward reality for DCE
- QALYs
 - Facilitates trade-offs between length and quality of life
 - Forms the basis for interpersonal comparisons
- Time
 - Being dead constitutes lost time

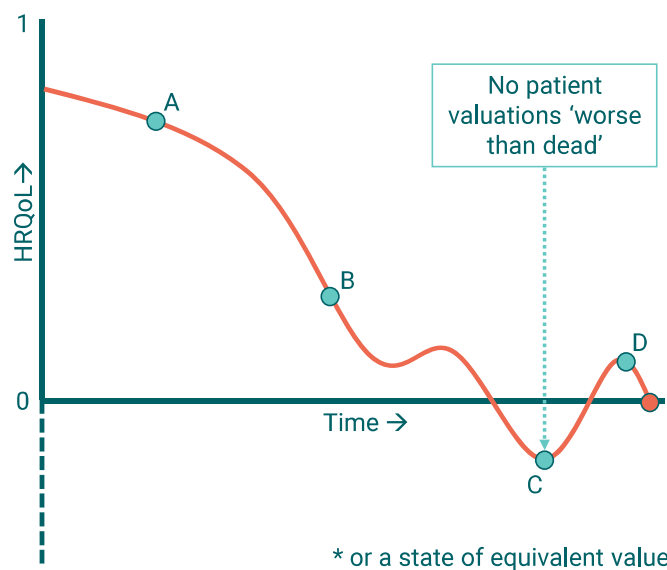


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Dead is problematic in practice

1 = full health*
0 = dead*

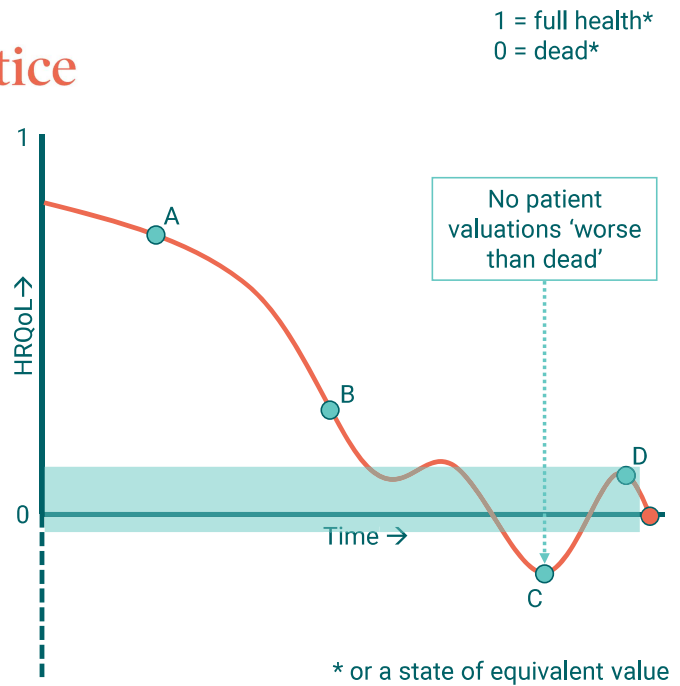
- Experience-based valuation is problematic
 - No states worse than dead ([Bernfort et al, 2018](#))



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Dead is problematic in practice

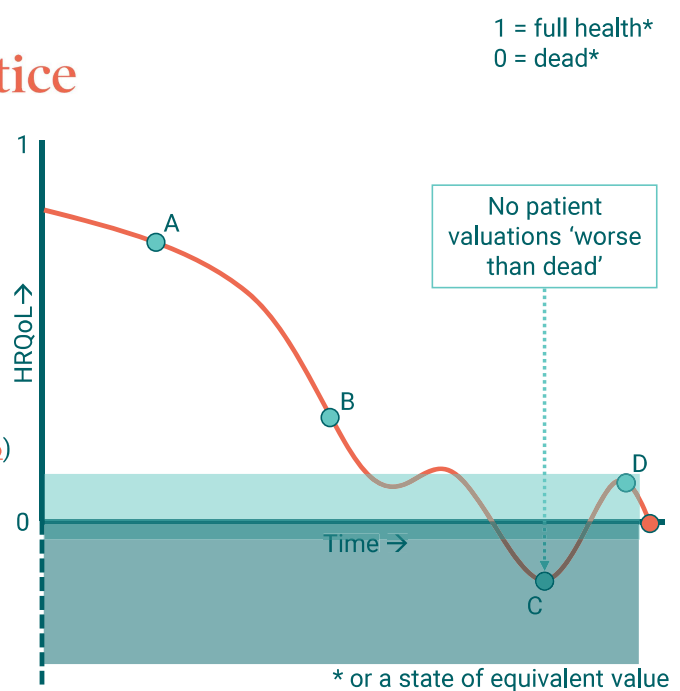
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 - No states worse than dead ([Bernfort et al, 2018](#))
- Gap effect ([Stalmeier et al, 2005](#))
 - Few states valued close to 'dead'



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Dead is problematic in practice

- Experience-based valuation is problematic
 - No states worse than dead ([Bernfort et al, 2018](#))
- Gap effect ([Stalmeier et al, 2005](#))
 - Few states valued close to 'dead'
- States 'worse than dead' are not meaningful
 - Not associated with severity ([Gandhi et al, 2019](#))
 - Confusion about what they mean ([Al Sayah et al, 2016](#))

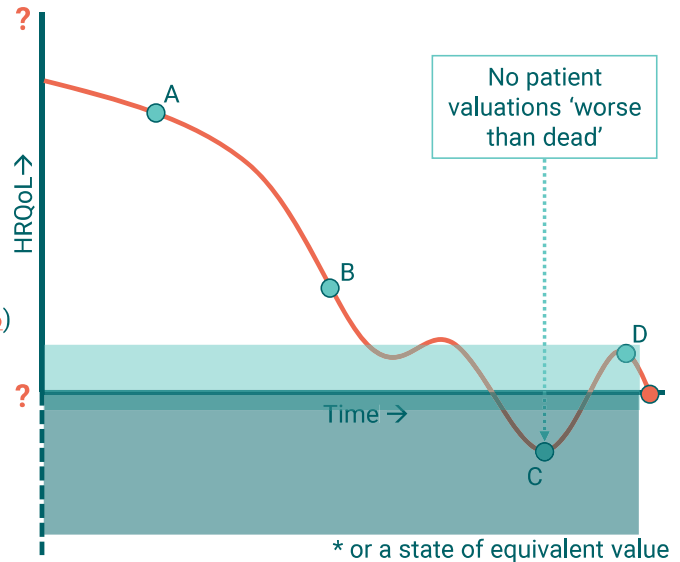


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 - Lexicographic ([Flynn et al, 2008](#))
 - Infinite willingness to pay to avoid ([Becker et al, 2007](#))

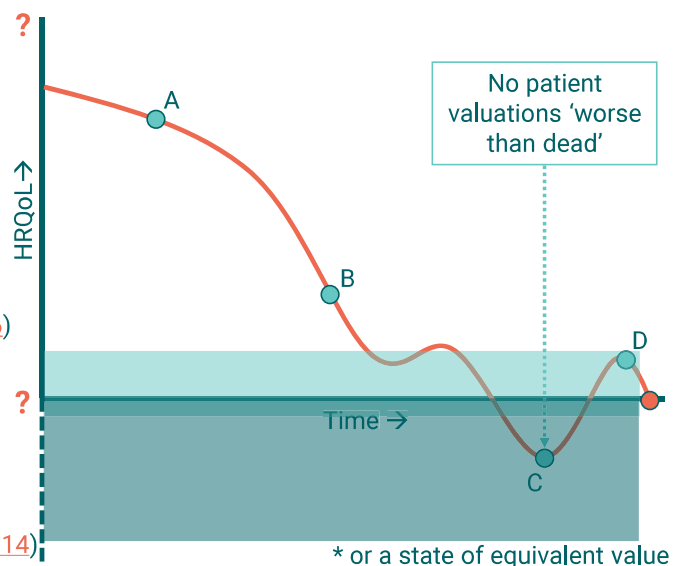


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- Preferences for 'dead' are problematic
 - Lexicographic ([Flynn et al, 2008](#))
 - Infinite willingness to pay to avoid ([Becker et al, 2007](#))
- Results in questionable data
 - People don't acknowledge 'dead' ([van Nooten et al, 2014](#))
 - Observations often dropped from studies ([Engel et al, 2016](#))

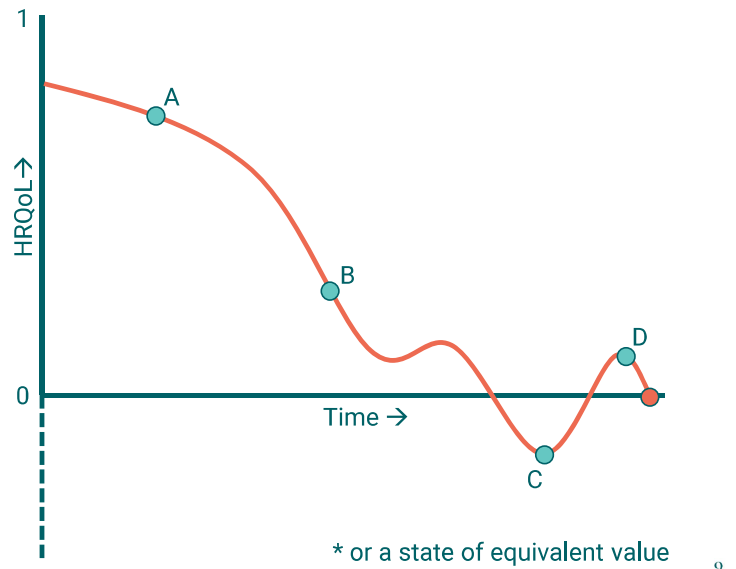


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Dead is problematic in theory

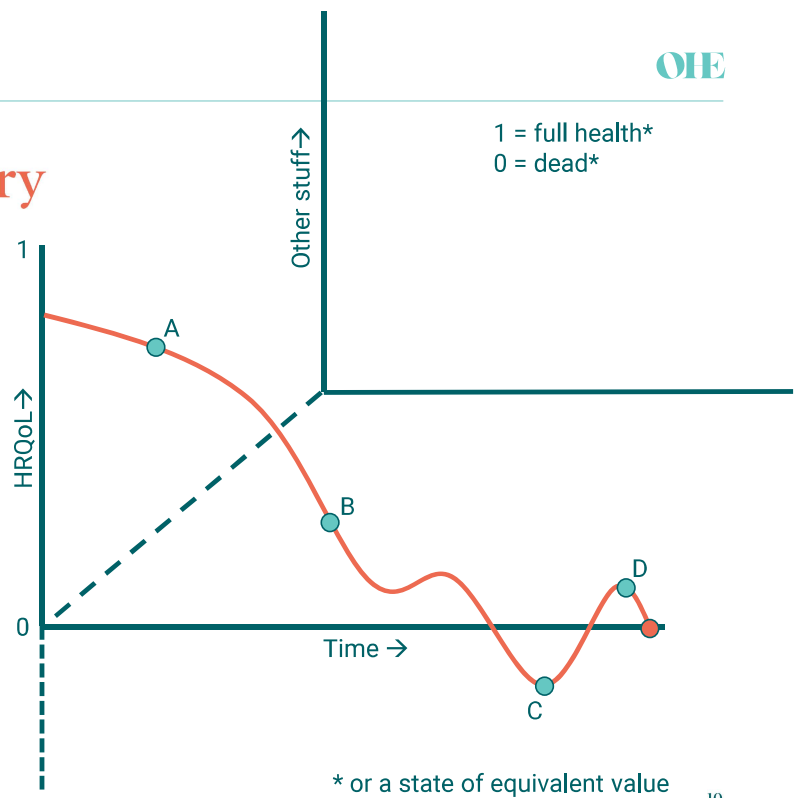
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- Dead vs death vs dying
 - What does it mean to value 'dead'? ([Devlin et al, 2004](#))



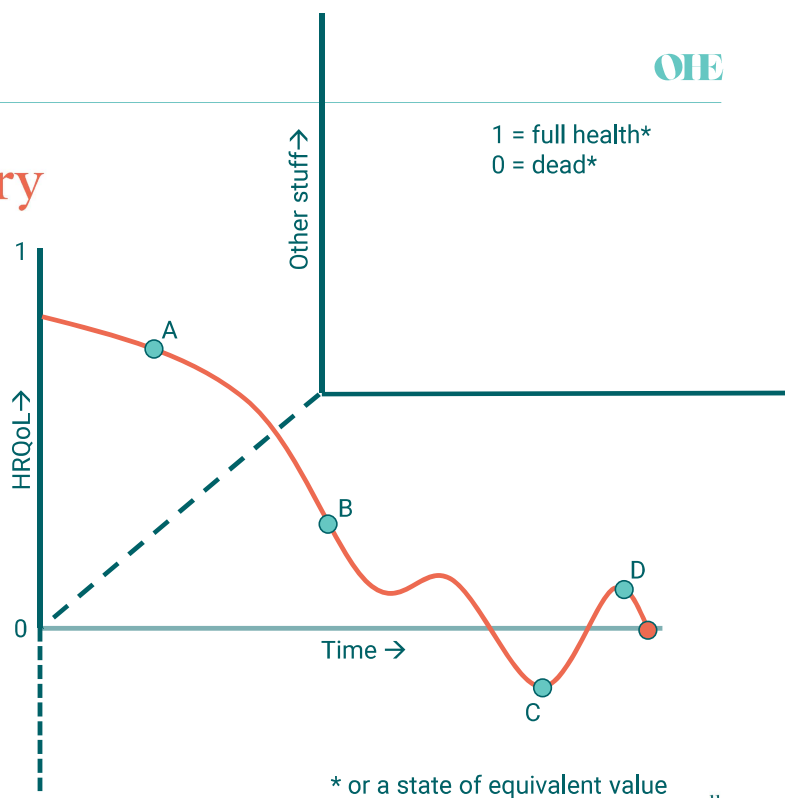
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- Invokes considerations beyond health
 - Time preference, probability of survival ([Sharma & Stano, 2010](#))
 - Views on euthanasia ([Augestad et al, 2013](#))



Dead is problematic in theory

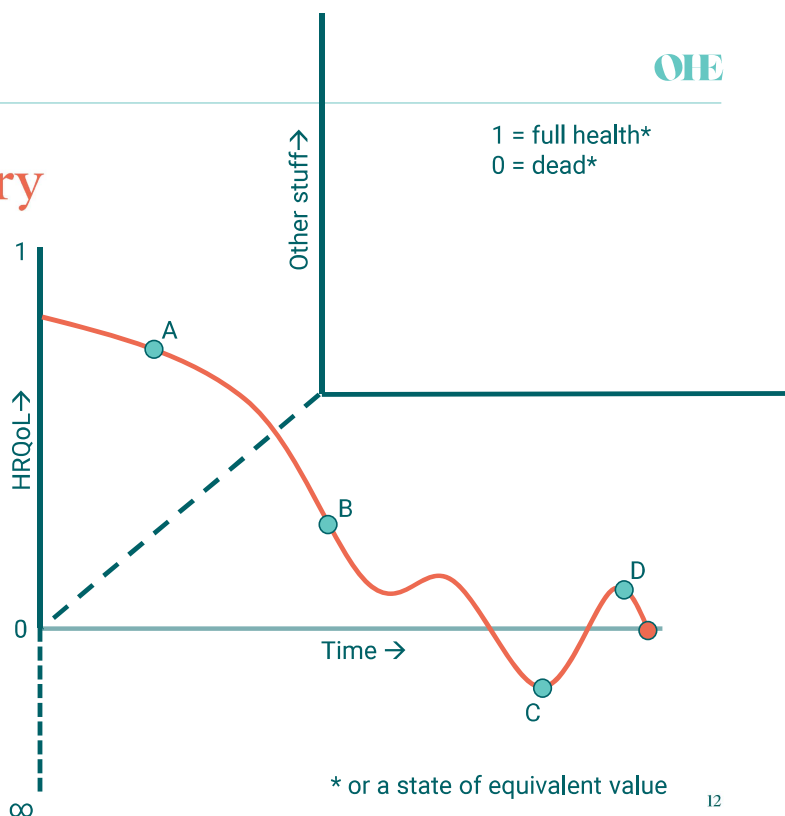
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Dead is problematic in theory

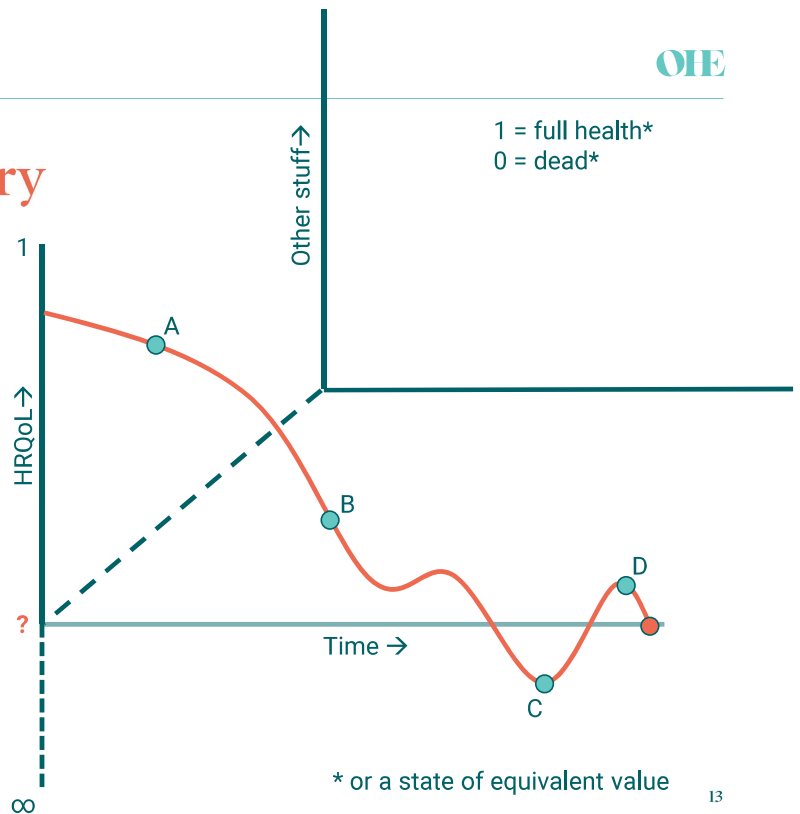
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- Indefinable with respect to time
- The negative scale is limitless



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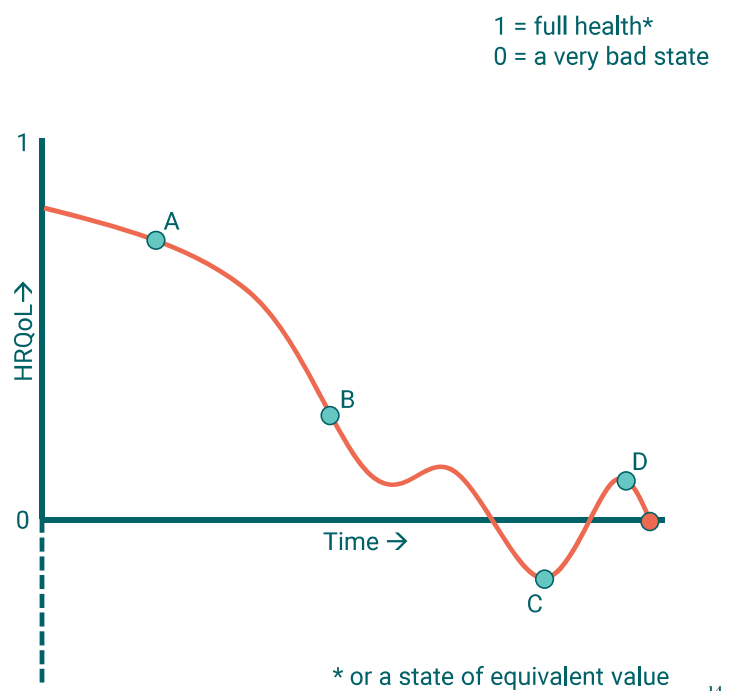
Dead is problematic in theory

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- Indefinable with respect to time
- The negative scale is limitless
- Health state "of equivalent value to being dead" is hard to conceive
 - EQ-5D-5L state 55511?



Why we don't need 'dead'

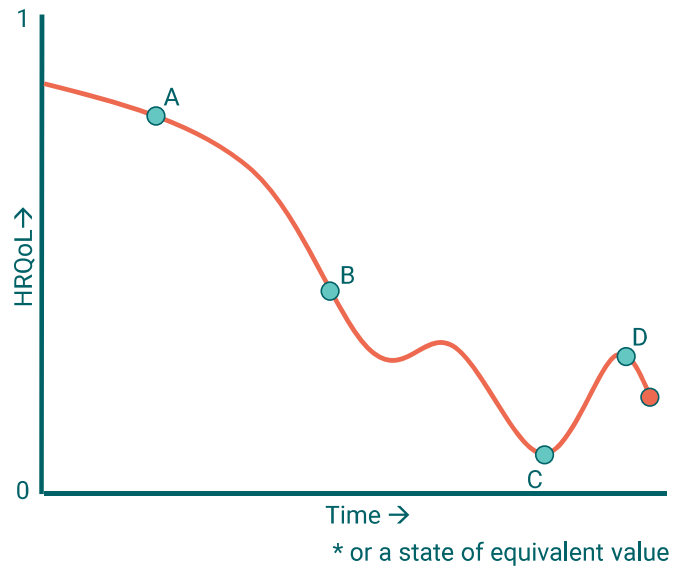
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Why we don't need 'dead'

- Zero can be anything
- Ratio scale > interval scale
 - Requires an absolute zero

1 = full health*
0 = a very bad state

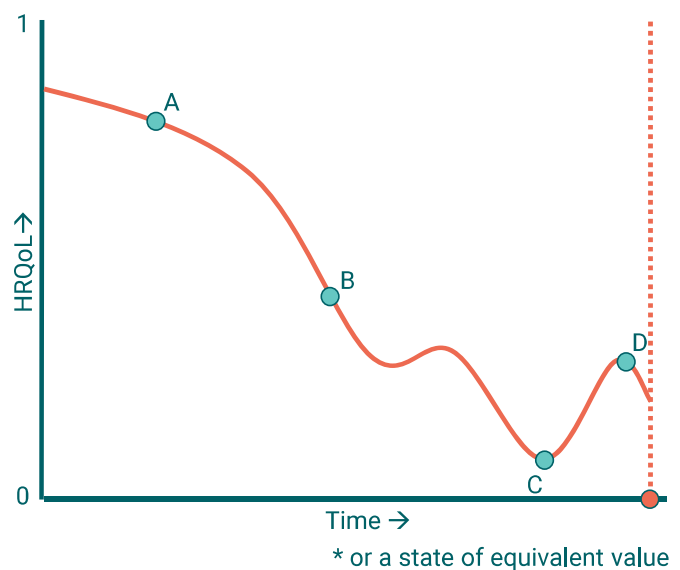


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Why we don't need 'dead'

- Zero can be anything
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 - Requires an absolute zero
- 'Dead' can still be zero
 - And it must ([Roudijk et al, 2018](#))

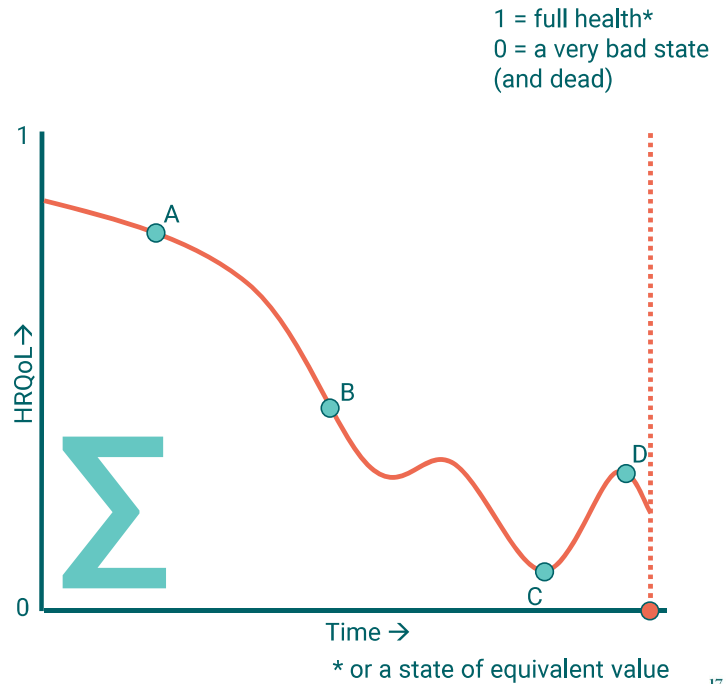
1 = full health*
0 = a very bad state
(and dead)



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Why we don't need 'dead'

- Zero can be anything
- Ratio scale > interval scale
 - Requires an absolute zero
- 'Dead' can still be zero
 - And it must ([Roudijk et al, 2018](#))
- Resource allocation trade-offs are not health vs death
 - They are QALYs vs QALYs



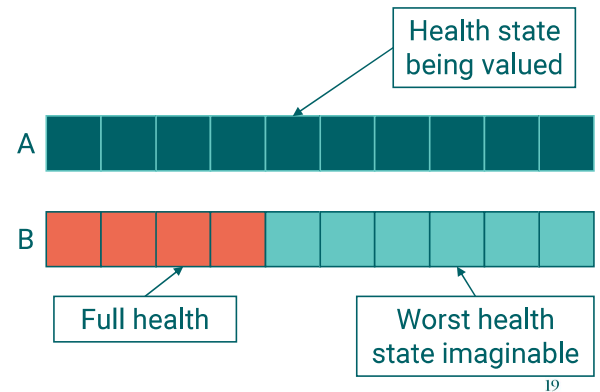
What we should do instead

- Dropping dead makes a big difference ([Sutherland et al, 1983](#); [Nord, 1991](#))

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1. Adopt an alternative anchor as an absolute zero
 - a) Worst health state imaginable
 - b) Worst health state defined by the measure (e.g. EQ-5D)
 - c) A minimum endurable health state

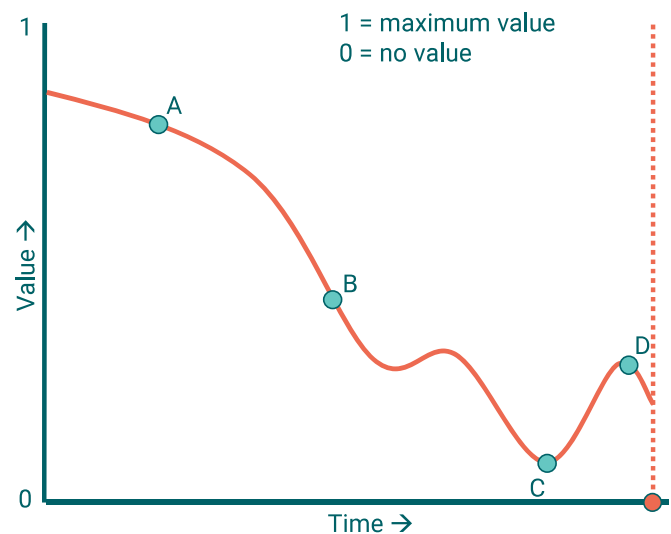


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What we should do instead

- Dropping dead makes a big difference ([Sutherland et al, 1983](#); [Nord, 1991](#))

1. Adopt an alternative anchor as an absolute zero
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 - b) Worst health state defined by the measure (e.g. EQ-5D)
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2. Redefine QALYs as a decision-making tool
 - a) Zero is a point where no value is generated over time
 - b) QALYs can be rescaled

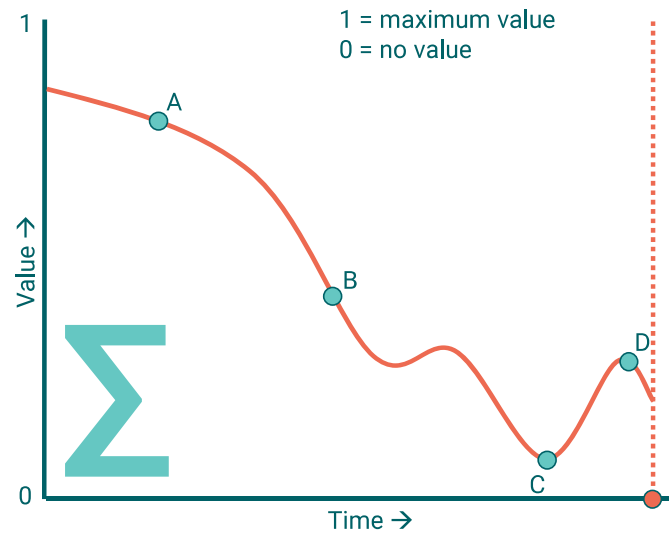


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What we should do instead

- Dropping dead makes a big difference ([Sutherland et al, 1983](#); [Nord, 1991](#))

1. Adopt an alternative anchor as an absolute zero
 - a) Worst health state imaginable
 - b) Worst health state defined by the measure (e.g. EQ-5D)
 - c) A minimum endurable health state
2. Redefine QALYs as a decision-making tool
 - a) Zero is a point where no value is created
 - b) QALYs can be rescaled
3. Keep calm and carry on estimating QALYs



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To enquire about additional information and analyses,
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Polling

- Should we drop dead from health state valuation?
 - Yes
 - No
- Which of the following concerns do you have about 'dropping dead'
 - It is important to know the value of death
 - It is important to know which states are worse than dead
 - There isn't a meaningful alternative to 'dead' for anchoring
 - I have no concerns! Drop dead!

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