Empirical thresholds and explicit trade-offs

Martin Henriksson

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Introduction

The European Journal of Health Economics
https://doi.org/10.1007/s10198-018-1000-4

EDITORIAL

When is it too expensive? Cost-effectiveness thresholds and health care decision-making

Werner Brouwer[1,2,3] · Pieter van Baal[1] · Job van Exel[1,2] · Matthijs Versteegh[3]

More research on v and k needed

Swedes are well known for doing as they are told!

The European Journal of Health Economics
https://doi.org/10.1007/s10198-019-01039-0

ORIGINAL PAPER

Estimating the marginal cost of a life year in Sweden's public healthcare sector

Jonathan Siverskog[1] · Martin Henriksson[1]

Approximately 200 000 SEK/QALY

The European Journal of Health Economics (2019) 20:1063–1077
https://doi.org/10.1007/s10198-019-01077-8

ORIGINAL PAPER

Value of a QALY and VSI estimated with the chained approach

S. Olofsson[1,2] · U.-G. Gerdtham[1,2,3] · L. Hultkrantz[4] · U. Persson[1]

Received: 3 September 2018 / Accepted: 29 May 2019 / Published online: 6 June 2019

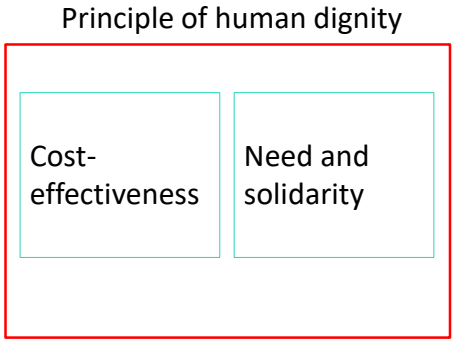
Approximately 3 000 000 SEK/QALY

Priority setting principles in Sweden

Legislation and the Swedish ethical platform

- The principle of human dignity
  - all individuals have equal rights regardless of personal characteristics and position in society
- The principle of need and solidarity
  - resources should be used in domains (or patients) where needs are considered to be largest
- The principle of cost-effectiveness
  - resources should be used in the most effective way without neglecting fundamental duties concerning the improvement of health and quality of life

Priority setting principles in Sweden



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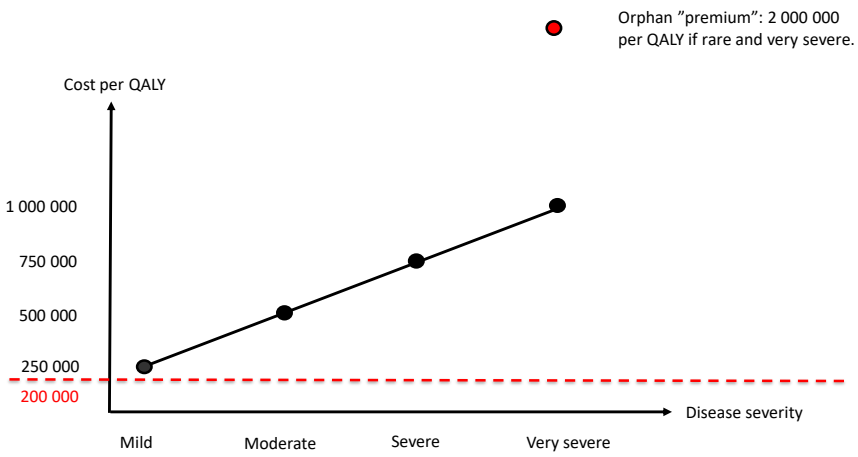
3 000 000

Operationalization – reimbursement decisions



So the estimates of 200 000 and 3 million very helpful!

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What to make of this?

- So – who is right!?
- Decision makers?
- Researchers…
- …or both?
- Most likely nobody!
- Obviously the empirical work estimate different things
- Unclear still what decision makers are actually ”using”

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Estimates of the marginal cost of health in Sweden

Main variables, data sources and methodological approach

- Standardised average remaining life expectancy (ARLE)
  - Statistics Sweden, 1970-2016
- Healthcare expenditure (HCE) per capita
  - KOLADA (SKL), 2003-2016
- Panel data approach, 2003-2016
  - Two-stage least squares (2SLS)
- Main instrument
  - Graduated nurses

Panel data (N=20, T=14)

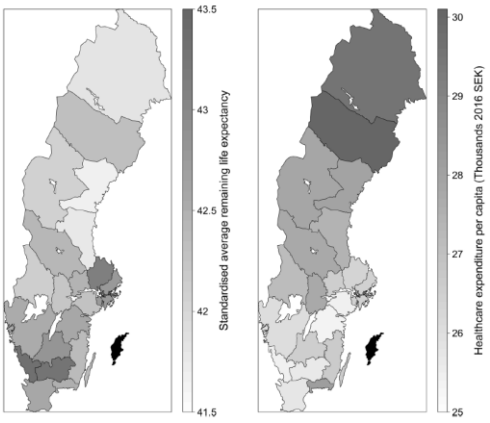
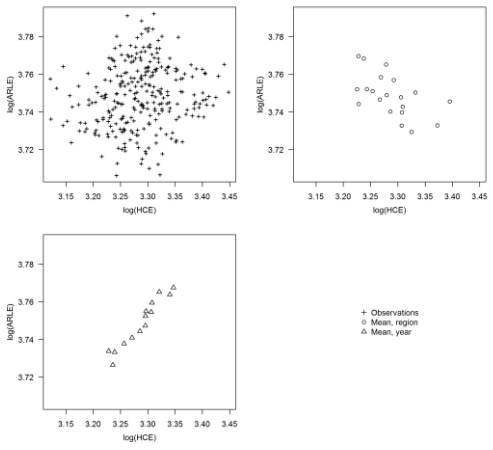
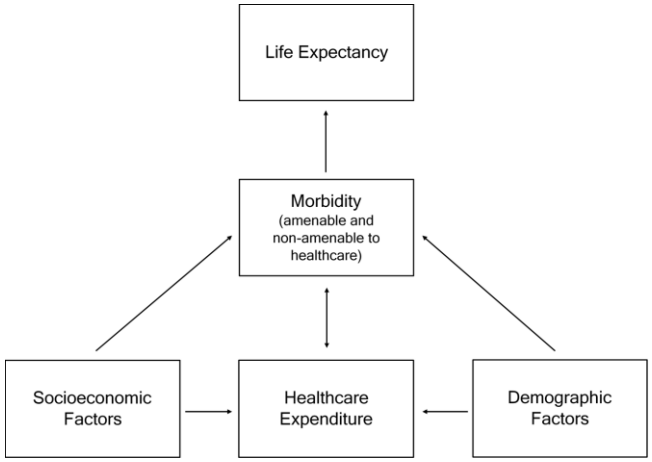


Fig. 2 Regional variation in life expectancy and expenditure, 2003–2016 averages

Panel data (N=20, T=14)



Panel data – conceptual model



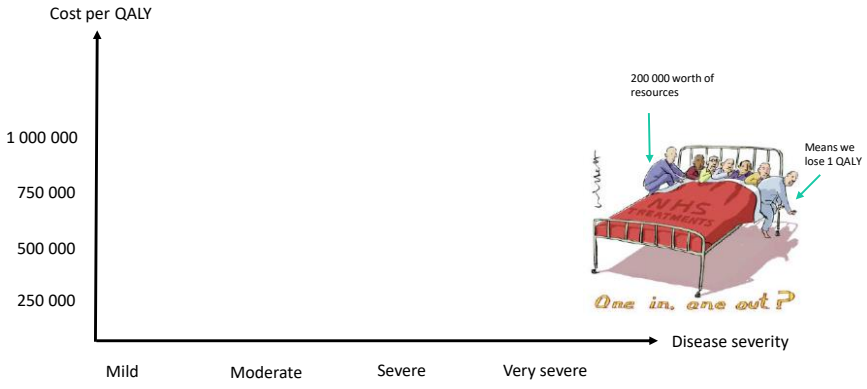
Main results

- Central estimate of marginal cost per life year is **SEK 367,507** (95% CI 200,279–2,227,010)
- Assuming same relative pure QoL-effect as Claxton et al. (2015), **SEK 180,000 per QALY**

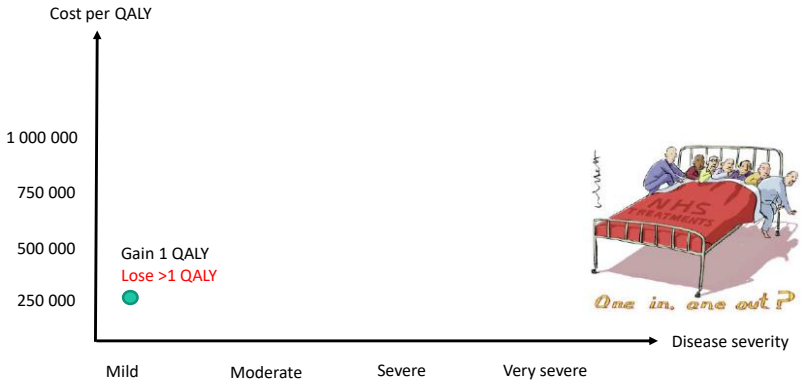
The importance of ”knowing” the marginal cost of health

- If you believe health is forgone when we fund treatments, we need to know by how much
  - Results indicate 2 million SEK buy 11 QALYs
- If you make equity efficiency trade-offs in decision making – these trade-offs should be as explicit as possible

Disease severity – make trade-offs explicit



Disease severity – make trade-offs explicit



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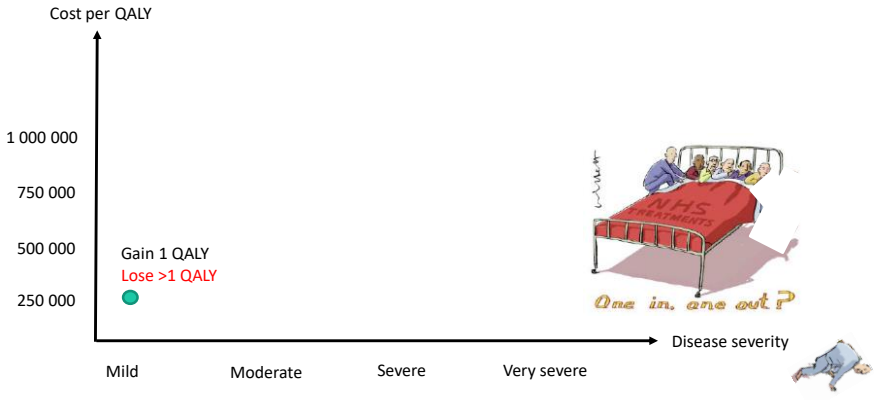

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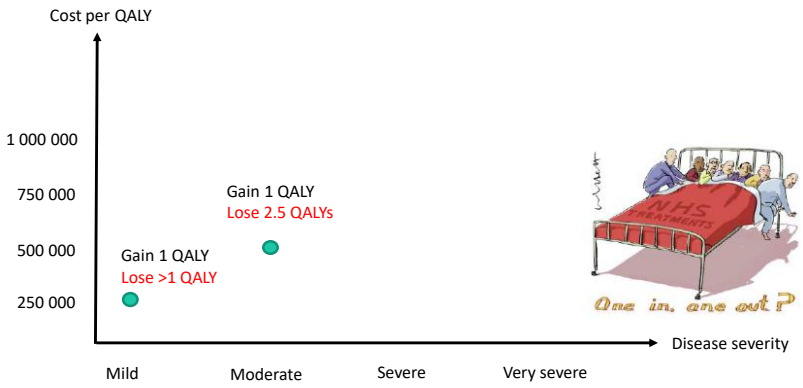

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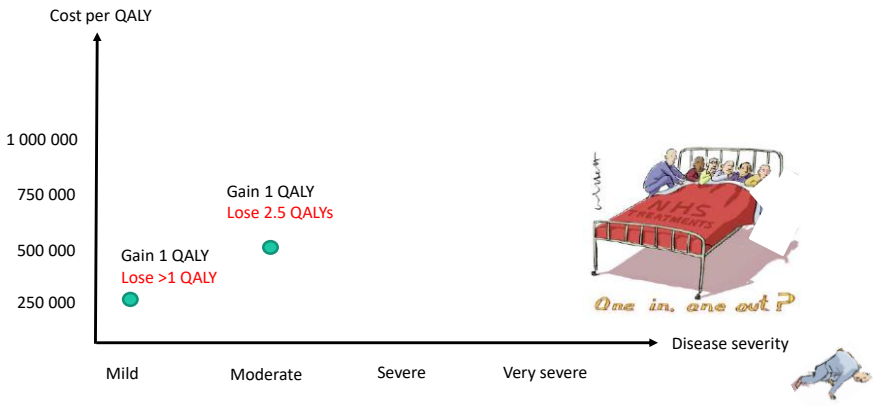

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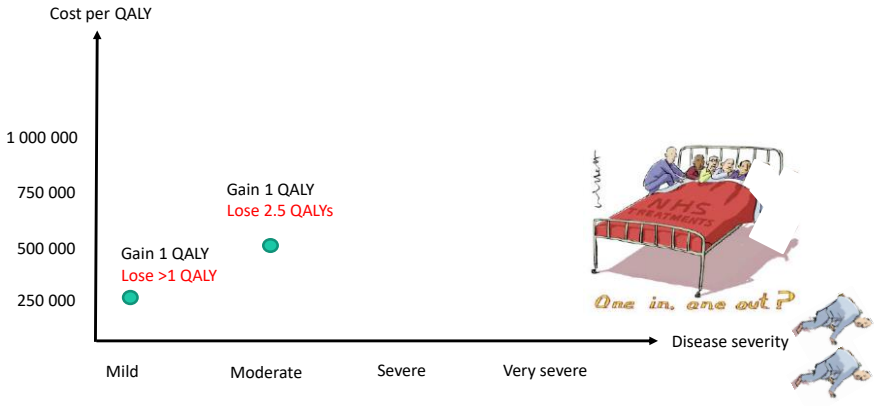

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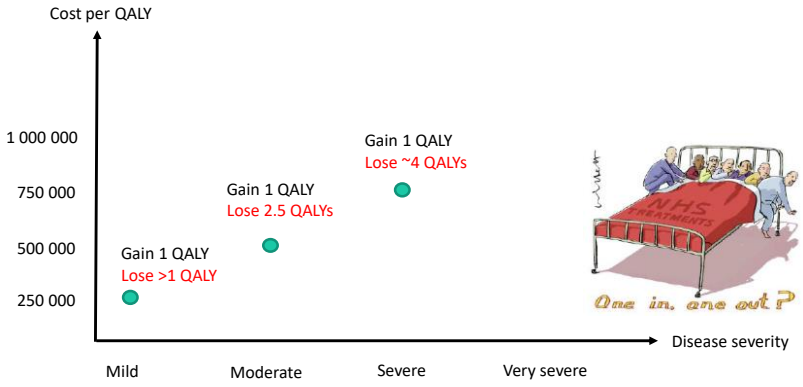

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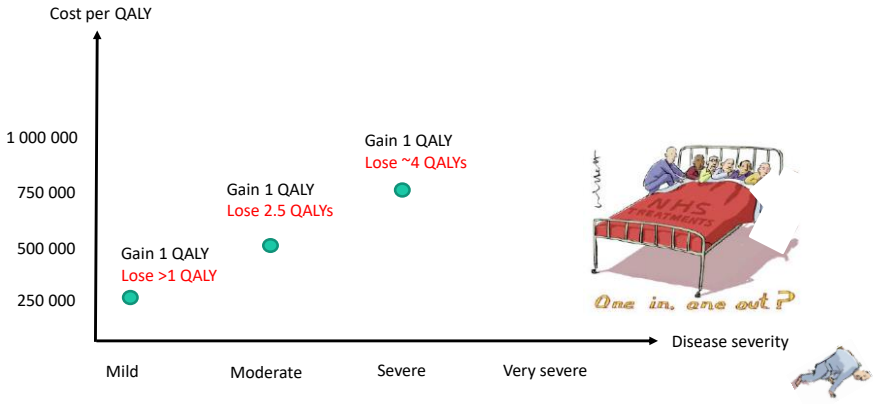

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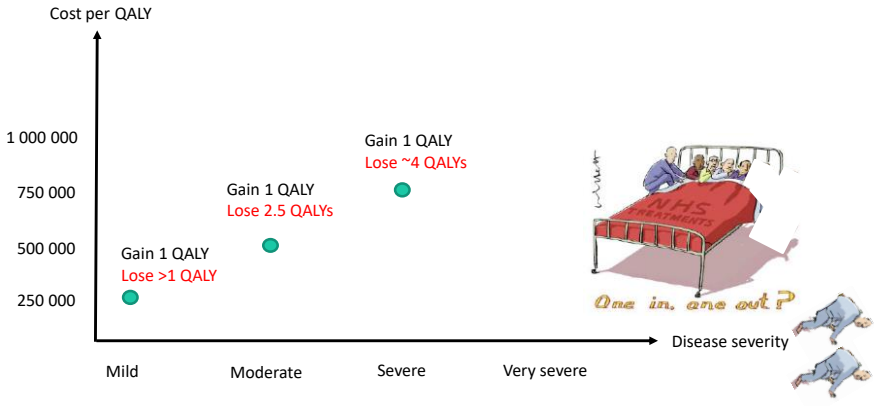
Disease severity – make trade-offs explicit



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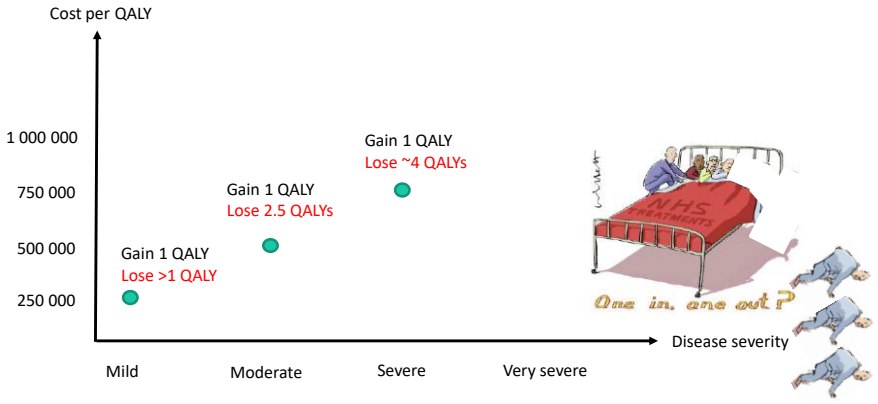
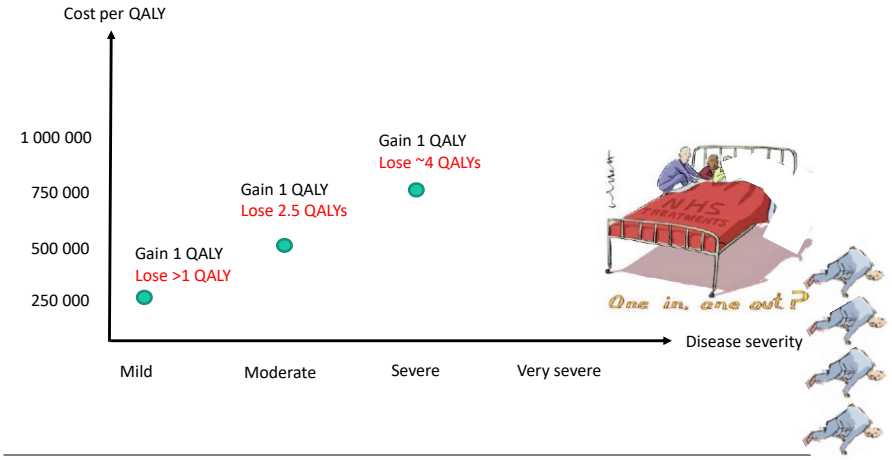


Disease severity – make trade-offs explicit



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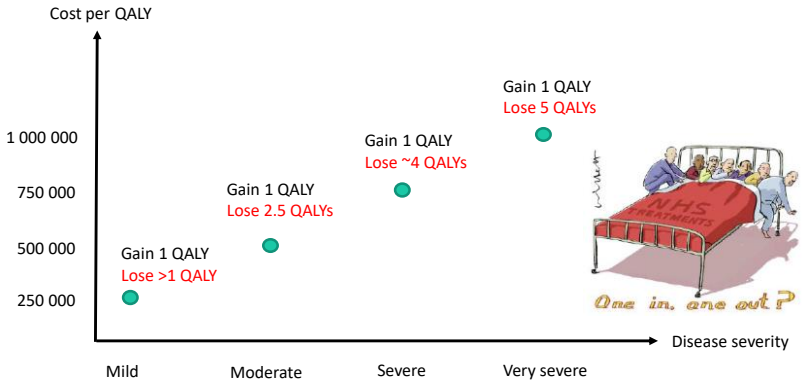

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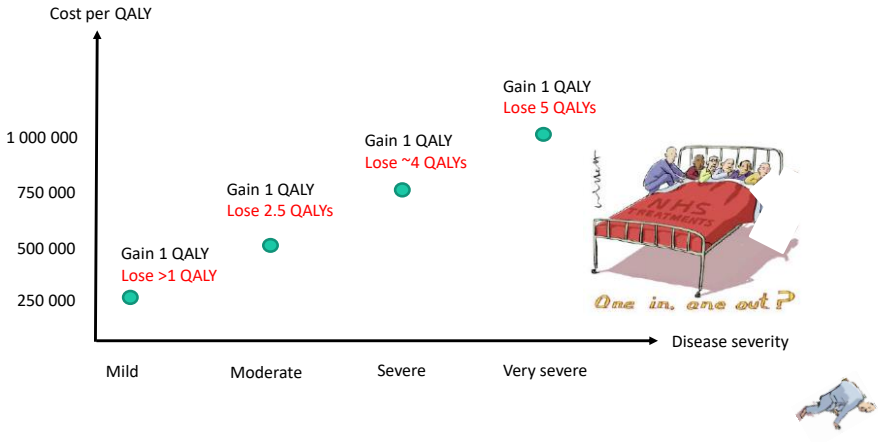
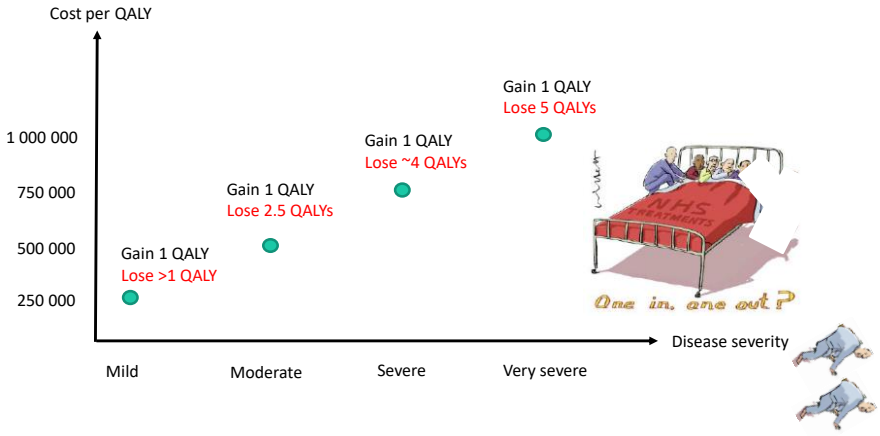
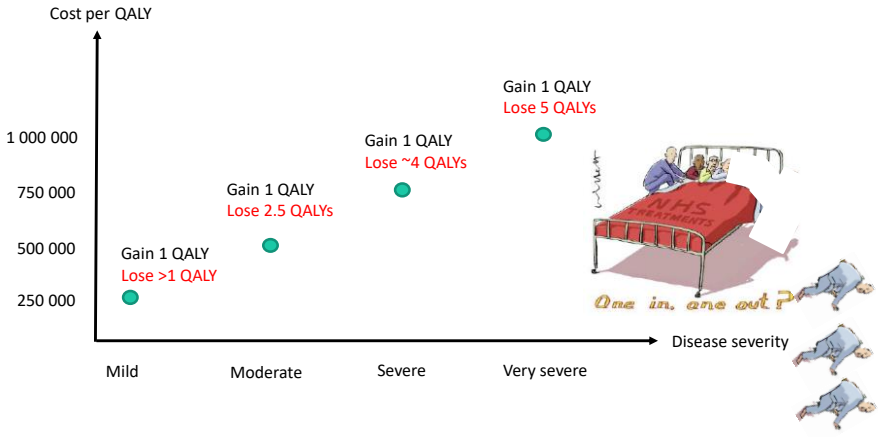


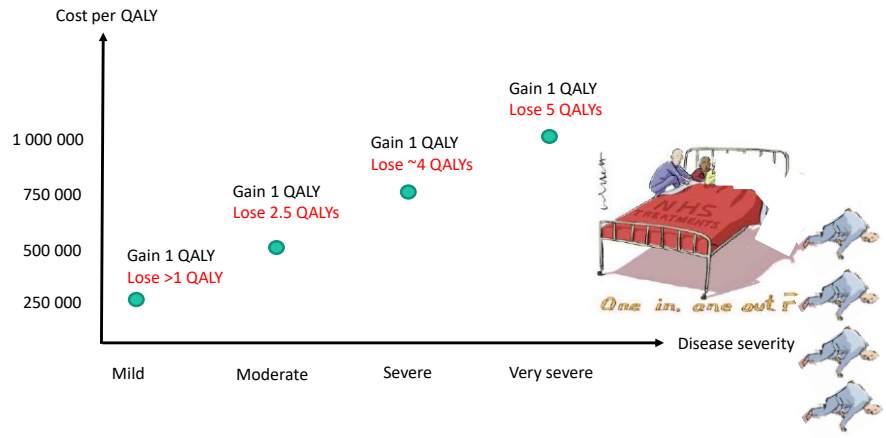
Disease severity – make trade-offs explicit



Disease severity – make trade-offs explicit



Disease severity – make trade-offs explicit



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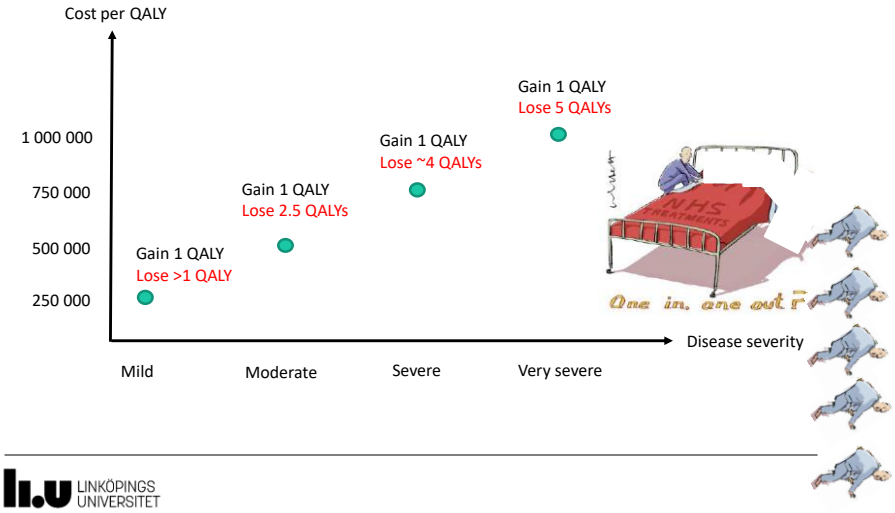
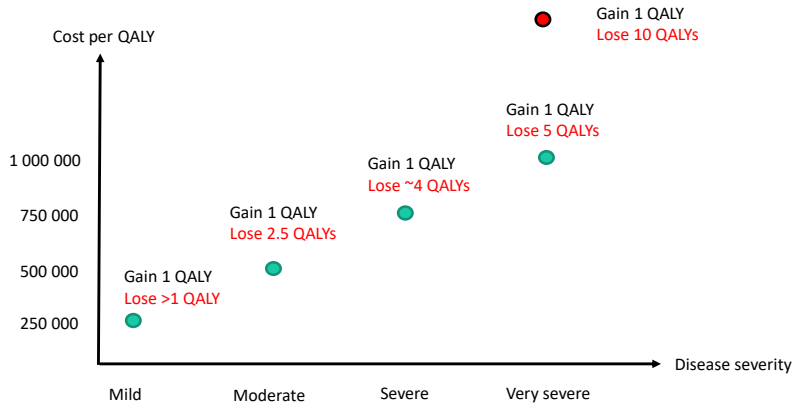


Rarity and severity – make trade-offs explicit



The usefulness of emerging research for decision making

- Opportunity costs made explicit (and perhaps also decision maker´s objective function)
- Many jurisdictions (as Sweden) take need/severity seriously in prioritisation – explicit considerations of the "costs" associated with such trade-offs should prove very important in the future

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Poll: 6. Has research on opportunity costs helped making some of the trade-offs between efficiency and other values more explicit?

Live Content Slide

When playing as a slideshow, this slide will display live content

Poll: 7. On balance, has the concept and terminology of a 'cost-effectiveness threshold' helped to communicate opportunity costs to decision-makers when conducting cost-effectiveness analysis?

Alan Williams revisited

"Giving priority to one group of people means taking it away from another group, though for obvious reasons politicians tend not to dwell on this implication, leaving us to infer, from what is not said, who the 'low priority' groups are. In any honest and open discussion of these issues, however, that implication must be faced squarely, and **we must not shrink from identifying who (implicitly) the 'low priority' people are**, in any particular system of health care."
Alan Williams 1988

"**How big a sacrifice in the overall health of the population** would you be prepared to accept in order to **eliminate the disparities in health** between A and B; there is a regrettable tendency for equity arguments to be conducted within a rhetorical framework in which it appears possible to "do good" at no opportunity cost whatever."
Alan Williams 1997