The Value of Health II

PHIL 334: Pandemic Ethics

Questions about Rationing During COVID-19

Question:
Should we be aiming to maximize the sheer **number of lives saved**, ignoring facts about expected life years and quality of life?

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What are features that might matter?

Things That (Might) Matter

- What are the patient's **chances of survival**?

- What is the patient's **life-expectancy** (if they survive)?

- What will the patient's **quality of life** be like (if they survive)?

- How **old** is the patient? (Why might this matter?)

- How much **overall happiness** would be produced?

What **else** might matter?

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- How **old** is the patient? (Why might this matter?)

- How much **overall happiness** would be produced?

What **else** might matter? **We're going to focus on Quality of Life Measures**

Measuring Health-related quality of life

Health State Methods
Rating Scale
Standard Gamble
Time Trade-Off

Slide 1

Health State Methods

The Rating Scale Method

Step 1: We learn the patient's health state.

Step 2: We learn how the patient evaluates that health state.

By placing a tick in one box in each group below, please indicate which statements best describe your own health state today.
- Mobility
  - ☐ I have no problems in walking about
  - ☐ I have some problems in walking about
  - ☐ I am confined to bed
- Self-Care
  - ☐ I have no problems with self-care
  - ☐ I have some 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 with performing my usual activities
  - ☐ I have some problems with performing my usual activities
  - ☐ I am unable to perform my usual activities
- Pain/Discomfort
  - ☐ I have no pain or discomfort
  - ☐ I have moderate pain or discomfort
  - ☐ I have extreme pain or discomfort
- Anxiety/Depression
  - ☐ I am not anxious or depressed
  - ☐ I am moderately anxious or depressed
  - ☐ I am extremely anxious or depressed

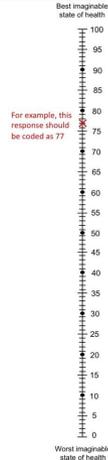We would like to know how good or bad your health is TODAY.

This scale is numbered from 0 to 100.

100 means the best health you can imagine.
0 means the worst health you can imagine.

Mark an X on the scale to indicate how your health is TODAY.

Now, please write the number you marked on the scale in the box below.

For example, this response should be coded as 77

Best imaginable state of health

100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0

Worst imaginable state of health

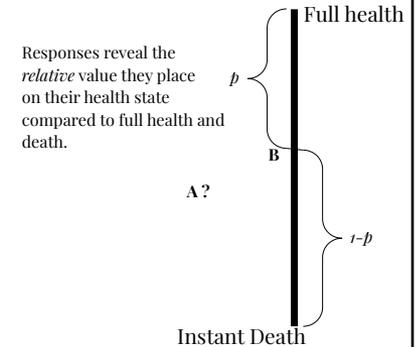**YOUR HEALTH TODAY =** 77

Slide 2

Health State Methods

The Standard Gamble

Patients give a health state description. Then they are asked to make a choice:

A Remain in that health state

B Receive a treatment that will restore them to full health with probability p or lead to instant death with probability $(1-p)$

Responses reveal the *relative* value they place on their health state compared to full health and death.

Full health

p

B

A ?

$1-p$

Instant Death

Slide 3

Health State Methods

The Time Trade-Off Method

Patients give a health state description. Then they are asked to make a choice:

A Spend T years in that health state

B Can live for X years in full Health

Clearly, X < T.

Responses reveal the *relative* value they place on their health state compared to full health and death.

Value of being in that health state = X/T

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Health State Methods

(1) The Rating Scale Method

(2) The Standard Gamble Method

(3) The Time Trade-Off Method

Problem with (1):
Merely orders the health states; it doesn't give us the *difference in value* between health states.

Problem (2):
The method assumes that respondents are *risk-neutral*: their choices are determined only by the severity of those health states.

Problem (3):
The method assumes *temporal neutrality:* respondents don't discount their future health.

Quality-adjusted measures

Comparing Health:

Health-adjusted Life Expectancy (HALE)

HALEs:
Let 1 = spending one year in full health.

Let values smaller than 1 stand for spending one year in a health state that is worse than full health.

Example:

65 years	1	(full health)
5 years	0.76	
5 years	0.52	

Life Expectancy = 75 years

HALE =   65 * 1 + 5 * 0.76 + 5 * 0.52
    =   71.4

Quality-adjusted Measures

QALYs
Quality-adjusted life years

A QALY is a combination of health-related quality of life and years of life.

1 QALY can represent ...
    ... one year lived at full health
    ... two years at health-related quality of life level 0.5
    ... four years at health-related quality of life level 0.25

Example:
Treatment A = 5 years at level 0.4
Treatment B = 3 years at level 0.7

Treatment A results in **2 QALYs**, and Treatment B results in **2.1 QALYs**.

The Burden of Disease

The Burden of Disease: DALYs

DALYs are a combination of ...
   years of life *lost* due to disability
   years of life *lived* with a disability

Life Lost = relative to an ideal

Life lived with a disability = makes use of *disability weights* to represent the burden of the disability associated with particular disease and injuries.

DALYs represent the gap between *actual health* and some ideal level of health.

   (# of years that one could've lived - # of years that one actually lives)

Each year one spends having the condition is adjusted for her health-related quality of life (just as in the case of QALYs).

The Burden of Disease: DALYs

DALYs are a combination of ...
   years of life *lost* due to disability
   years of life *lived* with a disability

Full health   = 0
Death   = 1

DALYs represent *harm*.

(Compared to QALYs, the scale is inverted)

Example:
Suppose a person at 40 contracts a disease with disability weight 0.5, which kills them at age 50.

Burden of the Disease =
   (i)   37 years of life lost
   (ii)   10 years with disability at level 0.5

This amounts to **42 DALYs**.

Question:
What determines the disability weights?

Who Should We Ask?
Professionals?
Patients?

Disability and Discrimination

Some people object to cost-effectiveness analysis because they believe it **unfairly disadvantages** certain groups of patients.

(Patients who have a limited capacity to benefit from an intervention.)

Cost-effectiveness analysis

CEA ratio = *Unit of cost* / QALY*s*

Each intervention is assigned a cost-effectiveness ratio.

The lower this ratio, the more cost-effective the intervention.

We should try to select the the most cost-effective intervention and services.

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1. People with disabilities

2. Different ages

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Slide 1

The Disability Discrimination Objection:
Cost-effectiveness Analysis unfairly discriminates against people with disabilities because it leads to their *unequal treatment*.

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Slide 2

The Disability Discrimination Objection:

"A severely disabled person will have a much lower QALY ranking than a person in full health and therefore each year they live will have a lower (normative) quality of life ranking. But does this mean that the former person's life is less worth living than the latter's; is it thus *worth less?* This goes against a profound belief, both spiritual and secular, that all lives are equally valuable."

Slide 3

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Discussion Question: What is the argument here? Do you agree? How could a proponent of Cost-Effectiveness Analysis respond?

Slide 4

The Disability Discrimination Objection:

(1)   A person with a disability will have a lower health-related quality of life than a person in full health.

Question:
Does it follow that someone with a disability has a worse life than someone without one?

Distinction:
All Else Equal vs All Things Considered

Disability and Discrimination

The Disability Discrimination Objection:

(1) A person with a disability will have a lower health-related quality of life than a person in full health.

Question:
Does it follow that someone with a disability has a worse life than someone without one?

Distinction:
All Else Equal vs All Things Considered

Health is only one component of well-being.

So, it doesn't follow that a person with lower QALYs will have a worse life, all things considered, than a person at full health.

Disability and Discrimination

The Disability Discrimination Objection:

Suppose, though, that *all else is equal* …

Does it follow that the life of a person with a disability is worth less?

Question:
Does it follow that someone with a disability has a worse life than someone without one?

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Health is only one component of well-being.

So, it doesn't follow that a person with lower QALYs will have a worse life, all things considered, than a person at full health.

Disability and Discrimination

The Disability Discrimination Objection:

Suppose, though, that *all else is equal* …

Does it follow that the life of a person with a disability is worth less?

No!

Distinction:
The Value of Persons vs Quality of Life

Each *person* is equally valuable.

Disability and Discrimination

The Disability Discrimination Objection:

(2) A severely disabled person will have a much lower QALY ranking than a person in full health.

Response:
Cost-effectiveness analysis does not rank *people* in terms of QALYs; it ranks *interventions*.

Distinction:
Ranking People vs Ranking Interventions

Slide 1

The Disability Discrimination Objection:

(2) A severely disabled person will have a much lower QALY ranking than a person in full health.

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What about cases of triage?
Doesn't this involve ranking people?

Slide 2

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What about cases of triage?
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If you have to choose between saving a person with a disability and person without, won't you have to save the one without?

Slide 3

The Disability Discrimination Objection:

No.

The QALY gains associated with particular treatments represent the *average* health improvement of using that treatment (which ignores the possible impact of co-disabilities)

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Slide 4

Questions?