Appendix A Survey questionnaire

Welcome this research project! Please read carefully the following instructions. You will be able to proceed to the next page in approximately one minute.

Imagine that the federal government of the Unites States wants to publish a set of guidelines for doctors to tackle the current pandemic crisis (COVID-19). In particular, suppose the government wants to publish guidelines for cases in which doctors are forced to choose who to treat because of shortage of intensive care units (henceforth, ICUs). In the next pages, you see a series of hypothetical scenarios in which doctors need to decide one between two people to be admitted to an ICU. We will refer to them as Patient A and Patient B. One patient only can be admitted to the ICU and will survive with some probability. The other patient will die for sure.

For each scenario, we list a series of possible indications that the government can give to doctors. For each scenario, please select which indication is more appropriate according to you. There is no right or wrong answer. In all scenarios, we will refer to remaining life expectancy as the estimated remaining life expectancy by the U.S. Department of Health and Human Services given socio-demographic characteristics of the patient (age, sex, ethnicity). Hence, this statistic refers to the number of years of life left for an average person with these characteristics if she survives the current infection. Instead, we will refer to probability of survival in an ICU as the probability based on the current health conditions of the patient when hospitalized as estimated by the medical staff. This project is conducted by researchers from the University of Verona (Italy) and LISER (Luxembourg). We thank you in advance for contributing to our research.

In each scenario, how many ICU are there available?

- 1
- 2
- 3

In each scenario, how many patients are there?

- 1
- 2
- 3

If a patient is not admitted in the ICU, he/she:

- Dies for sure

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524

- May survive
- Survives for sure

If a patient is admitted in the ICU, he/she:

- Dies for sure
- May survive
- Survives for sure

1. Suppose Patient A and Patient B due to their individual characteristics have the same remaining life expectancy. The estimated probability of survival in the ICU is higher for Patient A than for Patient B. The guidelines should prescribe that:

- Doctors admit Patient A to the ICU. (59.63%)
- Doctors admit Patient B to the ICU. (11.13%)
- Doctors decide randomly through the toss of a fair coin. (5.52%)
- Doctors decide on a first-come first-served basis. (23.72%)

2. Suppose Patient A has higher remaining life expectancy than Patient B. The estimated probability of survival in the ICU is the same for both patients. The guidelines should prescribe that:

- Doctors admit Patient A to the ICU. (44.72%)
- Doctors admit Patient B to the ICU. (18.10%)
- Doctors decide randomly through the toss of a fair coin. (5.13%)
- Doctors decide on a first-come first-served basis. (32.14%)

3. Suppose Patient A has the same remaining life expectancy than Patient B. The estimated probability of survival in the ICU is the same for both patients. The guidelines should prescribe that:

- Doctors admit Patient A to the ICU. (12.04%)
- Doctors admit Patient B to the ICU. (8.25%)

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524

- Doctors decide randomly through the toss of a fair coin. (7.18%)
- Doctors decide on a first-come first-served basis. (72.52%)

4. Suppose Patient A is a scientist working on COVID-19 vaccine. Patient B has a job unrelated to the health sector. Patient A and B have the same probability of survival in the ICU and the same life expectancy according to their socio-demographic characteristics. The guidelines should prescribe that:

- Doctors admit Patient A to the ICU. (44.72%)
- Doctors admit Patient B to the ICU. (9.39%)
- Doctors decide randomly through the toss of a fair coin. (4.84%)
- Doctors decide on a first-come first-served basis. (41.05%)

5. Suppose Patient A is a nurse working in a COVID-19 hospital. Patient A and B have the same probability of survival in the ICU and the same life expectancy according to their socio- demographic characteristics. The guidelines should prescribe that:

- Doctors admit Patient A to the ICU. (43.08%)
- Doctors admit Patient B to the ICU. (8.23%)
- Doctors decide randomly through the toss of a fair coin. (6.49%)
- Doctors decide on a first-come first-served basis. (42.21%)

6. Suppose Patient A is chronically ill and has been in an ICU for 2 months. Patient B has contracted COVID-19. Patient A has a lower probability of survival under the ICU than Patient B. The guidelines should prescribe that:

- Doctors leave Patient A in the ICU. (41.27%)
- Doctors withdraw Patient A from the ICU and admit Patient B to the ICU. (54.32%)
- Doctors toss a fair coin to decide who gets ICU treatment. (4.41%)

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524

7. Suppose Patient A is chronically ill. Patient B has contracted COVID-19. Patient A has a lower probability of survival under the ICU than Patient B. The guidelines should prescribe that:

- Doctors admit Patient A to the ICU. (26.42%)
- Doctors admit Patient B to the ICU. (68.69%)
- Doctors decide randomly through the toss of a coin. (4.89%)

8. Suppose Patient A has pneumonia not caused by COVID 19 and Patient B has contracted COVID-19. According to their socio-demographic characteristics they have the same life expectancy and the same probability of survival in the ICU. The guidelines should prescribe that:

- Doctors admit Patient A to the ICU. (21.01%)
- Doctors admit Patient B to the ICU. (34.75%)
- Doctors decide randomly through the toss of a fair coin. (5.42%)
- Doctors decide on a first-come first-served basis. (38.82%)

9. How likely do you think you will contract COVID-19?

- Extremely likely (5.13%)
- Somewhat likely (18.97%)
- Neither likely nor unlikely (32.43%)
- Somewhat unlikely (29.24%)
- Extremely unlikely (14.23%)

10. How safe do you think you are with respect to contracting COVID-19 after the restrictive measures taken by the State you currently live?

- Extremely safe (15.00%)

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524

- Moderately safe (50.05%)
- Neither safe nor unsafe (21.78%)
- Moderately unsafe (10.16%)
- Extremely unsafe (3.00%)

11. How much are you following the restrictions that the State you currently live in imposed to contain the spread of COVID-19?

- Completely (47.92%)
- Quite a lot (35.04%)
- A moderate amount (11.81%)
- Quite a little (4.55%)
- Not at all (0.68%)

12. How do you evaluate the current spread of the COVID-19 virus in your State?

- The pandemic has just started (6.98%)
- The pandemic is before the peak (25.19%)
- The pandemic is at its peak (32.95%)
- The pandemic passed the peak (28.88%)
- The pandemic is almost over (6.01%)

13. How many of these diseases do you have? Cardiovascular diseases, diabetes, Hepatitis B, chronic bronchitis, kidney diseases and cancer.

- 0 (74.44%)
- 1 (13.75%)
- 2 (3.78%)

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524

- 3 (2.71%)
- 4 (1.84%)
- 5 or more (2.42%)
- prefer not to answer (1.06%)

14. What is your age? Average: 44.6

15. In which state do you currently reside?

16. In which city you currently reside?

17. What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree (1.74%)
- High school graduate (high school diploma or equivalent including GED) (16.65%)
- Some college but no degree (18.97%)
- Associate degree in college (2-year) (10.16%)
- Bachelor's degree in college (4-year) (29.33%)
- Master's degree (17.72%)
- Doctoral degree (2.52%)
- Professional degree (JD, MD) (2.90%)

18. Choose one or more races that you consider yourself to be:

- White (81.51%)
- Black or African American (5.81%)
- American Indian or Alaska Native (1.06%)

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524

- Asian (8.13%)
- Native Hawaiian or Pacific Islander (0.39%)
- Other (3.10%)

19. What is your gender?

- Male (39.01%)
- Female (60.79%)
- Other (0.19%)

20. Please indicate includes your entire household income in (previous year) before taxes.

- Less than $10,000 (4.36%)
- $10,000 to $19,999 (7.26%)
- $20,000 to $29,999 (10.75%)
- $30,000 to $39,999 (8.23%)
- $40,000 to $49,999 (7.55%)
- $50,000 to $59,999 (9.00%)
- $60,000 to $69,999 (6.87%)
- $70,000 to $79,999 (8.13%)
- $80,000 to $89,999 (4.36%)
- $90,000 to $99,999 (5.03%)
- $100,000 to $149,999 (15.30%)
- $150,000 or more (13.17%)

21. Which statement best describes your current employment status?

- Working (paid employee) (46.66%)
- Working (self-employed) (6.39%)

- Not working (temporary layoff from a job) (6.97%)
- Not working (looking for work) (7.74%)
- Not working (retired) (19.07%)
- Not working (disabled) (3.58%)
- Not working (other) (8.91%)
- Prefer not to answer (0.68%)

22. Do you smoke?

- Yes (17.33%)
- No (78.80%)
- Occasionally (3.87%)

23. Do you think of yourself as closer to the Republican or Democratic party?

- Republican (36.59%)
- Democratic (41.63%)
- Independent (21.78%)

24. Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal (left) to extremely conservative (right). Where would you place yourself on this scale? Average: 3.99

Appendix B Robustness checks

Below, we break down the sample according to the following sociodemographic subgroups: gender, education, employment status, age (median split), political orientation and income (median split). For each breakdown, we report the p-value corresponding to the statistical test reported in the main text. For each test, we report the p-value in italics if the result of the test is in line with the result reported in the main text. We consider a result significant if $p < 0.050$. Adopting this criterion, all the results are in line in terms of significance with the results reported in the paper. If we would consider $p < 0.10$ as significant, we would find two heterogeneous effects in Result 3. Recall that in the corresponding scenario, participants are asked to decide on two patients which are identical in terms of life expectancy and probability of survival, but Patient A is a nurse who has being treating Covid-19 patients. In an additional version, Patient A is a scientist working on a potential vaccine to prevent Covid-19. Result 3 in the main text shows that people do not tend to use instrumental value in an asymmetric way across the scientist and the nurse scenarios. The heterogeneous effects found below show that men tend to use instrumental value more in the scientist scenario than in the nurse scenario, while women use instrumental value not significantly different across the two scenarios. Also unemployed tend to use instrumental value more with in the scientist scenario than in the nurse scenario, while employed use instrumental value not significantly different across the two scenarios. This may be due to the fact that the instrumental value of the scientist is perceived to be higher than the instrumental value of the nurse.

	Men	Women
Result 1	*p-value < 0.001*	*p-value < 0.001*
Result 2	*p-value = 0.006*	*p-value < 0.001*
Result 3	*p-value = 0.099*	*p-value = 1.000*
Result 5	*p-value = 0.001*	*p-value < 0.001*

Table B1: breakdown of the main results by gender. P-values in italics denote that results of the subgroup are in line with main results.

	Up to high school degree	At least some college years
Result 1	*p-value < 0.001*	*p-value < 0.001*
Result 2	*p-value < 0.001*	*p-value = 0.002*
Result 3	*p-value = 0.540*	*p-value = 0.398*
Result 5	*p-value < 0.001*	*p-value < 0.001*

Table B2: breakdown of the main results by level of education. P-values in italics denote that results of the subgroup are in line with main results.

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524

	Employed	Unemployed
Result 1	*p-value < 0.001*	*p-value < 0.001*
Result 2	*p-value = 0.002*	*p-value = 0.006*
Result 3	*p-value = 0.810*	*p-value = 0.063*
Result 5	*p-value < 0.001*	*p-value < 0.001*

Table B3: breakdown of the main results by employment status. P-values in italics denote that results of the subgroup are in line with main results.

	Up to 41 years old	42 or older
Result 1	*p-value < 0.001*	*p-value < 0.001*
Result 2	*p-value = 0.006*	*p-value < 0.001*
Result 3	*p-value = 0.197*	*p-value = 0.924*
Result 5	*p-value < 0.001*	*p-value < 0.001*

Table B4: breakdown of the main results by age using the median split. P-values in italics denote that results of the subgroup are in line with main results.

	Liberal	Conservative
Result 1	*p-value < 0.001*	*p-value < 0.001*
Result 2	*p-value < 0.001*	*p-value = 0.001*
Result 3	*p-value = 0.102*	*p-value = 0.689*
Result 5	*p-value < 0.001*	*p-value = 0.005*

Table B5: breakdown of the main results by political orientation. P-values in italics denote that results of the subgroup are in line with main results.

	Up to $60,000	Above $60,000
Result 1	*p-value < 0.001*	*p-value < 0.001*
Result 2	*p-value < 0.001*	*p-value < 0.001*
Result 3	*p-value = 0.327*	*p-value = 0.641*
Result 5	*p-value < 0.001*	*p-value < 0.001*

Table B7: breakdown of the main results by household income before taxes using the median split. P-values in italics denote that results of the subgroup are in line with main results.

Fallucchi F, *et al. J Med Ethics* 2020; 47:3–6. doi: 10.1136/medethics-2020-106524