The Role of Justice in Rationing Medical Resources During Emergencies

Henry Silverman, MD, MA

Definition of Rationing

fair

The allocation of limited beneficial healthcare resources

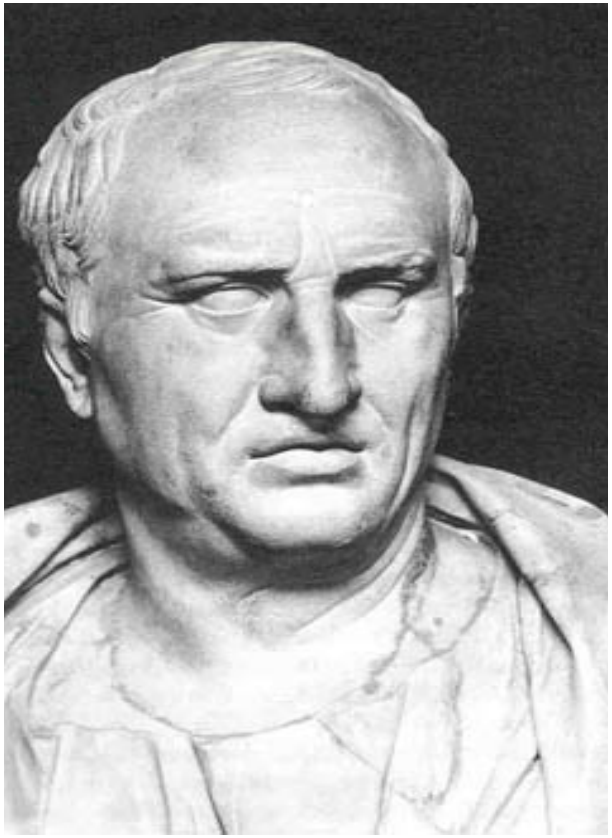
Beneficial interventions are withheld from some individuals

Justice

"Shall we call that which is just, 'fair'?

or

"that which is fair, 'just'?"



Cicero
106 BC – 46 BC

On what basis should goods be distributed?

"Shall we call
that which is just, 'fair' or that which is fair, 'just'?"

Outcome Measures

Justice assessed on the outcomes of a distribution

Fair Process

Justice assessed by looking at the process of distribution: how did it take place.

On what basis should goods be distributed?

- Treat equals equally and treat unequals unequally
- Treat the same, unless there are morally relevant reasons for treating them differently.
- Which criteria to use to distinguish between those who are equal and those who are not?

Equal

- Gender
- Race/Religion
- Age ?

Unequal

- Best prospects of survival
- Maximal life-years
- Worst-off – Sickest/Youngest
- Reward Instrumental Value

Three theories of justice

Three theories

- Utilitarian
- Egalitarian
- Libertarian
- Prioritarian

- All attempt to explain what would make a distribution just

Utilitarian Justice

"the greatest good for the greatest number of people"

- **Seeks to maximize aggregate well-being of society as a whole**

- **Problems:**
  - How to define aggregate welfare?
  - Happiness? Pleasure?
  - Most lives saved?
  - Most life-years?

Egalitarianism

Basic principle:

- All persons have equal moral claim to treatment.
- Treat all people equally
- For indivisible goods, providing equal chances at the scarce interventions
- Random Selection
  - Lottery
  - First-come First Serve

Problems

Lottery

- blind to morally relevant factors

First-come, first-served

- favors those who are well-informed, well-connected, and are well-off.

Libertarian justice

- Emphasis on individual liberty.
- Procedural justice is important
- If under fair rules, then the outcome is just.
- Just rules for acquisition and transfer of property
  - e.g., free market

Prioritarism

Giving priority to the worst-off

Sickest first

Youngest

less chance to live through a full life-cycle

Pandemic Planning

VALUES

GOALS

FAIRNESS

Values

- Transparency
- Respect
- Solidarity
- Community Engagement
- Reciprocity

Reciprocity

- If society asks individuals to put themselves at risk for the common good, then society owes those individuals special protection and care.
- Healthcare workers
  - Priority with prophylaxis and vaccination
  - Treatment when sick

Goals

- Utility: “greatest good” – many interpretations
- Greatest number of lives saved
- Great number of life-years (priority to younger age)
- Preserve functioning societal infrastructure

Accountability for Reasonableness

- Rationales for fair priority setting decisions must be publicly accessible (publicity condition);
- these rationales must be considered by fair-minded people to be relevant to priority setting in that context (relevance condition);
- there must be an avenue for appealing these decisions and their rationales (appeals condition)
- there must be some means, either voluntary or regulatory, of ensuring that the first three conditions are met (enforcement condition)

Outcomes That Should Drive Clinical Rationing Decisions

- Best-outcomes
  - Number of lives
  - Quantity of life-years
- Treat people equally
  - Worst-off
  - Fair Innings – Life-Cycle
- Instrumental Value


QUIZ

Theories of Justice

Tom and Jim both need a liver transplant. They have waited the same amount of time on the waiting list and they have the same prognosis.

Tom - 35 y/o and can live 5 years after transplant
Jim - 35 y/o and can live 5 years after transplant

Question: Who should receive the transplant?

Answer: flip a coin

Theories of Justice

Tom and Jim both need a liver transplant. They have waited the same amount of time on the waiting list and they have the same prognosis.

Tom - 57 y/o and can live 5 years after transplant

Jim - 35 y/o and can live 5 years after transplant

Question:

Who should receive the transplant?

Answer: Jim

Fair Innings

Theories of Justice

Tom and Jim both need a liver transplant and have the same prognosis without the transplant.

Tom - 25 y/o and can live 5 years after transplant

Jim - 25 y/o and can live 15 years after transplant

Question: Who should receive the transplant?

Answer: Jim

Best-Outcomes – Life-Years

Theories of Justice

Tom and Jim both need a liver transplant. They are the same age and have waited the same length of time on the waiting list.

Tom – prognosis of survival 10% within 1 month

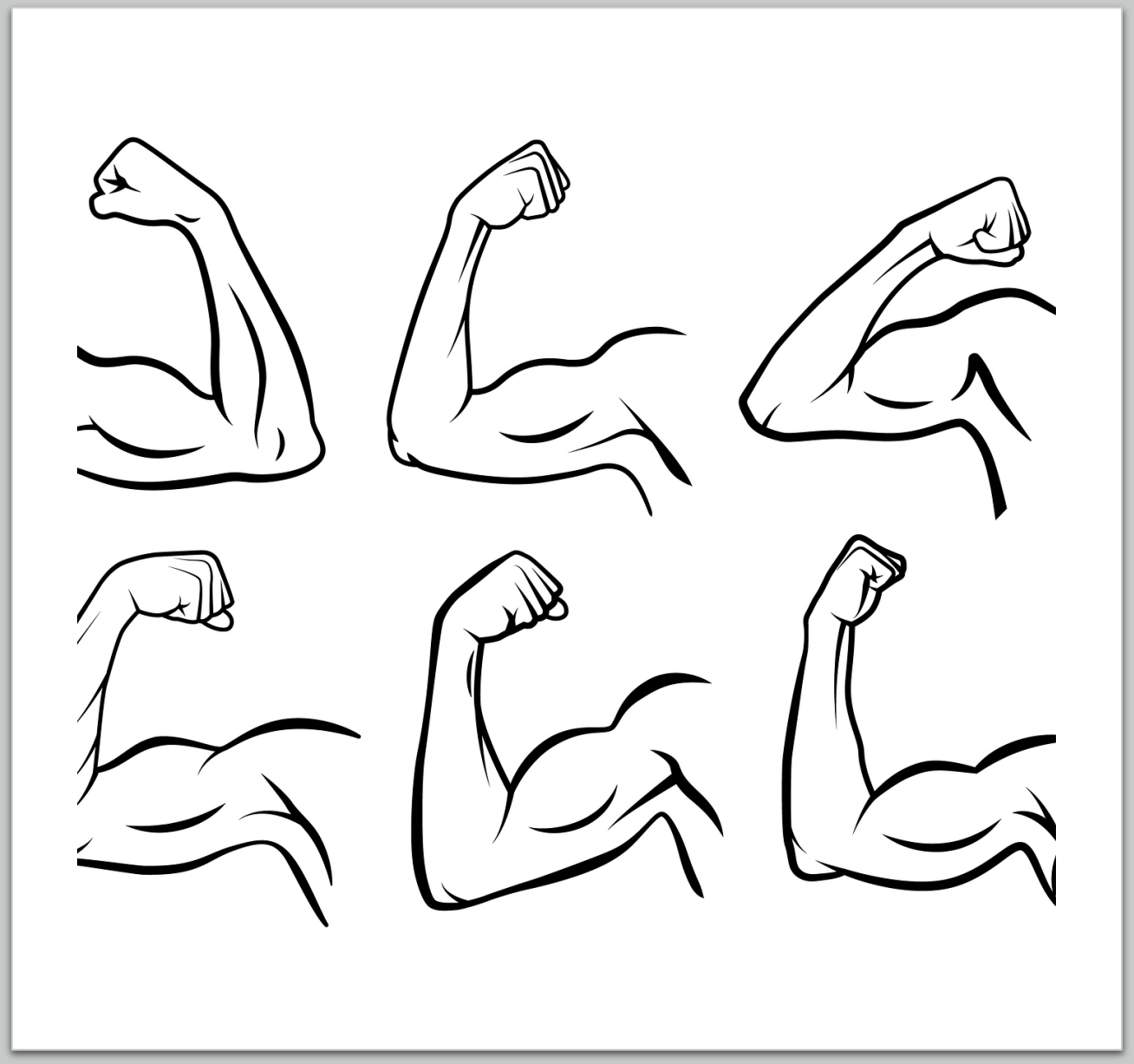
Jim - prognosis of survival 80% within 1 month

Question: Who should receive the transplant?

Answer: Tom

Medical Need/Worst-off

Well Done!
Enhanced
Rationing
Muscles



Pandemic Flu Case

Case Study

For the past several months, there has been sustained human-to-human transmission of a novel strain of avian influenza A with genetic components of human influenza in several countries around the world.

Your community was first affected three weeks ago, and since then there have been over 500 cases and 50 deaths.

Oseltamivir phosphate is the only drug that may effectively reduce mortality of ill patients and limit infection of exposed persons. It is most effective when given within 48 hours after the start of symptoms.

However, supplies of oseltamivir are limited, and hospitals are independently making decisions to govern allocation of antivirals within their institutions.

In your community, the five major academic medical centers have recently established five different protocols regarding prioritization of access to care.

Hospital A

Recognizing the importance of protecting its workforce in order to minimize absenteeism and ensure continuous response capacity, Hospital A has decided to use its remaining cache of oseltamivir for **prophylaxis of staff** who are exposed while caring for influenza patients.

Hospital B

In an effort to save its very ill patients, Hospital B has decided to reserve its remaining cache of oseltamivir for **treatment of the sickest** influenza patients.

Hospital B is relying on airborne infection isolation and personal protective equipment, namely N-95 respirators, gloves, and gowns to protect its staff, and is not using oseltamivir for prophylaxis.

Hospital C

In order to maximize survival rates, Hospital C has decided to reserve its remaining cache of oseltamivir for **treatment of the patients most likely to benefit,** namely those who present within 48 hours of disease onset.

As this prioritization plan will result in faster depletion of the antivirals, Hospital C is relying on airborne infection isolation and personal protective equipment, namely N-95 respirators, gloves, and gowns to protect its staff, and is not using oseltamivir for prophylaxis.

Hospital D

Assuming that its cache of oseltamivir will soon be depleted regardless of distribution strategy, Hospital D is using the antiviral for **prophylaxis of exposed staff and treatment of all probable and confirmed cases,** regardless of severity.

This is the most comprehensive approach, but Hospital D will reach limitations most quickly.

Hospital E

- Recognizing that it will not be able to treat all presenting patients Hospital E has decided to give priority to **probable and confirmed cases of younger patients** on the basis that younger patients will have had fewer years of life than older patients if they die from the disease. It appeals to a “fair innings” principle to justify its policy.

Questions for Discussion

1. Taken independently, comment on the extent of fairness of each hospital's strategy to distribute its cache of oseltamivir?
2. Prioritize the hospitals with regards to the fairness of their approach.

Multi-Value Ethical Framework

- No single value is sufficient alone to determine which patients should receive scarce resources.
- Hence, fair allocation requires a multi-value ethical framework that can be adapted, depending on the resource and context in question

Ethical Values

Maximizing benefits

Treating equally

Patients have similar prognosis

Giving priority to the worst off

Younger patients

Promoting and rewarding instrumental value

Guidance for Allocation of Scarce Resources

Maryland Framework for the Allocation of Scarce Life-sustaining Medical Resources in a Catastrophic Public Health Emergency

August 24, 2017

Project Team

Lee Daugherty-Biddison, MD
Howard Gwon, MS
Alan Regenberg, Mbe
Monica Schoch-Spana, PhD
Eric Toner, MD

VENTILATOR ALLOCATION GUIDELINES

New York State Task Force on Life and the Law
New York State Department of Health

November 2015

Guidance for Allocation of Scarce Resources (Ventilators and other therapies)

- The primary goal is to **maximize benefit** of treatment and to enhance survival for as **many patients** as possible when resources are scarce.
- Time of presentation for care will not be considered in determining scope of care.
  - First-come, first-serve not relevant

Triage criteria to limit potential beneficial therapy

Exclusion Criteria

(a) Patients on presentation who have a medical condition that will result in immediate or near-immediate mortality even with aggressive therapy

- e.g., patients with a terminal illness such as advanced metastatic cancer or an advanced illness

(b) Patients with advanced and irreversible neurologic event or condition

- e.g., massive subdural.

Patients on presentation who have a high risk of mortality (e.g., cardiac arrest: unwitnessed, recurrent, or unresponsive to defibrillation or pacing; or irreversible shock).

Triage criteria to limit potential beneficial therapy

On presentation, priority based on best prognosis

- assessment of short-term mortality risk by use of SOFA scores.
- assessment of long-term mortality risk based on severe co-morbitities (not expected to live more than 12 months).
- life-cycle considerations (age).
- If patients have similar prognosis – allocation based on chance in a fair way (e.g., first-come, first- served or lottery).

MSOFA Scores

Proposed Strategy for Ventilator Allocation in Epidemics of Novel Respiratory Pathogens					
Principle	**Specification**	**Point System**			
		1	**2**	**3**	**4**
Prognosis for short-term survival	Adults (SOFA) or Peds (PELOD-2)	SOFA score ≤ 8	SOFA score 9–11	SOFA score 12–14	SOFA score >14
		PELOD-2 ≤ 12	PELOD-2 12-13	PELOD-2 14-16	PELOD-2 ≥ 17
Prognosis for long-term Survival	Prognosis for long-term survival (assessment of comorbid conditions)			Severe comorbid conditions; death likely within 1 year	
Secondary Consideration					
Life-cycle Considerations	Prioritize those who have had the least chance to live through life's stages (age)	Age 0-49 y	Age 50-69 y	Age 70-84 y	Age ≥85y

Influence of Age on Rationing

Co-morbid conditions with life expectancy of less than 1 year

1. New York Heart Association (NYHA) Class IV heart failure
2. Advanced lung disease with FEV1 < 25% predicted, TLC < 60% predicted, or baseline PaO2 < 55mm Hg
3. Primary pulmonary hypertension with NYHA class III or IV heart failure
4. Chronic Liver Disease with Child-Pugh score > 7
5. Severe trauma
6. Advanced untreatable neuromuscular disease
7. Metastatic malignant disease or high-grade primary brain tumors

Serial Evaluation of Overall Prognosis

- Repeat clinical assessments after scarce resources have been instituted to determine when the clinical condition is not improving.
- The “triage officer/triage team” will evaluate whether such patients should continue with their treatments.
- Any decision to remove a patient from ventilator therapy should be carefully thought out and be based on ethical principles.

Other Considerations

- Patients triaged not to receive life-saving resources
  - will be offered alternative forms of medical intervention, palliative care, or hospice services.

- Right of appeal:
  - Patients determined not to qualify to receive a scarce resource in the near future (e.g., within the next 24-48 hours) or are being considered to have a scare resource withdrawn will be notified of the right to appeal such decisions to a Triage Review Committee.

Other Considerations

- Transparency:
  - communication to patients and families both on admission to the hospital and when triage decisions are made;
  - inform the public regarding the goals of this allocation guidance document.
- Life-cycle principle:
  - adults and children have similar prognosis, then pediatric patients might be given priority over adults, as they have lived through the fewest stages of life.

Other Considerations

- Role sequestration:
  - An appointed triage officer/triage team, rather than health care providers, will implement the priority structure.
  - This role sequestration serves to enhance objectivity and limit moral distress.

- Moral Distress:
  - Hospitals will make plans to assist with moral distress in health care providers who are involved in providing care under this guidance.

Case #1

- Patient A, 24 years of age, has a SOFA score of 13, and no severe comorbid conditions resulting in likely death within 1 year.
- Patient B, 45 years of age, has a ”lower” SOFA score of 10, and no severe comorbid conditions.
- Patient A receives 3 points and Patient B receives 2 points.
- Patient B is prioritized via the framework.

Case #2

- Patient A, 20 years of age, has a SOFA score of 7.
- Patient B, 39 years of age, has a SOFA score of 8. Neither has severe comorbid conditions. Both receive a score of 1.
- Looking to life-cycle considerations, they each receive 1 point.
- The scarce resource should be allocated based on chance in a fair and transparent way, e.g., via lottery.

Case #3

- Patient A, 72 years of age, has a SOFA score of 15, and no severe comorbid conditions.
- Patient B, 74 years of age, has a SOFA score of 7, and has metastatic cancer with death likely within 1 year.

- Patient has 3 points/Patient B has 4 points
  - SOFA (1 points) + Co-morbid (3 points)
- Patient A would be prioritized

Case #4

Patient comes in with unwitnessed cardiac arrest and has been defibrillated twice with return of spontaneous circulation (ROSC). Patient has ventricular tachycardia. He is intubated.

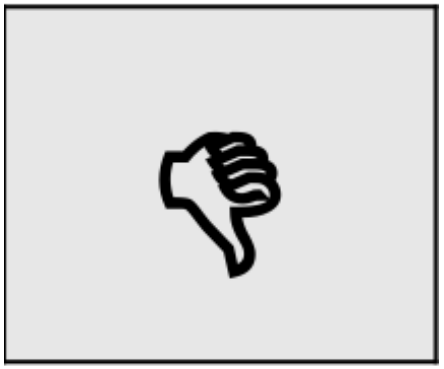
Continue therapy or compassionate extubation?

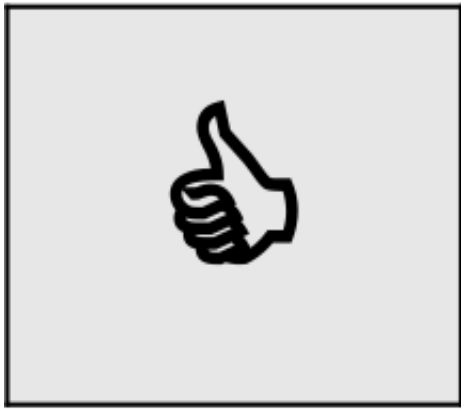
Continue until resources become limited?

Continue therapy for now. check reflexes in 48 hr/cooling protocol

Question

- Patient A, 68 y/o with SOFA score of 11 and Patient B, 66 y/o with SOFA score 11.
- Neither has severe comorbid conditions.
- Patient A tested + for COVID-19
- Patient B tested – for COVID-19
- Who should receive the ventilator?

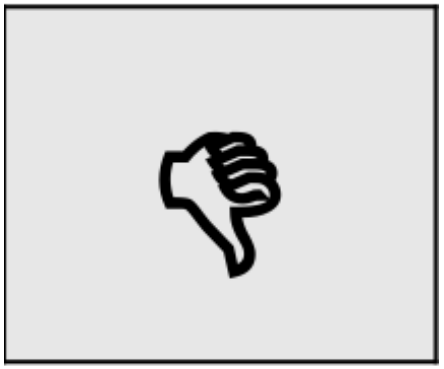




Lottery

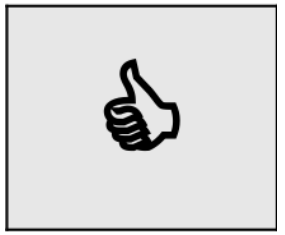
Question

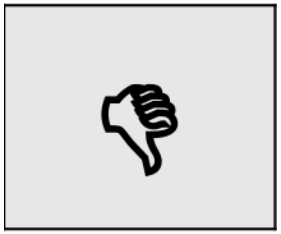
- Have there been any thought about compassionately extubating patients who are chronically ventilated in order to free up ventilators from other facilities to use here?



Question

- At what point, would we remove a patient from a ventilator?
  - e.g., when resources get scarce and several patients have been on the ventilator for 1 day and then another person rolls up who needs a ventilator. Extubate anyone?

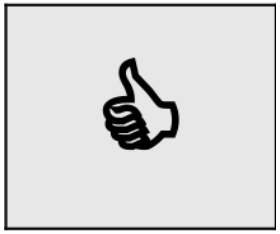


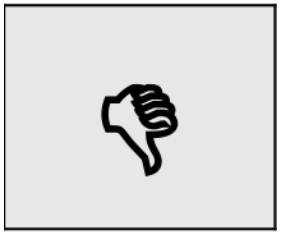


It's too early to see if they're going to improve

Question

- At what point, would we remove a patient from a ventilator?
  - e.g., if there are many people awaiting a ventilator would we remove a patient from a ventilator who had been on it for 7 days without significant improvement?.





Thank you

Hospitals consider universal do-not-resuscitate orders for coronavirus patients

+ Add to li

Worry that 'all hands' responses may expose doctors and nurses to infection prompts debate about prioritizing the survival of the many over the one