Tragic Choices: The Allocation and Distribution of Scarce Resources During a Pandemic

Douglas S. Diekema, MD, MPH
Professor of Pediatrics
University of Washington
Treuman Katz Center for Pediatric Bioethics
Seattle Children’s Hospital

Image: CDC/Alissa Eckert, MS; Dan Higgins, MAMS
Disclosure

Neither I nor any member of my immediate family has a financial relationship or interest with any proprietary entity producing health care goods or services related to the content of this CME activity.
January 2020

Outbreak of Pneumonia of Unknown Etiology (PUE) in Wuhan, China

Distributed via the CDC Health Alert Network
January 8, 2020, 1615 ET (04:15 PM ET)
CDCHAN-00424
Snohomish County man has the United States’ first known case of the new coronavirus

Jan. 21, 2020
Washington State Preparations

• Surveillance-Seattle Flu Study

• Disaster Preparedness

• Crisis Standards of Care
Regional Healthcare Coalitions (of hospitals, clinics, and health departments) begin working on materials related to crisis standards of care for a disaster scenario.

2006
Regionale healthcare coalitions begin working on crisis materials.

2012
Pierce and King County Groups combine to form Northwest Healthcare Response Network (NHRN), a program within Seattle-King Country Public Health Department.

2014
NHRN becomes non-profit independent organization.

2017
State DOH contracts with NHRN to guide training and exercises, information management, patient movement, and disaster response coordination across Western Washington.

2018
State DOH combines 6 coalitions into 2 (Eastern and Western); NHRN becomes coalition for Western Washington.
Northwest Healthcare Response Network

- 70% of Washington State’s Hospitals
- 3000 healthcare organizations
- 178,000 healthcare workers

- Disaster Clinical Advisory Committee
- Acute Infection Disease Advisory Group
Increasing Resource Scarcity
Scarce resource cards for potentially limited resources:

- Behavioral Health
- Blood products
- Burn
- Hemodynamic support and IV fluids
- Mechanical ventilation
- Medication administration
- Nutritional support
- Oxygen
- Renal replacement therapy
- Respirator and General PPE
- Staffing

Hospitalized Covid-19 patients by day

Source: Hospitalization data from the U.S. Department of Health and Human Services.

New York Times, April 11, 2021
‘Chilling’ Plans: Who Gets Care as Washington State Hospitals Fill Up?

Fearing a critical shortage of lifesaving resources as the coronavirus spreads, Washington State is engaged in grim discussions to determine which dying patients would get priority.

Seattle Children’s Hospital has begun admitting people up to 21 years old to free up more beds for critically ill patients. Elaine Thompson/Associated Press

‘It will not be pretty’: State preparing to make life-or-death decisions if coronavirus overwhelms health care system

March 20, 2020 at 8:04 pm | Updated March 21, 2020 at 5:56 pm

The Hardest Questions Doctors May Face: Who Will Be Saved? Who Won’t?

As coronavirus infections explode in the U.S., hospitals could be forced to make harrowing choices if pushed to the brink. Planning is already underway.

A staff member of a hospital in Brescia, Italy, tends to a patient in the intensive care unit. Italy’s health care system is crumbling under... (Claudio Furlan / The Associated Press) More

By Mike Carter
Seattle Times staff reporter

THE COMING CORONAVIRUS CRITICAL-CARE EMERGENCY

By Benjamin Wallace-Wells
March 18, 2020
Ventilator Triage Policies During the COVID-19 Pandemic at U.S. Hospitals Associated With Members of the Association of Bioethics Program Directors
Armand H. Matheny Antonmorria, MD, PhD; Tyler S. Gibb, JD, PhD; Amy L. McGuire, JD, PhD; Paul Root Wolpe, PhD; Matthew K. Wynia, MD, MPH; Megan K. Applewhite, MD, MA; Arthur Caplan, PhD; Douglas S. Dickema, MD, MPH; D. Micah Hester, PhD; Lila Soleymani Lehmann, MD, PhD; Renee McLeod-Sordjan, DNP; Tamar Schiff, MD; Holly K. Tabor, PhD; Sarah E. Wieten, PhD; and Jason T. Eberl, PhD; for a Task Force of the Association of Bioethics Program Directors*
Clinicians, such as physicians and nurses, are trained to care for individuals.

Public health emergencies require clinicians to change their practice to respond to the care needs of populations.

In a public health emergency, the fair allocation of scarce resources requires clinicians to prioritize the community.

The shift from patient-centered practice to patient care guided by public health duties creates great tension for clinicians, including clinical ethics consultants.
Principle of Disaster Triage

The goal is saving as many people as possible, by treating those who are likely to get the greatest benefit from care while using the fewest resources.
Justice requires that everyone be treated similarly unless there is a good (relevant and justifiable) reason to treat some people differently.

Formal Principle of Justice (Aristotle)
What Features are Relevant?

- Merit/Dessert/Effort (promotion, pay)
- Reciprocity (Markets/Investments)
- Equality (Application of Laws/Rules)
- Need (Health Care/disaster triage)
What Features are Relevant in a public health emergency?

- Merit/Dessert/Effort (promotion, pay)
- Reciprocity (Markets/Investments)
- Equality (Application of Laws/Rules)
- Need (Health Care/disaster triage)
What Factors are Not Relevant?

- VIP, status, political power, social “worth”
- Race
- Disability
- Ethnicity
- Ability to Pay
- SES
- Past use of resources
- Perceived obstacles to treatment
- Age?
Basic Triage: Allocation of Scarce Treatment Resources

**Eligibility**
- Potential for Benefit
- Willing to Accept Treatment

**First in Line**
- Likelihood of Benefit
- Degree of Need
- Less Resource Required

**Tie-breakers**
- Random Allocation
- First in Line

**General Order of Priority**
1. Likely to survive only with treatment
2. Likely to survive without treatment
3. Likely to die regardless
How to Define Benefit

• Life-years?
• QALY adjusted life-years?
• Long-term survival?
• 5-year survival?
• Survival to discharge
  • Are SOFA scores adequate and fair?
Should younger age groups be prioritized?: Yes

Utility:
Optimizes “life-years” saved

Fair Innings Argument
Should younger age groups be prioritized?: No

- Ageist: Devalues older individuals (form of social value)

- Covid-19 already prioritizes the young (less likely to get ill and more likely to survive)

- Would prioritize a child over their parent (who cares for them)

- How do you mark the “innings”? 
Should Health Care Workers be Prioritized?

Yes

- Utilitarian or “Multiplier Effect”
  - Maintain Healthcare Workforce
  - Minimize spread from HCPs to Patients

- Social Contract

- Reciprocity
<table>
<thead>
<tr>
<th>Should Health Care Workers be Prioritized?</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Utilitarian or “Multiplier Effect”: Questionable with COVID-19</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Social Contract: Exists for PPE (and maybe vaccine), but there is no promise to be first in line for treatment</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Reciprocity: Added risk is part of the professional role</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Looks bad: Favoritism from those who control resources</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Exacerbates societal disparities</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Where do you draw the line? Why HCPs? Why just HCWs?</strong></td>
<td></td>
</tr>
</tbody>
</table>
Ventilator Triage in Seattle

**Eligibility**
- Potential for Benefit
- Willing to Accept Treatment

**First in Line**
- Likelihood of Benefit: Survival to Discharge
- Degree of Need
- Less Resource Required

**Tie-breakers**
- Random Allocation
- First in Line

**General Order of Priority**
1) Likely to survive only with treatment
2) Likely to survive without treatment
3) Likely to die regardless

No preference for Health Care Workers
Other Therapeutics (Remdesivir, antibody therapies, etc)

• Ability to do clinical trials must be preserved

• Those most likely to benefit based on best available evidence and among those, those with greatest need
  • Prioritized population will differ depending on agent (Anti-viral vs. Anti-inflammatory)

• Random process among those eligible

DeJong et al. Ethical Framework for Allocating Scarce Inpatient Medications. JAMA, May 15, 2020
What about *Preventive Measures* (PPE, Vaccine)?

- **Narrow Social Worth** and **Reciprocity** become more important
  - Healthcare workers (those caring for high risk patients)
  - First-responders placed in at risk situations (EMS)
  - Essential workers in at risk jobs (where physical distancing cannot be reliably maintained)

- **Need** and **Likelihood of benefit** still prevail, but manifest differently:
  - High Risk groups based on confined living or working space (homeless shelters, prisons, nursing homes and retirement communities, dense populations)
  - High Risk groups based on co-morbidities
  - In identifying these individuals, poor and marginalized populations would require active outreach for priority
# Fair Distribution of SARS-CoV-2 Vaccines

## Focus on Need (protection of high-risk individuals)
- High-risk health conditions or age
- Congregate Living
- High-risk jobs

## Focus on community welfare and decreasing spread (utilitarian)
- Essential health care workers and first responders
- Those in congregate living and high-risk jobs
• For ventilators (and other lifesaving resources), saving the most lives favors those *most likely to survive*

• For vaccines (and other preventive resources), saving the most lives favors those *most likely to die and those most likely to contract and spread disease*

• *Equity* and *Access*
Vaccine Priorities

- frontline and essential workers
- people at high risk of severe disease or death
- people at high risk of infection and/or spreading infection
Risk of Death Determines Priority
Age as an example

1918 Pandemic: younger people at highest risk

2019 Pandemic: older people at highest risk
On the Ground as the Pandemic Begins

- Weekly meetings early on
  - NHRN committee members
  - Hospital Representatives
  - State and Local DOH representatives
  - Governor (twice)

- Subgroups (including ethics group) met multiple times a week to revise materials to match unique characteristics of SARS-CoV-2 and pandemic dynamics

- Input from Stakeholders concerned about triage materials

- Individual Hospitals focused on implementation
Core Principles

Governor expected sharing of resources across state

No hospital would declare crisis standards of care until all were ready to do so
Triage Teams: Local and Regional
Why a Triage Team?

- Remove some of the burden from bedside providers
- Provide an objective, evidence-based assessment of medical factors
- Blinding of irrelevant factors to greatest degree possible
- Situational Awareness of Regional Needs
Four Phases

- Pre-pandemic: 10 years of meetings, discussions, collaborations, materials development, and regional simulations

- Early Pandemic:
  - Implementation and revisiting of developed guidelines and materials
  - Coordination of response (PPE, Patient redistributions, Ventilators)

- Mid Pandemic:
  - Working with stakeholders (Groups representing persons with disabilities and people of color) to reconsider triage guidelines for ventilators and vaccines
  - Revisit triage guidelines for Remdesivir

- Current Phase: Subsequent Waves and Vaccine distribution
Lessons Learned

• Principles of a fair distribution hold from resource to resource

• Allocation priorities (who gets the resource) differ depending on the resource in question

• Re-assessment and Refinement of process essential (we won’t get it right the first time)

• A centralized process for sharing resources is better than every hospital and clinic fighting for resources

• Equity requires attention to access
The demands of living morally are hard. We do not wish to face the truth that we live in a world where honesty and faithfulness do not always lead to good results and consequences, but sometimes to tragic choices.

--Stanley Hauerwas, Truthfulness and Tragedy