Bioethics in the Time of Coronavirus

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Outline

- Basic Science
- Epidemiology
- Clinical issues
- Ethical Principles
- Virtues
- Casuistry
- Issues
  - Virtue and Professionalism
  - Prevention
  - Contact tracing
  - Access and allocation of treatment

Background on SARS-CoV 2

- SARS-CoV 2 is the official name of the virus
- COVID-19 is the name of the disease
- The virus has positive strand RNA, 4 genera: alpha, beta, gamma, delta
- Alpha and beta CoV strains infect humans
- Four endemic CoVs (9HCoV 229E, NL63, OC43, and HKU1) cause 10-30% of URIs in adults
- SARS: In 2002, severe atypical pneumonia in Guangdong Province, China
  - Came to be known as SARS – Severe Acute Respiratory Syndrome
  - Causative agent: novel beta-HCoV, named SARS-CoV, now SARS CoV 1
  - 20% to 30% required mechanical ventilation and 10% died,
  - higher fatality rates in older patients and those with medical comorbidities

  MERS: in 2012, the Middle Eastern Respiratory Syndrome
  - pathogenic novel beta-HCoV MERS-CoV
  - severe atypical pneumonia, more GI symptoms and renal failure
  - 50-89% require mechanical ventilation a case fatality rate of 36%

- https://jamanetwork.com/journals/jama/fullarticle/2759815#jvp200006r2

Where did it come from?

"Live market," likely in Wuhan
A natural, random mutation
Bats → Pangolins → People → Other people

Symptoms – And what to watch for

- "Clinical presentation among reported cases of COVID-19 varies in severity from asymptomatic infection to mild illness to severe or fatal illness."
- fever (77–98%)
- cough (46%–82%)
- myalgia or fatigue (11–52%)
- shortness of breath (3-31%)
- Less common: sore throat, headache, cough with sputum production and/or hemoptysis, GI symptoms.

- Incubation period: 4 days (2-14 days suggested)
- Mild to moderate lasts a week
- Severe: clinical deterioration in second week
- Mean onset of dyspnea 8 days after illness onset (range: 5–13 days).
- Onset of illness to hospitalization: 9 days
- Onset of illness to ARDS: 8 days
- Acute respiratory distress syndrome (ARDS) developed in 17–29% of hospitalized patients, and secondary infection developed in 10%.

https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html

COVID 19 characteristics

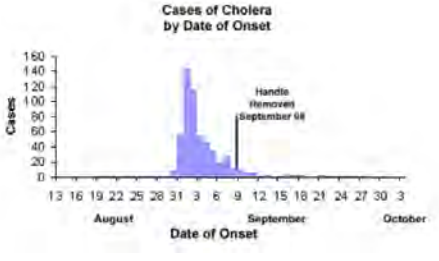
- About twice as infectious as flu; much less infectious than measles
  - R_0 = 1 for normal seasonal flu
  - R_0 = 2 for SARS CoV 2
  - R_0 = 15 for measles
- 15% of people with COVID 19 are sick enough to be hospitalized
- More severe in older patients and those with:
  - CHF
  - DM
  - HTN
- Case fatality rates:
  - Normal seasonal flu = 0.1%
  - COVID 19 = 1% (O.5 to 3%)
  - Ebola = 50%

How does it spread?

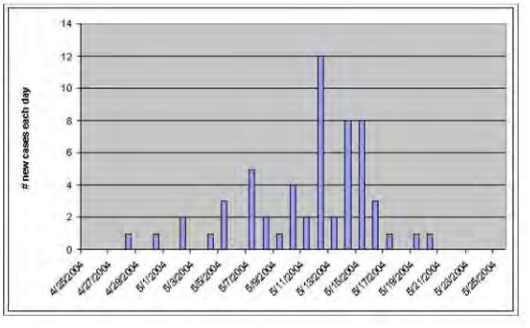
- Respiratory droplets: coughing, sneezing,
- Persists on inanimate surfaces: doorknobs, subway straps
- Pre-symptomatic shedding: possible, but unlikely to be efficient in spreading
- Asymptomatic infection:
  - Likely can spread virus
  - Young people more likely asymptomatic
- Post-symptomatic:
  - Shedding does persist in small amounts for up to 3 weeks from onset
  - Standard for effectively non-infectious =
    - 48 hours after last fever or symptom
    - OR 7 or 10 or 14 days from onset, whichever is longer

Epidemiology 101

- Cholera – London – 1854

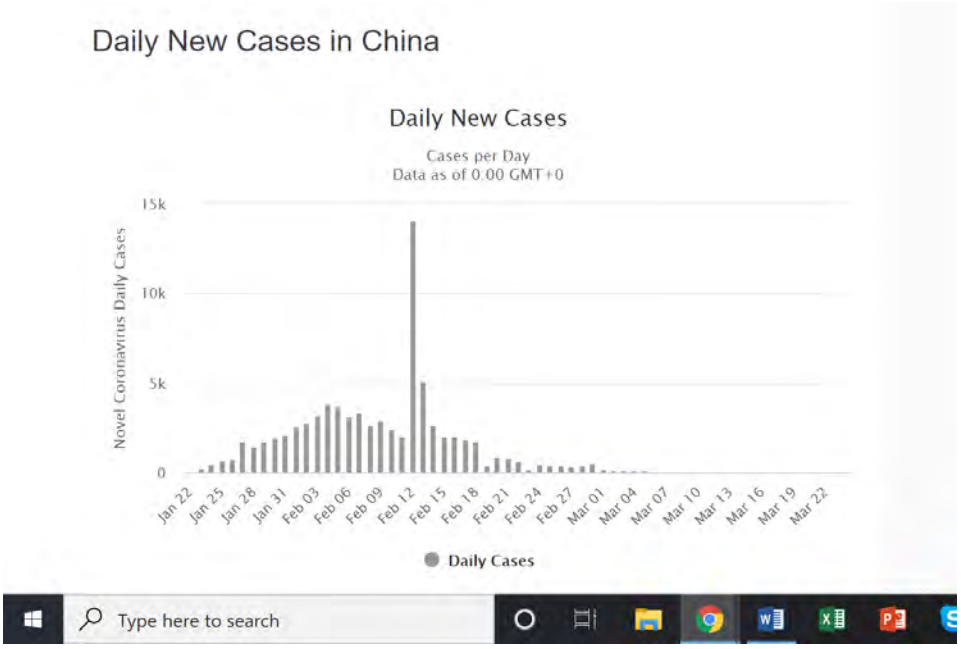


- Example: Hep A outbreak

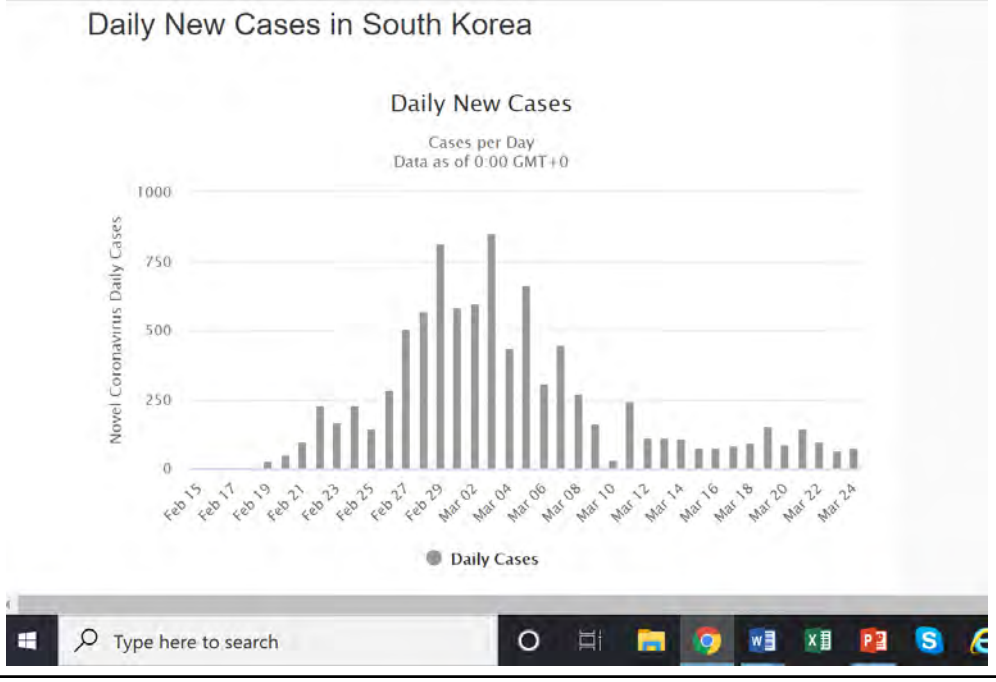


http://sphweb.bumc.bu.edu/otlt/MPH-Modules/EP/EP713_DescriptiveEpi/EP713_DescriptiveEpi3.html

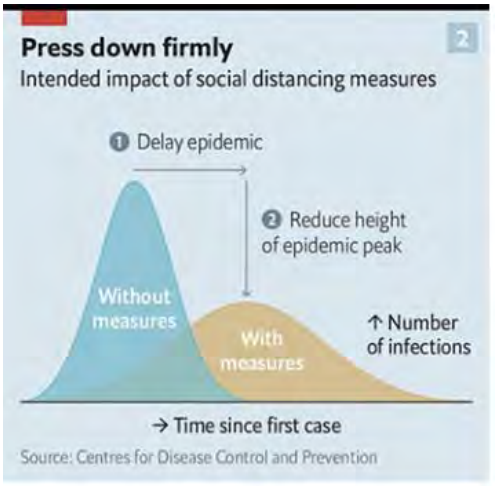
Daily New Cases in China



Daily New Cases in South Korea



Flatten the curve!



https://www.mailman.columbia.edu/public-health-now/news/public-health-rallies-flatten-curve

THE PRESIDENT'S **CORONAVIRUS GUIDELINES** FOR AMERICA

DO YOUR PART TO SLOW THE SPREAD OF THE CORONAVIRUS

Even if you are young, or otherwise healthy, you are at risk and your activities can increase the risk for others. It is critical that you do your part to slow the spread of the coronavirus.

Work or engage in schooling **FROM HOME** whenever possible.

IF YOU WORK IN A CRITICAL INFRASTRUCTURE INDUSTRY, as defined by the Department of Homeland Security, such as healthcare services and pharmaceutical and food supply, you have a special responsibility to maintain your normal work schedule. You and your employers should follow CDC guidance to protect your health at work.

AVOID SOCIAL GATHERINGS in groups of more than 10 people.

Avoid eating or drinking at bars, restaurants, and food courts — **USE DRIVE-THRU, PICKUP, OR DELIVERY OPTIONS.**

AVOID DISCRETIONARY TRAVEL, shopping trips, and social visits.

DO NOT VISIT nursing homes or retirement or long-term care facilities unless to provide critical assistance.

PRACTICE GOOD HYGIENE:

- *Wash your hands, especially after touching any frequently used item or surface.*
- *Avoid touching your face.*
- *Sneeze or cough into a tissue, or the inside of your elbow.*
- *Disinfect frequently used items and surfaces as much as possible.*

CORONAVIRUS.GOV

School operations can accelerate the spread of the coronavirus. Governors of states with evidence of community transmission should close schools in affected and surrounding areas. Governors should close schools in communities that are near areas of community transmission, even if those areas are in neighboring states. In addition, state and local officials should close schools where coronavirus has been identified in the population associated with the school. States and localities that close schools need to address childcare needs of critical responders, as well as the nutritional needs of children.

Older people are particularly at risk from the coronavirus. All states should follow Federal guidance and halt social visits to nursing homes and retirement and long-term care facilities.

In states with evidence of community transmission, bars, restaurants, food courts, gyms, and other indoor and outdoor venues where groups of people congregate should be closed.

A fundamental premise

- Circumstances do not dictate our ethical principles
- We apply our ethical principles to whatever circumstances we encounter
- And when the circumstances are extraordinary, we need our ethical principles even more than we did before
- *Not*, "This pandemic is changing everything."

In ordinary circumstances, the most salient principles of medical ethics are

- **Duty to benefit patients**
  - Corollary: do not harm them
  - Corollary: do not do what does not benefit them
- **Duty to respect patients as persons**
  - Corollary: show appropriate respect for them as moral agents

In extraordinary circumstances of overwhelming need and scarce resources, two other principles come to the foreground:

- **Solidarity**
  - Respect for the common good
    - Not just the sum of the individual good but an
    - Integral sense of the common good:
      - The good of the whole partly determines each individual's good
- **Justice**
  - Equity
    - All persons are treated as equal on the basis of their humanity alone
  - Fairness
    - Procedures for distributing burdens and benefits are:
      - Reasonable
      - Objective
      - Transparent
      - Shared by/ applicable to all

All of these principles are at play in our response to the COVID-19 pandemic

Virtues are also part of the ethics of being a health care professional

- We become professionals by having *professed* to care for our patients in the swearing of our oaths
- This makes demands of us beyond those expected of accountants and shoe salespersons
  - When I go to the accountant…
  - When I go to the shoe salesperson…
  - When I go to the doctor…
- The situation of illness gives patients no recourse but to trust us

What are some of those virtues?

- The cardinal virtues:

- Practical Wisdom (*phronesis*)
  - Every medical act is both technical and moral
  - Wise decisions about our actions
- Fortitude
  - Physical courage
  - Moral courage
  - A mean between the reckless and the pusillanimous
- Temperance
  - Don't overtreat patients
  - Don't be greedy
  - Keep a steady hand
- Justice
  - Treat patients equitably and fairly
  - Don't waste resources

Medicine-specific virtues

- Competence
- Altruism
- Fidelity to trust
- Compassion
- Humility
- Integrity

The fight against COVID-19 will demand great virtue of us all

Casuistry

- We have been here before
  - The lessons are medical, political, and moral
- Historical
  - Plague
  - Yellow fever
- Contemporary
  - HIV
  - SARS
  - MERS
  - Ebola

With all that said, here is the specific ethical guidance we can give regarding the COVID 19 Pandemic…

- Above all
- Act as normally as you can
- Rely on ethics as your compass

Virtue and professionalism

- Be competent, keep up reading, attend webinars, keep learning
  - "Life is short and the art is long"
- Be courageous but practically wise
  - Care for the sick
  - Take appropriate precautions
- Be compassionate
  - You are (and will be) seeing lots of suffering and death
- Be temperate
  - Oslerian *aequantimitas*
- Care for yourselves so as to have the resources to do this
  - Rest
  - Exercise
  - Family & friends
  - Spiritual or religious practices

Identification, Isolation, Quarantine

- Public health ethics:
  - Individual good vs. Common good
  - Principle of restraint
- Identify cases as resources are available (a form of rationing)
  - Hospitalized
  - Symptomatic
  - Population testing
- Isolate infected individuals
- Quarantine contacts
  - ✓ Contact tracing
  - ✓ General announcements
  - ✓ Self-disclosure
  - X Public naming
    - ➢ not likely to add much benefit
    - ➢ could discourage positive individuals from reporting

In the event of an overwhelming surge…

- Keep treating COVID 19 patients as you would others
- Practical wisdom
  - Ask anyone sick enough to be admitted with COVID 19 about their plans for care should things get worse
- Avoid COVID 19 alarmism and exceptionalism
- Don't frame your conversations manipulatively

A few additional talking points on advance care planning conversations

- Ethics—respect for patient dignity and agency
- "Don't be alarmed. We ask everyone who is at increased risk..."
  - Most people do fine with COVID 19 and recover
- "We hope for the best, but plan for the worst"
- "Some people have already decided that if they were ever to get sick enough for any reason they would not want…"
- "Have you thought about that? Spoken with anyone?"
- "Is there someone we can speak with if you become too sick to talk to us?"
- "Do you have a living will or durable power of attorney for healthcare?"
- Don' ask them if they would give their shot to someone younger or healthier
  - But *do* make a note if that is the reason they give for electing to forego a vent

At least for now…

- "We are not rationing and we are doing everything in our power not to ration"

Alternatives short of rationing

- Ethics: we do everything reasonable and possible to benefit patients
- Try to increase the supply
- Use alternatives almost as good to temporize
- Transfer if necessary and possible (Perhaps acting as a health system)
- Maybe be creative?
  - Sharing vents (Columbia, SUNY Upstate, Ohio State)
  - Using scuba masks (Italy)

Ethical rationing (if it is necessary) is based on

- Need
- Prognosis
- Effectiveness

Ethical rationing is *not* based on

- Individual characteristics not related to need, prognosis, and effectiveness
- To do otherwise is not to respect equal individual dignity
- We should decide whether the *treatment* is worthwhile, not whether the *person* is worth treating
- Age alone ought not be a criterion
  - No absolute age cutoffs
  - No Maximizing Life-Years or QALYs (biased against elderly & disabled)
  - Figures into estimates of effectiveness
- Disability alone ought not be a criterion
  - Neither physical nor intellectual
  - Could figure into prognosis or effectiveness
- Social worth ought not be a criterion
  - Not the rich over the poor
  - Not the educated over the less educated

Based in social solidarity & equal dignity

- Concern for the common good
- *Not* by pitting groups against each other
  - Wealthy, healthy, and young vs. the poor, disabled, and old
- But by equitably applying rules that apply to *all* persons

DNR (DNAR) orders

- Again, ethics as usual
- No carte blanche exclusion of COVID-19 patients *solely* on that diagnosis
- Imagine a 45 yo with COVID 19 & hypoxemia → transient ischemia
- Yes, there is risk to other patients and staff
- Take proper precautions (brave but not rash)
  - Carts have PPE
  - Limited number in the room
- Casuistry: automatic DNR orders for HIV were touted in the 1980s
- Nonetheless:
  - DNR orders may be appropriate, recommended, and consented to by patient or surrogate
  - CPR may be effectively physiologically (biomedically) futile
    - Will not work, or repeatedly necessary with patient dying anyway
    - Two physicians certifying
    - Can write a unilateral DNR order
    - Ethics: no moral obligation to do what can't be done

Ventilator withdrawal

- Again, ethics as usual
- No unilateral withdrawal of ventilator from one patient to reallocate to another with a better prognosis (ie, no "re-allocation")
  - Having started treatment constitutes a commitment to continue treating that patient unless the patient refuses or it becomes clear that the patient is overwhelmingly unlikely to survive even with treatment*
  - Starting treatment constitutes a prima facie claim to continue
  - Starting treatment initiates a caring relationship
    - Professionals become dual agents →
      - Patient distrust
      - Moral distress for clinicians
- Perfectly acceptable to recommend vent withdrawal when chances of success are poor and patient is suffering
- Can be withdrawn unilaterally only if effectively futile (chances of survival are slim to none)
  - Follow your hospital's policies

*Sulmasy & Sugarman. *J Medical Ethics* 1994;20:218-222

Ethical mandate to care

- Again, ethics as usual
- Imperative to treat the symptoms and address the psychosocial and/or spiritual needs of all patients
- Palliative Care referrals
  - Anyone whose symptoms are refractory or difficult to manage
  - Anyone electing to forgo life-sustaining treatment
  - Anyone triaged to comfort care or best available alternative to ventilator
- Pastoral Care
  - Patients may have spiritual needs even if not physically symptomatic

Ethics Consults

- Any difficult cases or questions

A Triage Protocol Based on Need/ Prognosis/ Effectiveness

- Do everything possible to avoid triage
- *Triage trigger:*
  - Government
  - Health system
  - Chief of intensive care

Need

- A normal clinical decision—this patient has medical need for a ventilator
  - standard decision to ask for a MICU consult

Instead of a MICU consult, Consult the Triage Team First

- Members: two to three
  - One clinical ethicist
  - One critical care physician not on service
- More than one so everyone is kept honest
- Separates the team treating patients from those excluding patients
- Reduces “moral distress” of clinicians

Prognosis

- If we are in a triage situation, patients who (to a reasonable degree of medical certainty) have a less than six month life expectancy can be excluded
- Justification:
  - Unlikely to survive to hospital discharge (ineffective)
  - Little chance of even short term benefit
- For example:
  - Metastatic cancer refractory to treatment
  - End stage HFrEF—eg—Class IV symptoms, hyponatremia, hi BNP, EF < 20%
  - End stage COPD
  - End stage neuromuscular disease
  - End-stage dementia (bed-bound, unable to recognize loved ones or speak)

Effectiveness

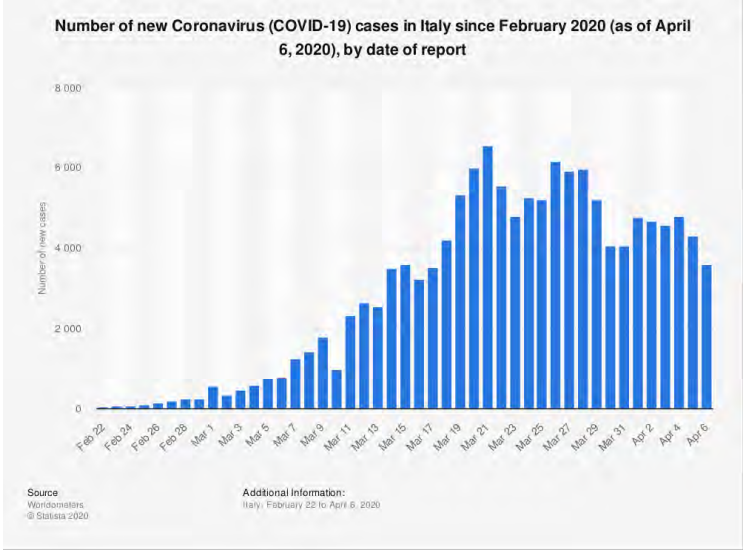
- Have a need and are not terminally ill
- Scoring (would recommend APACHE II over SOFA)
- e.g. APACHE II Score > 35, excluded (mortality > 85% even outside COVID 19)
- Rest would be prioritized: lowest score gets highest priority

Anyone not ventilator eligible should be

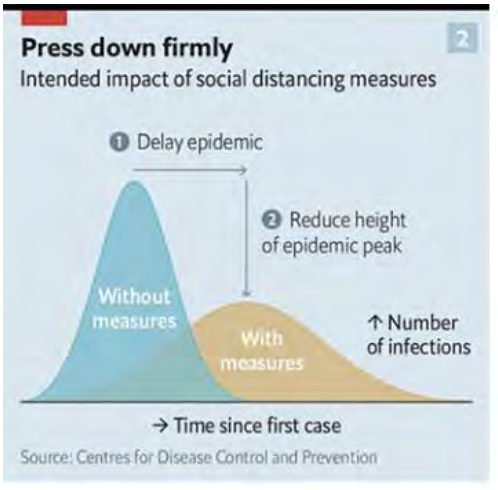
- Informed
- Provided the best available alternative
- Offered a palliative care consult

But let's hope (and pray) it does not come to rationing

Hope for us: Italy has turned the corner



Ethical Imperative: do your part



Many more ethical issues related to COVID-19…

- Special issues in palliative care
- Preferential access for first responders
- Advance care planning
- Organizational ethics (staffing, PPE)
- L&D and the NICU
- Surveillance technology and prevention
- Research ethics – trials, compassionate use
- Calls for blanket legal immunity for physicians
- Concerns of the disabled

Stay tuned! Georgetown and CHA will be hosting a series of 30 minute ethics webinars, beginning next week

Benjamin Rush, MD

- Signer of Declaration of Independence
- Yellow fever epidemic in Philadelphia, 1793
- Though urged to flee the city like others, Rush said, "I have resolved to stick to my principles, my practice, and my patients to the last extremity."