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Ethical considerations during the COVID-19 pandemic

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■ ABSTRACT

The care of patients during the COVID-19 pandemic has added many layers of complexity to ethical issues. Our response emphasizes the importance of having an ethically sound framework to inform our decisions, requiring caregivers to consider what is ethically optimal and feasible for the patient. It is increasingly important to understand the ethical principles and to appropriately apply them to both patient management decisions and guide scarce resource allocation. If we are to be prepared to face the many challenges of this pandemic, we must prioritize the ethical demands to our treatment and management concerns.

■ CLINICAL ETHICS DURING A PANDEMIC

Challenging ethical issues in healthcare are common because central to our role as caregivers is the relief of human suffering. Reviewed on a global scale, ethical issues surrounding pandemics are not unique to our healthcare systems, neither are the ethical issues surrounding scarce resource allocation. The concept of scarce resource allocation has value-incorporation, as shown during World War II when the US production of penicillin was not enough to meet all the need, with 90% being used for soldiers. This demonstrates the promotion of instrumental value (saves the most lives because soldiers were most valuable at that time) in allocation.¹

As part of an anticipated response to the effects of the COVID-19 pandemic, the importance of having an ethically sound framework to inform our clinical decisions cannot be emphasized enough. During this time, healthcare leaders are asked to engage in proac-

tive planning where addressing worst-case scenarios is the first step to reducing morbidity, mortality, and other undesirable effects of an emerging public health emergency.²

■ POPULATION HEALTH VS INDIVIDUAL RIGHTS

A public health emergency, such as a surplus of people seeking healthcare as well as critically ill patients with COVID-19 or another severe respiratory illness requiring admission to the intensive care unit (ICU), disrupts normal processes for supporting ethically sound patient care due to the steeply rising supply demand gap for treatment or supportive measures.³ The ethical framework in a public health crisis shifts to promoting the health of the population by using resources responsibly to maximize the total number of lives saved. Understanding the guiding principles surrounding public health ethics may help promote trust and alleviate moral distress and burn-out in bedside providers under austere circumstances.⁴ The focus of public health ethics, can require limitations on individual rights and preferences due to need for prudent use of resources and strategies.³ These limitations must be consistently and equitably applied, be proportional, necessary, and relevant.⁵

■ PRIORITIES OF HEALTHCARE PROVIDERS

During pandemics, the priorities of healthcare providers change. Shifts in these priorities create competing obligations for providers who are naturally geared towards focusing on their individual patients. Policy planners are asked to consider the two competing ethical obligations that must be held in balance (for the sake of brevity we only consider the two primary obligations listed here but concede that other ethical obligations exist):

- Duty to care—relief of suffering and respect for the rights and preferences of patients, which is a focus of ethics consultation services.

The statements and opinions expressed in COVID-19 Curbside Consults are based on experience and the available literature as of the date posted. While we try to regularly update this content, any offered recommendations cannot be substituted for the clinical judgment of clinicians caring for individual patients.

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- Duty to promote equity and moral equality—fairness relative to need in the distribution of risks and benefits of care provision in society, which is the focus of public health ethics.³

Ethical reasoning thus requires caregivers to consider what should be ethically optimal and feasible for the patient. This is known as the *crisis standard of care*—a recognition of limitations during times of scarcity.⁶ In addition to duty to care and fairness, this ethical guidance is also based on duty to steward resources, transparency, consistency, proportionality, and accountability.² As an ethical concept, it offers concrete guidance for a system-wide response to a disaster, addressing allocation.

■ ETHICAL PRINCIPLES GUIDING PATIENT MANAGEMENT IN A PANDEMIC

The severe acute respiratory syndrome (SARS) outbreak in 2003 exposed the healthcare systems' vulnerabilities, revealing the need for coordinated and cooperative responses across national borders. As such, the Pandemic Influenza Working Group at the University of Toronto Joint Centre for Bioethics was formed. They created a document that provides a framework for values at risk during a pandemic.⁵ This is being used as a framework for ethical decision-making during the COVID-19 pandemic (Table 1).

■ ETHICAL PRINCIPLES REGARDING SCARCE RESOURCE ALLOCATION

A majorly anticipated ethical dilemma is the allocation of finite resources, defined as measures, rationale, or means by which resources or access to care is obtained by individuals to exclude others in a time of crisis.⁶ Estimates indicate that a moderate pandemic would infect 64 million Americans and necessitate hospitalization of 800,000 (1.25%) with 160,000 (0.25%) needing space in the intensive care unit (ICU).⁷ With dwindling resources as hospitals approach surge capacity, it is likely that an increased need will cause competition for resources such as testing, personal protective equipment (PPE), ventilators, vaccines, and ICU beds. Ethical principles that guide resource allocation are well-described in the literature (Table 2).^{8–11} Ultimately, we stress that no single value stands alone in determining which patients should receive scarce resources.

■ APPLYING ETHICAL PRINCIPLES TO RESOURCE ALLOCATION

It is important to remember that context will determine the crisis standard of care in order to apply ethi-

cal frameworks to our decisions. Thus, it is important to stress how pandemic-associated priority shifts will lead to the selection of ethical principles guiding institutional- and clinician-driven patient-level decisions. The current overarching goal is to “privilege the greater chance to successfully overcome critical illness with a greater probability of maintaining a good quality of life.”¹³

Redefining our approach to individual patient care while adhering to the principles of clinical appropriateness and proportionality of care happens as we move between the three operational stages in a pandemic: Conventional, contingency, and crisis.¹⁴ Like Italy, we must contextualize and account for the current disease severity, comorbidity, and the presence and reversibility of organ failures when allocating crucial resources.

Allocation of ICU resources (beds and ventilator)

The potential for recovery should be part of a patient's criteria for ICU admission. This approach will be a conscious shift, taken deliberately so as to not pursue our usual framework of ICU admission and care on a “first-come, first-served” basis. This shift in the care model is indicative of the health emergency nature of the care provision, as illustrated by Italy, which, in March 2020, struggled with being the second most-affected country globally.¹³ Clinical decision support systems in triage decision-making with validated criteria for limits (eg, Sequential Organ Failure Assessment (SOFA) scores, Multi-Organ Dysfunction Prediction Score (MODS), age) are helpful.^{11,15} As such, ventilator allocation, should follow the same principle as allocation of ICU beds to patients with higher chance of survival. Consideration of time-limited trials¹³ with clear communication of this ahead of time will address proportionality of care and enhance transparency to families. It is also important to state that all patients, regardless of COVID-19 status, should be treated similarly during the pandemic (ie, viewed with the same lens of chances of survivability) when it comes to consideration for ventilator and ICU bed allocation.

Withdrawal of life-sustaining treatment

Early consideration of a patient's history, current clinical course, expressed wishes, and expected goals are important when the patient is not responding to prolonged life-sustaining treatments. A consistent mechanism of streamlined de-escalation of care is important to have to guide clinician decisions. When a decision to withhold or withdraw life-sustaining

TABLE 1**Anticipated ethical questions and responses to the COVID- 19 pandemic**

Question	Value	Response
Are the restrictions on normal activities ethically justified?	<u>At risk:</u> Individual liberty (integrity/empathy) <u>Overriding value:</u> Public health responsibilities (quality and safety/community)	Yes. Restrictions that impinge on individual liberty should be applied equitably when relevant and necessary to protect the public from serious harm. Personal and professional practices must be regularly reviewed and amended for the duration of the pandemic to assure fairness of application.
How much more restrictive can the measures ethically be for individuals and communities?	<u>At risk:</u> Justice and autonomy (caregiver/empathy) <u>Overriding value:</u> Protection of the public from harm (safety/community)	In a public health crisis, healthcare organizations and public health authorities may be required to implement restrictions. Reasoning for the restrictions should be based on those minimally necessary to protect the public/individuals from the harm of infection-transmission.
I don't want anyone to know I have COVID-19. Is it a HIPPA violation to report my diagnosis to public health officials?	<u>At risk:</u> Privacy/integrity <u>Overriding value:</u> Obligations to our patients' health	Not necessarily. In a public health crisis, the right to privacy typically afforded individuals may be overridden to protect the public from serious harm. Restrictions are the minimum necessary to accomplish public health goal with full transparency to patients.
Who has the greatest right to personal protective equipment?	<u>At risk:</u> Protection of all employees and community <u>Overriding value:</u> Duty to provide care	Healthcare workers have a duty to care for the sick even when this places them at greater risk of harm. To mitigate these elevated risks, healthcare workers should be prioritized when distributing personal protective equipment.
How will public health officials and healthcare leaders decide how to distribute the resources if supplies become scarce?	<u>At risk:</u> Providing each patient what they need. <u>Overriding values:</u> Stewardship/utility/transparency	The distribution of testing and treatment will be equitable and measured by the expectation of benefit. During a pandemic, the parameters for distribution of scarce goods may shift to a focus on rescue of the sick who are expected to recover.
What can the public expect regarding updates and communication about how healthcare institutions will make decisions?	<u>At risk:</u> Expending time and resources <u>Overriding value:</u> Open and transparent	Decisions should be made using an open and transparent process that is accessible to the public. The basis for procedural and allocation decisions will be based on evidence, principles, and shared values.

treatments is made as a matter of good clinical practice, appropriate palliative care should be made available to hypoxemic patients.

■ RESPONSIBILITY TO FAMILIES

Communicating the definition of crisis standards of care to patients and families at admission is crucial to

TABLE 2
Ethical principles used for resource allocation

Allocation principle	Description example	Pros	Cons
<u>Treating people equally</u>			
Lottery	Military draft, vaccinations, employee drug screening	Hard to corrupt; little knowledge about recipients	Blind to other factors and ignores relevant principles
Waiting list on a first-come, first-served principle	ICU beds, organ allocation	Favors those with access: wealthy, powerful, and well-connected	Protects existing doctor-patient relationships; exposes inequities (lack of insurance, undesirable groups such as prisoners)
<u>Favoring the worse off: Prioritarianism</u>			
Sickest first	Emergency room triage, organ allocation	Priority to those suffering right now; "rule of rescue"; makes sense in temporary scarcity; proxy for being worst off overall	Ignores needs of those who will become sick in future; might falsely assume temporary scarcity; leads to people receiving interventions only after prognosis deteriorates
Youngest first	ACIP pandemic flu vaccine proposal ¹²	Benefits those who have had least life; prudent planners have an interest in living to old age	Undesirable priority of infants over adolescents and young adults (eg, 2-month-old has less life than 20-year-old but is prioritized)
<u>Maximizing benefits to all: Utilitarianism</u>			
Prognosis (highest survival probability and duration)	Disaster triage, penicillin distribution	Maximizes life years produced	Ignores distributive principles; does not consider number of lives saved
Number of lives saved	Bioterrorism response	Avoids need to compare quality of life; less time spent deliberating	Ignores other principles
<u>Promoting and rewarding social usefulness</u>			
Behavior	Gives priority to those who did not engage in risky behaviors that caused their condition or affected it negatively	Promotes healthy lifestyle and individual responsibility	Ignores the reason for the individual behavior
Instrumental value	PPEs to essential healthcare workers during pandemics	Serves saving most lives because protects those who can help save others	Prone to abuse
Reciprocity	Rewards irreplaceable people who have served public	Justice to people who have contributed in the past	Rewards only those who have voluntarily provided societal services in the past; requires time to inquire

ICU = intensive care unit; PPE = personal protective equipment

fulfil our commitment to transparency. Complimentary services (eg, ethics service, palliative care teams) should be involved early to potentially decrease distress for the patient and family. This applies to all patients being cared for during the COVID-19 pandemic, regardless of COVID-19 status.

Use of extra corporeal membrane oxygenation
Extreme measures with little evidence and greater

resource utilization (blood products, personnel, exposure) that portend poorer prognosis challenge the principle of maximizing benefits, which aims at saving the most individual lives or number of life-years by giving priority to patients likely to survive longest after treatment.⁹

Need for tracheostomy
In the context of COVID-19, a tracheostomy

increases the number of healthcare providers exposed and increases PPE use, which at various stages of the pandemic might itself be a scarce resource. So tracheostomy would be a case-by-case decision point.

■ ACCESS TO DIAGNOSTICS TESTING

COVID-19 testing is currently available in Ohio; however, nationally, testing may become scarce, requiring it to be allocated according to the same principles noted previously. We initially prioritize testing based on supply and demand and operating level of the institution (conventional, contingency, crisis). Therefore at the onset, we reserved testing for the patients with the greatest disease burden. As we enter a more conventional level in which normal operations in institutions resume, patients who are not suspected to be COVID-19 positive may require testing to be allocated in order to safely allocate healthcare resources and minimize exposure (eg, being tested for COVID-19 prior to accessing healthcare settings for services such as chemotherapy infusions, invasive procedures, or surgery).

■ RESPONSIBILITIES TO HEALTHCARE WORKERS: PPE, EXPOSURE RISK, PSYCHOLOGICAL AND MENTAL BURDEN

Pandemics challenge our duty to provide care to patients versus the moral obligation to ourselves and our families, among other tensions. The risk of occupation-related infectious exposures reveal vulnerabilities for both patient and caregiver populations during a public health emergency. Such populations include older individuals, those with underlying health conditions, and existence of pre-existing barriers to health care owing to insurance or immigration status. Thus, healthcare workers are prioritized when distributing PPE because their specialized training lends instrumental value in pandemic response, which in turn increases their perceived duty to provide care.^{5,9} If providers are sick, their smaller numbers will impair the crisis response, further diminishing our ability to maximize benefits for patients. Furthermore, the risk of quarantine and loss of income, transmission of the disease, and, possibly, death prove that the risk to front-line medical providers is both physical and psychological—both aspects of which should be considered.

■ SUMMARY

The care of patients during the COVID-19 pandemic has multiple layers of complexity. A shift in the perspectives of both patients and caregivers is necessary.

TABLE 3

COVID-19 ethical resource allocation approach at Cleveland Clinic

Resource allocation

- Recognize that pandemic crisis standards of care can interrupt access to care that is suspended temporarily in outpatient settings.
- Use a clinical decision support system in triage decision-making with validated criteria for limits (eg, SOFA scores, Multi-Organ Dysfunction Prediction Score (MODS), age).^{11,15}
- Account for prognosis, comorbidities, and functional status in admission criteria to the ICU.
- Form triage teams that are distinct from bedside care team and are specific to allocation decision-making, to reduce moral distress during pandemic settings for the treating team.

Ethical responsibility to families

- Palliative care for discussions on advanced care planning or decision to withhold or withdraw life-sustaining treatments are done on an individual basis.
- Patients appropriately triaged to palliative care are notified of their right to discuss concerns or appeal decisions. In these situations, palliative care and ethics consultation services are readily accessible.

Ethical responsibility to healthcare workers

- Conservation and reallocation of resources make utilization more efficient and allow appropriate PPE to be made available to healthcare workers across settings such as the hospital, outpatient, long-term acute care facilities, and hospice.

If we are to be prepared to face the many challenges this pandemic will bring, we must prioritize the ethical demands of this disease as much as we do treatment and management concerns. Our Cleveland Clinic approach to resource allocation is summarized in Table 3. It aligns with guidelines from the Ohio Hospital association.¹⁶

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