



Utilitarian Principlism as a Framework for Crisis Healthcare Ethics

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Abstract

This paper introduces the model of Utilitarian Principlism as a framework for crisis healthcare ethics. In modern Western medicine, during non-crisis times, principlism provides the four guiding principles in biomedical ethics—autonomy, non-maleficence, beneficence, and justice; autonomy typically emerges as the decisive principle. The physician–patient relationship is a deontological construct in which the physician’s primary duty is to the individual patient and the individual patient is paramount. For this reason, we term the non-crisis ethical framework that guides modern medicine Deontological Principlism. During times of crisis, resources become scarce, standards of care become dynamic, and public health ethics move to the forefront. Healthcare providers are forced to work in non-ideal conditions, and interactions with individual patients must be considered in the context of the crisis. The COVID-19 pandemic has forced healthcare to shift to a more utilitarian framework with a greater focus on promoting the health of communities and populations. This paper puts forth the notion of Utilitarian Principlism as a framework for crisis healthcare ethics. We discuss each of the four principles from a utilitarian perspective and use clinical vignettes, based on real cases from the COVID-19 pandemic, for illustrative purposes. We explore how Deontological Principlism and Utilitarian Principlism are two ends of a spectrum, and the implications to healthcare as we emerge from the pandemic.

Keywords COVID-19 · Pandemics · Bioethics · Principlism · Population health · Standard of care

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Introduction

The COVID-19 pandemic has strained healthcare delivery in the US and internationally, with hospitals, emergency departments, and intensive care units overwhelmed and routine medical and surgical care unavailable or limited to telemedicine. During times of crisis, healthcare resources, including personnel, physical space, medications, and equipment may become scarce. As a result, standards of care take on a dynamic nature, changing based on supply and demand—a phenomenon that typically does not influence non-crisis medical care in the US. As standards of care morph, the obligations and duties of healthcare providers (HCPs) expand as public health ethics and clinical ethics intersect in crisis healthcare ethics. The Institute of Medicine (IOM) has emphasized the importance of an ethical framework to guide crisis healthcare, stating that “an ethical framework serves as the bedrock for public policy and cannot be added as an afterthought” (Altevogt et al. 2009, p. 5).

In this paper, we introduce the model of utilitarian principlism as a framework for crisis healthcare ethics. Principlism, the overarching ethical framework in biomedical ethics, is guided by the four principles of autonomy, nonmaleficence, beneficence, and justice. Ethical dilemmas arise when guidance from one principle is in tension with another. In non-crisis times, in our Western society, autonomy is typically given the greatest weight—the interest of the individual patient is paramount. The physician–patient relationship is a deontological construct where the physician’s primary duty is to the patient, therefore we term non-crisis principlism as deontological principlism.

During times of crisis, the lens through which principlism is viewed must shift from deontological to utilitarian. The interests of the individual are overshadowed by the interests of the population at large, with a utilitarian approach that maximizes net benefit on a societal level. In the same way, justice, typically the least considered principle in healthcare ethics, takes a central role but must also adopt a utilitarian emphasis given the public health crisis at hand. Healthcare is guided by both deontological and utilitarian aspects; principlism as a guiding framework can be viewed along a spectrum where the emphasis shifts between the underlying focus. The fundamental values and core principles are unchanged—it is the emphasis on the various principles that shifts as one moves across the spectrum from deontological toward utilitarian. Where we fall on the spectrum depends on the nature and extent of the crisis society and healthcare face.

In this paper, we discuss each of the four principles from a Utilitarian Principlism perspective and use clinical vignettes, based on real cases that have occurred in US hospitals during the COVID-19 pandemic, for illustrative purposes. In Utilitarian Principlism, autonomy transitions from individualistic to relational, nonmaleficence tolerates a “learn as we go mentality”, beneficence seeks population health, and justice takes on a more important role as healthcare adjusts to the needs of many over the needs of an individual.

Background: Crisis Standards of Care

In response to the 2009 H1N1 influenza pandemic and the need to prepare for a public health emergency that threatened to overwhelm the nation's healthcare system, the Office of the Assistant Secretary for Preparedness and Response within the Department of Health and Human Services charged the Institute of Medicine (IOM) with the task of developing guidelines for standards of care that would apply during disaster situations (Altevogt et al. 2009). Disasters, whether natural or manmade, have the potential to make resources scarce, demanding a shift in the practice of medicine. The IOM Committee on Guidance for Establishing Standards of Care for Use in Disaster Situations generated a letter report presenting concepts and preliminary guidance to assist states, public health officials, healthcare systems and institutions, and healthcare professionals in the development of comprehensive policies and protocols for disaster situations.

The committee defined *crisis standards of care* as “a substantial change in usual healthcare operations and the level of care it is possible to deliver, which is made necessary by a pervasive (e.g., pandemic influenza) or catastrophic (e.g., earthquake, hurricane) disaster” (Altevogt et al. 2009, p. 3). In the IOM model, changes in the level of care are to be initiated by a formal declaration by state governments that crisis standards of care are in operation. This formal declaration is to be accompanied by legal and regulatory protections for providers who are forced to practice in suboptimal conditions that require the allocation of scarce resources and altering standard practices to respond to a surge in demand for healthcare providers and hospital resources.

Principlism, Deontology and Utilitarianism

The four-principles approach, now commonly referred to as principlism, is the overarching ethical framework in biomedical ethics, guiding both clinical ethics and public health ethics. Beauchamp and Childress define the four principles that guide modern biomedical ethics as autonomy, nonmaleficence, beneficence, and justice (Childress and Beauchamp 2001). Autonomy involves respect for persons and individual, informed choices. Nonmaleficence is the obligation to avoid inflicting harm on others. Beneficence is the commitment to promote the well-being of others. Justice focuses on promoting equality in healthcare.

Even in the absence of a crisis situation, healthcare providers apply principlism in nearly all patient interactions, albeit often unconsciously. Discussions of risks, benefits, and alternatives are routine in order to promote patient autonomy and maximize beneficence. Nonmaleficence is supported by widespread systems to reduce medical errors, including identification bracelets, allergy bracelets, procedure time-outs, checklists, medication dosing and interaction alerts on electronic medical records, among many others. Triage conducted at arrival to any emergency department in the US is an accepted form of justice, as it prioritizes

patients based on urgency of the medical treatment needed, equality and fairness, and the utility of the treatment.

In standard, non-crisis clinical care, the physician's *prima facie* obligation is to the individual patient. In the American Medical Association code of ethics, principle VIII states "A physician shall, while caring for a patient, regard responsibility to the patient as paramount" (American Medical Association, revised 2001, p. 1). In this respect, the physician–patient relationship is a deontological construct. Morality is determined by the nature of the action and the duty is to the patient. In deontology, harmful actions are unacceptable, even if the end result is a net benefit. We refer to principlism during non-crisis times as deontological principlism to reflect the primacy of the provider's duty to the individual patient in our current healthcare system. In deontological principlism, justice in the distribution of resources is less important than the fiduciary duty the physician has to the patient.

In times of crisis, there is a shift from a deontological to a utilitarian focus. Utilitarianism is a consequentialist theory that determines morality based on the outcomes of interventions. The principle of utility asserts that the moral course is one that maximizes value over disvalue and seeks the greatest benefit for the greatest number. In this framework, harm to some individuals may be acceptable for an overall net benefit to the group at large. We propose Utilitarian Principlism as an ideal framework for Crisis Healthcare Ethics.

By accepting Utilitarian Principlism as the Crisis Healthcare Ethics framework, clinicians already accustomed to principlism need only shift their view rather than convert to a new way of thinking and operating during a crisis. Utilitarian Principlism allows providers and institutions to apply the ethical knowledge and skills they utilize on a daily basis, simply with a shift in focus and realignment of the principles to deemphasize autonomy and elevate justice in order to benefit the health of communities and populations at large. Justice as the paramount principle is in accord with what the IOM considers the overarching goal in developing crisis protocols, which is for "them to be recognized as fair by all affected parties" (Altevogt et al. 2009, p. 28).

Utilitarian Principlism

Utilitarian Autonomy

Clinical Vignette

A 50-year-old woman presents to the emergency department. She states that she is anxious about COVID-19 and that she is having repeated panic attacks because she thinks she may have it even though she does not have any symptoms. She is requesting a COVID screening test and a prescription for the medication that she heard about on the news as being effective against the disease. The physician explains to the patient that due to a lower inventory of nasal swabs needed to perform the test, the institutional protocol is not currently allowing for asymptomatic screening. The physician refers the patient to a community testing center. She also explains to the

patient that due to insufficient scientific evidence regarding the safety and efficacy of the requested medication, institutional protocol recommends against the routine use of the drug. She informs the patient about a clinical trial of the drug that the patient can enroll in if she would like. The patient begins yelling and demanding the test and the prescription. She states she is getting claustrophobic in her house which is worsening her anxiety and that she needs the COVID test to ease her anxiety. She also states that she doesn't want to be in a trial because she doesn't care about scientific evidence. Despite lengthy discussions and counseling, the patient remains angry and threatens to sue the physician.

In Deontological Principlism, autonomy tends to be individualistic; however, in Utilitarian Principlism, autonomy becomes more relational and embedded within the social context. As opposed to non-crisis times, during times of crisis, previously unrestricted autonomy may become limited in several ways. The interests of the individual become overshadowed by the interests of the community and population at large. Availability of physical space, healthcare personnel, lab testing equipment, and/or medications limit what care can be offered to patients, thereby narrowing the scope of individual autonomy. In the vignette above, perhaps the physician during non-crisis times would have acquiesced to the patient to diffuse the tension, gain trust, or just to avoid further legal or administrative headaches. But during a pandemic, the needs of others may be more clearly in the forefront of each clinician's mind, becoming a small part of every patient interaction.

Autonomy is not only passively limited by resource shortages, but actively imposed upon in order to protect the health of the public. Public health and clinical care limits on autonomy and individual freedoms may be necessary in the interest of justice. Public health ethics offers examples of this notion with imposed quarantine. Isolation and quarantine are effective measures for controlling the spread of communicable diseases. Isolation separates people who are sick with a contagious disease from those who are not sick; quarantine separates and restricts the movement of persons who have been exposed to a contagious disease to see if they become sick. Table 1 shows a list of quarantinable diseases in the US that can be revised by executive order by the president.

Imposing on the freedoms of sick and exposed asymptomatic persons is often accepted as ethical and legal. The Centers for Disease Control and Prevention (CDC), as a federal governmental entity, possesses the authority to propose and

Table 1 Communicable diseases for which isolation and quarantine are authorized (Centers for Disease Control and Prevention 2020a)

Cholera
Diphtheria
Infectious tuberculosis
Plague
Smallpox
Yellow fever
Viral hemorrhagic fever
Severe acute respiratory syndromes
Flu that can cause a pandemic

promulgate isolation and quarantine regulations. The Public Health Service Act (42 U.S. Code § 264) authorizes the apprehension, examination, detention, and/or conditional release of persons with communicable diseases or suspected to have communicable diseases to prevent the spread of disease from foreign countries or between states. The enforcement of CDC regulations may involve various law enforcement entities on the federal, state, or local level.

The US has seen unprecedented quarantines and travel restrictions with the COVID-19 pandemic. Social distancing and the use of face masks have become morally, socially, and politically charged. The opposing sides have been referred to as the “distancers” and “non-distancers” (Prosser et al. 2020). Distancers describe a moral obligation to protect others from disease even if their personal benefits are secondary. Non-distancers deem these actions to be unnecessary limitations on personal liberties. They report wariness of governmental overreach and motivations. Morally charged disagreements lend to particularly hostile disagreements between parties who do not see each other as merely different, but as wrong and a threat to others and/or society.

Another public health intervention that limits personal autonomy is the closure of non-essential sectors of the economy. Such interventions are effective in limiting or slowing the spread of communicable disease in a population (Lau et al. 2020). The COVID-19 pandemic has resulted in widespread employee layoffs and furloughs, leading to a record number of jobless claims. Americans who obtained health insurance through their employers are either without insurance, must purchase insurance, or apply for governmental assistance. Unemployment and loss of insurance negatively impact social determinants of health, which have a greater impact on health outcomes than healthcare itself (Artiga and Hinton 2019). Therefore, there has been considerable debate about the timing and extent of economic closures.

The US’s failure to prevent or adequately slow the COVID-19 pandemic suggest a more coherent strategy may be needed. During the Ebola outbreak, electronic monitoring was implemented with webcams to observe persons taking their temperatures. Webcams are also used for the routine public health control of tuberculosis. Webcams facilitate “directly observed therapy” to ensure that persons take their prescribed anti-tuberculosis medications. While electronic monitoring has raised concerns regarding privacy, the protection of the health of the public is considered to outweigh these concerns (with appropriate security measures in place).

In clinical care, Utilitarian Principlism reins in the autonomy of individual patients. In non-crisis time, the United States consistently spends more money than other countries on healthcare, without having better outcomes than countries that spend significantly less (U.S. Health Care from a Global Perspective 2020). While the reasons for this are complex and multifactorial, unbridled autonomy, patient requests, and physician acquiescence to requests for tests or treatments that may be non-beneficial or minimally beneficial are certainly contributing factors (Brett and McCullough 2012; LiPuma and Robichaud 2020). Considering it a duty, physicians may continue to provide aggressive care for patients at the end-of-life even when they perceive it as futile, resulting in a substantial critical healthcare burden (Huynh et al. 2013). Confusing autonomy as an unqualified right to choose, and the culture of consumerism in healthcare, help to drive the misinterpretation of deontological

patient-centered medicine (Zeckhauser and Sommers 2013). In Utilitarian Principlism, providers must consider fair allocation of scarce resources when devising and re-evaluating treatment plans.

This is not to say that autonomy becomes unimportant during times of crisis; patients are still entitled to the right to self-determination facilitated by informed consent. The how, what, where, and when of treatment may be limited in crisis, but among the available options, patient preferences and values guide treatment decisions.

Case Discussion

The patient in the above case was denied the request for a COVID-19 screen due to the limited supply and the need to save tests for patients who exhibited symptoms. She was also denied a prescription for a medication that lacked a scientific proof of efficacy and held no formulary indication to be given for possible COVID-19. If the patient had presented requesting a Lyme titer be drawn for no reason other than anxiety after hearing about Lyme disease on the news, the physician very well may have acquiesced because Lyme tests are not in short supply and the social context does not need to be considered. A central goal of medicine is to alleviate suffering. The risks of a blood draw are minimal. If a negative Lyme test would alleviate the patient's anxiety and the test is within appropriate stewardship of resources, performing the test would be a reasonable course of action. And, if the patient had asked for a prescription for penicillin, while there is increased attention to antibiotic stewardship, the physician may have acquiesced to strong demands for a medication prescription with a good safety profile that is also not in short supply. It is not uncommon for physicians to be influenced by patient pressure for antibiotics (Scott et al. 2001). Additionally, the physician provided the patient with alternatives—including community testing sites and involvement in a clinical trial.

Utilitarian Non-Maleficence

Clinical Vignette

A premature infant suffered a grade 2 interventricular hemorrhage shortly after birth as a consequence of his prematurity. After a prolonged stay in the Neonatal Intensive Care Unit (NICU), he was discharged home with close follow up by a pediatric neurosurgeon due to concern that he could develop symptomatic hydrocephalus; head circumference measurements and clinical exam are critical to tracking this development. If not treated urgently, hydrocephalus can cause permanent brain damage or death. As a result of the COVID-19 pandemic and institutional restrictions on outpatient visits to prevent the spread of disease, the infant's next appointment with neurosurgery was changed to a telehealth visit. His mother was mailed a tape measure in order to report the head circumference to the neurosurgeon in lieu of a robust physical examination and comprehensive neurologic evaluation.

The principle of nonmaleficence provides that clinicians avoid or minimize harms to their patients. In utilitarian nonmaleficence, threats to population health may outweigh potential or actual harms to individuals. Across the country, non-emergent surgeries, procedures, and office visits were postponed in an effort to thwart virus transmission. Patients with cholelithiasis without cholecystitis endured pain; patients with cancer delayed treatments or further screening; patients with functional limitations due to non-urgent ailments had surgeries postponed. These harms have been justified as a protection to society afforded by minimizing human encounters.

Another concern attributed to the COVID-19 pandemic is the inadvertent harm to patients with therapies initially thought to be efficacious. In conventional medicine, therapeutic interventions, including medications and devices, must be thoroughly studied prior to utilization in routine patient care as a safeguard against maleficence. Candidate drugs typically undergo three phases of clinical trials, over several years, prior to receiving approval for an indication by the FDA (Table 2). Medical devices undergo a two-phase testing process prior to approval. Use of a medication for condition(s) other than those for which it was approved, also known as off-label use, typically occurs only after clinical trials have demonstrated that the medication is as effective or more effective than currently utilized treatments or with tightly regulated compassionate use exceptions. This process is effective—in the 1960s, the US almost completely avoided the maleficence due to the thalidomide scandal, which worldwide resulted in tens of thousands of infants being born with thalidomide embryopathy, due to the FDA withholding approval of the medication for sale pending additional studies.

In crisis situations, the use of novel or unproven therapies may be undertaken when standard therapies have not yet been developed, increasing the risk of potential harm to patients. This potential risk is justified by Utilitarian Principlism—the risk is acceptable in order to save as many lives as possible using what we have available, even with limited scientific study. In crisis situations, we are forced to take on a “learn as we go” mentality (Rubin et al. 2020). Early in the COVID-19 pandemic, two therapies that were widely deployed in the management of infected persons ultimately proved to result in patient harms: early mechanical ventilation and hydroxychloroquine.

In the early phases of the pandemic, profound hypoxia seen in patients with COVID-19 led to calls for early mechanical ventilation. Comparisons were drawn between Acute Respiratory Distress Syndrome (ARDS) and COVID-19 leading to the utilization of ARDS protocols in the care of COVID-19 patients (Huang et al. 2020; Pan et al. 2020; Yang et al. 2020; Marini and Gattinoni 2020). Early

Table 2 Clinical trial testing

Medications	Devices
1. Safety & toxicity	1. Pilot/feasibility
2. Safety & efficacy	2. Pivotal/confirmatory
3. Clinical effectiveness relative to standard therapy	

endotracheal intubation was also thought to reduce virus aerosolization through the use of cuffed endotracheal tubes equipped with viral filters, offering protection to other patients and medical staff as compared to non-invasive ventilation where the airway is not secured in a closed loop circuit (Wax and Christian 2020). Over time, however, it became apparent that the pulmonary pathophysiological mechanisms underlying COVID-19 were distinct from ARDS and that early mechanical ventilation was causing more harm than benefit, due to ventilator-induced lung injury (Gattinoni et al. 2020; Tobin et al. 2020). The treatment of COVID-19-associated hypoxia shifted to both permissive hypoxia and oxygen therapy via high flow nasal cannula with improvement in patient outcomes.

The lack of a clear medication to abate the symptoms and/or severity of COVID-19 has hindered patient care since the onset of the pandemic. Early small-scale studies performed in China and France (Gautret et al. 2020; Chen et al. 2020) suggested a benefit from hydroxychloroquine, a quinolone traditionally used for malaria, although their methods were later questioned (Ferner and Aronson 2020). Due to the lack of other effective medical treatments, and public and political pressure, the FDA issued an Emergency Use Authorization for hydroxychloroquine for COVID-19 on March 28, 2020. The medical community quickly embraced hydroxychloroquine in the treatment of COVID-19 despite a lack of convincing evidence of benefit. On May 22, 2020, a manuscript published by *The Lancet* reported that use of hydroxychloroquine or chloroquine in hospitalized patients with COVID-19 was associated with a decreased risk of in-hospital survival and an increased frequency of ventricular arrhythmias, immediately calling into question the widespread adoption of these medications (Mehra et al. 2020). However, less than 2 weeks later on June 4, 2020, *The Lancet* retracted the study after questions were raised about the integrity of the data and the refusal of the company that owned the dataset to transfer it for third-party review. Since that time, additional studies have reported no benefit to hydroxychloroquine use, but harms include QTc interval prolongation and elevation of liver enzyme levels (Geleris et al. 2020; Molina et al. 2020; Bessière et al. 2020; Mégarbane and Scherrmann 2020).

The COVID-19 pandemic has also prompted providers to rethink and reframe how interventions may result in harm for their patients in an era of dynamic risk/benefit profiles. In the treatment of neuro-oncology patients, Weller and Preusser state that now, “more than ever, it seems mandatory to adhere to evidence-based practices and not to prescribe potentially toxic, notably immunosuppressive systemic therapy where evidence for efficacy is low” (Weller and Preusser 2020, p. 1). They advocate for increased advance care planning and discussing goals of care with patients. For patients involved in clinical trials, the risks and benefits should be re-evaluated with patients.

Case Discussion

In the clinical vignette, the infant is not brought to the office due to cancelled outpatient visits and a reliance on telemedicine to minimize face-to-face contact and potential disease transmission. The mother was mailed a measuring tape, suggesting limited or no training on how to properly perform a head circumference

measurement. Even if the mother had been trained, there is limited evidence to support the reliability of parental measurements of head circumference. The potential harms of an inaccurate measurement included a delay in diagnosis that could lead to brain damage or death, worse than, or at least tantamount to the potential harms of COVID-19 infection. However, the potential harm to the individual infant was tolerated to minimize the chance of the perceived greater threat—disease spread within the community. During the pandemic, many patients avoided urgent care, primary care, or even emergency care due to worry about becoming sick with COVID-19 or because these resources were unavailable or limited, with consequences that are difficult to quantify and follow over time.

Utilitarian Beneficence

Clinical Vignette

A 31-year-old woman with a history of alcoholism presented to the emergency department with acute liver failure. During her hospital admission, she developed acute renal failure and severe hepatic encephalopathy with anoxic brain injury. Her clinical course was marked by severe clinical decline and intensive medical needs and she was considered unlikely to survive the hospital admission. Three days into her hospitalization, and due to bed shortages as a result of the influx of COVID-19 patients to the adult ICU's, she is transferred to the Pediatric Intensive Care Unit (PICU) and her care was assumed by pediatricians trained to care for critically ill infants and children. She died 8 days into her hospitalization when her family elected to withdraw medical support as her condition deteriorated. The pediatric intensivists experienced moral distress over caring for an adult patient at the end of her life as this was beyond their typical practice; however, the institution deemed this the most appropriate use of the available resources in order to benefit the most patients. The family reported a high level of satisfaction with the care their loved one received.

In traditional medical care not affected by a crisis state, beneficence is focused on what is best for the individual patient. In utilitarian beneficence, the focus shifts to what is best for the patient with respect given to the population at large, possibly resulting in a decrease in beneficence on the individual level. The utilitarian benefit in a crisis is typically interpreted as either saving the most lives or saving the most life-years by prioritizing patients who are most likely to benefit from treatment and/or are the youngest and therefore have the most years left to live (Emanuel et al. 2020).

In the beginning of the COVID-19 pandemic, it appeared as if mechanical ventilators would be the scarce resource that would require rationing. In response, ethics literature and allocation protocols for mechanical ventilators took over the forefront of the discussion—who gets the last ventilator (White and Lo 2020; Ranney et al. 2020; Truog et al. 2020; Cohen et al. 2020)? Given the early outbreak in the Northeast, many institutions looked to the New York State Department of Health Ventilator Allocation Guidelines for guidance. This document, initially written in 2007 after the avian flu outbreak, and then revised after the 2009 H1N1 influenza

pandemic, specifies their goal as saving the most lives, while balancing this goal with other societal values, such as protecting vulnerable populations, and promoting fairness (New York State Task Force on Life and the Law 2015).

In prioritizing patients, in addition to considering saving the most lives and life years, some authors and existing crisis protocols gave priority to frontline healthcare workers and workers who are essential to the healthcare infrastructure (Emanuel et al. 2020; White and Lo 2020). This priority is not based on evaluations of worth, but rather utility as these persons are instrumental in the care of patients and the net goal of beneficence to all.

For physicians, beneficence is a driving force—physicians do not want to only avoid harm, they want to improve the well-being of their patients. During the COVID-19 pandemic, healthcare providers have stepped up in a variety of ways including working longer hours, traveling to “hot spots” to pitch in, and shifting their work to more essential purposes. In early March, a physician in Italy described how other subspecialists (cardiologists, rheumatologists, dermatologists, etc.) were quickly trained to manage ventilated patients with COVID-19 as their critical care staff were overburdened (Di Marco 2020). In the US, in order to expand the ability to provide care and maximize benefits in the current circumstances, states passed a variety of reforms including allowing providers to practice outside their usual scope of practice, waiving licensing requirements and fees, and expanding access to telemedicine (Bayne et al. 2020).

Case Discussion

In the above case, the patient has an end-stage disease process with a low probability of survival or neurological recovery. She was transferred to a pediatric ICU and cared for by staff who were practicing beyond their usual scope of care, but the patient still received ICU level care. Moving her to the pediatric ICU did several things: it opened a critical care bed for a patient more likely to survive to hospital discharge, it facilitated cohorting of adult patients with COVID-19 within the adult ICU, and it moved her away from other patients critically ill with COVID-19.

Thankfully, the low case rates of COVID-19 in pediatric patients resulted in very few hospitalized children and has allowed the utilization and expansion of ICU resources in a novel way. While imperfect, many US hospitals sought to extend their intensive care coverage both by moving non-COVID critically ill adults to pediatric ICU’s where beds, nurses, and clinicians were available, but also by increasing the acceptable age for pediatric emergency department triage to 20–25 years-old—all with a utilitarian beneficence mindset.

Utilitarian Justice

To this point, we have examined how in Utilitarian Principlism, the shift in focus on the net benefit for society requires the other three principles—autonomy, non-maleficence, and beneficence—to have a public health emphasis that is not typically present in non-crisis clinical care. This public health perspective promotes

justice in Crisis Healthcare Ethics. The previous clinical vignettes demonstrated how the other principles shift so that the interests of society were incorporated into individual medical decision-making.

As previously discussed, the 2009 IOM letter report for guidance on establishing standards of care during a crisis identifies justice as paramount. Justice in Crisis Healthcare Ethics includes protections for vulnerable populations in the equitable allocation of resources. Pandemics disproportionately affect socially disadvantaged populations (DeBruin et al. 2012), creating an ethical responsibility to direct resources to at-risk populations. Understanding how pandemics disproportionately affect socially disadvantaged populations can be facilitated by a discussion of structural violence. Structural violence, a term introduced in the 1960s, is the mechanism by which large-scale social forces, such as racism, poverty, political forces, and gender inequalities, among others, indirectly harm persons and populations (DeBruin et al. 2012). Structural violence leads to poor health outcomes, disability, and premature death.

DeBruin explains how procedural notions of justice, that are often applied in crisis protocols, are insufficient (DeBruin et al. 2012). Procedural justice, focused on equality, strives for neutral decision making. Bias is ideally removed with blindness to race, ethnicity, gender, socioeconomic status, and other social categories. However, when applied to already systematically unequal populations with inherent health disparities, the neutral approach maintains, if not exacerbates, existing inequities (DeBruin et al. 2012). DeBruin advocates for early identification of at-risk populations so that more resources can be directed to them and barriers to access to care can be addressed. A focus on equitable healthcare outcomes as opposed to equal distribution of resources maximizes justice.

As part of the Minnesota Pandemic Ethics Project, the project team led a series of community engagement meetings designed to foster inclusion of typically under-represented groups, including ethnic minorities, lower income persons, and persons with disabilities (DeBruin et al. 2012). Frequently identified barriers to care included: (1) lack of accessible information about the pandemic disease and the available public health and healthcare resources in the community; (2) Distrust of government entities as well as the healthcare infrastructure and providers; (3) lack of or inadequate insurance; (4) geographical distance to care; and (5) limited transportation options or other mobility issues. Another issue identified was the need for assurance that immigration authorities would not be present in the delivery of healthcare or involved in resource distribution.

The obvious and marked racial disparities emerging as factors in COVID-19 incidence and severity raise concern regarding healthcare equity and justice with respect to resource availability. Minority, underserved, impoverished inner city communities have been particularly affected by the pandemic. In Chicago, COVID-19 deaths in Blacks are nearly six times those in Whites, and cases were concentrated in impoverished South Side neighborhoods (Reyes 2020). West Detroit, an impoverished mostly Black neighborhood, was hard hit by COVID-19, complicated by lack of access to health care (Burns 2020). Proposed factors driving the increased incidence of COVID-19 in inner city minority communities are summarized in Table 3.

Table 3 Factors thought to be driving increased COVID-19 incidence in inner city minority communities

Inability to socially distance
Reliance on public transportation
Crowded housing conditions
Availability and affordability of face masks
Inability to self-isolate
Homelessness
Availability and affordability of delivered essential items
Work-related issues
Service-industry or front-facing jobs
Inability to work remotely or from home
Essential industry jobs
Co-morbidities associated with more severe infection (greater infectivity)
Diabetes mellitus
Hypertension
Obesity

In a discussion on ethical guidelines for pandemic influenza, the CDC emphasized the importance of community engagement and transparency in decision-making. Ethical decision-making requires a diversity of public voices to represent populations. Acknowledgment of the historical context of distrust of the healthcare system and the government is essential. In the past, vulnerable populations have been abused in the name of the public good (e.g., the US Public Health Service syphilis study at Tuskegee, involuntary sterilization of mentally retarded persons, the internment of Japanese Americans during World War II (Kinlaw et al. 2009)). Addressing the distrust that exists should be a core mission of healthcare in general, but becomes even more central during times of crisis when fears exist regarding the potential for pure utilitarian arguments, not guided by the principle of justice, in order to condone the harm of persons or populations.

The COVID-19 pandemic has occurred during a time of complex social and political tensions. Amidst the pandemic, protesters swarmed the streets across the country to express outrage and sorrow over a longstanding history of unchecked police brutality against African American men. The protests exposed how deeply ingrained systemic racism in our country leaves vulnerable populations fearful of the very institutions from which they should be receiving protection, whether it be law enforcement or healthcare.

Maximizing justice in healthcare requires considering it within the overall social context. The healthcare institution is only one aspect contributing to health outcomes. The social determinants of health (SDH)—the conditions in which persons live, work, and play—have a larger impact on health outcomes than healthcare itself (Artiga and Hinton 2019). While addressing the social determinants of health is important during non-crisis times, it becomes even more imperative during crises that exacerbate inequalities. The most effective social interventions to promote health during pandemics is an area in need of further research. More effective

public health policies directed at inequities in SDH during non-crisis times may be the most effective way to address unequal health outcomes during crisis as well as non-crisis times.

Conclusion

Western medicine's deontological principlist approach focuses on individuals as opposed to populations, resulting in rising healthcare costs without improved health outcomes and an inadequate framework to guide resource allocation when a healthcare crisis occurs. The COVID-19 pandemic has challenged society and healthcare in unprecedented ways. These challenges have reminded us how interdependent we are as a society, as healthcare is embedded within a greater social context. As we endure and hopefully emerge from the pandemic, it is perhaps time to reconsider where crisis healthcare should fall on the principlism spectrum. Improving the health of populations during the COVID-19 pandemic may require a shift toward a more utilitarian principlism perspective, maintaining an emphasis on justice and the promotion of health within its social context.

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Compliance with Ethical Standards

Conflict of interest The authors declares that they have no conflict of interest.

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