What Covid Has Taught the World about Ethics

Ezekiel J. Emanuel, M.D., Ph.D., Ross E.G. Upshur, M.D., and Maxwell J. Smith, Ph.D.

he Covid pandemic has posed substantial challenges to societies and health systems globally. Many of these challenges have been technical, such as the development of effective vaccines and therapies. The challenges that have proven most vexing and controversial, however, involve determining the "right" course of action on a number of critical issues: how to allocate scarce vaccines, whether to introduce mask and vaccine mandates, whether to restrict travel, and whether to intentionally infect research participants in order to test vaccines, to name a few. The "right" decision in these cases

is neither a technical matter nor resolvable by additional evidence; rather, it requires value judgments and, thus, ethics (see Table 1).

Many policymakers and political leaders around the world recognized the central role of ethics in addressing these challenges, calling, for instance, for "fair and equitable" allocation of Covid vaccines. Yet this recognition has infrequently led to ethically desirable outcomes. Some of the most important lessons from the pandemic are therefore about ethics and its effective integration into decision making for global health.

Although global leaders have frequently invoked "solidarity," "equity," and "fairness" during the pandemic, they seemed unable to elucidate these ethical norms, including how they should be concretely implemented. For instance, numerous calls for "fair and equitable" distribution of Covid vaccines among countries failed to characterize what distribution would constitute a fair or equitable one; though such calls indicated that more vaccine should be provided to low- and middle-income countries, they did not specify how much more would be fair or what sacrifices on the

Table 1. Role of Values in Decision Making during Public Health Emergencies.		
Point at Which Values Enter into Pandemic Decision Making	Explanation	Sample Policy Questions
When explicitly invoking values	Equity, fairness, solidarity, trust, security, and transparency are all examples of values explicitly invoked by decision makers. Values reflect judgments about what is important or of worth, which can form the basis for ethical action. Ethics involves the systematic study of the values that do, or ought to, underpin choices in pandemic response.	What does equity require in the allocation of scarce vaccines? Does solidarity mean ensuring that people in low- and middle-income countries receive first and second vaccine doses before people in high-income countries receive booster doses? What does a commitment to transparency or inclusion mean for decision-making processes?
When establishing policy objectives	Because policy objectives reflect judgments about what is important or of worth, they are closely linked with values, even if that link is not always made explicit. Science alone cannot tell us which objectives are important or of worth; value judgments are required.	 In a vaccine rollout, should we aim to minimize deaths, protect frontline workers, or protect critical infrastructure (e.g., services essential to the health and well-being of the public)?
When navigating trade-offs	When two or more objectives come into conflict, values come into conflict. Decision makers must determine how much weight to give certain values and assess whether the promotion of one or more values should be traded off against the promotion of other values.	 Should we prioritize suppressing a pandemic virus even if doing so could harm the economy? Should we jeopardize in-person schooling for the sake of reducing community transmission of a pandemic virus?
When navigating uncertainty	When decisions must be made in the context of uncertainty, they may turn out to be wrong. Values inform the weight we attach to the consequences of these possible errors and our judgments about how much risk to accept.	 Should vaccinated persons be exempted from public health measures such as isolation and quarantine? Should the interval between vaccine doses be extended to ensure that more people receive first doses more quickly?

part of high-income countries would be ethically justified to achieve those aims. Ethics provides the moral requirements entailed by these norms and helps in navigating disagreements in their interpretation.

Although Covid is new, the ethical issues prompted by it are not, and they needn't be addressed ab initio. There is a wealth of knowledge about the appropriate values and principles to guide policy during global health emergencies.1-3 Indeed, well-developed frameworks articulate ethical values for addressing allocation of health resources, mandates, challenge studies, and other issues. These approaches have been informed by previous events deemed public health emergencies of international concern, such as outbreaks of Zika, Ebola in West Africa, and H1N1 influenza. Ethical guidance can make policymakers aware of this knowledge and help them to navigate trade-offs among ethical values and implement ethical principles in future health emergencies.

For instance, Covid vaccines are hardly the first scarce health resource requiring allocation. Penicillin during World War II, dialysis in the 1960s, and HIV/ AIDS antiretroviral therapies in the 1990s all required priorities to be established amid resource constraints. These challenges have forced the critical examination of practices, identification of unethical allocation schemes, and elucidation and critical evaluation of ethical frameworks and policies for allocating scarce health resources.4

Analysis of our preexisting knowledge, on one hand, and the priorities established for allocating resources during Covid, on the other, reveals agreement between the two on the importance of five substantive values in allocating resources: maximizing benefits and preventing harms, mitigating disadvantage, reciprocity, instrumental value, and equal moral concern (see Table 2). Explicit recognition of these values helps to elucidate essential ethical considerations, but further insight

is needed to determine which values should be prioritized in particular circumstances.

We would argue that maximizing benefits and preventing harms should be given presumptive priority, because any allocation that generates more deaths or serious illness should be met with suspicion. But this value should not receive absolute priority; it should be balanced against and shaped by the other four values, which help clarify, for instance, how much weight should be given to the distribution of benefits and harms among different populations. These values also place constraints on the maximization of benefits in accordance with ethical commitments to social justice. For example, already-disadvantaged groups should not be further disadvantaged by the allocation of resources in an emergency. Hence, preventing harms in the least advantaged populations is especially important. Similarly, in public health emergencies, medical personnel frequently receive priority for resources not because they are

Table 2. Fundamental Values Affecting Allocation of Scarce Medical Resources.		
Value	Definition	
Maximizing benefits and preventing harms	Prioritization of a good or service should maximize benefits and minimize harms. Harms may be broad and include both health harms (e.g., morbidity and mortality) and non-health harms (e.g., poverty). They can also derive directly from the disease or indirectly, as health system functioning is compromised.	
Mitigating disadvantage	Special concern and prioritization should be given to people who are disadvantaged be- cause of their income or because of discrimination based on their race, ethnicity, reli- gion, or other factors.	
Reciprocity	Preferential allocation of medical resources should be given to people who, in the past, have mitigated harm for others and faced a disproportionate burden (e.g., research participants and food-processing workers).	
Instrumental value	Benefits should be provided and harms mitigated for people who can, in the future, mitigate harms and disadvantage for others. Instrumental value is not an independent value but facilitates realizing the other values, particularly maximizing benefits.	
Equal moral concern	People should be treated as moral equals, and discrimination on the basis of morally irrelevant characteristics such as race, ethnicity, or religion should be avoided. People in different circumstances (e.g., in communities with higher or lower burden of disease) can typically be treated differently given unique needs.	

more worthy but because of their instrumental value: their work may save the lives of many others, thereby maximizing benefits and preventing harms.

Other frequently invoked ethical principles, including transparency, engagement, and responsiveness to evidence, are procedural. Unlike substantive values, they do not determine the allocation of resources, though they can render such allocations more fair. Indeed, ethical processes for decision making go beyond articulating values and principles. Allocative schemes also need to be translated into just policies that are then implemented with fidelity. In the case of allocation, these policies take the form of prioritized tiers of populations. The procedural principles shape and constrain the process of translating values into priority tiers and implementing them in the world.

Though it is naive to expect unanimity on the allocation of scarce health resources, mandates, or challenge studies, we don't have to return to debating fundamental values when they are already clear. Proceeding with this multivalue framework and preexisting ethical knowledge may not "settle" these issues, but it can facilitate swifter policy formulation and enable policymakers to publicly communicate policies' ethical rationale. Such communication should help build greater awareness, trust, and compliance.

Ethical values, however, cannot apply themselves or resolve conflicts among themselves. Positioning ethics to meaningfully inform decisions requires changing the policymaking process. Ethics must be considered at the start of any response to a health emergency. Government policies should be ex-

pected to be not just evidenceinformed but also explicitly ethicsinformed. During an emergency, policymakers call on epidemiologists and others to bring their expertise and experience to policy formulation; they should also call on ethicists to inform a coherent ethical response.

How can this approach be operationalized? First, like epidemiology and vaccine development, ethics cannot simply be switched on during an emergency. Institutional capacity and memory cannot be built or restored ad hoc. The agencies responsible for responding to public health emergencies need to have trained ethicists on staff, regularly participating in scenario planning and advising.

Second, this function cannot be performed by a single token ethicist. As Covid proved, the numerous ethical issues necessitate a competent team with complementary capacities and skills that can fully consider the complex global, regional, and local impact of pandemic planning and decision making. We need to build capacity to expand expertise in public health ethics.

Third, before an emergency occurs, staff ethicists can draw on preexisting knowledge to anticipate common issues, such as allocation of scarce resources, mandates, isolation protocols, and challenge studies. Then, they can elucidate vetted frameworks that incorporate well-accepted ethical values. Using these frameworks, they can elaborate potential policies for implementation. Ethicists might also translate these frameworks into checklists that can be used by policymakers to ensure they address the relevant ethical considerations in responding to an emergency.⁵ Staff ethicists can seek input on their proposals from experienced ethicists and the public (including disenfranchised populations) to refine a working ethical framework and initial set of policy considerations.

Finally, ethics must be integrated into emergency decision making. Ethicists should be at the table when policies are formulated, rather than merely serving as external critics.

The world has not yet had time to fully elucidate the lessons of Covid and apply them to preparations for future emergencies. But policymakers should heed the lessons of the pandemic by appreciating the ethical, not just the technical, dimensions of all challenges faced during emergencies; by starting from existing knowledge about the right values and principles to guide policy; and by ensuring that ethics expertise is present before an emergency response is conceived and is effectively integrated into decision making. Achieving these aims will require a sustained, focused effort to enhance ethics capacity at key global, national, and local public health organizations, academic institutions, and governmental agencies.

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From the Department of Medical Ethics and Health Policy, Perelman School of Medicine, University of Pennsylvania, Philadelphia (E.J.E.); and the Dalla Lana School of Public Health, University of Toronto, Toronto (R.E.G.U.), and the School of Health Studies, Faculty of Health Sciences, Western University, London, ON (M.J.S.) — both in Canada.

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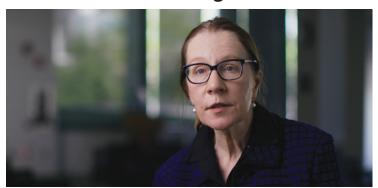
1. World Health Organization. Guidance for managing ethical issues in infectious disease outbreaks. 2016 (https://apps.who.int/iris/handle/10665/250580).

- 2. Smith MJ, Upshur REG. Pandemic disease, public health, and ethics. In: Mastroianni AC, Kahn JP, Kass NE, eds. The Oxford handbook of public health ethics. New York: Oxford University Press, 2019.
- 3. Nuffield Council on Bioethics. Research in global health emergencies: ethi-
- cal issues. January 28, 2020 (https://www.nuffieldbioethics.org/publications/research-in-global-health-emergencies).
- **4.** Persad G, Wertheimer A, Emanuel EJ. Principles for allocation of scarce medical interventions. Lancet 2009;373:423-31.
- 5. World Health Organization. WHO global

epidemic ethics and policy summit. 2021 (https://covid19crc.org/event/who-global -epidemic-ethics-and-policy-summit).

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Double Take Video: Migraine — Patient Perspectives



In this short documentary video, patients share their experiences of living with migraine and physicians discuss the current understanding and treatment of this very common condition.

Tailored to patients and families, this video highlights the debilitating symptoms and impact of migraine on daily life from the patient perspective.