How to Distribute a COVID-19 Vaccine Ethically

The unequal wealth of nations should not determine allocation

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As COVID-19 continues to take the world by storm, and vaccine developers race toward safe and effective candidates to stem the tide of the pandemic, health officials and policy makers are grappling with a significant philosophical and ethical challenge: how to best allocate limited vaccines doses to the world's population.

This challenge presents a range of questions: Which countries should get a vaccine first? To what degree should helping essential workers, the poor, minorities and the young (or old) affect vaccine distribution between countries? Is it better to prioritize the quantity of lives saved by a vaccine or rather the quantity of life years saved?

There are lots of proposals on the table for ethical vaccine distribution between countries, but how do we know which one, if any, policy makers should employ? To help answer that question, let's begin with an overview of some of the existing proposals.

The COVID-19 Vaccines Global Access (COVAX) facility is co-led by the World Health Organization (WHO), the Coalition for Epidemic Preparedness Innovation and Gavi, the vaccine alliance. It lets countries support a broad portfolio of vaccine candidates, and requires distribution in line with need. The facility has proposed to give countries vaccine quantities in proportion to their populations until each country can help 20 percent of its population. But it only guarantees enough to non-contributing—mostly poor—countries to cover essential workers before donors vaccinate 20 percent of their populations. In a controversial decision, the Trump administration announced the United States will not join this facility.

Another WHO proposal aims to prioritize health care workers, elderly and the most vulnerable. It would seek to reduce COVID-19 deaths and protect health systems by giving countries vaccines based on the number of essential health care workers, the proportion of people over 65 and those who are otherwise likely to suffer seriously if they get COVID-19.

Another approach, the "fair priority model," tries to limit economic and health consequences. A collaboration of ethicists, spearheaded by Zeke Emanuel, former director of bioethics at the National Institutes of Health, argues that at least after countries have their pandemics under control, fair allocation requires distributing the vaccine first to those countries where it is possible to save the greatest number of life years, then considering also disability that can be prevented by the vaccine as well as the amount of poverty and aggregate economic damage the vaccine can prevent, and finally distributing the vaccine to reduce transmission rates as far as possible.*

A proposal by Vanderbilt University considers contribution and capacity. Researchers at Vanderbilt propose scoring countries based on (1) their capacities to provide care, (2) their ability to distribute vaccines and (3) whether they have helped test and develop new interventions. Those with lower capacity to provide care without a vaccine, greater capacity to distribute the vaccine, and who have helped test and develop new interventions would have higher scores and thus priority access.

These proposals differ, and each one has some merit. It is important to distribute in line with need (though we need to examine what needs matter), and we should try to mitigate economic as well as health effects as well as prioritize countries who lack the ability to provide care.

But all of these proposals unfairly prioritize rich countries; they either let rich countries control their epidemics first, help all of their essential health workers (they have many more than poor countries), or even help 20 percent of their populations before letting poor countries do more than treat 3 percent.

A truly ethical proposal would treat all people equally and help countries get vaccines to people when they lack capacity to do so on their own, rather than accepting inequality in access as an unchangeable fact and bypassing the poor to help the rich, the weak to help the strong.

Moreover, for a good proposal to ensure that we reduce premature death and address economic deprivation, protect health systems or achieve any other objective equitably requires a lot of missing empirical data about what would be most effective.

And it is important to give a good ethical defense of any proposed allocation.

So, what ethical principles should policy makers employ? Should they distribute vaccines to countries to minimize premature death, save the most lives, combat poverty, forestall economic devastation, or something else?

Though some philosophers have tried to defend the idea that we should try to minimize premature death, and give some independent arguments for helping the worst off, these arguments are weak.

The main argument is just that we should prioritize the young because they have yet to have their "fair innings". That might be OK if we were setting up a health system that would serve everyone and everyone would live about the same amount of time.

But, right now, saving the most life years discriminates against the elderly and, once we take into account disability, disabled people who are likely to die young or fare poorly for reasons entirely unrelated to COVID.

Take two 20 year olds with COVID. Suppose the first has MS a degenerative disease that will probably kill them by age 75 while the other can expect to live to 80 - the average age of death in their country. If we save the former then we would gain 55 (75-20) years. If we save the later we gain 60 (80-20). So if we just care about saving the most life years, it is better to save those who are not already disabled. This adds burden to injury.

Saying we should also distribute vaccines to countries in the way that will most help the least well off may not improve the distribution. It depends how we define the least well off. We might try to reduce poverty, help those with a shorter life expectancy, or the marginalized and oppressed.

Similar problems arise in trying to use vaccines to combat and forestall economic deprivation. Many people are losing their livelihoods but trying to increase total income might just benefit the rich.

Even if we focus on poverty, how should we measure poverty and combine that with health? To measure poverty, some propose taking the total shortfall between each poor person and the poverty line and dividing by the level of the poverty line. How much does preventing some poverty on this measure matter compared to a life? Are we really willing to sacrifice lives to help the poor? Perhaps. But this requires some argument. And how many lives should we be willing to sacrifice exactly?

There are also deeper philosophical questions one might raise about these existing proposals: Should we care about protecting societies even at some cost to individuals? Why focus on health at all rather than welfare? And, even if it is OK to just focus on health, should we help those most at risk of COVID related health problems or those with the worst health more generally?

Insofar as we do focus on minimizing the health effects of COVID with a vaccine, I think it is best to treat every individual equally and try to save the most lives possible (whether we can best do this by distributing in ways that reduce poverty, target the elderly and help provide essential health care in all countries, or constrain the spread of the virus). Every individual's life is equally important to each individual.

Policy makers should not primarily benefit the rich by letting them constrain their pandemics first, try to increase income growth the most, or distribute vaccines in ways that fail to account for existing inequalities.

And even more important than distributing scarce vaccines equitably, we should try to make them less scarce. We should require pharmaceutical companies to distribute vaccines at cost, allow generic competition, and

endorse the WHO's Solidarity Call to Action for equitable global access to COVID-19 health technologies.

**Editor's Note (9/28/20): This sentence has been edited after posting to correct the spelling of Zeke Emanuel's name.*