

vaccines

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The coronavirus swept across the U.S., devastating our economy and killing far too many people, but recent news releases should give us hope that this plague may end soon. Most encouragingly, Pfizer and Moderna claim their vaccines are both safe and effective. Unfortunately, the U.S. will struggle to quickly distribute these vaccines for several reasons. First, they must be kept cold. Pfizer's vaccine must be stored at negative 94 degrees Fahrenheit. It will require special freezer units and special care as people transport it. Second, Pfizer's vaccine can only be stored for a short period of time. Moderna's vaccine must also be kept cold, but not as cold as Pfizer's vaccine, and it can be stored longer. Still Moderna's refrigeration and storage requirements will present difficulties. Third, to further complicate the distribution of these vaccines, people must receive two shots in order for the vaccines to be effective. Many healthcare experts worry that if patients have side effects from the first shot, they may not come back for the second shot. These health care officials also worry that it might prove challenging to keep enough vaccines on hand to deliver second shots in a timely manner.

We can also find more encouraging news from other companies that have been developing vaccines. According to the New York Times, 57 vaccines are being developed world wide, and 17 are in late-stage efficiency trials. Some of these 57 vaccines, if proven effective, will be much easier to distribute than the Pfizer and Moderna vaccines. One version of Johnson & Johnson's vaccine only requires the patient to get one shot. Merck has a vaccine candidate that comes in a pill.

Even though some of the vaccines still in development may be more effective, easier to distribute, and more conducive to mass production than the Pfizer and Moderna shots, we

may never learn this information. As Rolfe Winkler reports in the Wall Street Journal, Susan Baker, a participant in the trial that is testing the Johnson & Johnson vaccine, may drop out. She took an antibody test and discovered she received the placebo shot, so she has no protection from the virus. She does not want to get infected and as a nurse she should be able to receive a Pfizer or Moderna shot in the first group of people who are offered these vaccinations.

There are many people like Susan, who will drop out of a vaccine trial if they determine they got the placebo and have an opportunity to get the Moderna or Pfizer vaccination. If the placebo groups do not stay intact, Johnson & Johnson and the other vaccine makers may never complete their studies to determine if their vaccines are both safe and effective.

Now that Pfizer and Moderna are poised to start making their vaccines available in the U.S. and Europe, many vaccine trials that rely on volunteers in these countries are at risk; they may never be completed. The companies still testing their vaccines are complaining about the people who might leave their trials. Their complaints are unrealistic. Individuals will do what is best for themselves. Instead of complaining, these companies should attempt to test their vaccines in countries that will not have access to Moderna's and Pfizer's vaccine for quite some time. People in these countries will not soon have better options that allow them to defect from the study.

Of course, what I am arguing is that the center of testing new vaccines should move from the U.S. and Western Europe to less developed countries that, unfortunately, will have to wait longer before they get a vaccine. The people running the vaccine trials should not assume their volunteers are angels, who are willing to risk dying in order to help prove a vaccine is safe and effective. Instead, the trial administrators should seek people who will not soon be eager to leave their studies.