Within days of the first confirmed novel coronavirus case in the United States on 20 January, antivaccine activists were already hinting on Twitter that the virus was a scam—part of a plot to profit from an eventual vaccine. Nearly half a year later, scientists around the world are rushing to create a COVID-19 vaccine. An approved product is still months, if not years, away and public health agencies have not yet mounted campaigns to promote it. But health communication experts say they need to start to lay the groundwork for acceptance now, because the flood of misinformation from antivaccine activists has surged.

Such activists have “kicked into overdrive,” says Neil Johnson, a physicist at George Washington University who studies the dynamics of antivaccine groups on social networks (Science, 15 May, p. 699). He estimates that in recent months, 10% of the Facebook pages run by people asking questions about vaccines have already switched to antivaccine views.

Recent polls have found as few as 50% of people in the United States are committed to receiving a vaccine, with another quarter wavering. Some of the communities most at risk from the virus are also the most leery: Among Black people, who account for nearly one-quarter of U.S. COVID-19 deaths, 40% said they wouldn’t get a vaccine in a mid-May poll by the Associated Press and the University of Chicago (see graphic, below). In France, 26% said they wouldn’t get a coronavirus vaccine.

The Centers for Disease Control and Prevention (CDC) is now working on a plan to boost “vaccine confidence” as part of the federal effort to develop a vaccine, Director Robert Redfield told a Senate committee this week. Advocates urge campaigns that include personal messages and storytelling. “We better use every minute we have between now and when that vaccine or vaccines are ready, because it’s real fragile ground right now,” says Heidi Larson, an anthropologist and head of the Vaccine Confidence Project at the London School of Hygiene & Tropical Medicine (LSHTM).

Any coronavirus vaccine will face additional hurdles, especially the lack of a long-term safety record, Johnson says. The frenetic pace of vaccine development may play into that concern. Even advocates have worried that the rush for a vaccine raises the risk it could be ineffective or have harmful side effects. Consider the very name for the U.S. vaccine initiative, Operation Warp Speed, says Bruce Gellin, president of the nonprofit Sabin Vaccine Institute. “What is a worse name for something that’s supposed to give you trust in a product that you want everybody to take?”

Del Bigtree, a U.S.-based vaccine critic, claims scientists are pursuing one of “the most dangerous vaccines ever attempted,” for a virus that poses little risk to most peo-
The line starts to form for a coronavirus vaccine

U.S. and others debate who should get priority if vaccine doses are scarce

By Jon Cohen

When and if the world has a COVID-19 vaccine, who should get it first? That question came into sharp relief last week. A committee that makes vaccine use recommendations to the U.S. Centers for Disease Control and Prevention (CDC) wrestled with the issue in a virtual meeting, and new data suggested how fraught any prioritization is likely to be: Pregnant women—normally the last to receive a new vaccine, given the possibility of harm to a fetus—may have an increased risk of severe illness from COVID-19, suggesting they should be high on the list.

Bruce Gellin, former director of the U.S. government's National Vaccine Program who now helps lead the nonprofit Sabin Vaccine Institute, says the prioritization issue comes down to a tricky balancing act between what's best for society and individual interests. “These are tough decisions, because everybody can make a case for why somebody should be ahead of somebody else in line,” he says. “Nobody’s going to debate health care workers and first responders—people who are putting themselves at risk for others and keeping things moving. After that is when it gets complicated.”

The new coronavirus’ disproportionate toll on the elderly could put them at the front of the line—except they often have the weakest response to vaccines. Conversely, groups such as prisoners, meat packers, soldiers, and grocery store workers are often young and healthy—yet their profession or environment dramatically increases risks of getting infected. And then there is the thorny question of whether to favor specific ethnic groups hard-hit by the virus.

Even if the optimists are right and a COVID-19 vaccine is approved for widespread use as early as this fall, it is likely
Officials gird for a war on vaccine misinformation
Warren Cornwall

Science 369 (6499), 14-15.
DOI: 10.1126/science.369.6499.14