How nationalist politics disrupts mass vaccination: the case of AstraZeneca

Benjamin Mateus
29 March 2021

Despite the repeated calls by international agencies for the fair and equitable distribution of these lifesaving treatments, the COVID-19 vaccines, vaccine nationalism is threatening a complete breakdown in the global response to the COVID-19 pandemic. In this regard, AstraZeneca has become the focal point of what is undoubtedly an already deeply rooted vaccine war spurred by the conflicting interests of the major imperialist powers, as well as their lesser rivals and client states.

Earlier this year, there was an open brawl among the European powers over AstraZeneca's inability to meet delivery schedules to both Britain and the European Union. Last week European Commission President Ursula von der Leyen said that the EU would use emergency powers to ensure it received promised vaccines. Britain is partly reliant on supplies from Europe and thus may not be able to deliver a second dose to those who have received it.

The supply issue in Europe was exacerbated by apparently unwarranted claims of health problems among those receiving the AstraZeneca vaccine. Then the company ran afoul of US regulators when it published interim results of a US trial that showed 79 percent efficacy against symptomatic COVID-19 infections. While the Data and Safety Monitoring Board (DSMB) said the vaccine maker had provided "outdated information," refiled results showed 76 percent efficacy, essentially no different, and a higher efficacy among the elderly.

Dr. Anthony Fauci described the company's action as "an unforced error," adding that "this is very likely a very good vaccine, and this kind of thing does … nothing but really cast some doubt about the vaccines and maybe contribute to the hesitancy." Stephan Evans, professor of pharmaco-epidemiology at the London School of Hygiene & Tropical Medicine, told the *Guardian*, "I think some of the difficulties were that the trials were being set up by [AstraZeneca] to answer public health questions, whereas clearly Pfizer/BioNTech and Moderna's trials in the US were set up to get FDA approval."

The in-fighting, hostility, and derisory comments made by European government leaders directed against AstraZeneca, which contributed to popular concerns raised over its efficacy and safety, demonstrate the reactionary role of rival capitalist nation-states in the face of the pandemic There is no globally coordinated response to the pandemic, to the point that such tensions undermine distribution and utilization of what health officials regard as an efficacious and effective vaccine.

What the scientists say about AstraZeneca

A statement of support published on February 26 by the World Health Organization regarding AstraZeneca's vaccine explains, "Efficacy shown in clinical trials in participants who received the full series of vaccine (2 doses) irrespective of the interval between the doses was 63.1%, based on a median follow-up of 80 days, but tended to be higher when this interval was longer. The data reviewed at this time support the conclusion that the known and potential benefits of ChAdOx1-S/nCoV-19 [recombinant] vaccine outweigh the known and potential risks."

The assessment was based on a study published in *The Lancet* on February 19, 2021, on the "immunogenicity and efficacy" of the AstraZeneca vaccine—a pooled analysis of four randomized trials. Though it is unusual to pool these studies, it provides the context for an assessment of the vaccine. The vaccine's primary dosing regimen is considered to consist of two standard doses given at an interval of 4 to 12 weeks, with the spacing of 12 weeks seeming to be optimal.

According to the study, "The primary outcome was virologically confirmed symptomatic COVID-19 disease, defined as a nucleic acid amplification test (NAAT)-positive swab combined with at least one qualifying symptom (fever equal to or greater than 37.8 degrees Celsius, cough, shortness of breath, loss of smell or taste). The primary analysis was of cases occurring more than 14 days after the second dose."

When comparing vaccines, it is critical to take note of the primary outcome that is being measured. This makes the reported results in a particular study challenging to compare with other trials. When the mainstream media implies one vaccine is superior to another, simply by comparing their reported efficacy numbers, this is misleading. A genuinely scientific objective measure of superiority would require a head-to-head trial between vaccine candidates to confirm such assertions. Efficacy endpoints mainly indicate the vaccine is a viable candidate for broader use.

For instance, in the case of the Moderna vaccine trial, which cited an efficacy of 94 percent, Moderna made the diagnosis of COVID-19 in a participant if they had at least two symptoms with a fever considered equal to or greater than 38 degrees Celsius. The Moderna trial also allowed one symptom with confirmatory nasal swabs or saliva samples for viral confirmation. Participants were encouraged to self-report symptoms, a process that could bias these trials.

AstraZeneca's overall efficacy was found to be 63.1 percent in the initial trial. Further evaluation, however, found that the vaccine's efficacy after a single standard dose improved over time. By day 90, the efficacy had risen to 76 percent without evidence of waning of protection. A two-dose regimen with a 12-week interval raised the efficacy to 81.3 percent, suggesting that the 12-week gap is optimal. This has become the new accepted dosing regimen.

More importantly, both in the Moderna and AstraZeneca trials, no severe COVID-19 cases or hospitalizations were reported 14 days after those participants had completed their vaccine regimen. This means both prevented serious disease from developing in the participants, the most critical aspect of these treatments. These findings were recently confirmed in the trial conducted in the Americas where efficacy was found to be 76 percent and no severe disease or hospitalizations occurred. These studies also indicated that the efficacy was higher for older participants.

Efficacy and effectiveness

There are two critical and distinct concepts in vaccine terminology: efficacy and effectiveness. According to the Gavi vaccine alliance, "Efficacy is the degree to which a vaccine prevents disease, and possibly also the transmission, under ideal and controlled circumstances. … Effectiveness meanwhile refers to how well it performs in the real world."

Vaccines may differ in efficacy by a considerable degree in a controlled trial, while being roughly equal in effectiveness once deployed in daily life. This appears to be the case with the AstraZeneca, Johnson & Johnson, Pfizer and Moderna vaccines, any of which should be taken as soon as available. The same considerations seem to apply, by the way, to the Russian and Chinese vaccines.

The author of a recent Scottish trial looked at the effectiveness of a single dose of the Pfizer or AstraZeneca vaccines in preventing hospital admissions. As they noted, "There is an urgent need to study the 'real-world' effects of these vaccines." They conducted a prospective study using their Early Pandemic Evaluation and Enhanced Surveillance of COVID-19 database linking vaccinations to hospitalization among 5.4 million people, or 99 percent of the population. Their primary endpoint was hospital admission within 28 days of a positive PCR test for COVID-19.

Between December 8, 2020, and February 15, 2021, more than 1.1 million people (35 percent) had received at least one jab of a vaccine. Rapid uptake (production of antibodies to COVID-19) was seen among those 80 years or older. This group also had higher uptake from the AstraZeneca vaccine. Those under 65 had higher uptake from the Pfizer vaccine.

Vaccine effectiveness with just a single dose increased over time, peaking at day 28 to 34 post-vaccination for both vaccines. While the Pfizer vaccine was associated with an 85 percent reduction in hospital admissions for COVID-19, there was a 94 percent reduction in admissions for those who received the AstraZeneca vaccine. Statistically, both vaccines were equally effective. The EMA has reviewed the data and has noted that both vaccines offer similar protection. Still, prospective phase four trials remain a critical factor in appraising these vaccines on a global scale.

Dr. Soumya Swaminathan, chief scientist at WHO, commenting on recent modeling studies on the AstraZeneca vaccine, said, "There was data from the clinical trials which suggested that the longer the interval, at least up to 12 weeks, the better the immune response and the better the efficacy of the vaccine. So, there is also modeling done to show if you have a limited number of vaccine doses, and you want to protect the population, particularly the high-risk groups, the older groups, and so on, countries like the UK have taken the approach of vaccinating more people with available vaccines and giving the second dose at a time around 12 weeks. The SAGE group that advises the WHO recommended a gap of eight to 12 weeks between the first and second dose of the AstraZeneca vaccine. And this was based on an analysis of the data, both from the immunogenicity data and efficacy data. And we are getting more data from the actual rollout of the vaccines in countries which have opted to use this delayed approach showing that the first dose is providing significant protection against hospitalization and disease. So, it seems like a good strategy to protect more people more quickly. But a second dose must be given."

Vaccines and variants

An additional and perhaps critically important issue is how well the six major vaccines perform against variants of COVID-19 that have emerged because of the herd immunity policy adopted by the major imperialist powers, which has allowed the virus ample time and space to mutate into different versions, threatening to adapt in ways that would undermine the effectiveness of the vaccines.

There is some hopeful evidence emerging that people with prior infections or vaccinations may develop a robust cellular immunity to the new variants. A recent study released in preprint form from La Jolla, California, on March 1, found that T-cell responses from patients vaccinated with the mRNA vaccines or previously infected with the wild-type variants continued to have a robust response against the CAL.20C, B.1.1.7, P.1, and B.1.351 variants.

The authors wrote, "The data provide some positive news in light of justified concern over the impact of SARS-CoV-2 variants of concerns on efforts to control and eliminate the present pandemic. While it is not anticipated that circulatory memory T cells would be effective in preventing SARS-CoV-2 infections, it is plausible that they can reduce COVID-19 severity."

However, current developments with the continuing surge in Brazil with the P.1 variant should be a dire warning of the catastrophic dangers of the half-hearted measures and rhetorical responses by many governments to the pandemic.

Brazil is in the throes of a catastrophic surge that has brought the entire country's health system into a state of collapse, and daily death tolls are exceeding 3,000. Recent evidence has emerged that suggests that the P.1 variant's transmissibility is far higher than the B.1.1.7 at 2 to 2.5 times higher than the wild type. It is now also known to cause reinfection in 25 to 63 percent of people with prior infections with the coronavirus. The spillover into countries like Chile and Uruguay pose tremendous global health risks.

Studies show that the variants like those from South Africa and Brazil can evade the protective immunity elicited by previous infections. It has also raised concerns that the current vaccines may not be as effective. Data on the effectiveness of the current vaccines against these variants are lacking, and sorely needed.

These more transmissible variants have evolved under positive selection pressures that coincided with the winter surges. It appears that the Receptor Binding Domain of the spike protein is designed to allow for evolutionary convergence of different SARS-CoV-2 viruses mutating along similar adaptive lines, conferring a survival advantage over previous lineages. With these new strains of the SARS-CoV-2 becoming dominant across several regions across the globe, lifting restrictions while the vaccination campaigns are underway is a recipe for disaster.

Vaccines and the poor countries

A major concern, both from the standpoint of epidemiology and of social justice, is the inability of billions of people in the poor countries to gain access to or even to afford purchase of the life-saving vaccines that have been developed so rapidly in the United States, Europe, Russia and China. The conflict over the AstraZeneca vaccine has disrupted efforts to distribute the vaccines throughout Latin America, Africa and Asia.

Speaking of the international COVAX facility, created to provide no-cost coronavirus vaccines to the poorest countries, Director General Tedros Adhanom Ghebreyesus of the World Health Organization said

March 26, “COVAX is ready to deliver, but we can’t deliver vaccines we don’t have. As you know, bilateral deals, export bans, vaccine nationalism, and vaccine diplomacy have caused distortions in the market, with gross inequities in supply and demand. Increased demand for vaccines has led to delays in securing tens of millions of doses that COVAX was counting on.”

Aggravating matters most recently, Indian officials announced they had suspended exports of the AstraZeneca COVID-19 vaccine, potentially for several weeks, to redirect them to their own population, as coronavirus cases were rising explosively. The Serum Institute was providing the lion’s share of the vaccine to the COVAX facility and the rest of the world. This will only further exacerbate the limited supplies that exist and lead to more entrenched trade restrictions and bottlenecking of critical materials. To place the AstraZeneca vaccine in this critical context it should be noted that it has been given conditional marketing or emergency-use authorization in more than 70 countries, according to the *Guardian*, which are eagerly waiting their turn.

Whether the country is industrialized or underdeveloped, vaccines alone are not sufficient to fight the pandemic. The central question is the prevention and rolling back of the infection, both to save lives and to prevent COVID-19 from mutating any further and developing new and more terrible features.

Dr. Katherine O’Brien, Director of Immunizations, Vaccines, and Biologics at the World Health Organization, noted at a March 26 press conference, “As everybody knows, the evidence on the vaccines is really clear about the prevention of disease, certainly the prevention of severe disease and death for these vaccines. But the part of the evidence that is still rolling in is the degree to which they also protect against getting infected. Clearly, to get disease you have to get infected, but just because you get infected doesn’t mean you get disease. But it does mean you can transmit to somebody else … as vaccines are rolling out, there are many people in the community who are not vaccinated and not protected against disease.”

She added, “Continuation of the measures to avoid transmission even if you are not symptomatic is so incredibly important as we are rolling out vaccines and that increase in immunity in the population is continuing. We also have the variants of concern (VOC) and we don’t have information that is firm and clear about the degree to which each of these vaccines against each VOC may have some reduction or change in the ability they have to protect against infection or disease … this is the time when we should do everything possible to keep transmission low because it is that low transmission that will also impede and avoid the emergence of other variants.”

Conclusion

The ruling class sees vaccines as a mechanism to check the explosive social situation that exists. The working class should accept all the vaccines because they are life-saving. But they should understand that it isn’t being done because the ruling class cares an iota for them.

Precisely in this regard, such myopic strategies are exacerbating the population’s reluctance to accept these vaccines, while creating dangerous conditions such as school reopening and relaxing mitigation efforts, which are selecting for newer, more virulent mutations of the SARS-CoV-2 virus. Even though just one year has passed, the coronavirus still has significant energy to wreak havoc on communities worldwide.

At the World Health Organization’s virtual COVID-19 press conference on March 1, 2021, Director-General Ghebreyesus said, “It is regrettable that some countries continue to prioritize younger and healthier adults in their own populations ahead of health workers and older people elsewhere. Countries are not in a race with each other. This is a common race against the virus. We are not asking countries to put their own people at risk. We are asking all countries to be part of a global effort to suppress the virus everywhere. … We urge all governments and individuals to remember that vaccines alone will not keep you safe.”

The contrast between the director-general’s comments and the current strategy of vaccine nationalism is stark. An international plan for vaccine deployment should prioritize frontline health workers and the elderly and most vulnerable in all countries.

Evidence is emerging that the vaccines appear to limit onward transmission and prove effective in preventing severe disease and hospitalization. The first and most crucial phase in an international response to the COVID-19 pandemic is minimizing death and suffering to the greatest extent possible.

The implication behind this is simple; the intellectual property held by these giant pharmaceutical companies must be made publicly available to all nations. In turn, every country that can manufacture the vaccine or produce the necessary ingredients for their production, including supplemental materials such as syringes, vials, etc., must work in concert to mass-produce and deliver these life-saving treatments where they are required.

Simultaneously, all regions must initiate a mass vaccination program while working closely with their public health officials and health systems to ensure these measures are carried out safely and efficiently. This means that the virus must be suppressed to the greatest extent possible while a rational, systematic approach to vaccine delivery and administration is established. Such an initiative can only come from the working class and its seizure of power on the basis of an international socialist program.