VACCINE ACCESS TEST

Global Summary: November 2020

Background

The world is racing to find safe and effective vaccines against COVID-19. And when we do, these vaccines must be made available to everyone who needs them most, regardless of nationality or wealth. Because a fair global distribution of COVID-19 vaccines will end the pandemic faster for every country, save lives and help economies recover. So it's important to ask whether countries actions move us closer to, or further from, global access to COVID-19 vaccines ONE's Vaccine Access Test provides a framework to answer this question based on the following metrics:

- **Access to COVID-19 Tools Accelerator (ACT-A):** Providing financial support to the ACT-A, the only mechanism that is positioned to deliver a coordinated global response, at scale and at speed.
- **Multilateral Leadership:** Working with other countries, companies, and institutions to advance fair and efficient global access to vaccines and therapeutic treatments.
- **Policies:** Instituting and promoting policies to ensure COVID-19 vaccines are accessible to all on a global scale.
- **Deals**: Every deal to secure promising COVID-19 vaccine candidates is scored individually based on a set of metrics for how well it advances global access to vaccines. When countries and companies complete new deals, these are scored, with their average deal score then added to their final score.

ONE has scored G20 countries and pharmaceutical companies that have completed deals for promising vaccine candidates. See summary scores in Figure 1 below and visit ONE.org/VaccineAccessTest for detailed scorecards.

What We're Seeing

Good news about highly effective COVID-19 vaccine candidates could change the game on access. This month, Pfizer/BioNTech, Moderna, and AstraZeneca announced that their COVID-19 vaccine candidates are proving highly effective in clinical trials. This is very good news for science and humanity. These vaccines could come to market for provisional use in some places by the end of 2020, which is shifting the discussion from "if" to "when" we could see the end to the COVID-19 pandemic.

But the pandemic won't end with a vaccine. It ends when everyone has access to it, starting with the most vulnerable wherever they live. And so far, there are some mixed signals when it comes to equitable access. While AstraZeneca holds the top spot in the Vaccine Access Test, Pfizer, BioNTech and Moderna score in the bottom third due in part to their lack of engagement with the ACT-A and COVAX, lack of commitment to non-profit pricing, and their bilateral deals that do not promote equity. Promisingly, Pfizer and Moderna are in talks with COVAX — but with a number of bilateral deals already signed, it may be challenging to ensure initial doses are not directed to rich countries first.

Despite these warning signs there are a number of factors that could swing momentum toward better access depending on the actions of key players. Here are four areas we are watching:

1. **Supply**: Having three effective vaccines means more overall supply to go around. Between Moderna, Pfizer/BioNTech, and AstraZeneca alone, we can expect 4.8 - 5.3 billion doses of highly effective vaccines to come to market next year. This could vaccinate up to 2.6 billion people with a two dose regimen by the end of 2021. This is more than enough to vaccinate every health care worker and person over the age of 60 worldwide. But based on deals made to date, just five countries (Canada, US, EC, UK, and Japan) have already secured 1.82 billion of these doses with the option to buy an additional 1 billion doses, leaving the

rest of the world with -- at best -- two-thirds of initial supply to divvy up depending on how these five countries exercise their options. Promisingly, AstraZeneca's vaccine can be manufactured in mass quantities relatively easily, and both the Pfizer/BioNTech and Moderna vaccines target the "spike protein" which indicates that other vaccine candidates using the same mechanism — like that from Novovax and Sanofi/GSK — may also be effective,further increasing the supply.

2. **Suitability**: Not all vaccines are suitable for all settings. For example, Pfizer/BioNTech's vaccine must be stored at -70 degrees Celsius (-94 F) — equivalent to an Antarctic winter — making this vaccine unsuitable for settings without reliable electricity or specialized refrigeration. Further, Pfizer/BioNTech, Moderna, and AstraZeneca's vaccines all require two doses, which can be challenging in areas where access to healthcare is limited or requires travel (Johnson & Johnson's vaccine is the only vaccine in advanced trials that would only require one dose). This variation in vaccines is typical and highlights why it is so important to have a diversity of products come to market. The key will be getting vaccine doses to the settings where they are most suitable to ensure people have access no matter where they live.

3. **Price**: Moderna — which has received nearly $1 billion in public funding from the US government to support research and development of its vaccine — said it would price its vaccine at around $50 per patient for some customers. While the company has said it is in discussion for volume agreements that would lower the price, these figures are significantly higher than the cost of other vaccines. The Pfizer-BioNTech vaccine is reportedly priced at about $39 per patient, the AstraZeneca-Oxford vaccine is priced at up to $8 per patient, and Johnson & Johnson has priced their vaccine at $10 per patient. The COVAX Facility is set up to subsidize rollouts of coronavirus vaccines to low-income countries but, unless more companies commit to non-profit pricing like AstraZeneca and Johnson & Johnson, it may prove too costly for many.

4. **IP**: Despite the impressive efficacy of novel mRNA vaccines, they may face more limited production and higher prices due to intellectual property rights. While these types of vaccines are easier and faster to manufacture, the platforms are created with many layers of ground-breaking, patented technologies, such as platforms to deliver messenger RNA drugs into cells, which could make these vaccines costly to replicate. While Moderna did announce that it will not enforce COVID-19 related patents against those making their vaccine for the duration of the pandemic, their vaccine was created with other company's patents that are not subject to this commitment. Over the summer, Moderna lost a legal challenge to invalidate patents owned by Arbutus for its platform to deliver messenger RNA drugs into cells, which means manufacture of Moderna's vaccine will be subject to royalties from a sub-licensing agreement.

Why Vaccine Access Matters

Billions in public funding is being spent to speed the discovery and delivery of a COVID-19 vaccine. The reason governments are making these massive investments is simple: they have a responsibility to protect the lives of their citizens and enable their economy to open up. While it may sound counterintuitive, research shows that the fastest way to achieve that outcome is to ensure that the most vulnerable everywhere get access to the vaccine first.

A recent study from Northeastern University's MOBS Lab shows there could be twice as many COVID-19 deaths if rich countries monopolize the first 2 billion doses instead of making sure they are distributed globally. This is because even with an oversupply of vaccines in wealthy countries, not everybody will choose to be vaccinated and no vaccine will be 100 percent effective leaving large pockets of the population vulnerable.

Further, recent research from RAND suggests that prolonged pandemic caused by unequal vaccine distribution would cost the world economy $1.2 trillion per year if only the countries that are currently actively developing a vaccine are inoculated. In the event that the lowest-income countries are initially excluded from accessing a COVID-19 vaccine, it has been estimated that the global economy would still lose approximately $153bn a year, or $13bn a month. The International Monetary Fund (IMF) has stated that the world economy could recover faster and $9 trillion could be added to global income by 2025 if countries cooperate on a COVID-19 vaccine.

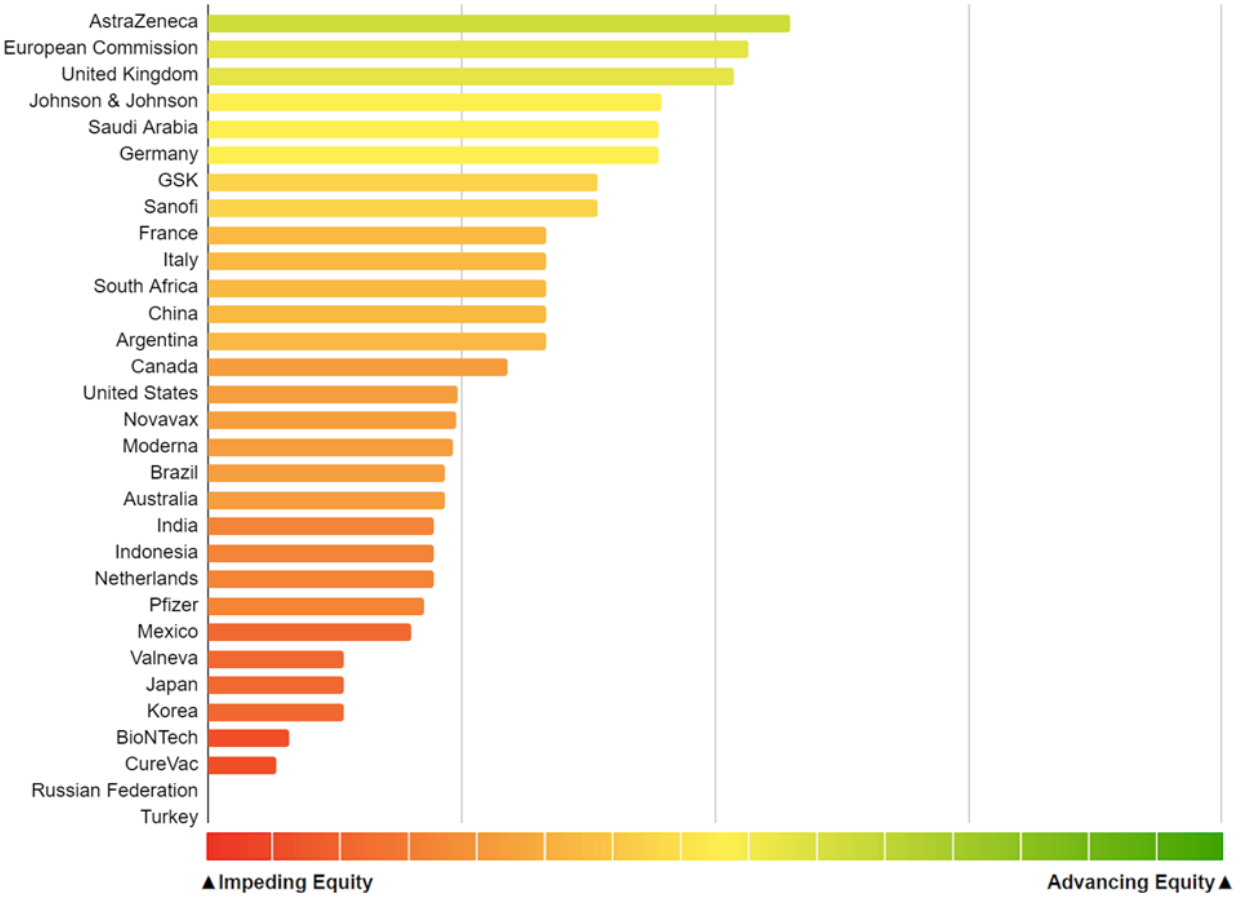
In short: hoarding vaccines in wealthy countries will slow the recovery for everyone, everywhere.

What is Next

The Vaccine Access Test is being updated monthly to gauge progress and glean lessons learned. Over the next month, both countries and pharmaceutical companies should continue to take steps to improve access including:

- Identify mechanisms that would allow for the quick exchange or buy-back of excess vaccine supply to enable timely, safe, and effective redistribution to other countries based on need. The World Health Organization and COVAX could play a leading role in designing and facilitating these transfers.
- Fully fund the Access to COVID-19 Tools Accelerator (ACT-A), and particularly the $5 billion needed immediately to fully fund the COVAX Advanced Market Commitment.
- Share vaccine technologies and know-how in alignment with WHO's Solidarity Call to Action to overcome price and supply barriers, especially for those vaccines developed with taxpayer money.
- Advance policies to speed up the production & distribution of successful vaccines, including by expanding access to relevant intellectual property and facilitating technology transfers needed to scale up manufacturing capacity. Given the limited engagement with the WHO's C-TAP voluntary patent pool, governments should support theTRIPS waiver proposed by South Africa and India at the World Trade Organization to provide countries with additional options to maximize production capacity.
- Increase transparency on elements of all deals, including with COVAX, that have the potential to improve access, such as the timeline for delivery, pricing structure, and provisions to allow for exports. For example, the EU includes non-exclusivity provisions in all of its procurement and R&D investment contracts, ensuring that vaccines produced in EU territory can be exported without restriction, and guaranteeing that results of clinical trials and increased production capacity are to the benefit of all.

Figure 1: Vaccine Access Test Scores, November 2020



How Scores have Changed this Month

- **CureVac,** newcomer to the Test, entered with a score of 1 out of 15.
- **Canada** surpassed the US, and five other countries and companies, after gaining a point for publishing preliminary national guidelines on priority distribution of an eventual vaccine.
- **The European Commission** increased its score by a third of a point due to two new deals - one with Pfizer/BioNTech and another with Moderna. This small increase was enough to put it ahead of the UK on the Test, earning the number-two spot behind AstraZeneca.
- **The UK** got a small bump to its score due to alignment with global allocation guidelines on their most recent deal with Moderna.
- **Australia** gained a point for releasing preliminary guidance on domestic allocation from the Australian Technical Advisory Group on Immunisation, which prioritizes those at increased risk of exposure.
- **Moderna's** score jumped by 2 points thanks to the company's decision not to enforce COVID-19 related patents against those making vaccines during the pandemic. Additionally, the company signaled it is willing to license its IP for COVID-19 vaccines to others for the post pandemic period upon request.
- **GSK** and **Sanofi** each received a 1 point increase for announcing they will apply tiered pricing for COVAX. This has pushed both companies into the top third of the Vaccine Access Test.
- **Pfizer** and **BioNTech** each received a small increase of 0.2 on their average deal scores thanks to a deal with the European Commission that provides the option to request more doses and phases delivery.
- **Three new deals** were scored since the last update including between European Commission and Pfizer-BioNTech, European Commission and CureVac, and the United Kingdom and Moderna.