

THE ALCIVAX

Alcimed evaluates why vaccine efforts are stalling and whether this is just our previous mistakes coming home to roost.

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COVID Vaccines: Current & Future

"It is better to take many small steps in the right direction than to make a great leap forward only to stumble back." - Ancient Chinese Proverb. To the frustration of many COVID vaccination rates globally have stalled in many places causing widespread frustration and prolonging the pandemic. India, for example needs 300 million doses of vaccine just to complete their first wave targeting the frontline workers and the elderly, which will take nearly another 3 months to complete. All of India's vaccine supply coming from the Serum Institute of India which is also the main global supplier, raising further alarm bells that global vaccine supply may be sacrificed to India's domestic demands.

To allay those concerns, the Quad Vaccine Partnership brings together the US, Japan, Australia with promises of expanding their manufacturing capabilities to contribute to the global supply. Working with the WHO & COVAX, the Quad partnership will contribute to vaccine manufacturing, last mile vaccination efforts, cold chain needs, and financial resources for vaccine purchase.



Vaccination For Everyone

So far, pregnant front line workers have been able to chose whether or not they would like to receive a COVID vaccination, although safety trials on pregnant women were not previously conducted. A US health care worker vaccinated at 36 weeks with a Moderna vaccine has now given birth to a healthy baby girl with COVID antibodies. This is the first real world evidence to suggest that maternal immunization strategies may work both for COVID and for mRNA vaccine platforms in general.

On the flip side, reinfection studies from Demark suggests that the majority of reinfection risk of COVID-19 is in the 65+ population. In the 65+ population, there is only 47% protection rate against reinfection, compared to an 80% protection rate in lower age groups, making the general risk of reinfection 7%. This reaffirms that widespread vaccination is the best response as the vaccine-induced immune response is indeed stronger than natural immunity.



AstraZeneca: Safety vs. Time



Image Credit: Shadi Ghanim

Griffin the EMA and WHO, currently still recommend continued usage of the vaccine while safety reports are being investigated.

20 European countries paused distribution of the AstraZeneca vaccine over concerns that the vaccine may cause widespread blood clots and internal bleeding. "The harm caused by depriving people of access to a vaccine will likely vastly outweigh even the worst case scenario if any link to the clotting disorders is eventually found," University of Leeds virologist Stephen



COVID-19: An Origin Story

The WHO has actively been investigating the origin of SARS-CoV-2. They know feel they have arrived at an answer. The team has isolated a bat infected with a virus that is 96% similar to SARS-CoV-2, introducing the future pandemic strain in a wildlife farm in Yunnan region in China, which were supplying the Huanan Seafood Wholesale Market in Wuhan where an early COVID-19 outbreak occurred.

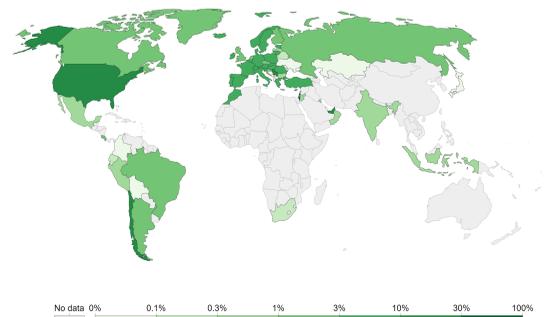


The COVID Vaccine Race In Graphs

Asia and Africa are still largely untouched by vaccine efforts.

Share of the population fully vaccinated against COVID-19, Mar 17, 2021

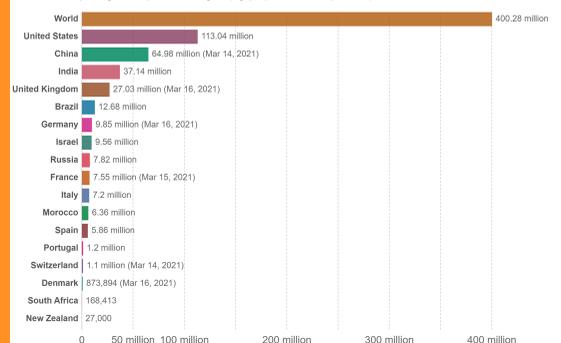
Share of the total population that have received all doses prescribed by the vaccination protocol. This data is only available for countries which report the breakdown of doses administered by first and second doses.



400M vaccines given since December, mostly in the US, India, the UK & China

COVID-19 vaccine doses administered, Mar 17, 2021

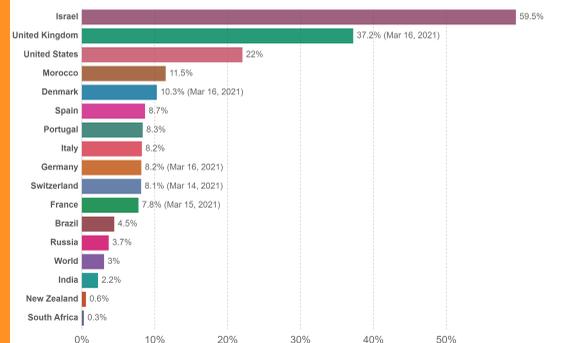
Total number of vaccination doses administered. This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).



Israel may indeed reach their claims of establishing population level immunity by summer at this rate.

Share of people who received at least one dose of COVID-19 vaccine, Mar 17, 2021

Share of the total population that received at least one vaccine dose. This may not equal the share that are fully vaccinated if the vaccine requires two doses.

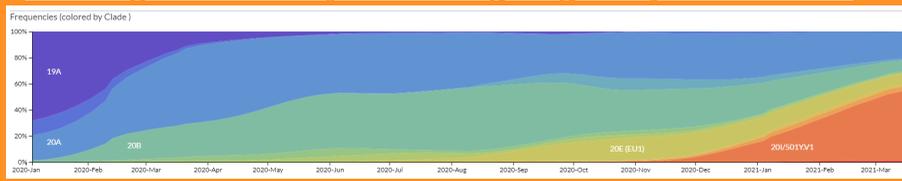


COVID Variants & the Third Wave

Delayed vaccination rollouts and a wider circulation of variants are likely contributors to the steady rise of COVID cases being seen all over Europe. Just when the weather was getting nice enough for people to really want to be outside, countries across Europe are rolling out new lockdowns to curb the rising case numbers. Italy, Germany, and France have all imposed new lockdowns in some portion of their countries, but the rise case numbers are occurring throughout the continent with Hungary, the Czech Republic, and Poland also strengthening the measures they already had in place.

The month long lockdown in Paris, is largely attributed to the COVID variant that had begun circulating in Britain and now accounts for more than 75% of the cases circulating in France. The lockdown is aimed to decrease on the intensive care wards that are currently full.

There is a second variant in France's Brittany region that increases the false negative rate for COVID tests. This means that the variant's mutations have the ability to evade detect through the nasal-swab PCR tests that have become standard practice. This is not the first variant to develop test evasion mutations, as a Finnish strain (Fin-796H) was also reported with this ability. The Brittany circulating variant does not seem to be more infectious or cause higher rates of mortality, nor does it share any of the common mutations found in the variants circulating in South Africa or Brazil. The Brittany variant's closest relative is the Clade C20 variants currently circulating in California and predicted to be at least 1/5 of the global circulating strains by April. European diagnostics company Novacyt is already working on adjust current diagnostics to account for the new variant. [The Nextstrain graph below depicts the transition changing in circulating variants in Europe from the beginning of the pandemic to now.](#)

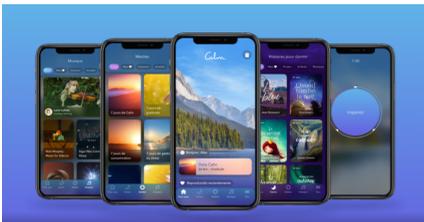


Lasting Digital Shifts



Some of the changes to digital health are here to stay post pandemic. These 4 articles give insights into what is expected to last.

- [Digital health in the post-Covid era: what does the future hold for telemonitoring?](#)
- [Transforming the patient experience in healthcare: 3 examples of unicorn companies](#)
- [CES 2021 series - Let's discover the new connected medical devices for patients remotemonitoring](#)
- [CES 2021 series - Disinfection devices: should we expect a revolution in our lifestyles?](#)
- [CES 2021 series - Meet the 2021 fashion for masks: real progress or gadgets?](#)



Passports & Positives

So far, the rules about pre-flight COVID tests have been mixed with concerns about fraud, since the printed out test results could have been manipulated. To circumvent this [International Air Transport Association has launched the Travel Pass app](#), which allows passengers to go to a local testing center for their pre-flight COVID test and have the results be directly uploaded into their phone. The airline also has access to the system so they can check your results before you board.

The Travel Pass app also lets you upload your passport, itineraries, and passports in addition to the COVID test results, opening the door to vaccination passports for travel in the near future. While travel vaccination passports do raise some ethical concerns about inequity, especially for countries that are struggling in their vaccination efforts, More than a dozen airlines have already signed up to use the app.

Being able to get on the airplane doesn't magically make travel safe and easy. [More and more reports have come to light of people who have contracted COVID-19 while traveling](#) getting stranded in foreign hospital systems with no insurance or being required to move from the room they paid for to a government run quarantine facility or a make shift facility set up by the resort in question. For the near future, don't travel without travel health insurance and make sure you know what will happen to you if you get COVID while you are away.



All joking aside

The third wave of coronavirus infections has once again put a damper on your outdoor music festival plans. Both [Coachella and Stagecoach have announced a new round of postponements](#) this time to 2022, proving that 2021 is being no kinder to the music industry than 2020.

Even when you want to go back to live music, who will you go and see? [It might not be a band](#). They number of new bands forming has been steadily declining influenced by how expensive it is to form a band, the number of musical acts that come from social media/talent scouting reality shows, and the reality that record labels fine solo acts cheaper to handle. What the evidence for this? The number of new bands has been steadily declining, bands are not often in the top 20 for streaming content, and less and less bands are headlining big music festivals such as Coachella.

Music is helping in the fight against COVID, as some artists create [ticket lotteries for in person shows for anyone who's fully vaccinated](#) and [Broadway musicals get co-opted for vaccine drive promotion](#).

AstraZeneca vaccine troubles: A cartoon guide

[Clogged by Adverse Events](#)

[AZ gets another safety review](#)

[Serious Vaccine Hesitancy](#)

[mRNA's new advantage](#)



Image Credit: BRANDAN REYNOLDS

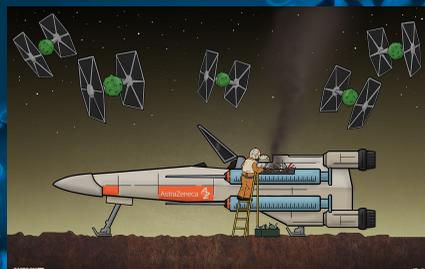


Image Credit: Royaaards



Image Credit: Chappatte



Image Credit: MWCartoons