

THE ALCIVAX

Alcimed analyzes the timeline and logistics for COVID-19 vaccine distribution as the world looks forward to a 2021 vaccine campaign.

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APPROVED!

"A man cannot be comfortable without his own approval." - Mark Twain. Over the next few weeks and months this will apply not just to a man's self esteem but his freedom of movement in a world slowly exiting the pandemic crisis mode as the Pfizer/BioNTech vaccine achieves approval in Britain.



COVID-19 Vaccine Approval by Country/Region



UK | [Approved Pfizer vaccine](#) for EUA on December 2nd



Canada | [Approved Pfizer vaccine](#) on December 9th



USA | [FDA approved Pfizer vaccine](#) on December 11th



EU | Pfizer formal review scheduled December 29th
Moderna formal review scheduled January 12th



COVID-19 Vaccine Campaigns



UK | **Campaign Started:** Target 4M by end of the first month, includes healthcare workers and the >80 y.o.



Canada | **Campaign Started:** Target 38M by year end, includes healthcare workers, >80 y.o., long term care residents and indigenous people



USA | **Campaign Started:** Target 6.4 M doses shipped in the first wave, includes healthcare workers and hospitals only



EU | **Campaign to Begin January 2021:** Targets and populations determined individually by member states

In the rest of the world, China has issued EUAs for some of its vaccines and the UAE is embracing China's Sinopharm candidate. China is also targeting much of South East Asia for vaccine export. In Russia, the 2021 domestic launch of the Sputnik V vaccine has been accelerated as case loads become overwhelming. In LATAM, Mexico is set to start vaccinations in December, followed quickly by Brazil, Argentina, and others. Africa is committed to COVAX and may not see vaccine roll outs until the middle of next year.

Cyber Security Concerns

Clinical trial data from [Pfizer and BioNTech](#) has [been attacked by hackers while the data was being stored by the EMA](#). While the EMA has assured Pfizer and BioNTech that the cyber attack will not impact the approval decision making process, the EMA has not yet released any specifics as to what pieces of the data were accessed. Whether Moderna's data, also under review by the EMA at present, was included in the attack is also currently unknown.

It is undeniable how valuable the stored information would be. Regulatory approval data is highly confidential about the make-up of the vaccine, third parties that contribute to the production of the vaccine, and trial participant information. [Previous reports have shown that North Korea, South Korea, Iran, Vietnam, China and Russia hackers have attempted to gain access to important vaccine information.](#) Gilead, Johnson & Johnson, Novavax, Moderna, and the WHO have previously been targeted.

There are also many security weak points along the vaccine distribution chain. Hackers have already attacked the necessary cold storage chain needed for shipping vaccine, which could ruin massive doses of vaccine if it causes the freezers to fail.

Electronic medical records are also vulnerable to attack and could disrupt the necessary record keeping for following up with the right patients in need of a second dose.

In terms of theft, distribution plans are particularly sensitive data, and ransomware could bring some health care systems to unfortunate halts.

But artificial intelligence is also playing a positive role in vaccine distribution. AI has been employed to [warn vaccine developers that vaccine effectiveness may not uniform across all groups](#). AI has also been instrumental in tracking disease cases, spread, mutation develop and now with developing robust vaccine roll out plans. The UK is even rolling out an AI system for tracking adverse events to collect long terms safety data for the COVID-19 vaccines distributed.

COVID-19 Vaccine Side Effects

One of the largest public concerns about the soon to be distributed Pfizer vaccine is safety. As vaccine distribution kicks off in the general public, increased scrutiny around the vaccines side effects is to be expected. Currently, it is clearly understood that the Pfizer vaccine is safe and effective, but trial recipients do report more intense side effects with the second dose, which can include fever, chills, muscle pain which usually dissipate quickly after inoculation. These are milder than the side effect reported of other vaccines such as Shingrix, the Zoster vaccine.

With wide release in the general public, additional reactions have been reported by the UK NHS that in people with a history of severe allergic reactions who get the vaccine. The real cause of the reactions is still being investigated, but it should not get in the way of the current vaccination efforts in the UK.

More important to watch, are the reported issues with Pfizer manufacturing. Pfizer will only be able to ship half (50M of the promised 100 M) doses in 2020, but still claims to be on target to catch up quickly and still produce the billion doses promised for 2021. In terms of what caused the delay, Pfizer had trouble scaling up the production, with raw material batches not being up to the appropriate quality standards. These supply chain hiccups should not be long term problems.



Real and Present Dangers

Nobody really needs a reminder that COVID-19 is a dangerous disease, but new studies have reported that 20% of COVID patient are diagnosed with a psychiatric disorder within 90 days. Anxiety, depression, and insomnia are the most common mental health issues that result from COVID infection. Higher risks of dementia have also been observed. These are largely first time diagnoses of mental illness and reaffirm the direct link between COVID and the brain.

This has also stimulated a lot of interest in the diagnosis and treatment of mental health issues. Thus, the pandemic has generated a lot of interest in the mental health startup scene, which is employing telemedicine, and other elements of digital health to fix what many see as a broken system.



The Kids are not alright



Normally, when someone is talking about young adults and COVID-19, the news is not good. Stories of wild parties fueling spread have been read all over the globe, since COVID-19 related lockdowns began. The Art with me Festival in Tulum, Mexico in November, mainly seen as a replacement for the canceled Burning Man this year, is no exception, spiking cases large cases numbers in New York City, Los Angeles, and Miami. Even in countries like Korea where virus control measured have been largely followed, scores of K-pop idols have caught COVID-19, many from continuing to perform or party in the middle of the pandemic.

But it is also important to raise concern and not just blame as young adults are secretly paying a high price trying to survive the pandemic. Here are a few hints:

- A National Union of Students survey in the UK revealed that more than 50% of University students report deteriorating mental health during the pandemic. But only 29% of those students have sought treatment.
- The news is not any better across the pond, as unemployment in the 16 to 24 year old age group as increased from 8.4% to over 24% in 2020, which is more than twice the rate of adults over the age of 25.
- More than half of Americans between 18 and 29 now are living with their parents, and more than 25% of 18-24 year olds are currently experiencing suicidal thoughts.



HEALTHCARE & AERONAUTICS



Faced with this crisis and its impacts (fear of flying again, importance of health considerations to travel again, investments required to take a new environmental turn, economic impacts on the entire supply chain ...), the aeronautics industry

will have to reinvent itself because there will definitely be a "pre-Covid-19 world" and a "post-Covid-19 world".

Read Alcimed's newest position paper on the reinvention of the aeronautics industry in light of the pandemic pressure put on the industry.

[CLICK HERE TO DOWNLOAD!](#)

Key Success Factors for COVID-19 Vaccine Campaigns in the EU, a new position paper from the editor of the Alcivax will be released on Tuesday December, 15th.



BE ON THE LOOK OUT!



All Joking Aside



South African artist Daniel Popper released his newest statue, Thrive in Ft. Lauderdale Florida, which will stand as a permanent installment and a fitting tribute to the end of a long and terrible year.

Image Credit: [Daniel Popper](#)

As we readjust to more lock downs, it's not too late to use all that indoor time to become an Olympic athlete. The Olympic committee announced this week that breakdancing will be getting its debut at the Paris Olympic Games in 2024. Skateboarding, sport climbing, and surfing will make their own debuts at the postponed Tokyo games in 2021.

The second person to get a COVID-19 vaccine in Britain this week was none other than William Shakespeare a mere 20 miles from Stratford-Upon-Avon birthplace of the only slightly more famous William.



Image Credit: [Reuters](#)

Cartoons from around the world on the eve of COVID-19 vaccine approval

US: Still at War

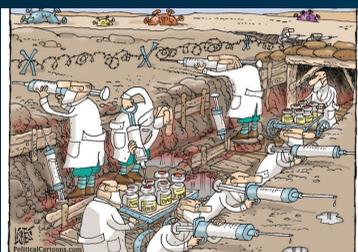


Image Credit: [Nikola Listes](#)

UK: To Jab or Not to Jab



Image Credit: [Paul Thomas](#)

France: Never trust a royal



Image Credit: [Chappelle](#)

India: Long way to go



Image Credit: [Kevin Siers](#)