



## The Fastest Path Out of the Pandemic

(Sources: An article by SETH BERKLEY, RICHARD HATCHETT, and SOUMYA SWAMINATHAN for Project Syndicate and an article by GAVI, the Vaccine Alliance)

Every day, the COVID-19 pandemic costs the world thousands more lives and billions more dollars. The most efficient way to bring this crisis to an end – possibly as early as next year – is with a safe and effective vaccine, manufactured in large quantities and distributed globally.

To avoid any unnecessary delays, governments need to take time to prepare the ground for rapid production and broad, equitable deployment while researchers work to develop the right formula. This is the principle on which the COVID-19 Vaccine Global Access (COVAX) Facility is based.

Created by Gavi, the Vaccine Alliance, the World Health Organization, and the Coalition for Epidemic Preparedness Innovations (CEPI), this innovative platform aims to distribute at least two billion doses of COVID-19 vaccine by the end of 2021. That many doses – which will be divided equitably among participating countries, regardless of their ability to pay – would cover some 20% of populations in participating countries. It would thus be sufficient to protect high-risk and vulnerable people and frontline health-care workers worldwide. (Additional doses would also be stockpiled, so that any future outbreak is tackled before it escalates out of control.)

Currently over 160 vaccine candidates are in preclinical or clinical development. There is no way to know which will pass clinical trials and be licensed as failure rates of vaccines in early development are high. The point is to ensure that, by the time an effective vaccine is ready, a competent framework for manufacturing and deployment is in place. To that end, governments must invest in COVAX as soon as possible.

The problem is that governments may feel compelled to shun cooperation, in favor of negotiating directly with vaccine manufacturers to claim the doses they need. While governments are duty-bound to protect their own citizens above all, this national approach carries serious risks, beginning with the possibility that a government may back the wrong vaccines. Even if a government secures enough doses of an effective vaccine for its own population, some of its people – such as those who are immunocompromised and may not be able to be vaccinated – would be left exposed if other countries are unable to obtain enough vaccine. This also sheds light on the moral imperative of ensuring that people are not cut off from lifesaving drugs.

By collaborating with global health agencies through COVAX, governments can ensure that everyone has equal access to COVID-19 vaccines. For countries that have secured bilateral deals with manufacturers, COVAX amounts to an insurance policy, in case they bet on the wrong candidates. For countries that have not secured any deals, COVAX is the only way to avoid being pushed to the back of the line. COVAX guarantees that the benefits and risks of vaccine development are broadly shared. With the largest portfolio of vaccine candidates anywhere in the world, it gives participating governments the best chance of receiving a safe and effective vaccine as soon as it becomes available. When pharmaceutical companies are shouldering the lion's share of the financial risks, they will invest in scaling up production only after their vaccine has completed clinical trials and been approved.

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## Around the Globe...

- ◆ Pharmaceutical giant **GlaxoSmithKline** (GSK) is investing US\$163 million in German biotech **CureVac**. GSK will have roughly a 10% stake, with US\$130 million in cash to initiate R&D collaboration. The remainder will reserve manufacturing capacity currently under construction. In so doing, GSK is betting on mRNA as the core technology behind future vaccines and monoclonal antibodies against infectious diseases.

- ◆ Global technology company **TransferWise** and an anonymous donor made significant financial commitments to Gavi's Advance Market Commitment for COVID-19 Vaccines (Gavi COVAX AMC). The commitments were made at a high-level summit hosted by the European Commission and the non-profit Global Citizen to mobilize additional funding to develop and universally deploy coronavirus vaccines, tests, and treatments.

- ◆ Lower-income countries across the world will now be able to access lifesaving pneumococcal conjugate vaccines, which protect against the leading cause of pneumonia, for US\$2 per dose, thanks to a

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## UCL School of Pharmacy Students Highlight Covid-19 Fake Meds

(Source: An article by Sofia Khan, Sharleen Yajnik, Nazifa Ibrahim, and Syed Haque of the University College of London's School of Pharmacy)

A substandard medicine has been defined by The WHO as “an authorized medical product that does not meet quality standards or specification, produced by a known manufacturer with no intent to fool or defraud the patient”. Essentially the medical products are not fit for the purpose they were designed for. Fake medicines are falsified medicinal products that are made using improper or harmful ingredients. They may not have the right amount of active ingredients or have a wrong ingredient altogether (e.g. chalk or potato starch). It is often difficult to distinguish real medicines from Substandard and Falsified (SF) ones as they can have similar packaging and appear to be genuine. SF medicines do not treat the patients' medical conditions and may be harmful or fatal to the patient.

We are currently living through a public health crisis of unprecedented proportions that has left many people insecure and vulnerable to exploitation by criminals selling falsified medical products. The WHO has cautioned that there has been increasing reports of fake medicines linked to coronavirus being sold around the world, especially in less developed areas. After unreliable claims that chloroquine and hydroxychloroquine can be used for treating COVID-19, there has been a global shortage and increased fake quantities of these malaria medicines. Thus, strain on supply chains and resulting chloroquine shortages has led to a spike in the price, incentivising criminals to manufacture and distribute fakes to unsuspecting customers via unlicensed pharmacies online. For example, in the Democratic Republic of Congo, Cameroon and Niger there have been large quantities of fake chloroquine in circulation.

This parallel pandemic of SF medicines has highlighted the fact that this is not just an issue for low-income countries. In fact, a rising number of fakes have also been discovered in developed countries. Criminals in

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Australia have been coercing the public to buy fake COVID-19 vaccines, while in Spain the Spanish Agency for Medication and Health Products released a warning about treating the virus with fake drugs obtained from illegal websites. A fake drug containing “silver solution” was circulating the U.S. market, claiming to kill the virus. It is important to remember that there are currently no official treatments or vaccines for COVID-19 and that any vendors selling COVID-19 cures are unapproved, intentionally falsified and could cause significant damage to the health and well-being of patients. Therefore, under no conditions should these “miracle coronavirus cures” be purchased by anyone. It is imperative current and future healthcare professionals speak up to educate the public on the dangers associated with fake medicines, especially at a time where medical products are in high demand. Effective regulatory supervision, robust authentication measures and policies supporting quality coupled with rigorous public education campaigns will help to fight fakes medicines.

Buying medication online has become common over the past decade, so it is imperative that patients understand how to purchase them safely. Online pharmacies, such as Pharmacy2U, help over 300,000 people across the U.K. with their NHS repeat prescriptions, give patients reminders when it is time to order their medication and have it delivered directly to their door. While there are upsides to purchasing medicines online, there are also significant downsides. 95% of websites claiming to sell medicines online are taking place illegally meaning that medicines sold could be falsified or substandard, threatening life of patients and the profession itself. Recently the MHRA investigated many scams and fake online pharmacies in the U.K. and the U.S. FDA is also starting to identify the sale and advertisement of fraudulent coronavirus products as a threat to public health. On March 9, 2020, FDA worked with the Federal Trade Commission to issue warning letters to over half a dozen companies involved in the sale of “products that fraudulently claim to prevent, treat or cure COVID-19”.

UCL FTF has been extremely active during the pandemic. Although the team has not been able to meet face-to-face, we bridged the gap through the use of social media! The team felt it was vital that informative and accurate news was available to the public regarding COVID-19 and the parallel pandemic of SF medicines. Following the rise of the Coronavirus pandemic, Fight the Fakes published an official statement outlining the spread of not only a pandemic but also an “infodemic”. (See <http://fightthefakes.org/resources/fight-the-fakes-official-statement-to-covid-19/>)

Along with regularly posting updates and news on Instagram, the UCL FTF team worked from home to put together informative videos on coronavirus symptoms and advice, the rise in substandard and falsified medicines and COVID-19 testing. Not long after, we had our first Instagram live event featuring two of our members, the chairperson of public health at IPSF, Hera Ali, and Brian Wong from the UCL Global Citizenship & UK Model WHO. The Instagram live event focused on the interrelation of the coronavirus pandemic with SF medicines.

Additionally, UCL FTF also collaborated with the International Pharmaceutical Students’ Federation on topics related to SF meds and Coronavirus, creating a student-friendly and accessible video to alert viewers to the circulation of falsified medicines and substandard healthcare products while sharing tips on how to buy medicines online safely. The second collaboration culminated in a webinar where our academic lead, Oksana Pyzik, and co-student lead, Maryam Jetha, were panelists tackling the topic of the rise of illicit online and offline sale of medical products and vital strategies to keep consumers and patients safe. After a series of successful events, UCL FTF will continue to collaborate and liaise with healthcare communities across the globe aimed to highlight the fight

against fake medicines and circumvent the current reality of SF meds. Our next event will be another Instagram live featuring Nelly Murugi, a young Kenyan student who unknowingly took falsified painkillers. Ms. Murugi is also our new Student Lead of FTF Kenyan Chapter! The event will include Dr. Sylvia Opanga; a consultant clinical pharmacist and senior lecturer who is working as part of the Covid-19 response task force in the pharmaceutical society of Kenya.

## Fastest Path (cont.)...

This approach may make business sense, but it does not make sense in the context of a rapidly moving global pandemic. COVAX employs a radically different approach. In addition to using “push” financing (direct investment in research, development, and manufacturing) it uses “pull” financing, in the form of advance purchase commitments for large numbers of doses upon licensure. This provides powerful incentives for the private sector to support urgent vaccine development. COVAX pools government resources to fund the most promising candidates even before clinical trials are completed so once approved, large quantities of vaccine doses will be ready to go.

Currently, WHO is working with a range of stakeholders, including member states and civil-society organizations, to develop and implement a mechanism for equitable and fair allocation of vaccine doses. COVAX will support only vaccine candidates that are developed in accordance with the highest possible safety standards. COVAX will establish a new benchmark for rapid, safe, and efficacious vaccine development and delivery.

As global GDP shrinks due to the coronavirus, poverty and hunger are rising sharply. The International Monetary Fund and the World Bank forecast a 5% contraction in 2020. With the world economy losing more than US\$10 billion each day, shortening the pandemic by even a few days would more than offset the cost of COVAX. Global collaboration has never been a better value proposition.

## Around the Globe (cont.)...

new supply agreement between **UNICEF**, Gavi’s procurement partner, and the **Serum Institute of India (SII)**. The new price represents a 43% reduction in cost.

- ◆ Japan’s supercomputer **Fugaku** (winner of the world’s fastest supercomputer and developed by the country’s national research institute) has been tasked with searching for the discovery of potential coronavirus drugs by identifying therapeutic molecules and modeling infections spread as well as socio-economic impact. Its nodes are being put to early experimental use ahead of its completion and fully fledged open use scheduled for fiscal 2021 (beginning in April.)

- ◆ South Africa’s growing COVID-19 epidemic should be an alert to the rest of the continent to strengthen disease surveillance, the **World Health Organization (WHO)** said. South Africa reported a surge of 13,373 new cases on Saturday, the fourth largest globally. Botswana, Kenya, Namibia, Zambia and Zimbabwe also reported significant increases in cases over the past week.

- ◆ The **United Nations Office on Drugs and Crime (UNODC)** released a new research brief highlighting a rise in the trafficking of substandard and falsified medical products due to the increased demand for medications and personal protective equipment (PPE) to address the COVID-19 pandemic. The rise in falsified and poor-quality PPE signals a significant shift in organized criminal group behavior directly attributable to the COVID-19 pandemic. Weak regulatory and legal frameworks to prevent the production and trade of substandard and falsified products and cyber security deficiencies are even more apparent during the crisis, UNODC emphasizes.

(Sources: *Endpoint News, Press Releases, Reuters, and Scrip*)