



## Storage Issues Threaten to Leave Up To 3 Billion People Without Access to COVID-19 Vaccines

(Source: An Article by Lori Hinnant and Sam Mednick for Associated Press)

The vaccine cold chain hurdle is just the latest disparity of the pandemic weighted against the poor, who more often live and work in crowded conditions that allow the virus to spread, have little access to medical oxygen that is vital to COVID-19 treatment, and whose health systems lack labs, supplies or technicians to carry out large-scale testing. Maintaining the cold chain for coronavirus vaccines will not be easy even in the richest of countries, especially when it comes to those that require ultracold temperatures of around -70°C (-94F).

Investment in infrastructure and cooling technology lags the high-speed leap that vaccine development has taken this year due to the virus. With the pandemic now in its eighth month, logistics experts warn that vast parts of the world lack the refrigeration to administer an effective vaccination program. This includes most of Central Asia, much of India and southeast Asia, Latin America except for the largest countries, and all but a tiny corner of Africa.

To uphold the cold chain in developing nations, international organizations have overseen the installation of tens of thousands of solar-powered vaccine refrigerators. Keeping vaccines at stable temperatures from the time they are made until they are given to patients also requires mobile refrigeration, reliable electricity, sound roads and, above all, advance planning. For poor countries, the best chance of receiving a coronavirus vaccine is through the Covax initiative, led by the World Health Organization and Gavi, The Vaccine Alliance. The goal of Covax is to place orders for multiple promising vaccine candidates and to allocate the successful ones equitably. The United Nations' children's agency, UNICEF, began laying the global distribution groundwork months ago, in Copenhagen. At the world's largest humanitarian aid warehouse, logistics staff are trying to foresee shortages by learning from the past, especially the spring chaos surrounding global shortages of masks and other protective gear that were commandeered off airport tarmacs or stolen and traded on the black market.

Currently, 42 coronavirus vaccine candidates are in clinical trials and another 151 are in pre-clinical evaluation, according to WHO. The ones most likely to end up in the Covax mix must be stored at 2 to 8° Celsius (26-46F). A Pfizer candidate is among the ones in advanced testing requiring storage at ultracold temperatures. The company, which has designed a special carrying case for its vaccine, has expressed interest in Covax and signed contracts with the United States, Europe and Japan. Medical freezers that go down to minus 70 degrees Celsius are rare even in U.S. and European hospitals. Many experts believe the West African countries that suffered through a 2014-16 Ebola outbreak may be the best positioned, because a vaccine against that virus also requires ultracold storage. Opportunities for vaccines to be lost expand the farther a vaccine travels. World logistics company DHL estimated that 15,000 cargo flights would be required to vaccinate the entire planet against COVID-19, stretching global capacity for aircraft and potentially supplies of materials such as dry ice.

Gavi and UNICEF worked before the pandemic to supply much of Africa and Asia with refrigeration for vaccines, outfitting 40,000 facilities

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## Around the Globe...

- ◆ A replenishment for **Gavi, The Vaccine Alliance** secured a record US\$8.8 billion in funding for 2021 to 2025 on June 4th, exceeding the target of at least US\$7.4 billion. A virtual event, hosted by the U.K., was attended by 52 countries, including the U.S. and China. Gavi is aiming to reach 300 million children with immunizations against diseases such as measles, polio, and diphtheria over the next five years but is also set to play a key role in the distribution of any vaccine for COVID-19 to low-income countries.

- ◆ The **Bill and Melinda Gates Foundation** has joined forces with 16 pharmaceutical companies to advance manufacturing and equitably distribute coronavirus vaccines. *Mark Suzman*, CEO of the Gates Foundation, announced that 16 CEOs signed a communique stating their "commitments to help ensure equitable & effective global allocation of #COVID19 interventions." The only way to eliminate the threat of COVID-19," Microsoft founder *Bill Gates* said, "is the ability to have the capacity to produce billions of vaccines, have the funding to pay for them and have the systems in place to deliver them everywhere."

- ◆ **Walmart** has partnered with **Zipline** to launch a first-of-its-kind drone delivery operation in the US. The new service will make on-demand deliveries of select health and wellness products with the

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## How COVID-19 Fuels Spike in Fake Meds

(Source: An article by Chukwuma Muananya for the Guardian)

Recent reports indicate that the ongoing Coronavirus disease (COVID-19) has led to scarcity and rise in prices of essential medicines, sanitizers, Personal Protective Equipment (PPEs) and medical products. Unconfirmed reports suggest that the situation has led to more people patronizing counterfeit and fake or substandard medicines – both to prevent and treat COVID-19.

The situation has raised lots of questions: What are the possible sources of fake and substandard drugs at times like this? What are the implications on efforts to contain COVID-19? What are the best ways to address the situation?

A consultant clinical pharmacist, public health specialist/health educator and National Chairman, Association of Hospital and Administrative Pharmacists in Nigeria (AHAPN), *Dr. Kingsley Chiedu Amibor*, said the COVID-19 pandemic no doubt has completely disrupted the medicines supply chain and brought with it huge challenges in ensuring medicines security in Nigeria. The result is drug scarcity as well as higher prices of essential and nonessential medicines in the country as supply struggles to catch up with demand. The consequences of these developments have seen additional mounting pressure on the economy, as pharmaceutical manufacturers must outsource to bring in scarce medicines into the country. The pharmacist said attempts to fill the shortage have created exorbitantly-priced and scarce products. The result is drug merchants operating in open markets supplying fake, falsified or substandard medicines to fill the gap. It has been reported that over 60 per cent of drugs circulating in Nigeria were fake. However, thanks to the doggedness of the National Agency for Food, Drug Administration and Control (NAFDAC) in recent years, that value was

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## Storage Issues (cont.)...

since 2017. UNICEF is now offering governments a checklist of what they will need to maintain a vaccine supply chain and to develop a plan.

But potential cracks in the global cold chain start once vaccines leave the factory. Container ships are not equipped to refrigerate pharmaceutical products with a limited shelf life. Shipping vaccines by air costs a lot more, and air cargo traffic is only now rebounding from pandemic-related border closures. Even when flights are cold and frequent enough, air freight carries other potential hazards. WHO estimates that as much as half of vaccines globally are lost to wastage, sometimes due to heat exposure or vials breaking while in transit.

Theft is also a danger; creativity in logistics will be key in preventing this. Gavi and UNICEF have experimented with delivering vaccines by drone, and Indian officials have floated the idea of setting aside part of the country's vast food storage network for the coronavirus vaccines.

Temperature-sensitive labels that change color when a vaccine is exposed to heat too long and no longer safe to use, and live delivery tracking to ensure vaccines reach their destinations as intended also have allowed for progress in delivering safe shots. Yet chances for something to go wrong multiply on the ground as vaccines are prepped to leave national depots. Since the cold chain is so fragile, logistics planning is crucial; syringes and disposal boxes must be available as soon as vaccine shipments arrive. By the end of the year, UNICEF expects to have 520 million syringes pre-positioned for coronavirus vaccines in the developing world and maps of where the refrigeration needs are greatest to ensure that these supplies arrive in countries by the time the vaccines do.

Complicating the supply chain in the poorest countries is a lack of public transportation, one more obstacle to getting citizens inoculated before vaccines go bad. In countries such as India, patients must walk for hours to receive health care, and frequently the last kilometer (mile) is the hardest part of delivering medicines to those in need. In Latin America (perhaps nowhere more than Venezuela) the vaccine cold chain could go dramatically off course. When a blackout last year left much of the nation in the dark for a week, doctors in several parts of Venezuela reported losing stocks of vaccines. Gas shortages also limit the ability to move vaccines quickly from one part of Venezuela to another. There also are fewer doctors and other professionals trained to keep the chain intact. While Venezuela presents an extreme example, a coronavirus vaccine also is likely to test even parts of Latin America with more robust health care systems, such as Peru.

For now, global NGOs and governments alike will continue to grapple with the challenges of fair and equitable distribution of the COVID-19 vaccines.

*IFPW Foundation, through its collaborations with Gavi, continues to explore opportunities for IFPW members and the global wholesale industry to support future COVID vaccines. A private-sector consultation is being scheduled for later in the year. Please contact IFPW's HQ for details.*

## COVID-19 and Fake Meds (cont.)...

drastically reduced.

"Now, the COVID-19 pandemic is gradually returning us to the dark days of falsified medicines. The other day, the Federal Ministry of Health sounded an alert on the existence of fake hand sanitizers circulating in the Federal Capital Territory. That is exactly part of what I am talking about," Amibor said.

On possible sources of fake and substandard drugs at times like this, the pharmacist said: "Charlatans, drug merchants, unscrupulous patent medicine dealers, drug hawkers, open drug markets are all sources of falsified and substandard medicines in Nigeria. There is indiscriminate

hawking of medicines in public places and the open markets, motor parks, buses and along the streets and these largely constitute sources of fake and substandard medicines in Nigeria. All these groups mentioned are capitalizing on the challenges of medicines unavailability and high cost to revisit falsification of drugs in Nigeria."

On the implications of efforts to contain COVID-19, patients prescribed medications for control of COVID-19 such as Hydroxychloroquine and Azithromycin, who feel the prices in pharmacies are beyond their reach, may end up purchasing the falsified or substandard medicines from the open drug markets or unlicensed patent medicines vendors who they feel might sell cheaper, oblivious of the fact that they could be fake or substandard.

"And of course, when that happens, you can be sure that such patients' conditions may get worse and they may end up developing respiratory and other complications with possibility of death. Yet some Nigerians who are managing their COVID-19 at home by activities of these drug merchants, since the outbreak of COVID-19," Amibor said.

### FIGHT THE FAKES WEEK IS DECEMBER 2-7, 2020!

*"Let's Fight the Fakes – through the pandemic and beyond"*



We need your participation to help raise awareness in the fight against fake and substandard medicines, including those related to the COVID-19 pandemic.

For more information visit [www.fightthefakes.org/week](http://www.fightthefakes.org/week) or contact Christina Tucker, Director of Program Support for the IFPW Foundation at [c.tucker@ifpwfoundation.org](mailto:c.tucker@ifpwfoundation.org)

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

potential to expand to general merchandise. This news follows days after Walmart announced plans to test drone delivery of certain household grocery items. The company stated in a release "We expect trial deliveries to take place near Walmart's headquarters in Northwest Arkansas using Zipline's proprietary technology, beginning early next year. To date, Zipline has safely delivered more than 200,000 critical medical products to thousands of health facilities serving more than 20 million people across multiple countries.

- ◆ Thanks to a new program approved by the board of **Gavi, The Vaccine Alliance**, a global emergency stockpile of Ebola vaccines will be funded and opened for use by those in need of outbreak and prevention efforts. US\$178 million will be pumped into the program through 2025, focusing on low- and middle-income countries. Those nations will have access to the stockpile free of charge and will also receive support for the operational costs of vaccination campaigns.

- ◆ British drugmaker **AstraZeneca** has doubled manufacturing capacity for its potential coronavirus vaccine to two billion doses in two deals involving Microsoft billionaire *Bill Gates* that guarantee early supply to lower income countries. The deals with epidemic response group **CEPI** and **Gavi, the Vaccine Alliance** are backed by the **World Health Organization** to quell concerns that the company was committing all initial supplies of the vaccine to the developed world. It is unclear if vaccines will work against the coronavirus but dozens of companies are in the race to develop one, and AstraZeneca's partnership with **Oxford University** is one of a handful to be backed so far by the U.S.

*(Sources: Devex Newswire, Homeland Preparedness News, Logistics Update Africa, Reuters, and U.S. News and World Report)*