

NEWS | 19 June 2023

Global ‘pandemic treaty’: nations wrestle with how to fairly share virus data

Researchers say a plan is needed to ensure countries aren’t being exploited, if the world is to prevent the next pandemic.

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Laboratories in countries such as Brazil provided early warning of the emergence of SARS-CoV-2 variants by sequencing their genomes. Credit: Douglas Magno/AFP via Getty

Last week, negotiators met to discuss the latest draft of a ‘pandemic treaty’ — an agreement among countries worldwide about [how to best respond to the next massive outbreak](#). One sticking point in the draft is how to fairly compensate countries for sharing viral-genome sequences.

During the COVID-19 pandemic, researchers in countries from Brazil to South Africa to India kept tabs on how SARS-CoV-2 was evolving by determining the genetic sequences of viruses collected from infected people. They then uploaded those sequences to online data-sharing platforms, enabling the development of vaccines. But many of the countries that uploaded sequences [were slow to receive the shots, if they got them at all](#).

This disconnect sets up a situation in which disease-affected countries might one day decide to keep information to themselves — an outcome that could be disastrous globally. To swiftly rein in a future pandemic, an equitable system for sharing data is needed, researchers and officials say.

The hope is that the pandemic treaty will establish such a system, but, as negotiations have shown, it will be difficult to get countries to agree on what it should look like. “There’s room for agreement, because all countries want a reliable system,” says Suerie Moon, a global-health-policy researcher at the Geneva Graduate Institute in Switzerland. But “hammering down the details is not easy”.

A global-health controversy

The idea that a country might decide not to share viral information for free has precedent. In 2007, Indonesia stopped sharing samples of the avian influenza virus H5N1 with the World Health Organization (WHO), which monitors influenza globally and makes recommendations for vaccine composition. At the time, H5N1 was spreading globally and Indonesia had the highest number of infections in humans.

The nation made its decision because a pharmaceutical company in Australia intended to use a viral sample provided by Indonesia to develop an H5N1 vaccine — a product that the middle-income country would probably have struggled to afford. Withholding samples was Indonesia’s way of protesting against what it saw as an unfair system.

The controversy eventually led to the development of the Pandemic Influenza Preparedness Framework, WHO guidance that sets the ground rules of data sharing in exchange for access to vaccines and other benefits. But the rules, adopted in 2011, apply only to influenza viruses.

At the moment, access to other viruses is, in theory, governed by the Convention on Biological Diversity (CBD), an agreement signed by 196 nations to protect the world’s flora and fauna. In 2010, a supplementary agreement, the Nagoya Protocol, was added to the CBD, stating that any company or researcher seeking to use genetic resources from a specific country — including viral samples — must obtain permission from that nation and reach an agreement on how the parties would share any potential benefits from that material.

But these agreements don’t regulate the sharing of data, including viral genomes, and didn’t prevent inequity during the COVID-19 pandemic. For example, South Africa, [which alerted the world to SARS-CoV-2 variants](#) such as Omicron and Beta, has fully vaccinated only around 40% of its population against COVID-19.

Some public-health specialists think oversight of viral-genome benefit sharing should be given to the WHO, an agency geared towards public health. The [latest draft of the organization’s pandemic treaty](#) dedicates an entire article to the subject, with an eye towards establishing that oversight.

The draft is a “big deal” because it aims to put pathogens, specifically those with pandemic potential, under a public-health-focused framework, rather than a biodiversity framework, says Amber Hartman Scholz, head of the science policy department at Leibniz Institute DSMZ, which houses a collection of microorganisms and cell cultures in Brunswick, Germany.

A difficult negotiation

But for the pandemic treaty to govern benefit sharing for pathogen data, a number of hurdles will need to be overcome.

Many low- and middle-income countries won't want the accord to contain any legal obligation that they monitor for potential pathogens and make the data available internationally, says Pierre du Plessis, one of Africa's lead negotiators on genetic resources, based in Windhoek, Namibia. "We are all quite concerned about protecting the sovereign right to control access to genetic resources, and not giving that up without at least getting something substantial in return," he says.

By contrast, pharmaceutical companies say that a transactional agreement, in which they must make a deal with a nation amid a crisis, causes delays in the development of treatments and vaccines. It also leads to the "serious politicization of pathogen sharing", says Thomas Cueni, director-general of the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA), based in Geneva.

Potential solutions to the problem have come from all sides. One, proposed by a group of African nations during the CBD negotiations, would be to deposit into a global fund 1% of retail sales from products, such as vaccines and diagnostic equipment, developed with viral-genome sequences. "Let's use that money to support conservation, sustainable use, capacity development and technology transfer," du Plessis says. For instance, low- and middle-income countries could use such funds to better equip themselves for doing viral surveillance.

Pharmaceutical companies have proposed another option. "Companies, looking at what happened in the pandemic, said that we are willing to commit part of our real-time production [of vaccines and other products] for immediate allocation by international institutions to populations in developing countries," Cueni says. IFPMA has formally presented this solution [in a proposal it has called the Berlin Declaration](#). In return, pharma firms would expect governments to guarantee the "immediate and unhindered" sharing of data.

Next steps

Which solution will be incorporated into the pandemic treaty remains to be seen. Currently, negotiators are discussing whether to include language that incentivizes data sharing by ensuring that, for example, a specific proportion of pandemic-related products are distributed in low- and middle-income countries. The international committee responsible for drafting the treaty has less than one year to come to a consensus and submit a final version to be voted on by the WHO's member states at the next World Health Assembly in May 2024.

Some still hold out hope that a strong commitment to low- and middle-income countries will be inserted into the document. If countries aren't motivated to share information, says epidemiologist Salim Abdool Karim, director of the Centre for the AIDS Programme of Research in South Africa, based in Durban, "then that basically means we won't have a global early-warning system in place to prevent the next pandemic".

doi: <https://doi.org/10.1038/d41586-023-01986-y>