

What is Disease X? How scientists are preparing for the next pandemic

January 16 2024, by Jason Gale, Bloomberg News



Credit: CC0 Public Domain

The term "Disease X" was coined years ago as a way of getting scientists to work on medical countermeasures for unknown infectious threats—novel coronaviruses like the one that causes COVID-19, for

example—instead of just known ones, like the Ebola virus.

The idea was to encourage the development of platform technologies, including vaccines, drug therapies and [diagnostic tests](#), that could be rapidly adapted and deployed in response to an array of future outbreaks with epidemic or pandemic potential.

1. What is "Disease X?"

It's the somewhat mysterious name for an illness caused by a currently unknown, yet serious microbial threat.

The World Health Organization added Disease X in 2017 to a short list of pathogens deemed a top priority for research, alongside known killers like Severe Acute Respiratory Syndrome (SARS) and Ebola.

The issue made it onto the agenda of the World Economic Forum in Davos, Switzerland, with WHO Director General Tedros Adhanom Ghebreyesus joining other [health officials](#) to discuss it.

COVID-19, caused by a novel coronavirus, was an example of a Disease X when it touched off the pandemic at the end of 2019. The vast reservoir of viruses circulating in wildlife are seen as a likely source of more such diseases. That's because of their potential to spill over and infect other species, including humans, giving rise to an infection against which people will have no immunity.

2. What's the point of studying Disease X?

As the WHO puts it, it's to "enable early cross-cutting R&D preparedness that is also relevant" for an unknown [disease](#).

The humanitarian crisis sparked by the 2014–2016 Ebola epidemic in West Africa was a wake up call. Despite decades of research, there were no products ready to deploy in time to save more than 11,000 lives. In response, the WHO created an R&D Blueprint to accelerate development of a range of tools for "priority diseases."

The current list includes: COVID-19; Crimean-Congo [hemorrhagic fever](#); Ebola virus disease and Marburg virus disease; Lassa fever; Middle East respiratory syndrome (MERS) and SARS; Nipah and henipaviral diseases; Rift Valley fever; Zika; Disease X.

3. How's the research for the next pandemic going?

It took just 326 days from the release of the genetic sequence of the SARS-CoV-2 virus to the authorization of the first COVID vaccine, thanks in part to the work done since 2017 in preparation for Disease X.

Now groups like the Coalition for Epidemic Preparedness Innovations, or CEPI, are supporting rapid response vaccine platforms that could develop new immunizations within 100 days of a virus with pandemic potential emerging under a \$3.5 billion plan. Other efforts underway include:

- Updating the International Health Regulations and developing a new global agreement to protect the world from future emergencies.
- A new fund, approved by the World Bank, for pandemic prevention, preparedness and response.
- A WHO Hub for Pandemic and Epidemic Intelligence in Berlin that aims to speed access to key data, and develop analytic tools and predictive models to assess potential threats.
- The Global Virome Project that aims to discover zoonotic viral

threats and stop future pandemics.

- A \$5 billion U.S. government initiative to develop next-generation vaccines and treatments for COVID-19, called Project NextGen.
- \$262.5 million in funding for a U.S. national network for detecting and responding more efficiently to public health emergencies.
- Establishment of global center for [pandemic](#) therapeutics.

Still, numerous challenges threaten to undermine these efforts, including depleted and weakened [health systems](#), a growing anti-science movement that has increased vaccine hesitancy, and the potential for governments to eventually deprioritize funding for outbreak detection and preparedness as perceived risks dissipate.

2024 Bloomberg L.P. Distributed by Tribune Content Agency, LLC.

Citation: What is Disease X? How scientists are preparing for the next pandemic (2024, January 16) retrieved 27 April 2024 from <https://medicalxpress.com/news/2024-01-disease-scientists-pandemic.html>

| |
|--|
| <p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p> |
|--|