

WHO launches global framework for understanding origins of new or re-emerging pathogens

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Framework designed as a resource for scientists, researchers, public health authorities, and investigators in Member States



With the support of the Scientific Advisory Group for the Origins of Novel Pathogens (SAGO), the World Health Organization (WHO) has published a global framework to help Member States comprehensively investigate the origins of new and re-emerging pathogens.

While there are a number of tools available for investigating infectious disease outbreaks, this is the first unified, structured approach to investigating the origins of a novel pathogen.

This framework aims to fill that gap by providing a comprehensive set of scientific investigations and studies. It is the first version of a “how-to” guide that will be updated as and when needed, based on feedback from users.

The WHO global framework outlines scientific investigations and studies for six technical elements:

- **Early investigations** of the first identified cases/ clusters / outbreaks to identify potential sources of exposure, collection of samples at the source, define the characteristics of the novel pathogen involved for establishment of diagnostic assays.
- **Human studies:** to understand the epidemiology including clinical presentation, modes of transmission, pathology and earliest presence in syndromic surveillance samples.
- **Human/Animal interface** studies to identify potential animal reservoirs, intermediate hosts and reverse zoonoses.
- studies to identify insect vectors or other sources of infection as well as earliest presence in the environment.
- **Genomics and Phylogenetics** studies to identify precursor strains, genomic characteristics, evolution in intermediate hosts and humans and spatial distribution over time.
- **Biosafety/Biosecurity studies** to determine if a breach in laboratory or research activities may have been associated with the first cases.

The WHO Global framework has been designed as a resource for scientists, researchers, public health authorities, and investigators in Member States. It provides guidance when and how to initiate such multi-disciplinary investigations and offers recommendations to countries on the capacities and tools needed to successfully implement them.