World Health Organization Methodology to Prioritize Emerging Infectious Diseases in Need of Research and Development

Technical Appendix 1

The three components of the Blueprint prioritization methodology

1. The annual review:

   • Convening a suitable expert group (Prioritization Committee, Table) covering: 1) microbiology of severe pathogens, including virology, bacteriology and mycology, 2) clinical management of severe infections, 3) Epidemiology, in particular during health emergencies, 4) Public health policy, including emergency response, 5) Animal health, including veterinarians and experts in zoonoses from both livestock and wildlife, 6) experts from the defense or security sectors familiar with biological weapons and 7) other experts, including anthropologists, bioethicists, and other relevant social sciences.

   • Identifying a long list of diseases to be fed into the annual review process.

   • Triaging the long list into a shorter list for more detailed analysis.

   • Conducting that analysis through the Analytic Hierarchy Process (AHP)/Multi-criteria Decision Analysis (MCDA) method and Delphi process.

   • Communicating the outcome of the review.
2. The methodology review

In accordance with best practice, separate processes were used to develop the methodology and run the annual review (1–5). According to Brookes et al. 2015, separating these processes improves transparency “by clearly separating decision-makers subjective opinions regarding the value of criteria from measurements for individual pathogens, as well as reducing opportunity for cognitive bias that can arise when directly valuing pathogens” (5). In addition to the annual exercise to update the list, the methodology itself will be reviewed every 2 years. This methodology review involves: convening a group of suitable experts; examining and revising the prioritization criteria and sub-criteria; and updating the weightings applied to the criteria.

3. Decision tree

The broader prioritization process also includes a decision tree for consideration of an unknown disease or a known disease presenting with unusual characteristics. The decision instrument is intended to guide users through: considering available information, determining
whether an emergency prioritization review is warranted, and whether this disease should be considered for the next annual review.

References


