

Integrating research infrastructures into infectious diseases surveillance operations: Focus on biobanks

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From novel technologies to Infrastructure

- Example: Biobanks in the UK and Indonesia
- Driven by regional and national needs
- Heterogeneity depending on technology legacy

Centralizing Existing Infrastructure

- Example: Biobanks in Estonia and Berlin, Germany
- Supported by a digital backbone
- Physical specimens can be linked to registries and other records (e.g., hospitals, education, etc.)

Infrastructure Interoperability

- Example: Biobanks in Sierra Leone and the UK
- Samples and data exist in two or multiple sites
- Single governance structure

Three approaches for integrating research infrastructure activities, including biobanking. Credit: *Biosafety and Health* (2022). DOI: 10.1016/j.bsheal.2022.10.001

Technological advances in the first two decades of the 21st century have profoundly impacted medical research in many ways, with large population cohorts, biological sample collections and datasets through biobanks becoming valued global resources to guide biomedical research, drug development, and medical practice.

However, for biobanks to maximize their impact and scientific reach of their resources, they need to act within a complex network of infrastructures and activities. Therefore, different ways have emerged in which biobanks, including those for [infectious diseases](#), can emerge as (part of) infrastructures, integrate within existing ones, or become an independent, yet an interoperable component of the existing infrastructural landscape. However, there has been a limited understanding and study of such mechanisms to date.

An article published in the journal *Biosafety and Health* aims to address this knowledge gap and illustrates these three high-level ways in which such infrastructures could integrate their activities and identifies the necessary key pre-conditions for doing so, while drawing from specific examples.

More information: Plebeian B. Medina et al, Integrating research infrastructures into infectious diseases surveillance operations: Focus on biobanks, *Biosafety and Health* (2022). [DOI: 10.1016/j.bsheal.2022.10.001](https://doi.org/10.1016/j.bsheal.2022.10.001)

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