

collaboration platforms central to scientific exchange also, by their nature, enable near-instant global availability of information.

The other world is that of the slow and deliberate pace with which information is treated under the IHR (2005), with their step-by-step confidentiality and verification requirements and threshold criteria for the declaration of a PHEIC, with greater emphasis on action that should **not** be taken, rather than on action that should.

The critical issue for this two-speed world is that viruses, especially highly transmissible respiratory pathogens, operate at the faster pace, not the slower one.

The Panel's conclusion is that **surveillance and alert systems at national, regional and global levels must be redesigned**, bringing together their detection functions – picking up signals of potential outbreaks – and their relay functions – ensuring that signals are verified and acted upon. Both must be able to function at near-instantaneous speed.

This will require the consistent application of digital tools, including the incorporation of machine learning, together with fast-paced verification and audit functions. It will also require a commitment to open data principles as the foundation of a system that can adapt and correct itself.

