## 4. Establish a new international system for surveillance, validation and alert

Epidemic intelligence is increasingly based on a constant process of surveying tens of thousands of signals from open sources and identifying and verifying potential public health threats. Advances in **real-time digitally based surveillance**, supported by machine learning, have created an always-on system that rapidly identifies information of concern. In contrast, the alert, verification and notification processes integral to the IHR (2005) require information to be methodically relayed through the machinery of government nationally and then to WHO. The methodical IHR-based process is not equipped to respond at a speed commensurate with surveillance systems, and the lag between the two is a critical point of system failure. This failure is especially evident if containment of a fast-moving respiratory pathogen is at issue.

**WHO Member States have been reluctant to give the organization and its Director-General the power to investigate and report immediately on potential outbreaks**. Technical expert missions can be dispatched to individual countries only with their permission, and a system of pre-authorization of missions has not been established. Often lengthy negotiations with governments for access by missions are required after an outbreak has been notified.

**The bias of the current system of pandemic alert is towards inaction — steps may only be taken if the weight of evidence requires them. This bias should be reversed — precautionary action should be taken on a presumptive basis, unless evidence shows it is not necessary.**

A PHEIC should serve as a clarion call for emergency pandemic response across the world, with countries being attentive to the precise nature of the emergency and the potential threat it contains. Instead, the processes around a PHEIC declaration are more oriented to ensuring that unwarranted trade and travel restrictions are not imposed. The IHR (2005) establish no obligations on States for action following declaration of a PHEIC.

In changing the system of alert to orient it towards speedy action, the **incentive structures** need to be addressed. At present, from local up to international level, public health actors only see downsides from drawing attention to an outbreak that has the potential to spread. **Incentives must be created** to reward early response action and recognize that precautionary and containment efforts are an invaluable protection which benefits all humanity.

Explicit performance standards should be attached to outbreak alert and response. These performance standards have to address different classes of emerging pathogen. Each of the steps leading up to and following the alert should be predictable and trigger requisite response action without delay.