

S3 Table. Summary of existing conceptual frameworks

Health Information System Frameworks			Public Health Surveillance System Frameworks		
1. Health Metrics Network (HMN) framework [21]	2. Performance of Routine Information System Management (PRISM) framework [22]	3. Human, Organisation and Technology fit model (HOT-fit) [23]	1. Conceptual Framework of Public Health Surveillance and Action [19]	2. Conceptual framework to evaluate tuberculosis surveillance and action performance and measure the costs [20]	3. Framework for evaluating public health surveillance systems for early detection of outbreaks [36]
-Stakeholders engagement. -Focus on inputs, processes, outputs and outcomes of HIS.	-Assesses HIS performance considering technical, organisational and behavioral factors. -Data management (processes), data quality and utilisation (outputs), health system performance (outcomes), and net impact on health status.	-Alignment of HIS ability, stakeholders' practices and the organisational setting. -Influence of information and service quality work on system use and users' satisfaction. -Organisational structure and environment influence system use and overall net benefits.	-Links surveillance activities to the resulting public health actions. -Adoptable in developing settings with sub-optimally functioning disease surveillance systems.	-Disease-specific perspectives. -Stakeholders' inputs influence process-oriented or outcome-oriented surveillance performance indicators.	-Improved epidemic preparedness and response actions linked to processes and outputs.