

**Annex 1**

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**Annex 1: integrated disease surveillance and response indicator matrix**

No	Component	Element	Indicator	Indicator definition	Target	Data source/ method
1.1	PH priorities targeted for surveillance	Prioritizing PH events for surveillance	Objectives for disease surveillance	Existence of objectives for national disease surveillance	Every 5-10 years	Surveillance guidelines, plan
1.2	PH priorities targeted for surveillance	Prioritizing PH events for surveillance	Disease prioritization	Evidence of prioritization of diseases for surveillance	Every 5-10 years	Surveillance guidelines, plan
1.3	PH priorities targeted for surveillance	Prioritizing PH events for surveillance	Updated priority diseases list	Number of years since the last update of the priority disease list	Every 5-10 years	Surveillance guidelines, plan
2.1	Structure	Surveillance legislation (laws and regulations)	Legislative support for the implementation of surveillance and response	Existence of legislation for surveillance and response	Existence of PH legislation	Document review (JEE report)
2.2	Structure	Surveillance legislation (laws and regulations)	Decree or orders for surveillance and response	Existence of a decree or order for surveillance and response	Existence of decree or order for PHSR	Document review (outbreak response)
2.3	Structure	Compliance with IHR (2005)	Presence of national IHR focal point	Designated IHR focal point	existence of national IHR FP	Document review (JEE report)
2.4	Structure	Compliance with IHR (2005)	Functioning IHR communication facilities	Evidence of functional email/telephone at IHR focal point for international notification and reporting	existence of communication facilities	Document review (JEE report)
2.5	Structure	Compliance with IHR (2005)	Timely notification to WHO of outbreaks of international importance	Proportion of outbreaks of international concern that were notified to WHO within 24 hours of detection	80-100%	Document review (JEE report)

2.6	Structure	Surveillance strategy and coordination	Assessment of disease surveillance systems	Assessment of national surveillance systems for surveillance	5-10 years	Document review (JEE report)
2.7	Structure	Surveillance strategy and coordination	PoA for disease surveillance	Presence of strategic and operational plans for surveillance	3-5year strategic plans; annual operational plans	Document reviews
2.8	Structure	Surveillance strategy and coordination	Performance of routine evaluation	Implementation of evaluations according to plan	Annually	Reports
2.9	Structure	Surveillance strategy and coordination	Presence of a surveillance coordinating body	Presence of surveillance unit for IDSR coordination	IDSR unit presence	MoH organogram
2.10	Structure	Surveillance strategy and coordination	Scheduled surveillance coordination meetings	Proportion of weekly IDSR meetings held	weekly	IDSR minutes
2.11	Structure	Surveillance strategy and coordination	Laboratory representation in surveillance coordinating	IDSR coordinating body includes laboratory personnel	IDSR lab FP presence	EPR unit organogram
2.12	Structure	Surveillance strategy and coordination	Existence of documented roles and responsibilities	IDSR roles and responsibilities documented by level	IDSR TGs	IDSR TGs
2.13	Structure	Surveillance strategy and coordination	Evidence of sharing resources	Evidence of sharing resources between IDSR and other surveillance programs	Reports	IDSR reports
2.14	Structure	Networking and partnerships	Intersectoral collaboration, networking, and partnership	Existence of intersectoral collaboration, networking, and partnerships with other sectors (WASH, agriculture, Livestock etc.)	Formalized intersectoral engagements	Reports, JEE
2.15	Structure	Networking and partnerships	Functional laboratory networks	existence of functional laboratory networks	National and sub-national lab focal points	Lab reports; training reports

2.16	Structure	Networking and partnerships	Cross-border collaboration	Evidence of framework for intercountry/cross - border collaboration	Cross-border frameworks	Cross-border surveillance framework documents
2.17	Structure	Networking and partnerships	Planned cross-border meetings	Proportion of planned cross-border meetings held	Cross-border meetings	Cross-border meeting reports
2.18	Structure	Networking and partnerships	Regular intercountry meetings	Evidence of regular intercountry meetings	Intercountry meetings	Intercountry meeting reports
2.19	Structure	Networking and partnerships	Routine information sharing between neighboring countries	Evidence of routine sharing of data and information between neighboring countries in regional and international networks	Routine data sharing between countries	Reports
2.20	Structure	Networking and partnerships	Capacity for sharing outbreak-related information between neighboring countries	Existence of intercountry and cross-border communications during outbreaks	Sharing of outbreak data between countries	Outbreak response reports
3.1	Core functions	Case registration	Availability of registers	Registers distributed per functional health facility	One register per functional HF	Distribution reports
3.1	Core functions	Case registration	Existence of rumor logs for registration of suspect PH events from informal	Rumor log registers distributed per functional health facility	One register per functional HF	Distribution reports
3.3	Core functions	case confirmation	Confirmation of priority diseases	Capacity to confirm selected priority diseases either within the laboratory or at a reference laboratory	Capacity to confirm priority pathogens	Lab reports 2019

3.4	Core functions	case confirmation	Documented list of reference laboratories	Presence of a documented list of reference laboratories for confirmation of epidemic-prone diseases	List of reference laboratories	Lab reports 2019
3.5	Core functions	case confirmation	Capacity to refer samples on time	Capacity for timely referral of samples to reference labs for rapid confirmation of causative agents	System for in-country specimen transport	Lab reports 2019
3.6	Core functions	case confirmation	Routine monitoring of antimicrobial resistance	Routine testing and reporting of AMR	AMR surveillance	AMR surveillance reports
3.7	Core functions	case confirmation	Routine monitoring of food safety	Routine monitoring (testing) of food safety	Food testing capacities	Food test reports
3.8	Core functions	case confirmation	Routine monitoring of water quality	Routine testing of water quality	Water quality testing capacities	Water quality test reports
3.9	Core functions	case confirmation	Laboratory reagents	Presence and maintenance of appropriate laboratory diagnostic reagents	lab reagents stocks	Lab reports 2019
3.10	Core functions	case confirmation	Supplies for specimen collection and transportation	Presence and maintenance of supplies for specimen collection and transportation	specimen collection kit stocks	Lab reports 2019
3.11	Core functions	case confirmation	Laboratory confirmation of outbreaks	Proportion of outbreaks that are laboratory confirmed	Lab confirmed outbreaks	IDSR reports 2019
3.12	Core functions	case confirmation	Presence of quality assurance system	Performance of routine external quality assurance	EQA scheme enrollments	Lab reports 2019
4.1	Core functions	Reporting	Case based reporting rate	Proportion of diseases targeted for elimination / eradication line	Case-based reporting compliance	IDSR reports 2019

				using case-based reporting forms in past 12 months		
4.2	Core functions	Reporting	Timely notification of epidemics	Proportion of epidemics detected in previous 12 months that were notified to the next high level within 2 days of detection	Timeliness of outbreak reporting	IDSR reports 2019
4.3	Core functions	Reporting	Reporting of healthcare-associated infections	Proportion of hospitals that routinely report outbreaks occurring within the healthcare setting	Reporting performance for HCAI	IDSR reports 2019
5.1	Core functions	Data analysis and interpretation	Routine analysis of data by surveillance units	Proportion of health facilities with evidence of data analysis by time, place, and person for selected diseases	Data analysis capacities	IDSR reports 2019
5.2	Core functions	Data analysis and interpretation	Capacity for routine data analysis and interpretation	Evidence of routine laboratory data analysis and interpretation	Capacities for lab data analysis	IDSR reports 2019
6.1	Core functions	Epidemic preparedness	Epidemic preparedness plans	Presence of epidemic preparedness plans	Updated preparedness plans	IDSR reports
6.2	Core functions	Epidemic preparedness	Emergency funds	Existence of funds for emergency response	National Emergency Fund	IDSR reports
7.1	Core functions	Response and control	Epidemic preparedness committee	Presence of function epidemic preparedness	Functional EPR committee	Meeting minutes
7.2	Core functions	Response and control	Rapid response teams (RRT)	Presence of RRT at national level	Functional RRT	RRT reports
7.3	Core functions	Response and control	States with RRT	Proportion of states with RRTs	Functional RRT	RRT reports
7.4	Core functions	Response and control	Capacity for outbreak response	Proportion of outbreaks responded to in	>80% of the outbreaks responded to	Outbreak response reports

				the past 12 months		
8.1	Core functions	Feedback	existence of regular feedback	Presence of feedback mechanism	Regular IDSR bulletin	IDSR bulletin publications
8.2	Core functions	Feedback	Feedback disseminated	Proportion of bulletins disseminated	Regular IDSR bulletin	IDSR bulletin publications
9.1	Support functions	Standard, guidelines	Surveillance standards and guidelines	Availability of Technical guidelines for	IDSR TGs adapted	Program reports
9.2	Support functions	Standard, guidelines	Surveillance guidelines distributed per functional HF	IDSR Technical guidelines for IDSR distributed per functional HF	IDSR TGs available at HF level	Program reports
10.1	Support functions	Training	IDSR Training manuals	Availability of IDSR Training manuals	IDSR Training manuals	Program reports
10.2	Support functions	Training	Availability of surveillance training plan	Availability of surveillance training plan	Training plan available at national level	Program reports
11.1	Support function	Supervision and communication	Supervisions conducted	Supervisions conducted	Supervision visits conducted	Program reports
11.2	Support function	Supervision and communication	Availability of communication facilities	Communication facilities distributed per functional HF	Communication facilities available at HF level	Program reports
12.1	Support function	Resources	Availability of budget line for surveillance activities	Evidence of budget line for surveillance activities	Budget lines for IDSR	Program reports
12.2	Support function	Resources	Availability of functioning computers	States with functional computers for surveillance purposes	Computers available at State level	Program reports
13.1	Quality of surveillance systems	Timeliness	Timeliness of receipt of surveillance reports	Proportion of weekly IDSR reports submitted on	at least 80% of reports submitted on time	Program reports
13.2	Quality of surveillance systems	Timeliness	Timeliness of notification of suspect outbreaks	Proportion of suspect outbreaks notified on time in 2019	at least 80% outbreaks reported on	Program reports

13.3	Quality of surveillance systems	Timeliness	Timeliness of response to suspected outbreaks	Proportion of suspect outbreaks responded to within 48 hours	at least 80% outbreaks responded to in 48 hrs	Program reports
14.1	Quality of surveillance systems	Completeness	Proportion of surveillance reports received regardless of the timeliness of	Proportion of weekly IDSR reports received regardless of the timeliness of submission	at least 80% of reports submitted	Program reports

JEE - Joint External Evaluation; IDSR - Integrated Disease Surveillance and Response; TGs - Technical Guidelines; HF - Health Facility; RRT - Rapid Response Teams; HCAI - Health Care Associated Infections; AMR - Antimicrobial Resistance; Lab - Laboratory; WASH - Water, Sanitation, and Hygiene; FP - Focal point; PoA - Plan of Action; PH - Public Health; IHR - International Health Regulations