Annex 1

Last updated: September 5, 2018

Tools for a Surveillance Review

1.1 DESK REVIEW

As part of the national desk review, VPD surveillance should be assessed to understand the diseases under surveillance and to identify which need more in-depth review, either as part of the EPI Review or as part of a separate review. The following is an example of a tool that can be modified to organize the desk review. Many aspects of a surveillance system can be investigated, but in an integrated review the key objectives are to evaluate functionality, timeliness, representativeness, sensitivity, data quality and sustainability. The most commonly reviewed disease surveillance systems have been added. Findings from this tool should inform site selection and development of the final assessment tool for the review. This tool can be filled out by talking to surveillance focal points in the country and reviewing subnational/national/site-specific surveillance data.

TABLE

1

VPD surveillance objectives

	AFP[a] (polio)	AFR[b] (measles/ rubella)	CRS[c]	Meningitis/Encephalitis		
				SENTINEL IB-VPD[d]	EPIDEMIC MENINGITIS[e]	JAPANESE ENCEPHALITIS
Is there a functional surveillance system? (Yes/No)						
Is surveillance national (N), subnational (SN) and/or sentinel (S)?						
Review case definitions; are they reasonable within country context?						
Are standard operating procedures available for review?						
Are they adequate? (Who should report, what, when, how, to whom)						
REVIEW DATA/INDICATORS AT NATIONAL AND SUBNATIONAL LEVEL: ARE THERE AREAS THAT ARE CONCERNING? At a minimum review the following:						
Are ≥80% of reporting units reporting?						
Is data relatively complete?						
Is data timely?						
Are cases mostly laboratory confirmed?						
Is sensitivity of surveillance sufficient?						
Laboratory testing in-country?						
Does recent external quality assessment of laboratory performing testing/laboratory network doing testing meet minimum standards?						
When was the last surveillance review?						
Which surveillance systems are priorities for the country (e.g. because of new or recent vaccine introduction, progression towards goal)?						
Which ones are priorities to include in EPI review?						

[a] *Acute Flaccid Paralysis*
[b] *Acute Fever And Rash*
[c] *Congenital Rubella Syndrome*

[d] *IB-VPD (invasive bacterial vaccine-preventable disease): Streptococcus pneumoniae, Haemophilus influenzae, Neisseria meningitidis*
[e] *Epidemic meningitis: Neisseria meningitidis, and in some cases Streptococcus pneumoniae*

TABLE 1 CONT'D

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Respiratory Diseases			Diarrhoea		TETANUS	DIPHTHERIA	YELLOW FEVER	OTHER[h]
SARI/ILI[f] (influenza)	PNEUMONIA/ SEPSIS[g]	PERTUSSIS/ WHOOPING COUGH	ROTAVIRUS	CHOLERA				
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					*			

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[f]   *Severe Acute Respiratory Illness / Influenza–Like Illness*

[g]   *IB-VPD: Streptococcus pneumoniae, Haemophilus influenzae*

[h]   *Examples include varicella, mumps, hepatitis, typhoid*

*   *Does not apply since tetanus surveillance does not require laboratory confirmation.*

INSTRUCTIONS FOR USING THIS TEMPLATE
The template is designed to provide additional questions to assess the status of the VPDs surveillance system (for use in the desk review or in the field). Findings from the desk review should help guide questionnaire development and areas of focus. Findings from the desk review should help identify supplemental questions to include.

TABLE
2

National (*) and sub-national health office level questions

TYPE OF INFORMA-TION	SUGGESTED SUPPLEMENTAL QUESTIONS
HR & SYSTEMS	
Structure and function of surveillance	* What is the structure and function of the VPD surveillance system (surveillance types – national/sentinel, active/passive), reporting and information flows, links to national health information system)? * Are there any standard operating procedures, including case definitions and classifications, for VPD surveillance? Is there adequate infrastructure (transport, communications) to support the surveillance system? What are the strengths and weaknesses of the structure and function of VPD surveillance? Does the system function well? If not, why not? How is the private sector engaged in the surveillance system, in terms of reporting and response?
Staff numbers, distribution, capacity	Are there adequate numbers and distribution of health staff to maintain the surveillance system? What are their roles? Are there written ToRs? When was the last training course conducted?
REPORTING AND RESPONSE	
Laboratory and transport support	What are the strengths and weaknesses of the laboratory system for investigation of reported VPDs? » Adequacy of laboratory supplies and equipment » Adequacy of transport of specimens » Timeliness and completeness of results » Use of reference laboratories for VPDs
Notification and investigation	* Are there uniform case definitions for reportable VPDs? Are there standard operating procedures for investigation and reporting of VPDs? Are the communication and information networks for notification adequate? What are the strengths and weaknesses of notification/ investigations?
Timeliness and completeness of reports, data quality	What is the frequency of VPD reporting between each service level in the health system? How does this vary by disease or type of information? Is the frequency and completeness of reports monitored at each level? (verify with document review) Is there a system of data quality review for surveillance data?
Zero reporting	* List the VPDs included in the zero report system. What are the strengths and weaknesses of the zero report system?

* *These questions should only be asked at national level, while non-starred questions should be asked at every level.*

TYPE OF INFORMA-TION	SUGGESTED SUPPLEMENTAL QUESTIONS
Feedback of reports	Is there a system for feeding back analysis of surveillance reports to the field level (publications, programme reviews, electronic communication)?
Use of data for planning/action	Provide examples of how analysis of surveillance data is utilized for programme purposes at the field level.
Impact assessment	* For vaccines that have recently been introduced, do the surveillance data show the impact of vaccination?
Outbreak response	Describe any disease outbreaks over the last five years. Were the outbreaks investigated? Describe the strengths and weaknesses of the current outbreak response systems at each level of the system.
Community-based surveillance	Describe any disease outbreaks over the last five years. Were the outbreaks investigated? Describe the strengths and weaknesses of the current outbreak response systems at each level of the system.

TABLE
3

Health facility questions

TYPE OF INFORMATION	SUGGESTED SUPPLEMENTAL QUESTIONS
PERFORMANCE	
Indicators	How is the system performing; are performance indicators met?
HR & SYSTEMS	
Surveillance staff numbers, distribution and capacity	Is there someone assigned to conduct surveillance? When was the last training course? Assess the knowledge of case definitions and surveillance procedures by health workers.
SURVEILLANCE NOTIFICATION AND LOGISTICS	
Notification and investigation	Presence of standard operating procedures for investigation and reporting of VPDs. Adequacy of communication and information networks for notification. Are case investigation forms available? What do staff do if they find a case of AFP? Measles/rubella? Neonatal tetanus? Who do they report to? How quickly do they report it? How do they report it (mail/email/fax/etc.)?
Adequacy of laboratory and transport support	Are there sufficient/appropriate specimen collection supplies? What are the timelines and challenges regarding transport of specimens? Timeliness and completeness of results.
REPORTING AND RESPONSE	
Timeliness and completeness of reports	Is form complete? Is zero-reporting done? What is the actual frequency of surveillance and information reporting (make observations of review forms, review log books to assess timeliness and completeness)?

TYPE OF INFORMATION	SUGGESTED SUPPLEMENTAL QUESTIONS
Feedback	Do you receive surveillance reports for the area (publications, programme reviews, electronic communication)? When was the last supervisory visit?
Use of data for planning/action	Examples of how analysis of surveillance data is utilized by the health facility.

TABLE 4

Disease-specific questions with a focus on sensitivity/response; to be tailored based on desk review findings

DISEASE-SPECIFIC INFORMATION	SUGGESTED SUPPLEMENTAL QUESTIONS
Neonatal tetanus elimination (NT)	How many cases of neonatal tetanus/neonatal death have been investigated over the last x years (neonatal death, number investigated, confirmed diagnosis)? Are data on neonatal tetanus (NT)/1000 live births available at subnational level (for the purpose of detecting areas of high risk)? What are the overall strengths and weaknesses of the surveillance system for NT?
AFP	How many cases of acute flaccid paralysis (AFP) have been detected over the last five years? What was the proportion of cases with two adequate stool samples collected 24 hours apart? What was the response to these cases? Are data available for review and are they being used? * What is laboratory capacity and when was the last EQA done? What are the overall strengths and weaknesses of the surveillance system for AFP?
Measles/ rubella elimination	How many measles and rubella cases have been reported over the last five years? How many outbreaks have been investigated? What are: number of suspected measles/rubella cases; number of tested cases confirmed; number confirmed measles; number confirmed rubella? What is the percentage of cases with a specimen collected for confirmation? * What is laboratory capacity and when was the last EQA done? What are the strengths and weaknesses of reporting systems for measles and rubella? What was the response to any measles/rubella cases?
Sentinel surveillance (e.g. CRS, IBD, rotavirus)	* What diseases are currently investigated through sentinel surveillance systems? * What are the geographical locations and population coverage of the sentinel sites? * What evidence do current sentinel sites provide regarding disease burden and vaccine impacts? * Are data available for review and are they being used? * What is the laboratory capacity and when was the last EQA done? * When was last surveillance review and by whom? * What are the strengths and weaknesses of the surveillance system for each disease (organization and management, infrastructure and laboratory support, human resource capacity, report and feedback systems, use of data for planning and evaluation)?
Other National Surveillance (e.g. diphtheria, non-neonatal tetanus, JE, mumps)	* What other diseases are currently investigated through national passive surveillance systems? * Are data available for review and being used? * What is the laboratory capacity and when was the last EQA done? * What are the strengths and weaknesses of the surveillance system for each disease (organization and management, infrastructure and laboratory support, human resource capacity, report and feedback systems, use of data for planning and evaluation)?