

GENERIC QUESTIONNAIRES

These generic questionnaires need to be adapted at country level to make them relevant to specific country needs.

These questionnaires comprise sets of indicators and questions. Indicators are preceded by “I” and are in bold. Questions have suggested variable names e.g. C1.1.

CENTRAL LEVEL QUESTIONNAIRE

Identifiers

Assessment team: ID1

Date: DATE

Interviewer: ID2

Respondent: ID3

Country: ID8

Surveillance System : ID9

O. General

I. Availability of legal mechanism to enforce surveillance

- C0.1** Is there mandatory surveillance for any diseases? Yes No
Unknown
Not applicable

C0.1T List diseases, *if yes*:

I. Availability of a national surveillance manual

- C0.2** Is there a national manual for surveillance? Yes No
Unknown
Not applicable

C0.2T *If yes*, describe (last update, diseases included, case definitions, surveillance and control, integrated or different for each disease):

I. Case detection and registration

I. Existence of standardised case definitions for the country's priority diseases

- C1.1** Do you have standard case definitions for the country's priority diseases? Yes No
Unknown
Not applicable
- C1.2Obs** [1 to n priority diseases] Observed the standard case definition for (each priority disease) Yes No
Unknown
Not applicable

II. Data reporting

I. Presence of recommended reporting forms in the country at all times over the past 6 months

- C2.1** Is the central level responsible for providing surveillance forms to the health facilities? Yes No
Unknown
Not applicable
- C2.2** *If yes*, have you lacked appropriate surveillance forms at any time during the last 6 months? Yes No
Unknown
Not applicable

I. Percent of district reports (either directly or through an intermediate level) received each reporting period at the central level during the past 3 months:

Number of reports in the last 3 months compared to expected number

C2.31N Weekly: /12 times the number of districts

C2.32N Monthly: /3 times the number of districts

I. On time (use national deadlines)

C2.41N Number of weekly reports received on time: /12 times the number of districts

C2.42N Number of monthly reports received on time: /3 times the number of districts

I. Reporting to WHO

C2.5Obs Does the Ministry of Health share surveillance data with the WHO? Yes No
Unknown
[Observe reports at WR's Office] Not applicable

I. Capacity to report to next level by e-mail, telephone, fax or radio

C2.6 How do you report:
Mail Fax Telephone Radio Electronic Other

III. Data analysis

I. Does the central level:

Describe data by person (case based, outbreaks, sentinel)?

C3.1Obs Observed description of data by age and sex Yes No
Unknown
Not applicable

I. Describe data by place?

C3.2Obs Observed description of data by district (tables, maps) Yes No
Unknown
Not applicable

I. Describe data by time?

C3.3Obs Observed description of data by time Yes No
Unknown
Not applicable

I. Perform trend analysis?

C3.4Obs Observed line graph of cases by time Yes No
Unknown
Not applicable

C3.4T List disease(s) for which line graph is observed

I. Have an action threshold defined for each priority disease?

C3.5 Do you have an action threshold defined for any of the country priority diseases? Yes No
Unknown
Not applicable

C3.6 Do you have an action threshold for any diseases targeted for eradication or elimination? Yes No
Unknown
Not applicable

C3.7 *If yes, what is it?* cases % increase rate
(Ask for two priority diseases)

C3.71N Eradication

C3.72N Epidemic prone

I. Have appropriate denominators?

C3.8Obs Observed presence of demographic data Yes No
(E.g. population by district and hard to reach groups) Unknown
Not applicable

I. Use appropriate denominators?

C3.9Obs Observed rates derived from demographic data Yes No
Unknown
Not applicable

I. Use appropriate source of denominators?

C3.10T What is the source of your denominator?

IV. Outbreak investigation

I. Percent of suspected outbreaks that were investigated in the past 1 year

C4.11N Number of outbreaks suspected in the past year

C4.12T List the diseases

C4.13N Of those, number investigated

(Observe reports and take copies if possible)

I. Of the investigated outbreaks in the past 1 year, percent in which risk factors were looked for

C4.2N Number of outbreaks in which risk factors were looked for

I. Of the investigated outbreaks in the past 1 year, percent in which findings were used for action

C4.3N Number of outbreaks in which findings were used for action

[Observe report]

V. Epidemic preparedness (relevant for epidemic prone diseases)

I. Existence of a national plan for epidemic preparedness and response

C5.1Obs Observed a written plan of epidemic preparedness and response Yes No
Unknown
Not applicable

I. Existence of emergency stocks of drugs, vaccines, and supplies at all times in past 1 year

C5.2 Has the country had emergency stocks of drugs, vaccines, and supplies at all times in past 1 year? Yes No
Unknown
Not applicable

C5.2Obs	Observed the adequacy of stocks of drugs, vaccines and supplies at time of assessment	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
I. Experience of a shortage of drugs, vaccines or supplies during the most recent epidemic (or outbreak)					
C5.3	Has the country experienced shortage of drugs, vaccines or supplies during the most recent epidemic (or outbreak)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
I. Existence of a standard case management protocol for epidemic prone diseases					
C5.4Obs	Observed the existence of a written case management protocol for at least 1 priority disease				
C5.4T	<i>If yes, list:</i>				
I. Presence of a budget line for epidemic response					
C5.5	Is there a budget line for epidemic response?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
I. Existence of a central epidemic management committee					
C5.6	Observed minutes (or report) of meetings of epidemic management committee	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
I. Existence of a central rapid response team for epidemics					
C5.7	Does the country have a rapid response team for epidemic?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
VI. Response to epidemics					
I. Ability of the central level to respond within 48 hours of notification of most recently reported outbreak					
C6.1Obs	Observed that the central level responded within 48 hours of notification of most recently reported outbreak (from written reports with trend and intervention)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
I. Ability of the central level to monitor mass vaccination (meningitis and yellow fever) campaign coverage evaluations					
C6.2Obs	Does the central level monitor mass vaccination campaign coverage evaluations (Observe report to confirm check for coverage by age group, logistics and costing)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
I. Ability of the national epidemic management committee to evaluate its preparedness and response activities					
C6.3Obs	Has epidemic management committee evaluated its preparedness and response activities during the past year (Observe written report to confirm)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>

VII. Feedback

I. Existence of capacity for publication of health and surveillance information

Is there at the MoH for publications

- | | | | |
|------|---------------------|---|-----------------------------|
| C7.0 | An editorial board? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | | Unknown <input type="checkbox"/> | <input type="checkbox"/> |
| | | Not applicable <input type="checkbox"/> | <input type="checkbox"/> |
| C7.1 | An editor? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | | Unknown <input type="checkbox"/> | <input type="checkbox"/> |
| | | Not applicable <input type="checkbox"/> | <input type="checkbox"/> |
| C7.2 | An annual budget? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | | Unknown <input type="checkbox"/> | <input type="checkbox"/> |
| | | Not applicable <input type="checkbox"/> | <input type="checkbox"/> |

I. Existence of a report or bulletin that is regularly produced to disseminate surveillance data

- | | | | |
|---------|---|---|-----------------------------|
| C7.3N | How many feedback bulletin or reports has the central level produced in the last year? | | |
| C7.3Obs | Observed the presence of a report or bulletin that is regularly produced to disseminate surveillance data | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | | Unknown <input type="checkbox"/> | <input type="checkbox"/> |
| | | Not applicable <input type="checkbox"/> | <input type="checkbox"/> |

VIII. Supervision

I. Percent of supervisors that made the required number of supervisory visits in the past 6 months

C8.1N How many supervisory visits have you made in the last 6 months?

C8.2N Obtained required number of visits from central level

The most usual reasons for not making all required supervisory visits. (Text)

C8.3T

C8.4T

C8.5T

IX. Training

I. Percent of health personnel trained in disease surveillance

C9.1N What percent of your subordinate personnel have been trained in surveillance

- | | | | |
|------|--|---|-----------------------------|
| C9.2 | Have you been trained in disease surveillance? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | | Unknown <input type="checkbox"/> | <input type="checkbox"/> |
| | | Not applicable <input type="checkbox"/> | <input type="checkbox"/> |

C9.2T *If yes, specify when, where, how long, by whom?*

I. Percent of health personnel that have received post-basic training in disease surveillance

- | | | | |
|------|--|---|-----------------------------|
| C9.3 | Have you received any post-basic training in disease surveillance? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| | | Unknown <input type="checkbox"/> | <input type="checkbox"/> |
| | | Not applicable <input type="checkbox"/> | <input type="checkbox"/> |

C9.3T *If yes, specify when, where, how long, by whom?*

I. Percent of health personnel that have received post-basic training in epidemic management

C9.4 Have you received any post-basic training in epidemic management? Yes No
Unknown
Not applicable

C9.4T *If yes, specify when, where, how long, by whom?*

Obtain and analyse the content of the surveillance and epidemic management training

C9.5T Strengths

C9.6T Weaknesses

C9.7T Opportunities

C9.8T Threats

I. Major strength and weaknesses of existing training schools and programmes' materials

C9.9T Strengths

C9.10T Weaknesses

C9.11T Opportunities

C9.12T Threats

I. Presence of a functional Epidemiology/Public Health Society

C9.13 Is there a national Epidemiology/Public Health Society? Yes No
Unknown
Not applicable

C9.13N How often do they meet?

X. Resources

I. Percent of sites that have:

Data management

- Computer
 - Printer
 - Photocopier
 - Data manager
 - Statistical package
-

Communications

- Telephone service
 - Fax
 - Radio call
 - Satellite phone
 - Computers that have modems
-

Budget line

Logistics

Data management	(Yes = Y No = N Unknown = U Not applicable = N/A)		Number if available
— Computer	C10.1	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	C10.1N
— Printer	C10.2	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	C10.2N
— Statistical package	C10.3	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Data manager	C10.4	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	C10.4N
— Photocopier	C10.5	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	C10.5N
Communications			
— Telephone service	C10.6	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Fax	C10.7	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Radio call	C10.8	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Computers that have modems	C10.9	Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	C10.9N
Logistics			

XI. Surveillance

I. Have a functional computerised surveillance network

C10.10 Do you have a computerised surveillance network at this level? Yes No
Unknown
Not applicable

C10.10T *If yes*, Describe (closed network, central database server, data storage and analysis, feedback through system etc)

C10.11T Links with other levels (list)

C10.12T Link to specialised computerised systems (ex. Outbreak notification system).
List:

I. Budget for surveillance

C10.13 Is there a budget line for surveillance in the MoH budget? Yes No
Unknown
Not applicable

C10.13N *If yes*, what is the proportion: %

I. Opportunities for strengthening surveillance

C11T How could surveillance be improved?

XII. Surveillance co-ordination

I. Existence of a surveillance co-ordination body at MOH central level

C12.1 Is there a surveillance co-ordination body at MOH central level? Yes No
Unknown
Not applicable

C12.1T *If yes*, describe its composition, function and links to various sectors including the laboratory

[Observe minutes/reports of the co-ordination committee to confirm]

I. Existence of focal unit for surveillance at MOH central level

C12.2Obs Is there a focal unit for surveillance at the MOH central level? Yes No
Unknown
[Observe organogramme of MoH to confirm] Not applicable

I. Opportunities for integration

C13T What opportunities are there for integration of surveillance activities and functions (core activities, training, supervision, guidelines, resources etc.)?

DISTRICT (INTERMEDIATE LEVEL) QUESTIONNAIRE

The questions are preceded by suggested variable names e.g., D1.1.

Identifiers

Assessment team: ID1	District: ID6
Date: DATE	Region/Province: ID7
Interviewer: ID2	Country: ID8
Respondent: ID3	Surveillance System : ID9

I. Percent of districts with available national surveillance manual

D0.1 Is there a national manual for surveillance at this site?

D0.1Obs Observe national surveillance manual

I. Case confirmation

I. Percent of districts that have the capacity to transport specimens to a higher level lab

D1.1 Does the district have the capacity to transport specimens to a higher level lab? Yes No
Unknown
Not applicable

I. Percent of districts with guideline for specimen collection, handling and transportation to next level

D1.2 Does the district have guidelines for specimen collection, handling and transportation to the next level? Yes No
Unknown
Not applicable

II. Data reporting

I. Percent of sites that have forms recommended for the country for that site at all times over the past 6 months

D2.1 Have you lacked forms recommended for the country at any time during the last 6 months? Yes No
Unknown
Not applicable

I. Percent of health facilities that reported each reporting period to the district level during the past 3 months

Number of reports received in the last 3 months compared to expected number

D2.21 Weekly: /12 times the number of health facilities

D2.22 Monthly: /3 times the number of health facilities

I. On time (use national deadlines)

D2.31 Number of weekly reports submitted on time: /12 times the number of health facilities

D2.32 Number of monthly reports submitted on time: /3 times the number of health facilities

I. Percent of districts that reported each reporting period to the next higher level during the past 3 months

Number of reports in the last 3 months compared to expected number

D2.41 Weekly: /12 times the number of health facilities

D2.42 Monthly: /3 times the number of health facilities

I. On time (use national deadlines)

D2.51 Number of weekly reports submitted on time: /12 times the number of health facilities

D2.52 Number of monthly reports submitted on time: /3 times the number of health facilities

I. Percent of districts that have means for reporting to next level by e-mail, telephone, fax or radio

D2.6 How do you report:
Mail Fax Telephone Radio Electronic Other

I. Strengthening reporting

How can reporting be improved?

D2.7T

III. Data analysis

I. Percent of sites that:

Describe data by person (case based, outbreaks, sentinel)

D3.1Obs Observed description of data by age and sex
Yes No
Unknown
Not applicable

I. Describe data by place

D3.2Obs Observed description of data by place (locality, village, work site etc)
Yes No
Unknown
Not applicable

I. Describe data by time

D3.3Obs Observed description of data by time
Yes No
Unknown
Not applicable

I. Perform trend analysis

D3.4Obs Observed line graph of cases by time
Yes No
Unknown
Not applicable

D3.4T List:

I. Have an action threshold for each priority disease

D3.41 Do you have an action threshold for any of the country priority diseases? Yes No
Unknown
Not applicable

D3.42 *If yes*, what is it? cases % increase rate
(Ask for 2 priority diseases)

D3.51N Eradication

D3.52N Epidemic prone

I. Have appropriate denominators

D3.6Obs Observed presence of demographic data at site Yes No
(E.g. population <5 yr, population by village, Unknown
total population) Not applicable

I. Use appropriate source of denominators

D3.7T What is the source of your denominator?

I. Percent of sites that compare current with previous incidence for early detection of epidemics

D3.8Obs Observed visible line graph of cases by time for epidemic prone diseases Yes No
Unknown
Not applicable

D3.8T List:

IV. Outbreak investigation

I. Percent of suspected outbreaks that were investigated in the past year

D4.1N Number of outbreaks suspected in the past year

D4.1Obs Of those, number investigated
(Observe reports and take copies if possible)

I. Percent of districts that have ever conducted an outbreak investigation

[Number of districts assessed that have ever conducted an outbreak investigation
Number of districts assessed to obtain indicator]

D4.2 Has your district ever investigated an outbreak? Yes No
Unknown
Not applicable

I. Of districts that investigated an outbreak, percent that looked for risk factors

D4.3N Number of districts that looked for risk factors [observe in reports]

I. Of districts that investigated an outbreak, percent that used the data for action (action include containing outbreak, improving surveillance, community actions)

D4.4N Number of districts that used the data for action [observe in final report]

V. Epidemic preparedness

I. Percent of districts that have a plan for epidemic preparedness and response

D5.1Obs Observed a written plan of epidemic preparedness and response

I. Percent of districts that have emergency stocks of drugs and supplies at all times in past 1 year

D5.2 Has the district had emergency stocks of drugs and supplies at all times in past 1 year?

D5.2Obs Observed the stocks of drugs and supplies at time of assessment

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

List what is available:

I. Percent of districts that experienced a shortage of drugs, vaccines or supplies during the most recent epidemic (or outbreak)

D5.3 Has the district experienced shortage of drugs, vaccines or supplies during the most recent epidemic (or outbreak)?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Presence of a budget line for epidemic response or access to funds for epidemic response

D5.4 Is there a budget line or access to funds for epidemic response?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of districts that have an epidemic management committee

D5.5Obs Observed minutes (or report) of meetings of epidemic management committee

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of districts that have rapid response team for epidemics

D5.6 Does the district have a rapid response team for epidemics?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

VI. Responses

I. Percent of sites that implemented prevention and control measures based on local data for at least one reportable disease or syndrome

D6.1 Has the district implemented prevention and control measures based on local data for at least one reportable disease or syndrome?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of districts that responded within 48 hours of notification of most recently reported outbreak

D6.2Obs Observed that the district responded within 48 hours of notification of most recently reported outbreak (from written reports)

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of districts that achieved acceptable case fatality rates (e.g. 10% for Meningococcal CSM 1% for Cholera) during the most recent outbreak

D6.3Obs Observed that the district achieved an acceptable case fatality rate for most recent outbreak (Observe from outbreak report)

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of districts that have performed mass vaccination (meningitis and yellow fever) campaign coverage evaluations

D6.41	Has the district ever performed mass vaccination campaigns?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Unknown			<input type="checkbox"/>
		Not applicable			<input type="checkbox"/>
D6.42Obs	<i>If yes</i> , has the district ever calculated vaccination coverage? (observe report to confirm)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Unknown			<input type="checkbox"/>
		Not applicable			<input type="checkbox"/>

I. Percent of epidemic management committees that have evaluated their preparedness and response activities during the past year

D6.5Obs	Has epidemic management committee evaluated their preparedness and response activities during the past year? (observe written report to confirm)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Unknown			<input type="checkbox"/>
		Not applicable			<input type="checkbox"/>

VII. Feedback

I. Percent of sites that have written report that is regularly produced to disseminate surveillance data

D7.1N	How many feedback written reports has the district produced in the last year?				
D7.1Obs	Observed the presence of a written report that is regularly produced to disseminate surveillance data (district and higher)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Unknown			<input type="checkbox"/>
		Not applicable			<input type="checkbox"/>

I. Percent of sites that have received a report or bulletin from a higher level during the past year on the data they have provided

D7.2N	How many feedback bulletin or reports has the district received in the last year?				
D7.2Obs	Observed at least 1 report or bulletin at district from a higher level during the past year on the data they have provided	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Unknown			<input type="checkbox"/>
		Not applicable			<input type="checkbox"/>

VIII. Supervision

I. Percent of individuals supervised in the past 6 months

D8.1N	How many times have you been supervised in the last 6 months?				
D8.1Obs	Observed supervision report or any evidence of supervision in last 6 months				

I. Of those supervised in the previous 6 months, percent of individuals for which the supervisor from the next higher level reviewed surveillance practices appropriate to their level

D8.2Obs	Observed supervision report or any evidence for appropriate review of surveillance practices				
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I. Percent of supervisors that made the required number of supervisory visits in the past 6 months

D8.31N	How many supervisory visits have you made in the last 6 months?				
D8.32N	(Obtain required number of visits from central level)				

The most usual reasons for not making all required supervisory visits. (Text)

D8.41T Reason 1

D8.42T Reason 2

D8.53T Reason 3

IX. Training

I. Percent of health personnel (in position of responsibility) trained in disease surveillance

D9.1 Have you been trained in disease surveillance? Yes No
Unknown
Not applicable

D9.1T *If yes, specify when, where, how long, by whom?*

I. Proportion of districts with staff trained in surveillance and epidemic management

D9.2 What percent of your personnel in the district have been trained in surveillance and epidemic management

D9.2N

I. Percent of health personnel (in position of responsibility) that have received post-basic training in disease surveillance

D9.3 Have you received any post-basic training in disease surveillance? Yes No
Unknown
Not applicable

D9.3T *If yes, specify when, where, how long, by whom?*

I. Percent of health personnel that have received post-basic training in epidemic management

D9.4 Have you received any post-basic training in epidemic management? Yes No
Unknown
Not applicable

D9.4T *If yes, specify when, where, how long, by whom?*

X. Resources

I. Percent of sites that have:

Logistics

- Electricity
 - Bicycles
 - Motor cycles
 - Vehicles
-

Data management

- Stationery
 - Calculator
 - Computer
 - Printer
 - Statistical package
-

Communication

- Telephone service
- Fax
- CB radio
- Computers that have modems

Information education and communication materials

- Posters
- Megaphone
- Flipcharts or Image box
- VCR and TV set
- Generator
- Screen
- Projector (Movie)
- Other:

Hygiene and sanitation materials

- Spray pump
- Disinfectant

Protection materials (list)

Logistics	(Yes = Y No = N Unknown = U Not applicable = N/A)	Number if applicable
— Electricity	D10.1 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Bicycles	D10.2 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	D10.2N
— Motor cycles	D10.3 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	D10.3N
— Vehicles	D10.4	D10.4N

Data management

— Stationery	D10.5 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Calculator	D10.6 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	D10.6N
— Computer	D10.7 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	D10.7N
— Printer	D10.8 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	D10.8N
— Statistical package	D10.9 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	

Communications

— Telephone service	D10.10 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Fax	D10.11 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Radio call	D10.12 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Computers that have modems	D10.13 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	D10.13N

Information education and communication materials

— Posters	D10.14 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Megaphone	D10.15 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Flipcharts or Image box	D10.16 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— VCR and TV set	D10.17 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Generator	D10.18 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Screen	D10.19 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Projector (Movie)	D10.20 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Other:	D10.21T Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	

Hygiene and sanitation materials

- | | | |
|----------------------------------|----------------|---|
| — Spray pump | D10.22 | Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/> |
| — Disinfectant | D10.23 | Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/> |
| — Protection materials
(list) | D10.24T | Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/> |
-

XI. Surveillance co-ordination

I. Existence of a surveillance co-ordination focal unit or person at district level

- D11.1** Is there a surveillance co-ordination focal point within the district epidemic management committee?
-

XII. Satisfaction with surveillance system

I. Satisfaction with the surveillance system

- D12.1** Are you satisfied with the surveillance system? Yes No
Unknown
Not applicable

- D12.1T** If no, how can the surveillance system be improved?
-

I. Opportunities for integration

- D13T** What opportunities are there for integration of surveillance activities and functions (core activities, training, supervision, guidelines, resources etc.)
-
-

HEALTH FACILITY QUESTIONNAIRE

Questions have suggested variable names e.g. HF1.1.

Identifiers

Assessment team: ID1	Type of Health Facility: ID5
Date: DATE	District: ID6
Interviewer: ID2	Region/Province: ID7
Respondent: ID3	Country: ID8
Name of Health Facility: ID4	Surveillance System : ID9

I. Percent of health facilities with national surveillance manual

HF0.1 Is there a national manual for surveillance at this site?

HF0.1Obs Observe national surveillance manual

I. Case detection and registration

I. Percent of health facilities that have a clinical register

HF1.1Obs Observed the existence of a clinical register

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown			<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of health facilities that correctly register cases

HF1.2Obs Observed the correct filling of the clinical register during the previous 30 days

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown			<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of health facilities that have standardised case definitions for the country's priority diseases

HF1.3 Do you have a standard case definition for: (each priority disease)?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown			<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

HF1.3Obs Observed the standard case definition for: (each priority disease)

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown			<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

I. Percent of health facilities that use standardised case definitions for the country's priority diseases

HF1.4Obs Observed the respondent correctly diagnosing one of the country's priority diseases using a standard case definition

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown			<input type="checkbox"/>
Not applicable			<input type="checkbox"/>

(Select one of the priority diseases in the facility's clinical register and ask how they diagnosed it — interviewer should have the standard case definition from MOH)

II. Case confirmation*

I. Percent of health facilities that have the capacity to collect specimens (sputum stool, blood/serum and CSF)

HF2.1	Are you able to collect sputum	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
	Stool	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
	Blood	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
	CSF at this facility?	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
HF2.1Obs	Observed the presence of materials required to collect	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
	Stool	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
	blood/serum	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
	CSF	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>

I. Percent of health facilities that have the capacity to handle specimens until shipment

HF2.2	Do you have the capacity to handle sputum, stool, blood/serum and CSF until shipment at this facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
HF2.2Obs	Observed presence of functional cold chain at health facility	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>

I. Percent of health facilities that have the capacity to ship specimens to a higher level lab

HF2.3Obs	Observed presence of transport media for stool at health facility	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
HF2.4Obs	Observed presence of packing materials for shipment of specimens at health facility	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>

III. Data reporting

I. Percent of sites that have appropriate surveillance forms for that site at all times over the past 6 months

HF3.1	Have you lacked appropriate surveillance forms at any time during the last 6 months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	Not applicable <input type="checkbox"/>
--------------	--	------------------------------	-----------------------------	----------------------------------	---

I. Percent of sites that reported accurately cases from the registry into the summary report to go to higher level

Observed that the last monthly report agreed with the register for 4 diseases (1 for each targeted group [eradication; elimination; epidemic prone; major public health importance])

HF3.21Obs	Eradication	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
HF3.22Obs	Elimination	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
HF3.23Obs	Epidemic prone	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>
HF3.24Obs	Major Public Health Importance	Y <input type="checkbox"/>	N <input type="checkbox"/>	U <input type="checkbox"/>	N/A <input type="checkbox"/>

* May have to develop table for the diseases

I. Percent of sites that reported each reporting period to the next higher level during the past 3 months

Number of reports in the last 3 months compared to expected number

HF3.31Obs Weekly: /12 times the number of sites

HF3.32Obs Monthly: /3 times the number of sites

I. On time (use national deadlines)

HF3.41Obs Number of weekly reports submitted on time: /12 times the number of sites

HF3.42Obs Number of monthly reports submitted on time: /3 times the number of sites

I. Percent of HF that have means for reporting to next level by e-mail, telephone, fax or radio

HF3.5 How do you report:

Mail Fax Telephone Radio Electronic Other

I. Strengthening reporting

How can reporting be improved?

HF3.6T

IV. Data analysis

I. Percent of sites that:

Describe data by person (outbreaks, sentinel)

HF4.1Obs Observed description of data by age and sex
 Yes No
 Unknown
 Not applicable

I. Describe data by place

HF4.2Obs Observed description of data by place (locality, village, work site etc)
 Yes No
 Unknown
 Not applicable

I. Describe data by time

HF4.3Obs Observed description of data by time
 Yes No
 Unknown
 Not applicable

I. Perform trend analysis

HF4.4Obs Observed line graph of cases by time
 Yes No
 Unknown
 Not applicable

I. Have an action threshold for each priority disease

HF4.5 Do you have an action threshold for any of the country priority diseases?
 Yes No
 Unknown
 Not applicable

H4.50 If yes, what is it? cases % increase rate
(Ask for 2 priority diseases)

HF4.51N (Eradication)

HF4.52N (Epidemic prone)

I. Have appropriate denominators

HF4.6Obs Observed presence of demographic data at site Yes No
(E.g. population <5 yr., population by village, Unknown
total population) Not applicable

I. Use appropriate denominators

HF4.7Obs Observed rates derived from demographic data Yes No
Unknown
Not applicable

I. Use appropriate source of denominators

HF4.8T What is the source of your denominator?

V. Epidemic preparedness

I. Percent of health facilities that have a standard case management protocol for epidemic prone diseases

HF5.1Obs Observed the existence of a written case Yes No
management protocol for 1 epidemic prone disease Unknown
Not applicable

VI. Epidemic response

I. Percent of sites that implemented prevention and control measures based on local data for at least one epidemic prone disease

HF6.1 Has the health facility implemented prevention and Yes No
control measures based on local data for at least one Unknown
epidemic prone disease? Not applicable

I. Percent of sites that achieved acceptable case fatality rates (e.g. 10% for Meningococcal CSM 1% for Cholera) during the most recent outbreak

HF6.2Obs Observed that the health facility achieved an Yes No
acceptable case fatality rate for most recent Unknown
outbreak Not applicable

VII. Feedback

I. Percent of sites that have received a report or bulletin from a higher level during the past year on the data they have provided

HF7.1 How many feedback bulletin or reports has the health facility received in the last year?

HF7.1Obs Observed at least 1 report or bulletin at the health Yes No
facility from a higher level during the past year on Unknown
the data they have provided Not applicable

I. Percent of health facilities that conducted at least semi-annual meetings with community members to discuss results of surveillance or investigation data

HF7.2 How many meetings has this health facility conducted with the community members in the past six months?

HF7.2Obs Observed the minutes or report of at least 1 meeting between the health facility team and the community members within the six months

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable	<input type="checkbox"/>		<input type="checkbox"/>

VIII. Supervision

I. Percent of individuals supervised in the past 6 months

HF8.1 How many times have you been supervised in the last 6 months?

HF8.1Obs Observed supervision report or any evidence of supervision in last 6 months

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable	<input type="checkbox"/>		<input type="checkbox"/>

I. Of those supervised in the previous 6 months, percent of individuals for which the supervisor from the next higher level reviewed surveillance practices appropriate to their level

HF8.2Obs Observed supervision report or any evidence for appropriate review of surveillance practices

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable	<input type="checkbox"/>		<input type="checkbox"/>

IX. Training

I. Percent of health personnel trained in disease surveillance and epidemic management

HF9.1 Have you been trained in disease surveillance and epidemic management?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Unknown	<input type="checkbox"/>		<input type="checkbox"/>
Not applicable	<input type="checkbox"/>		<input type="checkbox"/>

HF9.1T *If yes, specify when, where, how long, by whom?*

X. Resources

I. Percent of sites that have:

Logistics

- Electricity
- Bicycles
- Motor cycles
- Vehicles

Data management

- Stationery
- Calculator
- Computer
- Software
- Printer
- Statistical package

Communications

- Telephone service
- Fax
- Radio call
- Computers that have modems

Information education and communication materials

- Posters
- Megaphone
- Flipcharts or Image box
- VCR and TV set
- Generator
- Screen
- Projector (Movie)
- Other:

Hygiene and sanitation materials

- Spray pump
- Disinfectant

Protection materials (list)

Logistics	(Yes = Y No = N Unknown = U Not applicable = N/A)	Number if applicable
— Electricity	HF10.1 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Bicycles	HF10.2 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	HF10.2N
— Motor cycles	HF10.3 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	HF10.3N
— Vehicles	HF10.4 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	HF10.4N

Data management

— Stationery	HF10.5 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Calculator	HF10.6 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	HF10.6N
— Computer	HF10.7 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	HF10.7N
— Printer	HF10.8 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	HF10.8N
— Statistical package	HF10.9 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	

Communications

— Telephone service	HF10.10 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Fax	HF10.11 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Radio Call	HF10.12 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Computers that have modems	HF10.13 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	

Information education and communication materials

— Posters	HF10.14 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Megaphone	HF10.15 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Flipcharts or Image box	HF10.16 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— VCR and TV set	HF10.17 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Generator	HF10.18 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Screen	HF10.19 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Projector (Movie)	HF10.20 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Other:	HF10.21T Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	

Hygiene and sanitation materials

— Spray pump	HF10.22 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Disinfectant	HF10.23 Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	
— Protection materials (list)	HF10.24T Y <input type="checkbox"/> N <input type="checkbox"/> U <input type="checkbox"/> N/A <input type="checkbox"/>	

XI. Satisfaction with surveillance system

I. Satisfaction with the surveillance system

HF11.1 Are you satisfied with the surveillance system? Yes No
Unknown
Not applicable

HF11.1T *If no*, how can the surveillance system be improved?

I. Opportunities for integration

HF12T What opportunities are there for integration of surveillance activities and functions (core activities, training, supervision, guidelines, resources etc.)

LABORATORY ASSESSMENT

I. Objectives

General objective:

To rapidly assess the functional laboratory capacity for diagnosis of priority diseases for surveillance.

Specific objectives:

To employ a standardised tool for brief laboratory assessments to obtain easily available information about laboratory capability at all levels as part of the overall assessment of national surveillance systems.

To identify weaknesses in laboratory provision for priority disease detection and devise improvements ensuring that clinical specimens and information flow smoothly from district to provincial and national levels.

To enable the development of a plan of action to strengthen laboratory capacity for surveillance and control of priority diseases.

II. Key steps in carrying out the laboratory assessment:

Step I: Review of documentation and information in the country

1. Obtain pertinent documents from previous laboratory assessments performed in the country before assessment
2. National laboratory system (both public and private)
 - a. Review the national laboratory services policy
 - b. Description of organizational units within Ministry of Health (e.g. health centre, district, regional, national)
 - c. Description of organizational units for other Ministries that have health care functions (e.g. Ministry of Education or Scientific Research). University medical schools often provide laboratory services and are valuable resources that should not be overlooked

- d. Description of laboratories in the private sector. These include both independent labs and those in private hospitals. If a national accrediting organization for laboratories exists, consult this agency for information about the type and number of private laboratories.

Step II: Adaptation and modification of proposed generic questionnaire

The protocol recommends a generic tool for assessment, that needs to be modified for each level of the health system. This should take into account the degree of sophistication of the assessed level, as well as the type of laboratory facility to be assessed. These vary widely from country to country. Relevant questions would need to be identified for each level of laboratory assessed within the country. A careful review of each question is important and these should be modified or deleted as appropriate.

Train assessors in the use of the laboratory assessment tool and how to perform the associated brief laboratory inspection. The time spent administering the questionnaire and inspecting the laboratory may vary greatly, depending on the type of laboratory and the level of the health care system, and this should be taken into account.

Step III: The field assessment

3.1. Using a representative sample of laboratories at each level in both public and private organizations, assess the following:

1. Building facilities and utility services
2. Laboratory equipment
3. Laboratory Staff
 - a. Number (level of training)
 - b. Supervision
4. Reagents
5. Tests performed
 - a. Name of test
 - b. Number per month
6. Laboratory management
 - a. Hours of service
 - b. Procedure manuals
 - c. Specimen collection, labelling and handling

- d. Reporting procedures
- e. Quality control procedures and programme
 - 1) Internal and external quality assurance and proficiency programmes
 - 2) Equipment maintenance and repair
 - 3) Supply procurement and management
- f. Safety.

3.2. Inspect the laboratory and complete the inspection form to validate data reported in the interview.

- a. Accessioning and reporting
- b. Manuals
- c. Equipment and reagents
- d. Safety.

Step IV: Data analysis and report writing

Analyse data from country-wide laboratory assessment in regard to:

- a. Overall function of surveillance system
- b. Identification of specific laboratories deserving detailed laboratory assessment with a view to delineating and enhancing their role in the surveillance system.

The report writing could be done as part of the overall national surveillance system assessment report or separately if required.

Note: Follow-up assessments can also measure qualitative and quantitative changes in types of tests performed, number of each test performed per month and changes in proficiency by examining quality control data from internal controls and results of testing panels from reference labs.

LABORATORY ASSESSMENT TOOL

Checklist for diagnostic laboratory assessment

General Information	
Name of the laboratory	
Address of the laboratory	
Telephone/fax/e-mail	
Level of the laboratory	Health Facility <input type="checkbox"/> Provincial/State/Regional <input type="checkbox"/> National <input type="checkbox"/> Community/District <input type="checkbox"/>
Affiliation of the Laboratory (more than one may be applicable, e.g. Private and Academic)	Public <input type="checkbox"/> Private <input type="checkbox"/> Academic Institution <input type="checkbox"/> NGO or Religious Institution <input type="checkbox"/>
Name of head of Laboratory	
Name of Laboratory Director	
Building facilities and utility services	
How is the state of the building good <input type="checkbox"/> medium <input type="checkbox"/> poor* <input type="checkbox"/>	
Is the laboratory in a free-standing building <input type="checkbox"/> or part of larger structure <input type="checkbox"/>	
Does the laboratory perform tests for:	
Bacteriology	Yes <input type="checkbox"/> No <input type="checkbox"/>
Virology	Yes <input type="checkbox"/> No <input type="checkbox"/>
Mycobacteriology	Yes <input type="checkbox"/> No <input type="checkbox"/>
Parasitology	Yes <input type="checkbox"/> No <input type="checkbox"/>
Mycology	Yes <input type="checkbox"/> No <input type="checkbox"/>
Cell culture facility?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Is the laboratory connected to hospital service?	Yes <input type="checkbox"/> No <input type="checkbox"/>
How many rooms with bench space are there in the laboratories checked above?	Number:
What % of the working day do you have the following services available?	
Electricity	<50% <input type="checkbox"/> 50-95% <input type="checkbox"/> 95-100% <input type="checkbox"/>
Running water	<50% <input type="checkbox"/> 50-95% <input type="checkbox"/> 95-100% <input type="checkbox"/>
Gas (including bottled)	<50% <input type="checkbox"/> 50-95% <input type="checkbox"/> 95-100% <input type="checkbox"/>

* Need to define at country level

Is there a back-up power source in case of power failure (e.g. emergency generator)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<i>If yes, what systems are protected?</i>		
Refrigerators/freezers	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Ventilation/AC	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Computers	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	Not applicable <input type="checkbox"/>	
What ventilation is provided?		
Windows	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Electrically-powered ventilation (exhaust, not fans) system or air-conditioning	Yes <input type="checkbox"/>	No <input type="checkbox"/>
What types of communications systems are available?	√ all applicable	Number
Post	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Telephone	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Fax	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Satellite phone	Yes <input type="checkbox"/>	No <input type="checkbox"/>
E-mail (no. computers)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Internet (no. computers)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Laboratory equipment

Type and number of items available in your laboratory	Present	Number
Refrigerator	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Freezing at -20°C	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Freezing at -70°C	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Microscope with oil-immersion objective	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Slides and coverslips	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Scale or balance	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Candle jars	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other Anaerobe jar	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Magnifying lens	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Loop/needle handles	Yes <input type="checkbox"/>	No <input type="checkbox"/>
0.01 and 0.001ml calibrated loops	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Bunsen burner	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If no Bunsen burner, Electric heater or alcohol lamp to sterilise loops and needles	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Petri dishes (glass)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Petri dishes (disposable)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Test tube racks	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Staining facilities-sink and slide rack	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Adequate glassware for media preparation (flasks, graduated cylinders, etc.)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Wash bottles	Yes <input type="checkbox"/>	No <input type="checkbox"/>
pH paper	Yes <input type="checkbox"/>	No <input type="checkbox"/>
pH meter	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Manual pipettes (e.g. Eppendorf)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Water distillation system	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Type and number of items available in your laboratory	Present	Number
Low-speed centrifuge (hand or electrically powered)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Autoclave - manually controlled	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Autoclave - electrically controlled	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Hot air oven	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Inverted microscope	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Fluorescent microscope	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Electron microscope	Yes <input type="checkbox"/> No <input type="checkbox"/>	
ELISA plate reader	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Electrically-powered waterbath	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Warm air incubator	Yes <input type="checkbox"/> No <input type="checkbox"/>	
CO ₂ incubator	Yes <input type="checkbox"/> No <input type="checkbox"/>	
CO ₂ tanks	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Liquid nitrogen storage	Yes <input type="checkbox"/> No <input type="checkbox"/>	
ELISA washer	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Safety cabinet- level 1 (operator protection. Open-fronted, unrecirculated airflow away from operator)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Safety cabinet- level 2 (protects operator and material from contamination. Open fronted, filtered supply and exhaust air)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Safety cabinet- level 3 (protects operator, material and environment from contamination-enclosed, negative pressure, HEPA filtered air supply and exhaust)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Are all equipment functioning? (Ask this question after each equipment item, if response is NO, record below)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
If no, what items of equipment are not functioning?		

Laboratory staff and supervision for all microbiology and serology labs

Number of staff in each category	Number	% of staff available in lab
Supervisors — Medical/Scientific		
Supervisors — Technical		
Technologist/Technical (doing tests)		
Laboratory assistants (not doing tests)		
Clerical		
What is the highest level of microbiology training achieved by technical staff performing diagnostic tests? (state number of staff for each option)		
In-laboratory training only		
Diploma course or specific training course		
Degree level		
Other (briefly describe):		
Has training been conducted for your laboratory staff in the past year?	Yes <input type="checkbox"/> No <input type="checkbox"/>	

Number of staff in each category	Number	% of staff available in lab
<i>If yes, indicate the type of training and the number of staff trained</i>		
Formal training at national lab	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Formal training on-site	Yes <input type="checkbox"/> No <input type="checkbox"/>	
International training	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Laboratory staff supervision		
Who usually decides which tests to perform when the samples first arrive in the laboratory?		
The requesting clinician	Yes <input type="checkbox"/> No <input type="checkbox"/>	
The technician	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Microbiologist/supervisor	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Laboratory protocol	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Who makes decisions about further testing if indicated?		
The technician	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Microbiologist/supervisor	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Are ALL tests reviewed before results sent for reporting?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
<i>If yes, who reviews the results of tests (or test runs)?</i>		
Only the technician performing the test	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Another member of the technical staff	Yes <input type="checkbox"/> No <input type="checkbox"/>	
A supervisor/medical microbiologist	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Are ALL tests reviewed before results sent for reporting?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
<i>If yes, who reviews the final report before it is sent to the requesting clinician or other appropriate recipient?</i>		
Only the technician performing the test	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Another member of the technical staff	Yes <input type="checkbox"/> No <input type="checkbox"/>	
A supervisor/medical microbiologist	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Reagents		
What proportion of your reagents do you obtain from:		
A commercial supplier		%
From another laboratory		%
Prepared in-house		%
What type of water is used for preparation of media and reagents?		
Deionized	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Distilled	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Distilled and deionized	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Tap water	Yes <input type="checkbox"/> No <input type="checkbox"/>	

Tests performed at the laboratory

The following table lists a number of diseases and diagnostic tests. Please note which tests are performed in your laboratory. For each disease, note whether or not you test any of the named specimens by any of the listed tests. (If you do not perform any tests for meningitis, for example, ✓ in the "No" column for all. If you perform a Gram stain on CSF for meningitis, but none of the other tests, ✓ in the "Yes" column for Gram stain, and "No" for the other meningitis tests.) Please give the approximate number/month of each test you perform.

Disease	Specimen type	Assay Performed	Yes	No	Number/ Month
Meningitis	CSF <i>S. pneumoniae</i> <i>N. meningitidis</i> <i>H. influenzae</i> Blood	a. Cell count b. Latex agglutination c. Gram stain d. Culture e. Identification tests f. A-M susceptibility Optochin disks Sugar fermentations X, V, XV factors Blood Culture and tests b, e, f above			
Dysentery	Faeces	Microscopy of wet preparation Culture Identification tests A-M susceptibility			
Watery diarrhea (cholera)	Faeces	Microscopy of wet preparation Culture-TCBS Culture-Alk. Peptone Serotyping			
Plague	Bubo aspirate, sputum, blood	Stain Culture A-M susceptibility			
Tuberculosis	Sputum, CSF	Z-N staining Rhodamine/Auramine staining and fluorescent microscopy Culture A-M Susceptibility			
Malaria	Blood	Thick/Thin film microscopy			

Measles	Serum Throat swab, conjunctival swab	IgM by EIA Other serological test Virus isolation			
Yellow fever	Serum Blood, post-mortem liver	IgM Virus isolation			
FUO/PUO (suspect typhoid or brucellosis)	Blood, faeces Serum	Culture Identification tests A-M susceptibility Serological tests (Widal, brucella agglutinins)			
Hepatitis	Serum	Anti-HAV IgM Anti-HBc IgM Anti-HbsAg Anti-HCV IgM Anti-HEV IgG			
Viral haemorrhagic fevers (any)	Serum Serum, other tissue specimens	IgM Virus detection			
Acute flaccid paralysis	Faeces	Virus isolation Virus typing			
HIV	Serum Blood	IgG by EIA Viral load Virus isolation			

Laboratory management

What are the normal hours/days of service of the laboratory?	
Number of days per week	<5 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/>
Hours per day	<6 <input type="checkbox"/> 6-10 <input type="checkbox"/> 11-23 <input type="checkbox"/> 24 <input type="checkbox"/>
If no 24-hour service, is out-of-hours or emergency service available?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If there is 24-hour service, number of staff at the following times:	Number
5 PM to 12 AM	
12 AM to 7 AM	
How does the laboratory inform existing or potential clients about the services it offers?	
Verbally only (informal)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Printed list/Brochure	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the technical staff have access to typed or written protocols (Standard Operating Procedures) for performing each test?	Yes <input type="checkbox"/> No <input type="checkbox"/>

Specimen collection, labelling and handling

Proportion of samples collected on site	<20% <input type="checkbox"/>	20-50% <input type="checkbox"/>	50-80% <input type="checkbox"/>	>80% <input type="checkbox"/>
Does the laboratory use standardised request forms to order laboratory tests?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Do request forms contain ALL of the following patient information: specimen source, date and time of collection, type of test requested?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Do request forms provide details or a link which enable the lab to contact the patient?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Are specimens that are received labelled with the patient's name and unique identifiers?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Does the laboratory provide a unique accession number for all specimens?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Does the laboratory have a logbook/electronic record of all specimens sent for diagnostic testing?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Are specimens discarded after testing, or are they stored?	Discarded <input type="checkbox"/> Stored <input type="checkbox"/>			
Are standard criteria used for discarding specimens with prolonged transit times (time of collection to time of processing in lab)?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Does the laboratory during evening/night shifts accept specimens?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
<i>If yes, how are the following samples handled?</i>				
Specimen	Plated immediately	If no, held at (✓ one)		
CSF	Yes <input type="checkbox"/> No <input type="checkbox"/>	4° Ambient temp. 35° <input type="checkbox"/>		
Blood culture	Yes <input type="checkbox"/> No <input type="checkbox"/>	4° Ambient temp. 35° <input type="checkbox"/>		
Urine	Yes <input type="checkbox"/> No <input type="checkbox"/>	4° Ambient temp. 35° <input type="checkbox"/>		
Does your laboratory refer bacteriology isolates or serum samples to the Ministry of Health or a reference laboratory?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
<i>If yes, reason for referral (✓ all)</i>				
Confirmation	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Identification of unknown organism	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Test not performed on site	Yes <input type="checkbox"/> No <input type="checkbox"/>			
<i>If yes, then by what method?</i>				
By regular post service	Yes <input type="checkbox"/> No <input type="checkbox"/>			
By special messenger	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Courier service	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Other (describe):				
<i>If yes, number of sample sent per month?</i>				
Types of transport media used (✓ all that apply)				
Trans-isolate	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Amies	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Stuart	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Cary and Blair	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Blood agar slants	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Viral transport medium	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Other (describe):				

Reporting procedures	
Are records kept of the number and type of tests performed and results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the laboratory use standardised forms to report lab results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the laboratory have a list of diseases that are supposed to be reported to the Ministry of Health?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>If no</i> , does the lab staff know what diseases should be reported?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the lab provide regular reports of patients with notifiable diseases to any of the following Ministry of Health offices/institutions? (✓ all that apply)	
District Health Office	Yes <input type="checkbox"/> No <input type="checkbox"/>
State Health Office	Yes <input type="checkbox"/> No <input type="checkbox"/>
Central Laboratory	Yes <input type="checkbox"/> No <input type="checkbox"/>
National Communicable Disease Program	Yes <input type="checkbox"/> No <input type="checkbox"/>
If reports are submitted, how frequently?	
Weekly	Yes <input type="checkbox"/> No <input type="checkbox"/>
Monthly	Yes <input type="checkbox"/> No <input type="checkbox"/>
Quarterly	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other	Yes <input type="checkbox"/> No <input type="checkbox"/>
If reports are submitted, by what means are they sent?	
Line list	Yes <input type="checkbox"/> No <input type="checkbox"/>
Telephone	Yes <input type="checkbox"/> No <input type="checkbox"/>
FAX	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other (describe):	
Do you keep register of persons with notifiable diseases?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>If yes</i> , is the register computerised?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If computerised, are back-up copies (hard copies or disc) of data made and archived?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Quality control procedures and programs	
Is information gathered about laboratory turn-around times for specimens (time from receipt of specimen to issue of the report)?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the laboratory use any system for internal quality control?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Are internal controls included in each test run?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>If yes</i> , is the performance of these internal controls recorded and monitored over time?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the laboratory participate in any external quality assurance or proficiency schemes?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>If yes</i> , what programs?	
Bacteriology unknowns	Yes <input type="checkbox"/> No <input type="checkbox"/>
HIV/Hepatitis panels	Yes <input type="checkbox"/> No <input type="checkbox"/>
Antimicrobial susceptibility	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other (specify)	Yes <input type="checkbox"/> No <input type="checkbox"/>

Does your laboratory keep records of deliveries of reagents and materials?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does your laboratory have a system for regularly monitoring of quantities of reagents and materials so that there is warning if stocks become low?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the laboratory have problems obtaining and maintaining most supplies of essential reagents and materials?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, what is the most important reason for not maintaining an adequate stock of reagents and supplies?	
Information about how to obtain materials	Yes <input type="checkbox"/> No <input type="checkbox"/>
Long delay ordering and delivery of materials	Yes <input type="checkbox"/> No <input type="checkbox"/>
Lack of funds	Yes <input type="checkbox"/> No <input type="checkbox"/>
Inconsistent demand for test from physicians	Yes <input type="checkbox"/> No <input type="checkbox"/>
Is the functioning of ALL electrical or mechanical equipment routinely monitored and recorded (e.g. microscope calibration, checking temperatures of refrigerators or incubators, calibration of pipettes or handling devices, autoclave function, etc.)?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Are calibration, maintenance and service records kept?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Safety	
Does the laboratory staff receive training in laboratory safety?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Is there a safety manual easily accessible to the laboratory the staff?	Yes <input type="checkbox"/> No <input type="checkbox"/>
What methods are used for solid waste disposal?	
Autoclaving	Yes <input type="checkbox"/> No <input type="checkbox"/>
Incineration	Yes <input type="checkbox"/> No <input type="checkbox"/>
Burial with no pre-treatment	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other (briefly describe):	
What methods are used for liquid waste disposal?	
No treatment	Yes <input type="checkbox"/> No <input type="checkbox"/>
Autoclaving	Yes <input type="checkbox"/> No <input type="checkbox"/>
Chemical disinfection	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other (briefly describe):	
Is there a safety officer	Yes <input type="checkbox"/> No <input type="checkbox"/>
Is there a safety SOP	Yes <input type="checkbox"/> No <input type="checkbox"/>
Are new staff offered immunisation	Yes <input type="checkbox"/> No <input type="checkbox"/>
What protective clothing/equipment is available for laboratory staff? (✓ all)	
Gloves - latex	Yes <input type="checkbox"/> No <input type="checkbox"/>
Gloves - other	Yes <input type="checkbox"/> No <input type="checkbox"/>
Lab coats	Yes <input type="checkbox"/> No <input type="checkbox"/>
Safety glasses/visors	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other (briefly describe):	
Are gloves worn for all manipulations of specimens, organisms, and reagents?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, type of gloves	

Latex	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Other	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<i>If no</i> , are they worn			
Only for designated procedures OR	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
By the decision of the technician performing a test?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If the respondent has said YES to any question for Antimicrobial (A-M) susceptibility testing, please indicate which method was used:			
Disk diffusion	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Agar dilution	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Broth dilution	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
E-Test	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Any anti-TB susceptibility testing method	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Do use any internationally recognised standards for definitions of resistance/susceptibility (e.g., NCCLS, Stokes, DIN, SGRA)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<i>If yes</i> , then which one(s)?			
If the laboratory performs tests for any sexually transmitted diseases, e.g. syphilis, gonorrhoea, chancroid, please enter the information in the following table			
Disease	Specimen type	Assay performed	Number/Month
If the laboratory performs any other virological assays using enzyme immunoassay, other serological assays, virus isolation or detection (including molecular tests, e.g., PCR), please list on the table below. Please append sheet if too numerous to fit on table			
Disease	Specimen type	Assay performed	Number/Month

LABORATORY INSPECTION

Laboratory Inspection

Inspect the laboratory and complete the following form. Be courteous by first asking permission to open refrigerators, freezers, media storage closets and incubators to examine items contained therein. Some of the information collected during a walk-through will be used to verify information provided on the questionnaire. Make additional Notes as required, e.g. general cleanliness and organization of the laboratory, staff activity level, workload (specimens and inoculated plates present), and special facilities. Obtain copies of standard forms where indicated.

Accessioning and reporting

Review accessioning logbook(s) if available. Roughly calculate the number of specimens submitted over a one-month period. Record number: <i>samples/month</i>		
Review forms submitted with specimens. What proportion of specimens received are labelled with the patient's name and unique identifiers?	<50% <input type="checkbox"/> >50% <input type="checkbox"/>	
Are copies of report forms available?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
<i>If yes</i> , obtain copies of standardised reports forms that are used		
Manuals		
Type of manual	Available	Date of last revision
Test Procedures	Yes <input type="checkbox"/> No <input type="checkbox"/>	< 1 year <input type="checkbox"/> 2-5 years <input type="checkbox"/> >5 years <input type="checkbox"/> no date <input type="checkbox"/>
Safety	Yes <input type="checkbox"/> No <input type="checkbox"/>	< 1 year <input type="checkbox"/> 2-5 years <input type="checkbox"/> > 5 years <input type="checkbox"/> no date <input type="checkbox"/>
Quality control	Yes <input type="checkbox"/> No <input type="checkbox"/>	< 1 year <input type="checkbox"/> 2-5 years <input type="checkbox"/> > 5 years <input type="checkbox"/> no date <input type="checkbox"/>
Equipment and reagents		
Briefly look to see if reported number and type of equipment items is consistent with those reported on the questionnaire. Are findings generally consistent with responses above?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Inspect equipment to see if performance indicators (e.g., temperatures) are regularly recorded		
Equipment item	Sheet present	Temps. Recorded (per cent complete)
Refrigerators	Yes <input type="checkbox"/> No <input type="checkbox"/>	0% <input type="checkbox"/> 1-50% <input type="checkbox"/> >50% <input type="checkbox"/>
Freezers	Yes <input type="checkbox"/> No <input type="checkbox"/>	0% <input type="checkbox"/> 1-50% <input type="checkbox"/> >50% <input type="checkbox"/>
Incubators	Yes <input type="checkbox"/> No <input type="checkbox"/>	0% <input type="checkbox"/> 1-50% <input type="checkbox"/> >50% <input type="checkbox"/>
Inspect prepared reagents, dehydrated media, antibiotic susceptibility disks and prepared media to see if dates are recorded for the date prepared or opened and to see if expiration dates have passed.		
Proportion of reagents labelled appropriately?	None <input type="checkbox"/> < 50% <input type="checkbox"/> >50% <input type="checkbox"/>	
Expiration dates found?	None <input type="checkbox"/> < 50% <input type="checkbox"/> >50% <input type="checkbox"/>	
For reagents with dates - percent outdated?	None <input type="checkbox"/> < 50% <input type="checkbox"/> >50% <input type="checkbox"/>	
Inspect bacteriological media, both prepared and dehydrated, and reagents for signs of deterioration, e.g. drying, discoloration, hemolysis		

Deterioration noted in bacteriological media	None <input type="checkbox"/> < 50% <input type="checkbox"/> >50% <input type="checkbox"/>
Safety	
If biosafety hood is present, is it operational?	Yes <input type="checkbox"/> No <input type="checkbox"/> No hood <input type="checkbox"/>
Is a certification/inspection sticker present?	Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable <input type="checkbox"/>
<i>If yes</i> , date of certification?	< 1 year <input type="checkbox"/> >1 year <input type="checkbox"/> Not applicable <input type="checkbox"/>
Inspect laboratory for presence of biosafety equipment (gloves, sharps containers, safety glasses)	
Gloves present	Yes <input type="checkbox"/> No <input type="checkbox"/>
Sharps containers	Yes <input type="checkbox"/> No <input type="checkbox"/>
What proportion of staff are wearing gloves while performing procedures?	<1-50% <input type="checkbox"/> >50% <input type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/>
Inspect equipment used for the disposal of biological wastes, e.g. autoclaves, incinerator. Is the hazardous waste disposal system operational?	Yes <input type="checkbox"/> No <input type="checkbox"/>

ASSESSMENT OF GEOGRAPHIC INFORMATION SYSTEMS AND MAPPING RESOURCES

A Geographic Information System (GIS) provides an excellent means of collecting and managing epidemiological surveillance and programmatic information. These data can be easily visualised and analysed in a map, revealing trends and inter-relationships that would be more difficult to discover in tabular format.

Moreover, GIS allows decision-makers and planners to easily visualise health situation of populations in relation to their surrounding environment and existing health and social infrastructures such as health facilities, schools and water supply.

Specific diseases and health events can be mapped in relation to the number and location of health facilities or access to safe water supply in order to create a comprehensive picture of the health situation of a given community, district or nation. Such information when mapped together creates a powerful tool not only for monitoring of surveillance results but also for operational planning and targeting of interventions and resources to areas/communities in need.

Key to the successful implementation of a GIS is the development of a standardised geographically referenced database that can be accessed/updated and used in common by different programmes and by different sectors at different levels (national, regional, district). This database serves as a common geographic platform within which all surveillance and programmatic data can be converged at the most appropriate level. **As such GIS lends itself as an entry point for integrating disease specific surveillance approaches.**

As a basic minimum a geographically referenced database should contain:

- Digitised administrative boundary maps from national to district levels
- Digitised maps of basic geographic features including rivers, roads, forests, elevation, land use and vegetation
- Geo-referenced databases of villages (e.g., Village names and geographic co-ordinates)
- Geo-referenced information on health facilities, schools and safe water points
- Vital demographic data down to village level.

In some countries, the use of GIS within the Health sector may still be relatively new or even non-existent. However, it is often the case that GIS is being used in the same country by other sectors (e.g., Ministries of Water and Environment are often well established in this area). It is therefore recommended that a multi-sectoral approach to the assessment of GIS databases and resources be taken.

The following questionnaire aims to rapidly identify from the different sectors what GIS resources and essential information are existing in country. It is expected that the results of the questionnaire will provide sufficient baseline information in order to develop an implementation plan for the use of GIS to support national integrated disease surveillance.

ASSESSMENT OF DATABASES AND GIS RESOURCES

(FOR WORKSHOP)

I. Objectives

General objective

The general objective of the assessment of databases and GIS resources is:

- To facilitate the development of national strategies in countries in region for the implementation of GIS for surveillance, planning, management and monitoring of priority diseases. The strategy will be based on a multi-sector approach.

Specific objectives

The specific objectives of the assessment of databases and GIS resources are:

- To rapidly assess GIS/mapping resources and capacity in country, with particular emphasis on the availability of geo-referenced databases and digitised basemaps
- To explore and assess the different uses of GIS within national ministries of health, statistics, water, planning and education as well as within agency partners such as WHO, UNICEF, UNFPA
- To present the planned use for GIS/mapping within the Integrated Disease Strategy and propose/identify areas for collaboration with existing GIS/mapping activities and resources
- To identify existing geo-referenced databases of villages, health facilities, schools, population and available digitised basemaps of administrative boundaries, road and river network, forestry, land use and elevation
- To explore and identify ways by which to co-ordinate GIS activities at the national level, with particular emphasis on the development of mechanisms for improved data sharing in order to implement GIS more effectively

- Identify further technical assistance requirements in the area of GIS/mapping in order to develop a comprehensive implementation plan for GIS in support of an integrated disease surveillance strategy.

II. Proposed process

The proposed process is in summary as follows:

Pre-assessment phase

Step 1: The assessment team co-ordinates in advance of the assessment visit with WHO/Regional office and HealthMap/WHO/HQ to receive existing documentation of previous assessments and knowledge of existing GIS projects, capacities/resources/database.

Note: For countries in which HealthMap has already been working and for which standardised geo-referenced databases already exist, conduct an assessment of status of maintenance and updating of the databases and progress of GIS activities.

Step 2: The WHO Representatives in country will make arrangements for meeting with the following:

- Ministry of Health
- Ministry of Water
- Ministry of Education
- Ministry of Planning/Interior
- Dept of National Statistics
- National Geographic Institute
- UNICEF country office
- UNFPA country office
- Others.

In country assessment phase

Step 3: Conduct an interview with ministries and agencies above using the standardised tool for brief GIS assessments and obtain easily available information about the GIS resources and existing databases in each of the relevant sectors/ministries.

Step 4: Obtain description and detailed lists from each identified source of data/maps of the following:

- official list of names of administrative divisions (from administrative level 1 (region) to lowest administrative division (district or sub-district))
- official list of villages and code (if exists)
- official list of health facilities by type (public and private)
- official list of schools by type (public and private)
- official list of villages/communities with safe water supply

Step 5: Identify mechanisms for obtaining available existing geo-referenced databases and digitised base maps.

Post country assessment phase

Step 6: Compile report and send a copy to both WHO/regional office and to HealthMap/HQ for the development of a joint implementation plan for GIS for priority diseases in countries.

III. Methodology

Questionnaires administered to or interviews undertaken with national ministries and UN agency partners.

IV. Outputs

Details of current activities, capacities, resources and databases by sector.

Report to WHO/regional office and HealthMap/WHO/HQ.

QUESTIONNAIRE ON DATABASES AND GIS/MAPPING RESOURCES

Assessment team
Date
Respondent
Country
Name
Sector/Ministry/Agency
Address
Telephone
Fax
Email

I. General information

1. Is GIS used within your sector? Yes No
2. *If yes*, which departments/programmes are using GIS, for what purpose and at what level?

PROBE

- For each sector, ask what the system is being used for (e.g., assessing spatial distribution by region of a disease; monitoring results of disease surveillance; planning/targeting interventions etc.)
- Specifically ask at what level the GIS is operational (e.g., region, district, village etc.).

Name of Department	Purpose of GIS	Level (e.g. National, district, village, health facility level)
<i>E.g. Guinea worm/surveillance</i>	<i>Guinea worm: Monitoring results of surveillance data</i>	<i>Village level</i>
<i>E.g. Malaria/surveillance</i>	<i>Malaria: Morbidity/mortality monitoring at district level</i>	<i>District Level</i>
<i>E.g. Malaria/control</i>	<i>Planning bednet distribution</i>	<i>Village level</i>

II. Digitised basemap

1. Are digitised basemaps available of administrative boundaries? Yes No

If yes, please complete the following table.

PROBE

- Firstly find out the administrative structure of the country (the name and number of admin level 1, 2 etc.)
- Then find out if digitised maps are available for each (often a digitised map may only be available for all of 10 Regions but only for 2 of the 20 districts)
- For each variable, ask the format that in which it is available
- Specifically ask for the source for each.

Administrative Boundaries	Name	Total Number	Digitised map available	Format	Source
<i>Administrative Level 1</i>	<i>E.g. Region</i>	<i>10</i>	<i>10</i>	<i>ArcView</i>	<i>Min. of Water</i>
<i>Administrative Level 2</i>	<i>E.g. Department</i>	<i>30</i>	<i>30</i>	<i>ArcView</i>	<i>Min. of Water</i>
<i>Administrative Level 3</i>	<i>E.g. Communes</i>	<i>300</i>	<i>In progress</i>	<i>?</i>	<i>Min. of Planning</i>
<i>Administrative Level 4</i>					
<i>Administrative Level 5 (if exists)</i>					
<i>Health District (if different from administrative)</i>	<i>N/A</i>	<i>30</i>	<i>30</i>	<i>MapInfo</i>	<i>Min of Health</i>
<i>School District (if different from administrative)</i>	<i>N/A</i>	<i>25</i>	<i>In progress</i>		<i>Min. of Education</i>

2. Are digitised basemaps available of other geographic features such as roads, rivers, elevation? Yes No

If yes, please complete the following table:

	Digitised map		Format	Source
	Yes	No		
Road network	0		ArcInfo	Min. Planning
Rivers				
Forest				
Land Use (e.g. rice fields, cultivated areas, swamps etc.)				
Elevation				

III. Geo-referenced databases

1. Are geo-referenced village databases available? Yes No

If yes, complete the following table:

PROBE

- Explain what is meant by geo-referenced village database (i.e., a database of either villages or health facilities or schools in a country with geographic coordinates for each village/facility/school)

For each indicator (villages, schools, population etc.) ask the following questions:

- Ask if an official list of (villages) exist
- For each indicator ask what is the year of survey or last date of update
- Ask if an official code is available for each (village/school/health facility)
- Specifically ask if geographic coordinates are available for each (sometimes geographic coordinates are available for only the health facilities and not all villages)
- Ask if the data are available in a computerised database
- Ask what is the source of each dataset

- Note on *Population*; Specifically ask if population data are available for the village level (i.e., population census survey data)
- Note on *Source*; If the source provided is different from the sector of the respondent) make arrangements to visit the source and administer the same questionnaire
- Ask if any other *Other* information is collected with geographic coordinates that are not included in this list (for ex. Markets, dams) and obtain the same information for each additional indicator.

	Official list available		Year	Official Code Available		Geographic Coordinates Available		Exist in computerised database?		Source of data
	Yes	No		Yes	No	Yes	No	Yes	No	
Villages	√		1991	√		√		√		Min. of Water
Population	√		1991	√			√		√	Nat. Statistics
Health Facilities	√		1995		√		√		√	Min. of Health
Schools	√		1998	√		√		√		Min. of Education
Safe Water	√		1992	√		√		√		Min. of Water
Other:										
Other:										

2. What is the procedure required to obtain a copy of part or all of the existing geo-referenced databases?

PROBE

- Present again objectives of using GIS for a Multi-disease approach to surveillance and desire for co-ordinated approaches to data management and mapping
- Ask how one can obtain a copy of any/part of the data available (e.g., through an official request to the Ministry or programme?)

IV. Technical/Human resources

1. If GIS is being used in your office/sector, which software is used?

Please **Ö**

- ArcView Idrisi
 AtlasGIS ArcInfo
 MapInfo PopMap
 EpiMap Other (Please specify)

-
2. Do you have/use GPS units
(Global Positioning Units)? Yes No

If yes, what data are being collected? (Please list)

-
3. How many people have been trained in GIS in your sector? Please specify discipline of persons trained and the software on which they were trained.

Number of persons trained	Discipline of persons trained	Software
E.g. 4	2 Statisticans 2 Epidemiologists	MapInfo

4. Who is the GIS focal point in your sector/department/agency?

PROBE

- Specify that the GIS focal point should be the person to contact on technical follow up activities/queries etc.

Name _____

Sector _____

Address _____

Tel _____

Fax _____

Email _____

5. Have you any further technical assistance needs in GIS/Mapping?
 Please complete the table below:

	Yes Please ☐	No	If yes, please provide details
<i>Training in GIS use</i>	<i>E.g. ☐</i>		<i>E.g. Training in ArcView required: Epidemiology block</i>
<i>Assistance in database design/development</i>			<i>Yes</i>
<i>Database standardisation</i>			
<i>GPS surveying of villages</i>			
<i>Need for basemaps of boundaries/rivers etc.</i>			<i>E.g. No district maps available</i>
<i>Other: Specify</i>			
<i>Other: Specify</i>			

