International Influenza Surveillance Assessment Tool

National Center for Immunization & Respiratory Diseases
Influenza Division

Introduction: Surveillance Assessment & Review Tool

Purpose of Tool

The goal of this surveillance review tool is to assist in the systematic, standardized review of influenza sentinel site surveillance systems and to provide a guide for identifying problems and designing solutions to provide support. The specific objectives of this tool include:

1. To provide a guide to CDC epidemiologists and project officers, as well as to Ministry of Health or other national counterparts, for conducting site visits and assessing the functionality, standardization, thoroughness and sensitivity of the national surveillance system(s).
2. To obtain a clear understanding of the structure of the surveillance system as developed, while identifying both strengths and opportunities for improvement.
3. To provide quality technical assistance, feedback, and recommendations for changes in order to achieve system goals.
4. To provide basic recommendations on conducting surveillance data quality assurance and monitoring, and establishing solid laboratory and epidemiologic data integration.

Application & Administration

This tool is composed of 6 checklists, and a standardized report format. These sections include a broad overview of all influenza-related surveillance systems (e.g. national early notification systems, animal health surveillance, etc), a brief national/central laboratory review, central level ILI and SARI questionnaires, and ILI and SARI sentinel site review guides. All questions in the tool should be answered in the course of a visit, however strict adherence to the format is not necessary. This tool was designed for global use, and not all questions will be applicable in all situations. The tool can be used to evaluate all levels of a surveillance system, from an evaluation of the national surveillance administration and oversight, to an evaluation of site-level functionality.

Background

Depending on location, capacity, and available resources, both goals of surveillance, and types of surveillance systems in use might vary. Some basic goals and types of surveillance are outlined briefly below. Similarly, depending on resources and capacity, different partners might employ different logistical mechanisms for recording and reporting of data, storage and transport of specimens, and not all solutions will be applicable in all situations. It is important to assess feasibility and consider differing capacities while developing recommendations for improvement.

Goals of surveillance/uses of surveillance data:

- Monitor trends in influenza activity, describe seasonality, and basic epidemiology of influenza (eg timing, geography, population, type, etc
- Detect unusual events, novel viruses
- Describe burden of disease
- Describe severity of disease
- Identify risk factors for severe disease

Types of surveillance:

ILI sentinel site surveillance meets the following criteria: 1) adherence to a clearly defined case definition, 2) use of a sampling strategy for the collection of viral specimens, 3) reporting of aggregate weekly numbers for patients meeting the case definition and for total clinic visits.
Non-sentinel ILI surveillance may be conducted in either a systematic or a non-systematic manner, and may or may not adhere to a standard case definition.

SARI sentinel site surveillance meets the following criteria: 1) adherence to a case definition for SARI, 2) collection of viral specimens from **all*** patients meeting case definition, 3) completion of standard clinical and epidemiologic data forms that can be linked to specimens, and 4) reporting of aggregate weekly totals for SARI patients and for total admissions. * In some locations it may not be possible to sample **all** SARI admissions.
Event-based/outbreak/enhanced surveillance may **i**nclude supplemental reporting of pandemic H1N1 or increased testing of ILI or SARI cases based on regional outbreak reports, etc.
Population-based surveillance
Medical records surveillance eg based on discharge or diagnostic codes
Mortality surveillance, based on standard codes for causes of mortality

Summary Report

A standard report format is included with this tool, with a focus on summarizing the system design, system strengths, identification of opportunities for improvement and provision of key recommendations.

Making Recommendations

Causes of difficulties in the functionality of all surveillance systems will differ. A universal recommendation to be emphasized for all sentinel surveillance systems, especially those in their infancy, is the importance of establishing fewer, highly functional sites prior to the widespread establishment of sites. The clinical, laboratory, data analysis, and reporting capacities reviewed in the administration of the tool should be reviewed when making recommendations, in order to provide the most useful, realistic, and feasible advice and recommendations possible.

Useful recommendations might take into consideration total lab testing capacity combined with considerations of realistic storage and transport of specimens from sentinel sites, while also considering the data management and analysis capacities at the central level in order to identify realistic goals for specimen collection and testing on a regular (weekly) basis. Feasible standard goals for specimen and data collection might help in regularizing frequency of data analysis and reporting at the national level.

Follow Up

Initial surveillance assessments will ideally be followed up annually at the minimum at the national level. Site-level assessments will ideally be conducted on a monthly or quarterly basis by national surveillance staff, in order to ensure that recommendations are being implemented and the quality of data is being monitored.

INFLUENZA SURVEILLANCE REVIEW -- NATIONAL OVERVIEW

	Country		
	Name of Interviewer		
	Date of Site Visit		

	General Information			***Comments***
1	What kind of influenza/respiratory disease surveillance systems are currently operating, for how long, and who is responsible for their operation and oversight?			
	Type of System	***Y/N /DK***	**Length of operation (Y/M) & Ministry/group responsible**	
	ILI outpatient sentinel site surveillance			
	Non-sentinel ILI outpatient surveillance			
	SARI/Pneumonia hospital-based sentinel site surveillance			
	Event-based/outbreak surveillance			
	Other (*please describe*)			
2	Do all of the systems above share their specimens with the national influenza laboratory? (Y/N)			
3	Do all of the systems above share clinical and/or epidemiologic data with national surveillance staff? (Y/N)			
4	Are specimens, testing results, and data from all of the above systems kept track of separately? (Y/N) *(e.g. Are ILI and SARI tracked/able to be analyzed separately)*			
	National Data Aggregation & Analysis			
5	Are data from different surveillance systems maintained in different databases or otherwise distinguishable from one another? (Y/N)			
6	How frequently are site-level data compiled and analyzed at the national level (eg weekly/monthly, etc)?			
6a	Who analyzes this data?			

	National Reporting		Comments
7	Is a report describing national influenza activity produced at the central office using data received from participating sites? (Y/N/DK)		
7a	If yes, with whom is this report shared?		
7b	How is this report published?		

Format	Y/N/DK
Website	
Email newsletter	
Email listserv	
Paper reports by post	

	Which of the following analyses/charts are included in this report?	

Chart/Analysis	Y/N
ILI consultations/Total consultations	
Flu positive ILI specimens/Total tested ILI specimens	
SARI admissions/Total admissions	
Flu positive SARI specimens/Total tested SARI specimens	
Positive flu specimens by type & sub-type	
Other? *Please specify*	

7d	How frequently is this report prepared (eg weekly/monthly, etc)? *(If a report is available, please request a copy)*	
	National Data Use	
8	Does national surveillance staff have a set of indicators used to identify abnormal influenza activity based on data submitted by participating sites? (Y/K)	
8a	If yes, please describe	
8b	What is the notification mechanism to senior leadership if abnormal activity is noted? e.g. phone, email, fax, other	
9	Please list other uses of influenza surveillance data:	

INFLUENZA SURVEILLANCE REVIEW -- NATIONAL SEVERE ILI/SARI OVERVIEW

	General Information	Y/N/DK	Comments
1	How many sentinel SARI sites have been established, and in what sorts of facilities?	Please list sites by location:	

Type of facility	# of sites	
Pediatric hospital		
General hospital		
Fever hospital		
Chest clinic		
Other (*please describe*)		

1a	How were these sites selected? (*e.g. what selection criteria were used?*)	
1b	Do these sites provide a nationally representative sampling of the following:	Please describe

	Y/N
Age	
Sex	
Ethnicity	
Socio-economic status	
Risk factors/chronic disease	
Geography	

1c	Is participation in the sentinel surveillance program voluntary for each site? (Y/N)	
1d	Are any incentives provided to the facility from the national level for undertaking surveillance activities? (Y/N)	
1e	If yes, what are those incentives?	
2	Does each site have surveillance focal points/staff assigned to oversee surveillance activites? (Y/N)	
2a	Who are the staff overseeing surveillance/what are their qualifications?	
2b	Please describe the duties and responsibilities of site surveillance staff:	
2c	Are any incentives given to staff to undertake surveillance activities? (eg payment, continuing education credits, etc) (Y/N)	
2d	If yes, what are those incentives?	

3	Has a national protocol for SARI (or influenza) surveillance or a set of standard operating procedures (SOPs) been developed? (Y/N)		***Comments***
3a	If yes, who developed this protocol?		
3b	Does the protocol include clearly defined objectives for the surveillance system? (Y/N)		
3c	If yes, what are those objectives?		
3d	Has a copy of the protocol been distributed to each sentinel surveillance site? (Y/N)		
3e	Has the protocol, it's objectives, and the SOPs contained in it been presented to all participating surveillance staff at all sites?/Have staff been trained in implementation of the protocol? (Y/N)		
4	How frequently are site-level staff trained in each of the following (eg one time, annually, bi-annually, etc):		
	Training	**Frequency**	
	Application of standard case definition & identification of cases		
	Case sampling & enrollment procedures (eg random sampling, etc)		
	Specimen collection, storage, and shipment		
	Completion of specimen collection and clinical/.epidemiologic data forms		
	Recording & reporting of aggregate weekly hospital admissions, SARI admissions, patient enrollment, etc.		
Standards for SARI Case Detection			***Comments***
5	What is the case definition in use for SARI?		
5a	Are any exclusion criteria in use, and if yes, what are they?		
5b	Does the case definition specify a time period of symptom onset? (Y/N)		

5c	If yes, what is that time period?			
5d	Please describe diagnoses typically used for SARI cases:			
6	Does the protocol include a standard method for screening of SARI cases? (Y/N)			
6a	If yes, please describe:			
6b	Would this method mean that only patients who present with SARI upon admission be detected? (Y/N)			
7	Does the protocol indicate if ALL SARI cases should have a specimen collected? (Y/N)			
7a	If not all cases are enrolled and sampled, does the protocol include a standard sampling scheme? (Y/N)			
7b	If yes, please describe the sampling scheme:			
7c	Is the sampling scheme random? (Y/N)			
7d	If no, please describe how this sampling scheme might bias the data collected:			
Standards for Epidemiologic Data Collection				
8	Does the protocol include a standard SARI case report form to be used at every site? (Y/N) *(if available, please obtain a copy of that form)*			
8a	If yes, are those forms regularly distributed to the sentinel sites for use? (Y/N)			
9	Does the protocol specify that sites should keep a log/record of all SARI cases detected? (Y/N)			
9a	Does the protocol specify that sites should keep a log/record of all hospital admissions? (Y/N)			
10	Does the protocol include a standard aggregate SARI reporting form? (Y/N)			
10a	If yes, are those forms distributed to the sentinel sites for use? (Y/N)			
11	Does the standard method of recording SARI data include outcome? (Y/N)			
Standards for Respiratory Specimen Collection, Storage, and Transport				***Comments***
12	Does the protocol include a standard laboratory specimen collection form to be used at all surveillance sites? (Y/N) (*if available, please obtain a copy of that form*)			

13	Does that protocol include standard operating procedures (SOPs) for the following:			
	Task	**Y/N**		
	Specimen collection			
	Specimen packaging			
	Specimen storage			
	Specimen transport			
13a	If yes, how frequently are site level staff trained in these methods? (eg monthly, quarterly, etc)			
14	Please describe the specimen collection, storage, and transport SOPs outlined in the national protocol:			
15	How often are sites required to send specimens to the national laboratory for testing/verification? (e.g. weekly, bi-weekly, etc)			
16	Are sites required to keep a log of total specimens collected? (Y/N)			
17	How frequently are each of the following replaced (eg weekly, monthly, etc), and by whom are they provided?			
	Item	**Frequency**	**Provided by:**	
	Swabs			
	Tongue depressors			
	Gloves			
	Respiratory protection			
	Plastic vials containing viral transport media			
	Specimen collection forms			
	Shipping containers			
	Labels			
	Refrigerants			
Standards for Data Management, Analysis, and Quality				***Comments***
18	Does the national protocol include standard methods for linking laboratory specimens to data forms? (Y/N)			
19	How are laboratory results merged with case-based data at the national level? (*please describe; eg unique ID, last name, etc*)			
20	Who is repsonsbile for SARI data management at the national level?			

21	How often are SARI data updated at the national level? (eg weekly, monthly, etc)			
22	Please indicate in the boxes below how frequently (eg weekly, bi-weekly, monthly, etc) the following are summarized at the national level, and which strata, if any, are used?			
	Item	**National**	**Site level aggregates**	**Age groups (Y/N)**
	All SARI admissions			
	All sampled/tested SARI admissions			
	All hospital admissions			
	All SARI deaths			
	All hospital deaths			
	Flu positive SARI cases			
	Flu positive SARI cases by risk factor			
	Flu positive SARI cases by symptom			
	Flu positive SARI cases by outcome			
22a	If age groups are used, please describe the groupings used:			
23	Are national SARI trends routinely observed and interpreted? (Y/N)			
23a	If yes, with what frequency are trends analyzed/observed?			
24	Is there a method for identifying aberrations in SARI data at the:			
	Level	**Y/N**		
	Site			
	National			
24a	If yes, please describe that method:			
National Data Reporting				***Comments***
25	Is a national report on influenza activity prepared by the national office? (Y/N)			
25a	If yes, with what frequency is that report prepared? (eg weekly, monthly, quarterly, intermittently etc)			

25b	With whom is that report shared?		
	Agency/Group	**Y/N**	
	Sentinel Sites		
	Ministry of Health leadership		
	WHO Geneva		
	WHO Regional Office		
	WHO Country Office		
	CDC		
	Animal health authorities		
	Other (please list)		
National Monitoring & Evaluation of SARI Sentinel Sites			
26	How frequently do national surveillance staff visit each sentinel site for evaluation, quality control, or assessments?		
26a	What sorts of activities are performed on these visits? (please describe)		
26b	Are hospital admission logbooks verified on site visits to verify that all SARI cases are being identified and documented? (Y/N)		
26c	Are assessments of the percent of eligible patients that are enrolled done?		
26d	Are feedback and recommendations from these visits documented? (Y/N)		
26e	Are those documents shared with sites? (Y/N)		
27	Does national surveillance staff monitor the quality and completeness of epidemiologic data received from each of the sites? (Y/N)		
27a	How is that quality monitored?		
27b	How frequently are the quality/completeness monitored?		
27c	How frequently are those quality findings/comments reported back to sites?		
27d	Is an indicator checklist used to monitor quality and completeness? (Y/N) *(If so, please obtain a copy*)		
27e	Are feedback and recommendations from these findings given to sites individually?		***Comments***
27f	If so, how frequently are such feedback and recommendations provided?		

28	Do national surveillance staff follow up with sites when timely submissions of aggregate data are not received? (Y/N)		
28a	What proportion of SARI sites submit their data by the due date on a weekly basis?		
29	Do national laboratory staff follow up with sites when specimens are not received on a timely basis? (Y/N)		
29a	What proportion of SARI sites submit their respiratory specimens by the due date on a weekly basis?		
30	How often is refresher training provided to surveillance staff in:		
	Item	**Frequency**	**Training in past year? (Y/N)**
	SARI case detection		
	Epidemiologic data collection		
	Laboratory specimen packaging, storage, and transportation		

INFLUENZA SURVEILLANCE REVIEW -- NATIONAL ILI OVERVIEW

	General Information			Comments
1	How many sentinel ILI sites have been established, and in what sorts of facilities?		Please list sites by location:	

Type of facility	*# of sites*
Pediatric hospital OPD	
General hospital OPD	
Outpatient clinic	
Pediatric outpatient clinic	
Other (*please describe*)	

1a	How were these sites selected? *(eg what selection criteria were used?)*		
1b	Do these sites provide a nationally representative sampling of:		Please describe

	Y/N
Age	
Sex	
Ethnicity/minority group	
Socio-economic status	
Risk factors/chronic disease	
Geography	

1c	Are any incentives provided for undertaking surveillance activities at the site level? (Y/N)		
1d	If yes, what are those incentives?		
2	Does each site have surveillance focal points/staff to oversee surveillance activites? (Y/N)		
2a	If yes, are those staff paid? (Y/N)		
2b	If yes, how are they paid?		
2c	Who are the staff overseeing national surveillance activities/what are their qualifications?		
2d	Please describe the duties and responsibilities of site surveillance staff:		

3	Has a national protocol for ILI surveillance or a set of standard operating procedures (SOPs) been developed? (Y/N)			***Comments***
3a	If yes, who developed this protocol?			
3b	Does the protocol include clearly defined objectives for the surveillance system? (Y/N)			
3c	If yes, what are those objectives?			
3d	Has a copy of the protocol been distributed to each site? (Y/N)			
3e	Has the protocol, it's objectives, and the SOPs contained in it been presented to all participating surveillance staff at all sites/Have staff been trained in implementation of that protocol? (Y/N)			
4	How frequently are site-level staff trained in each of the following (eg one time, annually, bi-annually, etc):			
	Training		**Frequency**	
	Application of standard case definition & identification of cases			
	Case sampling & enrollment procedures (eg random sampling)			
	Specimen collection, storage, and shipment			
	Completion of specimen collection and clinical/epidemiologic data forms			
	Recording & reporting of aggregate weekly clinic visit, ILI visits, enrollment, etc.			
Standards for ILI Case Detection				***Comments***
5	What is the case definition in use for ILI?			
5a	Are any exclusion criteria in use, and if yes, what are they? (Y/N)			
5b	Does the case definition specify a period of symptom onset? (Y/N)			
5c	If yes, what is that time period?			

6	Does the protocol define a sampling method for the enrollment of ILI cases and collection of specimens? (Y/N)		
6a	If yes, what is that sampling method?		
6b	Is this sampling method random? (Y/N)		
6c	If no, please describe how this sampling scheme might bias the data collected:		
Standards for Epidemiologic Data Collection			
7	Does the protocol include a standard ILI case report form to be used at every site? (Y/N) *(if available, please obtain a copy of that form)*		
7a	If yes, are those forms regularly distributed to the sentinel sites for use? (Y/N)		
8	Does the protocol specify that sites should keep a log/record of all ILI cases detected? (Y/N)		
8a	Does the protocol specify that sites should keep a record of total ILI specimens collected? (Y/N)		
8b	Does the protocol specify that sites should keep a log/record of all clinic visits? (Y/N)		
9	Does the protocol include a standard aggregate ILI reporting form? (Y/N)		
9a	If yes, are those forms distributed to the sentinel sites for use? (Y/N)		
Standards for Respiratory Specimen Collection, Storage, and Transport			***Comments***
10	Does the protocol include a standardized swab collection form to be used at all sentinel surveillance sites *(if available, please obtain a copy of that form)* ?		
11	Does that protocol include standard operating procedures (SOPs) for the following:		

Task	**Y/N**
Specimen collection	
Specimen packaging	
Specimen storage	
Specimen transport	

11a	If yes, how frequently are staff trained in these methods (eg monthly, quarterly, etc)	

12	Please describe the specimen collection, storage, and transport SOPs outlined in the national protocol:			
13	How often are sites required to send specimens to the national laboratory for testing? (e.g. weekly, bi-weekly, etc)			
14	How many specimens are sites meant to draw per day/week?			
15	How frequently are each of the following replaced (eg weekly, monthly, etc), and by whom are they provided?			
	Item	**Frequency**	**Provided by:**	
	Swabs			
	Tongue depressors			
	Gloves			
	Respiratory protection			
	Plastic vials containing viral transport media			
	Specimen collection forms			
	Shipping containers			
	Labels			
	Refrigerants			
Standards for Data Management, Analysis, and Quality				***Comments***
16	Does the protocol include standard methods for linking laboratory specimens to data forms? (Y/N)			
17	Does the national protocol include standard methods for linking laboratory specimens to data forms? (Y/N)			
18	Are laboratory results merged with case-based data at the national level? (Y/N)			
18a	How are laboratory results merged with case-based data at the national level? (*please describe; eg unique ID, last name, etc*)			
19	Who is repsonsbile for ILI data management at the national level?			

20	How often are ILI data updated at the national level? (eg weekly, monthly, etc)			
21	Please indicate in the boxes below how frequently (eg weekly, bi-weekly, monthly, etc) the following are summarized at the national level, and which strata, if any, are used?			
	Item	**National**	**Site level aggregates**	**Age groups (Y/N)**
	All ILI consultations			
	All sampled/tested ILI consultations			
	All clinic consultations			
	Flu +ve ILI specimens			
21a	If age groups are used, please describe the groupings used:			
22	Are national ILII trends routinely observed and interpreted? (Y/N)			
22a	If yes, with what frequency are trends analyzed/observed?			
23	Is there a method for identifying aberrations in ILI data at the:			***Comments***
	Level	**Y/N**		
	Site			
	National			
23a	If yes, please describe that method:			
National Data Reporting				
24	Is a national report on influenza activity prepared by the national office? (Y/N)			
24a	If yes, with what frequency is that report prepared? (eg weekly, monthly, quarterly, intermittently etc)			

24b	With whom is that report shared?		
	Agency/Group	**Y/N**	
	Sentinel Sites		
	Ministry of Health leadership		
	WHO Geneva		
	WHO Regional Office		
	WHO Country Office		
	US CDC		
	Animal health authorities		
	Others (please list)		
National Monitoring & Evaluation of ILI Sentinel Sites			
25	How frequently do national surveillance staff visit each sentinel site for evaluation, quality control, or assessments?		
25a	What sorts of activities are performed on these visits? (please describe)		
25b	Are clinic logbooks verified on site visits to verify that all ILI cases are being identified and documented? (Y/N)		
25c	Are feedback and recommendations from these visits documented? (Y/N)		
25d	Are those documents shared with sites? (Y/N)		
26	Does national surveillance staff monitor the quality and completeness of epidemiologic data received from each of the sites? (Y/N)		***Comments***
26a	How is that quality monitored?		
26b	How frequently are the quality/completeness monitored?		
26c	How frequently are those quality findings/comments reported back to sites?		
26d	Is an indicator checklist used to monitor quality and completeness? (Y/N) *(If so, please obtain a copy*)		
26e	Are feedback and recommendations from these findings given to sites individually?		
26f	If so, how frequently are such feedback and recommendations provided?		

27	Do national surveillance staff follow up with sites when timely submissions of aggregate data are not received? (Y/N)		
27a	If yes, what is the lag period/when do national staff follow-up?		
27b	What proportion of ILII sites submit their complete data by the due date on a weekly basis?		
28	Do national laboratory staff follow up with sites when specimens are not received on a timely basis? (Y/N)		
28a	What proportion of ILII sites submit their respiratory specimens by the due date on a weekly basis?		
29	How often is refresher training provided to surveillance staff in:		

Item	**Frequency**	**Training in past year? (Y/N)**
ILI case detection		
Epidemiologic data collection		
Laboratory specimen packaging, storage, and transportation		

INFLUENZA SURVEILLANCE REVIEW -- NATIONAL LABORATORY OVERVIEW

National Laboratory Name:	
Date of Interview:	
Interviewer:	
Laboratory Staff Interviewed:	

	General Information	**Y/N**	***Comments***
1	Does the national laboratory receive all specimens from all ILI/SARI sentinel sites? (Y/N)		
1a	If not, how is selection done?		
2	Does the national laboratory receive specimens from all other human influenza surveillance systems? (Y/N)		
2a	If yes, please explain		
3	How frequently does the national laboratory process specimens from participating surveillance sites? (eg daily/weekly/bi-monthly, etc)		

	Specimen Processing & Testing		
4	What testing platform(s) is/are used in the testing of ILI		
	Platform	**Y/N**	
	RT-PCR		
	rt RT-PCR		
	IFA		
	Viral culture		
	Rapid test		
	Other		
4a	If mulitiple testing platforms are used, is a testing algorithm in use for priority testing by different platforms? (Y/N)		
4b	If yes, what is that algorithm?		
5	What type of data are recorded for each specimen:		***Comments***
	Type		
	Subtype		
	Strain		

5a	If all of the above are not recorded, please indicate the proportion of specimens that are assigned a strain			
6	Does this laboratory test animal specimens? (Y/N)			
7	Does the national laboratory routinely test influenza specimens for any other respiratory disease? (Y/N)			
7a	If yes, please list pathogen(s) and test(s)			
8	What is the weekly maximum sample testing capacity at the national laboratory?			
9	How are specimens stored at the national laboratory?			
10	What are the typical lag times between receipt of specimens at laboratory and the testing and reporting of results?			
Data Management & Tracking & Analysis				
11	Are specimens received from sites marked with a unique ID that enables a linkage to individual cases and to clinical/epidemiologic data? (Y/N)			
11a	If yes, do those IDs differentiate between sentinel ILI or SARI and specimens from other systems (eg is it possible to record test results from different systems separately?) (Y/N)			
12	Are all specimens received accompanied by a corresponding data collection form? (Y/N)			
13	Are laboratory testing results recorded in a national influenza database/table? (Y/N)			
13a	Who enters data and manages that database?			
13b	How frequently is that database updated with testing results?			
14	Are ILI and SARI cases identified separately in that database? (Y/N)			***Comments***
15	Is the total number of specimens received for testing recorded? (Y/N)			
15a	Is the total number of specimens tested recorded?			
15b	Is the total number of positive specimens recorded? (Y/N)			
16	How frequently is this data analyzed to observe patterns in influenza activity?			
16a	Who does this analysis?			

	Reporting	Comments
17	How frequently are basic testing results shared?	
17a	With whom is this information shared?	
18	How frequently are the analyzed results of testing outcomes shared?	
18a	With whom are these results shared?	
19	How many isolates have been sent from the national laboratory to WHO CC in the past year? In the past three years?	
19a	With what frequency are samples shared with a WHO CC?	
19b	Does a protocol exist for sharing specimens with a WHO CC? (Y/N)	
	If a protocol exists, please ask to see/have a copy	
20	Does the national laboratory report results to the WHO regional office? (Y/N)	
20a	If yes, how frequently is this information shared?	
	Specimen Quality & Site Monitoring	
21	Do national laboratory staff follow up with sentinel sites when specimens are not received by the scheduled date?	
21a	What proportion of sentinel ILI and SARI sites send their specimens consistenly at the interval specified by the central office?	
22	Does the national lab routinely monitor the quality of specimens submitted by sentinel sites?	
22a	If yes, how is quality monitored?	
22b	How frequently is quality reported to the sites?	
22c	Is this feedback documented?	
22d	Is there a system to track actions taken as a result of feedback/actions to be taken?	
22f	If yes, please describe that system.	

INFLUENZA SURVEILLANCE REVIEW -- DATA MANAGEMENT & ANALYSIS

	Data Management	Y/N		Comments
	Please spend some time looking at the surveillance data, how it is stored, recorded, and analyzed.			
1	What software is used to store surveillance data?			
2	Are ILI and SARI data housed in the same file/database? (Y/N)			
2a	Please describe the database structure; how are ILI and SARI data differentiated; can data be analyzed separately, etc.			
3	Are laboratory results and epidemiologic data kept in a common database? (Y/N)			
3a	If yes, are laboratory results and corresponding epidemiologic data on the same case kept in the same table? (Y/N)			
3b	If yes, are laboratory results and corresponding epidemiologic data on the same case kept in the same record in that table? (Y/N)			
3c	If no, please describe how laboratory results and clinical/epidemiologic data are linked.			
4	Is every laboratory result linked to a case record? (Y/N)			
	Core Data			
5	Are total outpatient visits recorded? (Y/N)			
6	Are total outpatients meeting ILI case defintion recorded? (Y/N)			
6a	If no, how are patients recorded? (eg all patients meeting particular ICD-9/10 codes; if codes are used, please specify which codes are counted and summarized for an estimate of ILI visits)			
7	Is the total number of ILI cases selected for sampling recorded? (Y/N)			
8	Are total all-cause* hospital admissions recorded? (Y/N) *all-cause with whichever exceptions have been noted elsewhere			

9	Are total SARI admissions recorded? (Y/N)		
9a	If no, how are SARI patients recorded? (eg all patients admitted with pneumonia? All patients meeting ICD-10/ICD-9 codes? *Please explain* .)		
10	Are total SARI cases selected for sampling recorded? (Y/N)		
11	Are total hospital deaths recorded? (Y/N)		
12	Are total SARI deaths recorded? (Y/N)		
12a	If no, how are SARI deaths estimated? *Please describe*		
13	Are all SARI cases admitted to ICU recorded? (Y/N)		
13a	If no, how are SARI ICU admissions recorded? (eg all pneumonia patients admitted to ICU? *Please explain)*		
14	Is outcome recorded for all SARI cases? (Y/N)		
14a	Are patients followed up after discharge or hospital transfer?		
15	Is the current year's influenza vaccination history recorded for all sampled ILI cases? (Y/N)		
15a	Is the vaccine received (manufacturer, etc) recorded? (Y/N)		
16	Is the current year's influenza vaccination history recorded for all sampled SARI cases? (Y/N)		
16a	Is the vaccine received (manufacturer, etc) recorded? (Y/N)		
17	Are total ILI specimens tested recorded? (Y/N)		
18	Are total SARI specimens tested recorded? (Y/N)		
19	Are total influenza positive SARI cases recorded? (Y/N)		
19a	For what proportion of influenza positive SARI cases is influenza virus type recorded?		
19b	For what proportion of A-positive SARI cases is subtype recorded?		
19c	For what proportion of influenza-positive SARI cases is strain recorded?		

Comments

20	Are total influenza positive ILI cases recorded? (Y/N)		
20a	For what proportion of influenza positive ILI cases is influenza virus type recorded?		
20b	For what proportion of A-positive ILI cases is subtype recorded?		
20c	For what proportion of ILI cases is strain recorded?		
20d	Is a routine tracking system in place to record differential diagnoses? (Y/N)		

Basic Analyses			***Comments***
Please record whether the data, as recorded and stored, are sufficient to allow for the following analyses. Please have the surveillance staff responsible for data analysis perform these analyses at some point during the site visit. Please also perform some of these analyses on your own and attach both to final surveillance assessment.			
21	Total hospital admissions, by week (Y/N)		
21a	Total SARI admissions, by week (Y/N)		
21b	Proportion of all hospital admissions that met SARI case definition, by week (Y/N)		
21c	Number and proportion of all *sampled* SARI patients that have laboratory confirmed influenza infection by week (Y/N)		
21d	Number and proportion of all sampled SARI patients that have laboratory confirmed influenza infection by week, by type/subtype (Y/N)		
21e	Number and proportion of all sampled SARI patients that have laboratory confirmed influenza infection by week, by age group (Y/N)		
21f	Number and proportion of all sampled SARI patients that have laboratory confirmed influenza infection by week, by geographic region (Y/N)		
22	Total outpatients meeting ILI case definition, by week (Y/N)		
22a	Proportion of all outpatient consultations that met ILI case definition, by week (Y/N)		
22b	Number and proportion of all *sampled* ILI patients that have laboratory confirmed influenza infection by week (Y/N)		
22c	Number and proportion of all sampled ILI patients that have laboratory confirmed influenza infection by week, by type/subtype (Y/N)		

22d	Number and proportion of all sampled ILI patients that have laboratory confirmed influenza infection by week, by age group (Y/N)			
22e	Number and proportion of all sampled ILI patients that have laboratory confirmed influenza infection by week, by geographic region (Y/N)			
23	Incidence rate for SARI (in systems where population served/represented is known) (Y/N)			
24	Incidence rate for ILI (in systems where population served/represented is known) (Y/N)			
25	Total influenza positive SARI cases by risk factor (Y/N)			***Comments***
26	Total influenza positive SARI cases by symptom (Y/N)			
27	Total influenza positive SARI cases by outcome (Y/N)			

Completeness of Data

Please spend some time analyzing the completeness of surveillance data. It might be helpful to explore completeness by site or by region to compare participation in activities by location. If ILI and SARI data are kept in separate databases and/or separate tables, please complete these questions for each.

28	For what proportion of records/cases is the age field complete?
29	For what proportion of cases is the date of onset field complete?
30	For what proportion of cases is the date of interview field complete?
31	For what proportion of cases is the date of specimen collection field complete?
32	To what proportion of cases is a unique identifier assigned?
33	For what proportion of cases is a temperature recorded?
34	For what proportion of cases is the cough field completed?
35	For what proportion of cases is the sore throat field complete?
36	For what proportion of SARI cases are the underlying conditions recorded/completed?
37	For what proportion of SARI cases are the treatment questions completed?
38	For what proportion of SARI cases are the outcome questions completed?

	Completeness & Timeliness of Reporting
	Please review available reporting documents in order to observe the completeness of reporting
39	When did reporting of surveillance data begin?
40	For how many of the weeks/months (if reporting only on a monthly basis) since reporting began has a report been produced?
41	Upon reviewing the reports, how many of the surveillance sites have submitted up-to-date surveillance data to be included in the weekly report?

INFLUENZA SURVEILLANCE REVIEW -- SARI SITE VISIT

	Date of Interview		
	Surveillance Staff		
General Information			***Comments***
1	What is the name of this facility?		
2	Where is this facility located?		
2a	Country:		
2b	Province:		
2c	City/Town/Village:		
2d	How many beds are in this hospital?		
	Non-ICU beds		
	ICU beds		
2e	For how long has this site been collecting SARI data (years/months)?		
3	Who is responsible for coordinating surveillance at this site?		
3a	What is this person's position?		
3b	How many surveillance staff are present at this site?		
3c	Have these staff received training in surveillance data and specimen collection from the national level? (Y/N)		
3d	Are these staff given a motivation/incentive to participate? (Y/N)		
3e	If yes, what is it?		
3f	Please describe the duties assigned to designated surveillance staff:		
4	Is this a public or a private facility?		
4a	What type of facility is it?		

Facility type	**Y/N**
General hospital	
Pediatric hospital	
Infectious disease hospital	
Specialty/referral hospital	
Other *(please describe)*	

4b	What level of care is provided at this hospital?		***Comments***
	Level of care	**Y/N**	
	Primary care (local, non-referral)		
	Secondary (first level of referral)		
	Tertiary (highest level of referral)		
4c	Which wards participate in SARI surveillance? (*e.g. all wards, selected wards; please describe*)		
4d	Does this site provide a representative sampling of the following?		
		Y/N	
	Age		
	Sex		
	Ethnicity		
	Socio-economic status		
	Risk factors/chronic disease		
	Geography		
4e	How might the answers to questions 4a through 4d bias the surveillance data collected?		
SARI Case Detection			
5	Please describe the procedure used to screen for SARI cases:		
6	What is the case definition in use for SARI at this site?		
6a	Does the case definition include a period of time for symptom onset? (Y/N) If yes, what is that time period?		
6b	Is the SARI case definition known and understood by all staff that screen patients for cases? (Y/N) *(If possible, please ask staff about the SARI case definition and their understanding of it)*		
6c	Is the SARI case defintion posted and visible to all staff? (Y/N)		
7	Would patients who develop SARI *after* hospital admission be detected at this hospital, or would only those patients admitted with SARI be detected/recorded? (Y/N) *Please explain.*		

8	Does SARI screening happen everyday, at all hours of the day? (Y/N)			***Comments***
8a	If no, when are patients screened?			
	Day	**Y/N**	**Time of Day** *(Morning, Afternoon, Evening, Night)*	
	Monday			
	Tuesday			
	Wednesday			
	Thursday			
	Friday			
	Saturday			
	Sunday			
9	How might the screening procedures described above bias or impact the selection of SARI cases?			
Epidemiologic Data Collection				
10	Does the site have standard individual SARI case report forms printed, accessible, and in use? (*If possible, please obtain a copy of this form*) (Y/N)			
10a	Is this form a standard from provided by the national office, and used at all sentinel sites? (Y/N)			
11	Please indicate which of the following items are included in this form:			
	Item	**Y/N**		
	Date of interview			
	Date of admission			
	Date of symptom onset			
	Date of specimen collection			
	Diagnoses at time of admission			
	Age or date of birth (years, months if under 1 year)			
	Sex			
	Patient Unique Identifier			

12	Please indicate which of the following signs and symptoms are included in this form:	***Comments***

Sign/Symptom	**Y/N**
Fever >38° measured	
Temperature recorded	
Cough	
Sore throat	
Shortness of breath or difficulty breathing	
Requires hospitalization	
Requires ICU admission	
Clinical signs of pneumonia	
Others (*please indicate*)	

13 Please indicate which of the following underlying/pre-existing condiions are included in this form:

Condition	**Y/N**
Heart disease	
Diabetes	
Chronic lung disease	
Asthma	
Liver disease	
Immuno-compromised/HIV+/AIDS	
Neurologic or neuromuscular dysfunction	
Others (*please indicate*)	

14 Please indicate which of the following other conditions are included in this form:

Condition	**Y/N**
Pregnancy	
Obesity reported (BMI>30)	
Morbid obesity reported (BMI>40)	
Undernourished	

15	Please indicate which of the following items related to treatment are included in this form:		***Comments***
	Treatment	**Y/N**	
	Antiviral use in the previous 14 days (*please list those used & date started*)		
	Influenza vaccination for the current season		
	Patient chest x-ray taken		
16	Please indicate which of the following items related to outcome are included on this form:		
	Outcome	**Y/N**	
	Discharged		
	Died		
	Unknown		
	Transfer to other health care setting		
	Other (*please list*)		
17	*If a SARI logbook/line list is kept, please ask to review a random selection of records from those patients*		
17a	Number of charts reviewed:		
17b	Number of charts meeting SARI case definition:		
17c	Number identified as SARI in the logbook/line list:		
17d	Does a review of charts indicate that all or most cases meeting the SARI case definition are being enrolled? (Y/N)		
17e	If yes, what percentage are being enrolled?		
17f	Please list some of the common admitting diagnoses for SARI cases:		
18	Does the site have standard aggregate SARI forms printed, accessible, and in use? (Y/N)		
19	Is a record of total SARI cases maintained, regardless of enrollment/sample collection? (Y/N		
19a	Is this record maintained by age, or age group? (Y/N)		
19b	Who is responsible for maintaining these records?		
19c	Are records/logbooks of total hospital admissions kept? (Y/N)		

	Respiratory Specimen Collection, Packaging, Storage, and Shipment		*Comments*
20	Is a specimen collected from every identified SARI patient? (Y/N)		
20a	If all cases are not enrolled/sampled, what is the sampling scheme used/how are cases selected for specimen collection and enrollment?		
20b	Is this method random? (Y/N)		
20c	How might this method be biased?		
20d	Is there a limit to the number of SARI cases that can be sampled on a weekly basis? (Y/N) If yes, what is that number?		
21	How are laboratory specimens collected in this hospital (*please describe*):		
21a	Which staff are responsible for specimen collection?		
21b	How frequently are these staff trained in specimen collection and storage methods?		
22	How are laboratory specimens packaged in this hospital? (*please describe*):		
23	How are laboratory specimens transported to the confirmatory laboratory? (*please describe*):		
24	How frequently are specimens transported to the confirmatory laboratory (*e.g. daily/weekly/monthly*):		
25	Does the site have standard specimen collection forms printed, available, and in use? (Y/N)		
26	Does the site have standard operating procedures for specimen collection, transportation, and storage written, accessible, and in use? (Y/N)		
26a	Is this a standard form provided by the national surveillance office/coordinator? (Y/N)		

27	Please indicate which of the following items are included on the specimen collection form:		***Comments***
	Item	**Y/N**	
	Unique identifier		
	Hospital name		
	Person collecting specimen		
	Age or date of birth		
	Sex		
	Date of symptom onset		
	Date of specimen collection		
	Type of specimen collected:		
	Nasal swab		
	Throat swab		
	Nasopharyngeal swab		
	Nasopharyngeal aspirates or washes		
	Nasal wash		
	Other (*please describe*)		
27a	Is there any protocol in place for multiple collections? (eg Day 1, Day 3, or acute & convalescent sera, etc) (Y/N)		
28	Please indicate which PPE are rountinely used during the collection of specimens:		
	PPE	**Y/N**	
	Gloves		
	Gown/Lab coat		
	Safety glasses		
	Respiratory protection type		
	Mask		
	Respirator		
28a	Is handwashing required before & after specimen collection?		

29	Are specimen collection materials readily available? (Y/N)		***Comments***
29a	If yes, for how many specimens are materials routinely available?		
29b	Please indicate which collection materials are available:		
	Material	**Y/N**	
	Tongue depressors		
	Swabs		
	Vials containing VTM at 4°C		
	Alcohol/bleach		
	Packaging materials for transport		
30	Is there a lab capable of testing for influenza on-site? (Y/N)		
30a	If yes, please indicate which tests are peformed on-site:		
	Test	**Y/N**	
	Rapid-test		
	Immunofluorescence assay		
	PCR (typing)		
	PCR (typing & subtyping)		
	Culture		
	Hemmaglutinin inhibition		
	Other (please describe)		
30b	If specimens are tested in hospital, are total numbers of positive and negative specimens reported to surveillance coordinator on-site? (Y/N)		
30c	If yes, how often are they reported? (e.g. daily/weekly/monthly etc)		
30d	If tested on-site, how often are specimens sent to the national laboratory for confirmatory testing?		
30e	If no, where are specimens sent for testing?		
30f	If no, how often are specimens sent for testing (e.g. daily/weekly/monthly/intermittently, etc)		

31	How are specimens stored?		***Comments***
	Storage method	**Y/N**	
	Refrigerated		
	Freezer -20		
	Freezer -70		
	Liquid nitrogen		
	Cold pack		
	Ambient temperature		
	Other (please describe)		
32	For how long are specimens stored before being sent for testing?		
33	Is there a system in place for monitoring the temperature of the samples in storage? (Y/N)		
33a	If yes, please describe that system:		
34	Are total numbers of specimens collected and tested recorded? (Y/N)		
35	Is a unique identifier affixed to the swab to allow for linkage to swab collection form/clinical/epidemiologic data?		
36	Are laboratory results reported back to clinicians?		
36a	If yes, how often are laboratory results received at the site/reported to clinicians?		
36b	What is the typical lag time between specimen collection & reporting of results to clinicians?		
37	Are total numbers of positive and negative specimens reported to a surveillance focal point?		
37a	If yes, how often are these results reported (eg weekly/monthly, etc)?		
Data Management, Analysis, and Quality			
38	How are surveillance data stored at the site (eg on paper, electronically)?		
38a	Who enters/records surveillance data?		
38b	How often is data entered into the storage system?		
38c	When is data entered?		
39	Who is responsible for data management on-site?		

40	How is data quality monitored?		***Comments***
40a	What data quality indicators are used?		
40b	How frequently is data quality monitored?		
40c	Who is notified of data quality issues?		
41	Do surveillance staff review admissions logbooks to ensure that all SARI cases have been recorded?		
42	How are SARI case-based data stored at the hospital?		
43	How are SARI aggregate data stored at the hospital?		
44	How often do you summarize total all-cause admissions at this hospital? (e.g. weekly/monthly/intermittently, etc.)		
44a	Are these summaries divided by age groups? (Y/N)		
44b	If yes, please describe age groups.		
45	How are laboratory results merged with the case-based reporting system (e.g. to case-based epidemiologic and clinical data forms)		
46	How often does the site receive data quality feedback from the national level?		
46a	How often does the site host site visits/quality assurance visits from the national level?		
47	Do site staff receive training updates from the national level?		
47a	If yes, how often do these trainings take place?		
48	Are SARI visits summarized by:		
	Interval	**Y/N**	
	Day		
	Week		
	Month		
	Other		
49	Is any SARI data analysis performed on site?		
49a	If yes, what sort of analysis is done? Please describe.		
49b	Who does on-site data aggregation and analysis?		

50	Does the surveillance focal point compile and prepare reports (weekly, monthly, other) at the site level? (Y/N)		***Comments***
50a	If yes, with whom are these reports shared?		
50b	Is a standard reporting template used? (Y/N)		
50c	Do other sites use this template?		
51	How is data reported/submitted to the national level? (eg email, fax, text message, post, etc)		
51a	With what frequency is this reporting done?		
52	Is there a method in place for identifying changes in activity/abnormal activity at the site level? (Y/N)		
52a	If yes, please describe.		
52b	To whom is this activity reported?		
52c	Is there a mechanism in place to respond to these changes in activity? If yes, please describe.		
52e	Is this mechanism used? (Y/N)		
52f	If no, why not?		

INFLUENZA SURVEILLANCE REVIEW -- ILI SITE VISIT

	Date of Interview		
	Surveillance Staff		
General Information			***Comments***
1	What is the name of this facility?		
2	Where is this facility located?		
2a	Country:		
2b	Province:		
2c	City/Town/Village:		
2d	How many patients does this facility typically see on a weekly basis?		
2e	For how long has this site been collecting ILI data (years/months)?		
3	Who is responsible for coordinating surveillance at this site?		
3a	What is this person's position?		
3b	How many surveillance staff are present at this site?		
3c	Have these staff received training in surveillance data and specimen collection from the national level? (Y/N)		
3d	If yes, how frequently are staff trained?		
3e	Are these staff given a motivation/incentive to participate? (Y/N)		
3f	If yes, what is it?		
3g	Please describe the duties assigned to designated surveillance staff:		
4	Is this a public or a private clinic?		
4a	What type of facility is it?		

Facility type	**Y/N**
General hospital OPD	
Pediatric hospital OPD	
Outpatient clinic	
Pediatric clinic	
Other *(Please describe)*	

4b	Does this site provide a representative sampling of the following?		Please describe	***Comments***
		Y/N		
	Age			
	Sex			
	Ethnicity			
	Socio-economic status			
	Risk factors/chronic disease			
	Geography			
4c	How might the answers to questions 4a and 4b bias the surveillance data collected?			
ILI Case Detection				
5	Please describe the procedure used to screen for ILI cases:			
6	What is the case definition in use for ILI at this site?			
6a	Does this case definition include a period of time for symptom onset?			
6b	If yes, what is that period of time?			
6c	Are any exclusion criteria in use at this site?			
6d	If yes, what are those criteria?			
7	Is the ILI case definition known and understood by all staff that screen outpatients for ILI? (Y/N) *(Ask a few staff about the case definition for ILI)*			
7a	Is the ILI case defintion posted and visible to all staff? (Y/N)			
8	On which days are patients screened for ILI & at what time of day?			
	Day	**Y/N**	**Time of Day** *(Morning, Afternoon, Evening, Night)*	
	Monday			
	Tuesday			
	Wednesday			
	Thursday			
	Friday			
	Saturday			
	Sunday			
8a	If patients are not screened daily or only at a particular time of day, how might this bias/impact surveillance? (Please explain)			
8b	Are any measures used to minimize this bias? (Please explain)			

9	What is the sampling scheme in use for the collection of ILI specimens? *(Please describe)*		***Comments***
9a	Is this method random? (Y/N)		
9b	If no, how might this impact/bias surveillance?		
10	What is the maximum number of ILI specimens collected at this site on a "surveillance day?"		
10a	What is the maximum number of specimens collected at this site in one week?		
Epidemiologic Data Collection			
11	Does the site have standard individual ILI case report forms printed, accessible, and in use? (*If possible, please obtain a copy of this form*) (Y/N)		
11a	Is this form a standard from provided by the national office, and used at all sentinel sites? (Y/N)		
11b	If no, why are forms not standardized across sites?		
12	Please indicate which of the following items are included in this form:		
	Item	**Y/N**	
	Date of interview		
	Date of visit		
	Date of symptom onset		
	Date of specimen collection		
	Diagnoses at time of consultation		
	Age or date of birth (years, months if under 1 year)		
	Sex		
	Patient Unique Identifier		
13	Please indicate which of the following signs and symptoms are included in this form:		***Comments***
	Sign/Symptom	**Y/N**	
	Fever >38° measured		
	Temperature recorded		
	Cough		
	Sore throat		
14	Are records/logbooks kept of total clinic visits/consultations? (Y/N)		
14a	If yes, who is responsible for the maintenance of this log?		

15	Are records kept of total patients meeting the criteria for ILI (*including measured temperature*)? (Y/N)		
15a	Is temperature recorded for ALL consultations recorded as ILI? (Y/N)		
15b	Are records kept of total number of ILI specimens collected?		
	If possible, ask to see a clinic visit logbook with diagnoses.		
16	Please list some of the common diagnoses for patients meeting the case definition for ILI.		
17	Does the site have standard aggregate (weekly/monthly, etc) ILI forms printed, accessible, and in use? (Y/N)		
17a	Is this record maintained by age, or age group? (Y/N)		
18	If ILI patients are admitted to hospital after initial consultation are they recorded as SARI cases? (Y/N)		
18a	What measures are taken to ensure that these cases are not counted twice?		
Specimen Collection, Packaging, Storage, and Transport			***Comments***
19a	What criteria are used to choose patients for specimen collection?		
19b	Is a sampling scheme used to draw specimens?		
19c	If yes, please describe		
19d	Is this method random and unbiased? Please explain.		
19e	If no, what measures are taken to minimize this bias?		
20	How are laboratory specimens collected at this facility? (*please describe*):		
20a	Which staff are responsible for specimen collection?		
20b	How frequently are staff trained in specimen collection?		
21	How are laboratory specimens packaged in this hospital? (*please describe*):		

22	How are laboratory specimens transported to the confirmatory laboratory? (*please describe*):		
23	How frequently are specimens transported to the confirmatory laboratory (*e.g. daily/weekly/monthly*):		
24	Does the site have standard operating procedures for specimen collection written, accessible, and in use? (Y/N)		
25	Does the site have standard specimen collection forms printed, available, and in use? (Y/N) *(If yes, please obtain a copy)*		
25a	Is this a standard form provided by the national surveillance office/coordinator? (Y/N)		

26	Please indicate which of the following items are included on the specimen collection form:			***Comments***
	Item	**Y/N**		
	Unique identifier			
	Hospital name			
	Person collecting specimen			
	Age of date of birth			
	Sex			
	Date of symptom onset			
	Date of specimen collection			
	Type of specimen collected:			
	Nasal swab			
	Throat swab			
	Nasopharyngeal swab			
	Nasopharyngeal aspirates or washes			
	Nasal wash			
	Other (*please describe*)			

27	Please indicate which PPE are rountinely used during the collection of specimens:		
	PPE	**Y/N**	
	Gloves		
	Gown/Lab coat		
	Safety glasses		
	Respiratory protection type		
	Mask		
	Respirator		
27a	Is handwashing required before & after specimen collection? (Y/N)		
28	Are specimen collection materials readily available? (Y/N)		
28a	If yes, for how many specimens are materials routinely available?		
28b	Please indicate which collection materials are available:		
	Material	**Y/N**	
	Tongue depressors		
	Swabs		
	Vials containing VTM at 4°C		
	Alcohol/bleach		
	Packaging materials for transport		
29	Is there a lab capable of testing for influenza on-site? (Y/N)		***Comments***
29a	If yes, please indicate which tests are peformed on-site:		
	Test	**Y/N**	
	Rapid-test		
	Immunofluorescence assay		
	PCR (typing)		
	PCR (typing & subtyping)		
	Culture		
	Hemmaglutinin inhibition		
	Other (please describe)		

29b	If yes, are total numbers of positive and negative specimens reported to surveillance coordinator on-site? (Y/N)		
29c	If yes, how often are they reported? (e.g. daily/weekly/monthly etc)		
29d	If tested on-site, how often are specimens sent to the national laboratory for confirmatory testing?		
29e	If no, where are specimens sent for testing?		
29f	If no, how often are specimens sent for testing (e.g. daily/weekly/monthly/intermittently, etc)		
30	How are specimens stored?		
	Storage method	**Y/N**	
	Refrigerated		
	Freezer -20		
	Freezer -70		
	Liquid nitrogen		
	Cold pack		
	Ambient temperature		
	Other (please describe)		
31	For how long are specimens stored before being sent for testing?		
32	Is there a system in place for monitoring the temperature of the samples in storage? (Y/N)		
32a	If yes, please describe that system:		
33	Are total numbers of specimens collected and tested recorded? (Y/N)		
34	Is a unique identifier affixed to the specimen to allow for linkage to swab collection form/clinical/epidemiologic data?		
35	Are laboratory results reported back to clinicians?		
35a	If yes, how often are laboratory results received at the site/reported to clinicians?		
35b	What is the typical lag time between specimen collection and receipt of results?		
36	Are total numbers of positive and negative specimens reported to a surveillance focal point?		
36a	If yes, how often are these results reported (eg weekly/monthly, etc)?		

Comments

	Data Management, Monitoring, Quality Assurance		
37	How are surveillance data stored at the site (eg on paper, electronically)?		
37a	Who enters/records surveillance data?		
37b	How often is data entered into the storage system?		
37c	When is data entered?		
38	How is data quality monitored?		
38a	What data quality indicators are used?		
38b	Do surveillance staff review OPD logbooks to ensure that all ILI cases have been recorded?		
38c	Do surveillance staff review hospital admission logs to ensure that SARI cases have not been recorded as ILI?		
38d	How often is data quality monitored?		
38e	Who is notified of data quality issues?		
39	How often does the site receive data quality feedback from the national level?		
39a	How often does the site have quality assurance visits from the national level?		
40	Do site staff receive training updates from the national level?		
40a	If yes, how often do these trainings take place?		
41	Are ILI visits summarized by:		
	Interval	**Y/N**	
	Day		
	Week		
	Month		
	Other		
42	Is any ILI data analysis performed on site?		
42a	If yes, what sort of analysis is done? Please describe.		
42b	Who does on-site data aggregation and analysis?		
43	Does the surveillance focal point compile and prepare reports (weekly, monthly, other) at the site level? (Y/N)		
43a	If yes, with whom are these reports shared?		
43b	Is a standard reporting template used? (Y/N)		
43c	Do other sites use this template? (Y/N)		

44		
	How is data reported/submitted to the national level?	
44a	With what frequency is this reporting done?	
45	Is there a method in place for identifying changes in activity/abnormal activity at the site level? (Y/N)	
45a	If yes, please describe.	
45b	To whom is this activity reported?	
45c	Is there a mechanism in place to respond to these changes in activity? If yes, what is that mechanism?	
45d	Is this mechanism used? (Y/N)	
45e	If no, why not?	