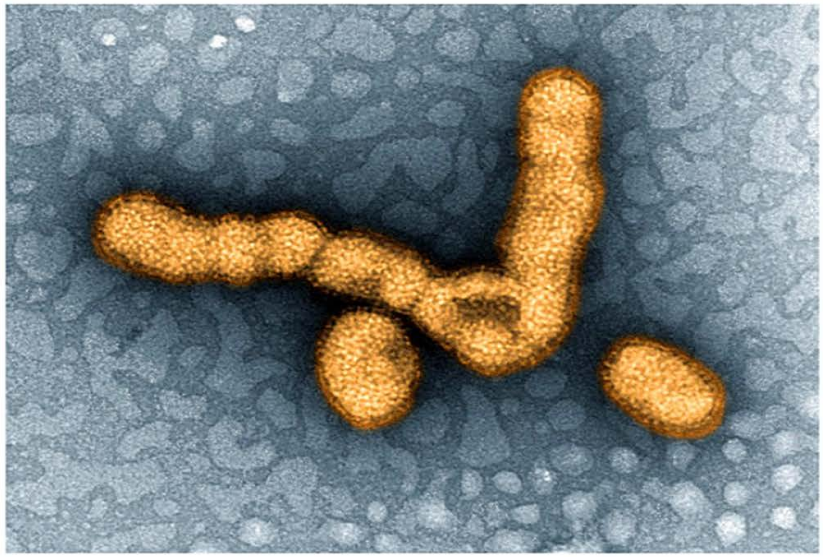
International Influenza Surveillance Assessment Tool



National Center for Immunization and Respiratory Diseases

Influenza Division

CDC

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 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 a series of tabs, and a standard report format. These sections include a broad discussion guide for a conversation about the goals and objectives of surveillance, meant to help put the system and the goals of the country in context. Next is an overview of all influenza-related surveillance systems (e.g. national early notification systems, animal health surveillance, etc.), central level ILI and SARI questionnaires, a brief national/central laboratory review, review of data collection, analysis and quality, a brief data check guide, a brief assessment of readiness to embark on burden of disease estimation and ILI and SARI sentinel site review guides. Two tabs are present for pre-visit work -- one tab to be completed by the country in advance of the visit, and the second to be completed by the reviewing epidemiologist using materials provided by the CDC project officer prior to the visit. 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 the 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 and goals while developing recommendations for improvement.

Some general goals of surveillance/uses of surveillance data include:

- To monitor trends in influenza activity, describe seasonality and basic epidemiology of influenza (e.g. timing, geography, population, etc.)
- To monitor virologic trends, contribute to WHO vaccine strain selection
- To detect unusual events, novel viruses
- To describe severity of disease
- To identify risk factors for severe disease
- To describe burden of disease
- To plan public health programs and interventions
- To generate an evidence base to develop public health/vaccine policy
- To provide information to assist in clinical decision-making

Some types of surveillance include:

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.

Severe acute respiratory infection (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 feasible or desirable to sample *all* SARI admissions depending on capacity and goals.

Event-based/outbreak/enhanced surveillance may include supplemental reporting of pandemic H1N1 or increased testing of ILI or SARI cases based on regional outbreak reports, etc.

Population-based surveillance may be any of the above, conducted at sites where the size of a catchment population is known.

Medical records surveillance e.g. 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, and identification of opportunities for improvement and provision of key recommendations. A summary for each sentinel site reviewed will be incorporated into the final report.

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.

These materials should be requested by the project officer upon scheduling of review and shared with reviewer at least two weeks prior to departure

1. Surveillance protocol
2. Data collection forms (if not in protocol document):
   a. SARI case report form
   b. ILI case report form
   c. Specimen collection form
   d. Aggregate SARI data form
   e. Aggregate ILI data form
3. Database structure (in format of empty database shell, for example)
4. Any materials used for M&E (e.g. indicator checklists, standard monitoring data collection forms, monitoring reports/outputs)
5. At least one routine national report
6. SOPs not included in protocol
7. Any publications to date
8. Any prior assessment reports
9. Summary of prior findings to be discussed during the pre-visit conference call

The project officer should also provide to the reviewer a copy of the WHO Global Standards for Influenza Surveillance. A copy of the WHO Guide to Disease Burden Estimation may also be provided.

Notes

Pre-visit questionnaire: *This information should be filled in by the lead responsible for influenza surveillance at the country level. It will be provided as a separate Excel file, the completed copy of which will be shared with the reviewer prior to visit. The reviewer should read and be familiar with this information to help inform the review on the ground.*

	General Information	**Y/N/DK**	**Long answer/comments**	
	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		**Ministry/group responsible**	**Length of operation (Y/M)**
2-1	ILI outpatient sentinel site surveillance			
2-2	Non-sentinel ILI outpatient surveillance			
2-3	SARI/Pneumonia hospital-based sentinel site surveillance			
2-4	Event-based/outbreak surveillance			
2-5	Other (*please describe*)			
2-6	Do all of the systems above share their specimens with the national influenza laboratory?			

	National Reporting	**Y/N/DK**	**Long answer/comments**
2-9	Is a report describing national influenza activity produced at the central office using data received from participating sites?		
	If yes, with whom is this report shared? (*select from list below)*		
2-10	Sentinel sites		
2-11	Ministry of Health leadership		
2-12	Immunization policy groups/NITAGs		
2-13	WHO Geneva		
2-14	WHO Regional Office		
2-15	WHO Country Office		
2-16	US CDC		
2-17	Animal health authorities		
2-18	Health care workers/medical groups/hospitals?		
2-19	Other (please list)		
	How is this report published and distributed? *(select from list below)*		
2-21	Website		
2-22	Email newsletter		
2-23	Email listserv		
2-24	Paper reports by post		
2-25	Other (describe)		
2-26	How frequently is this report prepared (e.g. weekly/monthly, etc.)? *(request a copy of a report if it wasn't already shared prior to visit)*		
2-27	Are virologic data shared with WHO FluNet?		
2-28	If yes, how frequently?		
2-29	Are epidemiologic data shared with WHO FluID?		
2-30	If yes, how frequently?		
2-31	Are different reports created for different audiences/purposes?		
2-32	If yes, describe for whom and for what purpose.		
2-33	Are annual reports created to summarize an influenza season?		

SARI Surveillance					
3-1	Please list sentinel sites performing SARI surveillance				
	Name	**Total # of beds**	**Type of facility**	**Wards conducting surveillance**	**# of beds in surveillance wards**
		Y/N/DK	**Long answer/comments**		
3-11	Does each site have surveillance focal points/staff assigned to oversee surveillance activites?				
3-18	Has a national protocol for SARI (or influenza) surveillance or a set of standard operating procedures (SOPs) been developed?				
3-19	If yes, who developed the protocol?				
3-22	Has a copy of the protocol been distributed to each sentinel surveillance site?				
3-23	Have all site surveillance staff been trained on use of the protocol, the SOPs and an understanding of the objectives?				
	How frequently are site-level staff trained in each of the following (eg one time, annually, bi-annually, etc., see below)				
	Training	**Frequency**	**Date of last training**		
3-24	Application of standard case definition & identification of cases				
3-25	Case sampling & enrollment procedures (eg random sampling, etc)				
3-26	Specimen collection, storage, and shipment				
3-27	Completion of specimen collection and clinical/epidemiologic data forms				
3-28	Recording & reporting of aggregate weekly hospital admissions, SARI admissions, patient enrollment, etc.				
3-33	Does the protocol include a standard method for screening of SARI cases?				
3-34	If yes, describe:				
3-42	Does the protocol include a standard SARI case report form to be used at every site?				
3-46	Does the protocol specify that sites should keep a log/record of all SARI cases detected?				
3-47	Does the protocol include a standard aggregate SARI reporting form?				
General Comments					

ILI Surveillance			
4-1	Please list sentinel sites performing ILI surveillance		
	Name		**Type of facility**
		Y/N/DK	**Long answer/comments**
4-11	Does each site have surveillance focal points/staff assigned to oversee surveillance activites?		
4-19	Has a national protocol for ILI (or influenza) surveillance or a set of standard operating procedures (SOPs) been developed? If yes, who developed this protocol?		
4-23	Has a copy of the protocol been distributed to each sentinel surveillance site?		
4-24	Have all site surveillance staff been trained on use of the protocol, the SOPs and an understanding of the objectives?		
	How frequently are site-level staff trained in each of the following (eg one time, annually, bi-annually, etc)	**Frequency**	**Date of last training**
4-25	Application of standard case definition & identification of cases		
4-26	Case sampling & enrollment procedures (eg random sampling, etc)		
4-27	Specimen collection, storage, and shipment		
4-28	Completion of specimen collection and clinical/.epidemiologic data forms		
4-29	Recording & reporting of aggregate weekly clinic visits, patients meeting the ILI definition, patient enrollment, etc.		
4-42	Does the protocol include a standard ILI case report form to be used at every site?		
4-47	Does the protocol specify that sites should keep a log/record of all clinic visits?		
4-48	Does the protocol include a standard aggregate ILI reporting form?		
General comments			

Notes

Pre-visit questionnaire: *This information should be filled in by the reviewer, using materials provided prior to the review. If materials were not provided, the same questions are embedded in the following sheets and will be answered during the course of the review. Note: the answers to these questions will automatically fill the corresponding questions in the following sheets. The question numbers correlate to questions on the following sheets.*

General Information - SARI		**Y/N/DK**	**Long answer/comments**
3-18	Has a national protocol for SARI (or influenza) surveillance or a set of standard operating procedures (SOPs) been developed?		
3-20	If yes, does the protocol include clearly defined objectives for the surveillance system?		
3-21	If yes, what are those objectives?		
Standards for SARI Case Detection - SARI		**Y/N/DK**	**Long answer/comments**
3-33	Does the protocol include a standard method for screening of SARI cases?		
3-34	If yes, describe the screening process.		
3-36	Would this method mean that only patients who present with SARI upon admission be detected?		
3-37	Does the protocol indicate if ALL SARI cases should have a specimen collected?		
3-38	If not all cases are enrolled and sampled, does the protocol include a standard sampling scheme?		
3-39	If yes, describe the sampling scheme.		
3-40	Is the sampling scheme random?		
3-41	If no, describe how this sampling scheme might bias the data collected.		
Standards for Epidemiologic Data Collection - SARI		**Y/N/DK**	**Long answer/comments**
3-42	Does the protocol include a standard SARI case report form to be used at every site? *(obtain a copy of that form)*		
3-44	Does the protocol specify that sites should keep a log/record of all SARI cases detected?		
3-46	Does the protocol specify that sites should keep a log/record of all hospital admissions?		
3-47	Does the protocol include a standard aggregate SARI reporting form?		
General Information - ILI		**Y/N/DK**	**Long answer/comments**
4-19	Has a national protocol for ILI surveillance or a set of standard operating procedures (SOPs) been developed?		
4-20	If yes, who developed this protocol?		
4-21	If yes, does the protocol include clearly defined objectives for the surveillance system?		
4-22	If yes, what are those objectives?		

Standards for SARI Case Detection - ILI		Y/N/DK	Long answer/comments
4-34	Does the protocol include a sampling scheme for the collection of ILI specimens?		
4-35	If yes, describe this sampling scheme.		
4-37	Would this method capture all ILI cases presenting at the facilities?		
4-38	Does the protocol define a sampling scheme for the enrollment of ILI cases and collection of specimens?		
4-39	If yes, what is that sampling scheme?		
4-40	Is this sampling scheme random?		
4-41	If no, please describe how this sampling scheme might bias the data collected		
Standards for Epidemiologic Data Collection - ILI		**Y/N/DK**	**Long answer/comments**
4-42	Does the protocol include a standard ILI case report form to be used at every site? (*obtain a copy of that form)*		
4-44	Does the protocol specify that sites should keep a log/record of all ILI cases detected, regardless of enrollment/data collection/specimen collection?		
4-46	Does the protocol specify that sites should keep a record of total ILI specimens collected?		
4-47	Does the protocol specify that sites should keep a log/record of all outpatient consultations?		
4-48	Does the protocol include a standard aggregate ILI reporting form?		
General Comments			

Goals and Objectives of Surveillance: a discussion guide

These questions are meant to guide a discussion with national surveillance staff about the goals of their system. This should be a semi-structured conversation, but should be left to flow more or less organically. This should be done at the beginning of the review so that observations may be put in context and recommendations made to help the country meet, revise, or set new objectives.

	Country	
	Name of Interviewer	
	Date of Site Visit	
		Long answer/comments
1-1	What led to the establishment of influenza surveillance? (e.g. response to novel virus outbreaks, availability of funding, national public health priority as determined by MOH, etc.)	
1-2	What are the current goals and objectives for the surveillance system? (below are some examples that might help to steer conversation)	
	Situational awareness (e.g. monitor current influenza activity, detect & respond to outbreak activity)	
	Establish seasonality patterns, describe basic local epidemiology, activity by region	
	Detect unusual events	
	Establish burden of disease	
	Describe severe disease	
	Identify risk factors/risk groups for severe disease	
	Establish evidence base for vaccine policy development/vaccine introduction	
	Contribute to WHO strain selection/GISRS	
	Contribute to global literature on influenza	
1-3	Who established these goals and objectives?	
1-4	Does the national government include these goals and objectives in their plans?	
1-5	Who are the stakeholders?	
1-6	What are the stakeholder expectations/what sort of reporting do they require/how frequently?	
1-7	Is influenza perceived by senior MOH administration to be a public health problem?	
1-8	Is the influenza surveillance system funded, at least in part, by the MOH?	
1-9	If yes, what portion of the funding comes from MOH?	
1-10	What are the expected outputs from the surveillance system in the short term? In the long term? On an ongoing basis? (e.g. situational awareness/activity reports, public health interventions, policy developments, academic papers/reports)	
1-11	What are the current outputs/outputs to date from the surveillance system?	

1-12	Which of the objectives outlined above do you feel are being met?	
1-13	Are priority objectives being met?	
1-14	If not, which ones are not?	
1-15	What improvements do you feel should be made to ensure priority goals and objectives are met?	
1-16	What public health actions are intended to be associated with the outputs from the system? (some examples are listed below to spur conversation)	
	Annual vaccination of special risk groups (SAGE high risk groups, for example)	
	Annual universal vaccination	
	Annual health care worker awareness & prevention campaigns	
	Annual community influenza awareness & prevention campaigns	
General Comments		

This section is a general overview of the surveillance system(s) to aid in understanding in a general fashion what the types of information collected are, how they relate to one another, and how surveillance data are used.

System Overview

General Information

	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***	**Ministry/group responsible**	**Length of operation (Y/M)**
2-1	ILI outpatient sentinel site surveillance			
2-2	Non-sentinel ILI outpatient surveillance			
2-3	SARI/Pneumonia hospital-based sentinel site surveillance			
2-4	Event-based/outbreak surveillance			
2-5	Other (*please describe*)			
		Y/N/DK	**Long answer/comments**	
2-6	Do all of the systems above share their specimens with the national influenza laboratory?			
2-7	Do all of the systems above share clinical and/or epidemiologic data with national surveillance staff?			
2-8	Are specimens, testing results, and data from all of the above systems kept track of separately? *(e.g. Are ILI and SARI tracked/able to be analyzed separately)*			

National Reporting

2-9	Is a report describing national influenza activity produced at the central office using data received from participating sites?		
	If yes, with whom is this report shared? (*select from list below)*		
2-10	Sentinel sites		
2-11	Ministry of Health leadership		
2-12	Immunization policy groups/NITAGs		
2-13	WHO Geneva		
2-14	WHO Regional Office		
2-15	WHO Country Office		
2-16	US CDC		
2-17	Animal health authorities		
2-18	Health care workers/medical groups/hospitals?		
2-19	Other (please list)		

	How is this report published and distributed? *(select from list below)*		
2-21	Website		
2-22	Email newsletter		
2-23	Email listserv		
2-24	Paper reports by post		
2-25	Other (describe)		
2-26	How frequently is this report prepared (e.g. weekly/monthly, etc.)? *(request a copy of a report if it wasn't already shared prior to visit)*		
2-27	Are virologic data shared with WHO FluNet?		
2-28	If yes, how frequently?		
2-29	Are epidemiologic data shared with WHO FluID?		
2-30	If yes, how frequently?		
2-31	Are different reports created for different audiences/purposes?		
2-32	If yes, describe for whom and for what purpose.		
2-33	Are annual reports created to summarize an influenza season?		
National Data Use			
2-34	Does national surveillance staff have a set of indicators used to identify abnormal influenza activity based on data submitted by participating sites?		
2-35	If yes, describe method.		
2-36	Are data used to inform policy decisions at the national level?		
2-37	Is an influenza vaccination policy in place?		
2-38	Was data from the sentinel influenza surveillance system used to form that policy?		
2-39	Are annual influenza vaccine campaigns conducted?		
2-40	Is data from the influenza sentinel surveillance system used to time those campaigns?		
2-41	What is the notification mechanism to senior leadership if abnormal activity is detected? (e.g. phone, email, fax, other)		
2-42	Are reports used for messaging to the media and public regarding influenza activity?		
2-43	Please list other uses of influenza surveillance data.		
General Comments			

This section is meant to gain a solid understanding of the structure and standards of the SARI surveillance system, resources and staff roles and responsibilities.

National SARI Overview

General Information

3-1	Please list sentinel sites performing SARI surveillance				
	Name	**Total # of beds**	**Type of facility**	**Wards participating in surveillance**	**# beds in surveillance wards**
		Y/N/DK	**Long answer/comments**		
3-2	Do the sites (all or any) have defined catchment areas?				
3-3	If yes, are population counts available by catchment area?				
3-4	If yes, where do these counts come from? (e.g. mid-year census estimates, DHS estimates, administrative records, etc.)				
3-5	What criteria were used to select sentinel sites (some examples include human infrastructure/willingness; sufficient and appropriate patient population; geographic representation; infrastructure - both in the facility and in the area surrounding it. Other criteria might be political (e.g. one in each district). For more discussion of this topic see WHO Guidelines for Influenza Surveillance, Appendix 2)				
3-6	Is participation in the sentinel surveillance program voluntary for each site?				
3-7	Are any incentives provided to the facility from the national level for undertaking surveillance activities?				
3-8	If yes, what are those incentives?				
3-9	If sites receive funding, how is that paid funding for? (e.g. MOH funding, CDC cooperative agreement funding, other external funding)				
3-10	Are those incentives sustainable for the program?				
3-11	Does each site have surveillance focal points/staff assigned to oversee surveillance activities?				
3-12	Who are the staff overseeing surveillance/what are their qualifications?				
3-13	Describe the duties and responsibilities of site surveillance staff (e.g. identify & enroll patients, collect data, specimens, etc.)				
3-14	Are any incentives given to staff to undertake surveillance activities? (e.g. payment, continuing education credits, etc.)				
3-15	If yes, what are those incentives?				
3-16	If the staff are paid, how are they paid (e.g. MOH funds, CDC cooperative agreement funds, other funding source)				

3-17	Are those incentives sustainable in the long term?		
3-18	Has a national protocol for SARI (or influenza) surveillance or a set of standard operating procedures (SOPs) been developed?		
3-19	If yes, who developed this protocol?		
3-20	If yes, does the protocol include clearly defined objectives for the surveillance system?		
3-21	If yes, what are those objectives?		
3-22	Has a copy of the protocol been distributed to each sentinel surveillance site?		
3-23	Have all site surveillance staff been trained on use of the protocol, the SOPs and an understanding of the objectives?		
	How frequently are site-level staff trained in each of the following (e.g. one time, annually, bi-annually, etc.):		
	Training	**Frequency**	**Date of last training held**
3-24	Application of standard case definition & identification of cases		
3-25	Case sampling & enrollment procedures (e.g. random sampling, etc.)		
3-26	Specimen collection, storage, and shipment		
3-27	Completion of specimen collection and clinical/epidemiologic data forms		
3-28	Recording & reporting aggregate weekly hospital admissions, SARI admissions, patient enrollment, etc.		
Standards for SARI Case Detection		**Y/N/DK**	**Long answer/comments**
3-29	What is the case definition in use for SARI?		
3-30	Does it conform to the WHO SARI case definition (an acute respiratory infection with history of fever or measured fever >=38C and cough with onset within last 10 days, requiring hospitalization)		
3-31	Are any exclusion criteria in use?		
3-32	If yes, what are they?		
3-33	Does the protocol include a standard method for screening of SARI cases?		
3-34	If yes, describe the screening process.		
3-35	Who is responsible for this work?		
3-36	Would this method mean that only patients who present with SARI upon admission be detected?		
3-37	Does the protocol indicate if all SARI cases should have a specimen collected?		
3-38	If not all cases are enrolled and sampled, does the protocol include a standard sampling scheme?		
3-39	If yes, describe the sampling scheme:		
3-40	Is the sampling scheme random?		
3-41	If no, describe how this sampling scheme might bias the data collected.		

Standards for Epidemiologic Data Collection		Y/N/DK	Long answer/comments
3-42	Does the protocol include a standard SARI case report form to be used at every site?		
3-43	If yes, does the national office regularly replenish the supplies at the site?		
3-44	Does the protocol specify that sites should keep a log/record of all SARI cases detected?		
3-45	How is that log kept? (e.g. note book, pre-printed SARI record book, etc.)		
3-46	Does the protocol specify that sites should keep a log/record of all hospital admissions?		
3-47	Does the protocol include a standard aggregate SARI reporting form?		
3-48	If yes, are those forms distributed to the sentinel sites for use?		
Standards for Respiratory Specimen Collection, Storage, and Transport		**Y/N/DK**	**Long answer/comments**
3-49	Does the protocol include a standard laboratory specimen collection form to be used at all surveillance sites? (Y/N)		
	Does that protocol include standard operating procedures (SOPs) for the following activities at the site level:		
	Task		
3-50	Specimen collection		
3-51	Specimen packaging		
3-52	Specimen storage		
3-53	Specimen transport		
3-54	If yes, how frequently are site level staff trained in these methods? (e.g. monthly, quarterly, etc.)		
3-55	Describe the specimen collection, on-site storage, and transport SOPs outlined in the national protocol:		
3-56	testing/verification? (e.g. weekly, bi-weekly, etc.)		
3-57	Are sites required to keep a log of total specimens collected?		
3-58	What is the process for replacing specimen collection materials when supply is low (e.g. do national surveillance staff check in when they visit the site, is there an ordering process, do they only request replacements once they run out, etc.)		
3-59	Does this effect stability of specimen collection activities?		
General Comments			

Notes

This section is meant to gain a solid understanding of the structure and standards of the ILI surveillance system, resources and staff roles and responsibilities.

National ILI Overview

General Information

4-1	Please list sentinel sites performing ILI surveillance		
	Name		**Type of facility**
		Y/N/DK	**Long answer/comments**
4-2	Do the sites (all or any) have defined catchment areas?		
4-3	If yes, are population counts available by catchment area?		
4-4	If yes, where do these counts come from? (e.g. mid-year census estimates, DHS estimates, administrative records, etc.)		
4-5	What criteria were used to select sentinel sites (some examples include human infrastructure/willingness; sufficient and appropriate patient population; geographic representation; infrastructure - both in the facility and in the area surrounding it. Other criteria might be political (e.g. one in each district). For more discussion of this topic see WHO Guidelines for Influenza Surveillance, Appendix 2)		
4-6	Is participation in the sentinel surveillance program voluntary for each site?		
4-7	Are any incentives provided to the facility from the national level for undertaking surveillance activities?		
4-8	If yes, what are those incentives?		
4-9	If sites receive funding, how is that paid funding for? (e.g. MOH funding, CDC cooperative agreement funding, other external funding)		
4-10	Are those incentives sustainable for the program?		
4-11	Does each site have surveillance focal points/staff to oversee surveillance activities?		
4-12	Who are the staff overseeing surveillance/what are their qualifications?		
4-13	Describe the duties and responsibilities of site surveillance staff (e.g. identify & enroll patients, collect data, specimens, etc.)		
4-14	Are any incentives given to staff to undertake surveillance activities? (e.g. payment, continuing education credits, etc.)		

4-15	If yes, what are those incentives?		
4-16	If the staff are paid, how are they paid? (e.g. MOH funds, CDC cooperative agreement funds, other funding source)		
4-17	Who are the staff overseeing national surveillance activities/what are their qualifications?		
4-18	Are those incentives sustainable in the long term?		
4-19	Has a national protocol for ILI surveillance or a set of standard operating procedures (SOPs) been developed?		
4-20	If yes, who developed this protocol?		
4-21	If yes, does the protocol include clearly defined objectives for the surveillance system?		
4-22	If yes, what are those objectives?		
4-23	Has a copy of the protocol been distributed to each site?		
4-24	Have all site surveillance staff been trained on use of the protocol, the SOPs and an understanding of the objectives?		
	How frequently are site-level staff trained in each of the following? (e.g. one time, annually, bi-annually, etc.):		
	Training	**Frequency**	
4-25	Application of standard case definition & identification of cases		
4-26	Case sampling & enrollment procedures (e.g. random sampling)		
4-27	Specimen collection, storage and shipment		
4-28	Completion of specimen collection and clinical/epidemiologic data forms		
4-29	Recording & reporting of aggregate weekly clinic visit, ILI visits, enrollment, etc.		
Standards for ILI Case Detection		**Y/N/DK**	**Long answer/comments**
4-30	What is the case definition in use for ILI?		
4-31	Does it conform to the WHO ILI case definition (an acute respiratory infection with history of fever or measured fever >=38C and cough with onset within last 10 days)		
4-32	Are any exclusion criteria in use?		
4-33	If yes, what are they?		
4-34	Does the protocol include a standard method for screening of ILI cases?		
4-35	If yes, describe.		
4-36	Who is responsible for this work?		
4-37	Would this method capture all ILI cases presenting at the facilities?		
4-38	Does the protocol define a sampling scheme for the enrollment of ILI cases and collection of specimens?		
4-39	If yes, what is that sampling scheme?		
4-40	Is this sampling scheme random?		
4-41	If no, please describe how this sampling scheme might bias the data.		

Standards for Epidemiologic Data Collection		Y/N/DK	Long answer/comments
4-42	Does the protocol include a standard ILI case report form to be used at every site? (*obtain a copy of that form)*		
4-43	If yes, does the national office regularly replenish the supplies at the site?		
4-44	Does the protocol specify that sites should keep a log/record of all ILI cases detected, regardless of enrollment/data collection/specimen collection?		
4-45	How is that log kept? (e.g. note book, pre-printed ILI record book, etc.)		
4-46	Does the protocol specify that sites should keep a record of total ILI specimens collected?		
4-47	Does the protocol specify that sites should keep a log/record of all outpatient consultations?		
4-48	Does the protocol include a standard aggregate ILI reporting form?		
4-49	If yes, are those forms distributed to the sentinel sites for use regularly? How are stock needs determined?		
Standards for Respiratory Specimen Collection, Storage, and Transport		**Y/N/DK**	**Long answer/comments**
4-50	Does the protocol include a standardized swab collection form to be used at all sentinel surveillance sites *(if available, obtain a copy of that form)* ?		
	Does the protocol include standard operating procedures (SOPs) for the following:		
	Task		
4-51	Specimen collection		
4-52	Specimen packaging		
4-53	Specimen storage		
4-54	Specimen transport		
4-55	If yes, how frequently are staff trained in these methods (e.g. monthly, quarterly, etc.)		
4-56	Describe the specimen collection, storage, and transport SOPs outlined in the national protocol		
4-57	How often are sites required to send specimens to the national laboratory for testing? (e.g. weekly, bi-weekly, etc.)		
4-58	How many specimens are sites meant to draw per day/week?		
4-59	What is the process for replacing specimen collection materials when supply is low? (e.g. do national surveillance staff check in when they visit the site, is there an ordering process, do they only request replacements once they run out, etc.)		
4-60	Does this effect the stability of specimen collection activities?		
General Comments			

Notes

This section is meant to help the reviewer gain a solid understanding of the laboratory in the context of sentinel site surveillance.

National Laboratory Overview

	National Laboratory Name:		
	Date of Interview:		
	Interviewer:		
	Laboratory Staff Interviewed:		
General Information		**Y/N/DK**	**Long answer/comments**
5-1	Does the national influenza testing laboratory receive ALL of the specimens collected from the ILI/SARI surveillance sites?		
5-2	If not, describe the algorithm for shipping to the national influenza testing laboratory.		
5-3	Does the national laboratory receive specimens from any other human influenza surveillance systems or outbreak response activities?		
5-4	If yes, explain.		
5-5	How frequently does the national influenza laboratory process specimens from the participating ILI/SARI sentinel surveillance sites? (e.g. daily/weekly/bi-monthly, etc.)		
Specimen Processing & Testing		**Y/N/DK**	**Long answer/comments**
5-6	What data is reported from the laboratory to epidemiology for surveillance? (i.e. type, subtype, strain) Explain.		
5-7	Are these data reported in aggregate or by case? Please explain.		
5-8	Does the national laboratory routinely test specimens collected for influenza surveillance for any other respiratory pathogens?		
5-9	If yes, list pathogen(s).		
5-10	What is the weekly maximum sample testing capacity at the national laboratory?		
5-11	What are the typical lag times between receipt of specimens at laboratory and the testing and reporting of results?		
Specimen Receipt		**Y/N/DK**	**Long answer/comments**
5-12	Are specimen requisition forms filled at the site level and included with shipped specimens?		
5-13	If yes, what information is included on the form (i.e. an indicator for ILI vs. SARI specimens, unique ID, etc.); if not, what is included with the shipped specimens? *(Please obtain a copy of forms/other information sent with the specimens if it was not provided prior to the visit.)*		

Reporting		Y/N/DK	Long answer/comments
5-14	How frequently are basic testing results shared with the epidemiology group?		
5-15	How frequently are the analyzed results of testing outcomes shared with the epidemiology group?		
5-16	Are results reported to WHO FluNet?		
5-17	If yes, with what frequency?		
Specimen Quality & Site Monitoring		**Y/N/DK**	**Long answer/comments**
5-18	Is there routine follow up with the ILI/SARI sentinel sites to submit specimens? If yes, who leads the follow up? (laboratory or epidemiology staff)		
5-19	What triggers follow up with the site?		
5-20	How often is follow up conducted?		
5-21	What proportion of sentinel ILI and SARI sites send their specimens consistently at the interval specified by the central office?		
5-22	Does the national lab routinely monitor the quality of specimens submitted by sentinel sites?		
5-23	How frequently is quality reported to the sites?		
5-24	Is this feedback documented?		
5-25	How is the feedback documented?		
General Comments			

This section focuses on data collection and management as laid out in the protocol/national plans, as well as management and analysis at both the site and at the national level. Lastly, this section covers how the country may be using data to do some monitoring and evaluation both of the sites and of the functioning of the system overall.

Data management, analysis and reporting

Section one: data collection

	Influenza-like illness-specific data	**Y/N/DK**	**Long answer/comments**
6-1	Are total outpatient visits recorded?		
6-2	Are total outpatients meeting ILI case definition recorded?		
6-3	If no, how is a numerator determined for an ILI consultation rate?		
6-4	Can these variables be stratified by age group?		
6-5	Is the total number of ILI cases selected for sampling recorded?		
6-6	Are total ILI specimens tested recorded?		
6-7	Are total influenza positive ILI cases recorded?		
6-8	Is type/subtype recorded for influenza positive ILI cases?		
6-9	If no, for what proportion is this information recorded?		
	Does the ILI case report form contain the following elements:		
6-10	Age/date of birth		
6-11	Sex		
6-12	Date of onset		
6-13	Date of specimen collection		
6-14	Patient unique identifier		
6-15	Are other data points collected?		
6-16	If yes, please describe other data collected and attach form.		
	SARI-specific data	**Y/N/DK**	**Long answer/comments**
6-17	Are total hospital admissions recorded?		
6-18	Are total SARI admissions recorded (enrolled & non-enrolled)?		
6-19	If no, how is a numerator determined to calculate SARI admission rate?		
6-20	Can these variables be stratified by age group?		
6-21	Are total SARI cases selected for sampling recorded?		
6-22	Are total SARI specimens tested recorded?		
6-23	Are total influenza positive SARI cases recorded?		
6-24	Is type/subtype recorded for influenza positive SARI cases?		
6-25	If no, for what proportion is this information recorded?		
6-26	Are total hospital deaths recorded?		
6-27	Are total SARI deaths recorded?		
6-28	If no, how are SARI deaths estimated?		
6-29	Are total hospital deaths recorded?		

		Y/N/DK	Long answer/comments
6-30	Are all SARI cases admitted to ICU recorded?		
6-31	If no, how are SARI ICU admissions recorded? (e.g. all pneumonia patients admitted to ICU? Other method?*)*		
6-32	Is outcome recorded for all SARI cases?		
6-33	Is outcome recorded for all influenza positive SARI cases?		
6-34	If yes, how is outcome tracked?		
6-35	Are patients followed up after discharge or hospital transfer?		
	Does the SARI case report form contain the following elements:		
6-36	Age/date of birth		
6-37	Sex		
6-38	Date of onset		
6-39	Date of specimen collection		
6-40	Patient unique identifier		
6-41	Hospital admission status (e.g. general ward, ICU)		
6-42	Admission diagnosis		
6-43	Temperature		
6-44	Cough		
6-45	Sore throat		
6-46	Other symptoms (list)		
6-47	Pre-existing medical conditions		
6-48	Vaccination status		
6-49	Pre-existing medical conditions:		
6-50	Chronic respiratory disease		
6-51	Asthma		
6-52	Diabetes		
6-53	Chronic liver disease		
6-54	Chronic cardiac disease		
6-55	Chronic renal disease		
6-56	Chronic neurological or neuromuscular disease		
6-57	Hematological (blood) disorders		
6-58	Immunodeficiency, including HIV		
6-59	Pregnancy (trimester)		
6-60	Other:		
6-61	Unknown		

Section two: data management			
Site level data management		**Y/N/DK**	**Long answer/comments**
6-62	How is data collected and stored at the sites? (e.g. paper forms, entered into electronic file, emailed to national level or paper forms, sent with specimen, no electronic data entry at site level). Describe the flow and format.		
6-63	Who is responsible for data management at the site level? (includes gathering, collating, and sending paper-based data)		
6-64	Are the same forms used for SARI and ILI? If so, are the same data required of both groups? (e.g. are all sections of the form filled out for both ILI and SARI or is there a cut off for ILI collection with additional data for SARI to follow?)		
6-65	How frequently are data sent (via whichever means, depending on particular system - electronic, paper, etc.) to the national level?		
6-66	If data are entered online or emailed to the national level, how stable is the internet connection at the sites?		
National level data management			
6-67	Are all data (virologic and epidemiologic) stored in one location/with one group? (e.g. with laboratory or with epidemiology)		
6-68	If no, do the laboratory and epidemiology groups have access to each other's data?		
6-69	Who manages the data at the national level?		
6-70	What software is used to store the data at the national level?		
6-71	Are ILI and SARI data housed in the same file/database?		
6-72	If yes, can they be distinguished from one another/analyzed separately?		
6-73	Does the national protocol include standard methods for linking laboratory specimens to data forms? Describe how laboratory and epidemiology case-based data are linked.		
6-74	Are laboratory results linked to case-based epidemiologic data?		
6-75	If yes, are the linked laboratory results stored in the same database as the epidemiologic data?		
6-76	If virologic and epidemiologic data are not linked, are analyses of epidemiologic trends by type/subtype possible?		
6-77	How is this done?		
6-78	Are data quality/validation controls built into the database/data entry process? (e.g. drop down lists to ensure correct spellings/limited response options; date checks for logical order regarding date of visit after date of onset, date of birth before data of onset/visit/etc.; logic checks for pregnant men or babies, etc.)		

6-79	If yes, describe those controls		
6-80	Is a variable for age group included in the database?		
6-81	If yes, is that variable auto-populated using date of birth, age or similar?		
6-82	*Spend some time reviewing database structure and compare to data collection forms. Are all variables included? Does it follow a logical order? Are the correct types of data used in the database?*		
6-83	Are data from other flu surveillance system (e.g. outbreak surveillance, other) stored in the same database?		
6-84	If yes, how are these data distinguished from routine surveillance data?		
6-85	How frequently are data sent from the surveillance sites merged with the national database?		
6-86	How frequently are laboratory data updated and merged?		
Section three: data analysis and reporting			
National level analysis		**Y/N/DK**	**Long answer/comments**
6-87	Who is responsible for data analysis at the national level?		
6-88	Do the laboratory and epidemiology groups analyze their data individually?		
6-89	Who analyzes the linked data?		
6-90	How frequently are data analyzed to observe trends in influenza activity?		
6-91	Is a national influenza activity report produced?		
6-92	If yes, with what frequency is it produced?		
	Please indicate which of the following analyses are included in the influenza activity report at the ***national*** *level (in any format - chart, table, etc.)*		
6-93	Number of influenza specimens tested		
6-94	Number of positive influenza specimens by type, subtype		
6-95	Proportion of tested specimens with an influenza positive test result in the reporting period		
6-96	Total outpatient clinic consultations		
6-97	Total outpatient clinic consultations that meet the case definition for ILI		
6-98	Proportion of outpatient clinic consultations that meet case definition for ILI		
6-99	Total enrolled and sampled clinic consultations that meet the case definition for ILI		
6-100	Proportion of ILI specimens with an influenza positive test result		
6-101	Proportion of ILI specimens with an influenza positive test result, by type, subtype		
6-102	Total hospital admissions (in wards included in SARI surveillance)		
6-103	Total hospital admissions that meet the case definition for SARI		
6-104	Proportion of hospital admissions that meet case definition for SARI		

		Y/N/DK	Long answer/comments
6-105	Total enrolled and sampled hospital admissions that meet the case definition for SARI		
6-106	Total hospital deaths		
6-107	Total SARI deaths		
6-108	Proportion of SARI specimens with an influenza positive test result		
6-109	Proportion of SARI specimens with an influenza positive test result, by type, subtype		
6-110	Influenza positive SARI cases by risk factor		
6-111	Influenza positive SARI cases by outcome		
6-112	Influenza positive specimens by age group		
6-113	If age groups are used, please describe the groupings used		
6-114	Are these same analyses performed for **site-specific** data as well as for aggregate national data?		
6-115	Is there a method for identifying aberrations in SARI data at the site level?		
6-116	Is there a method for identifying aberrations in SARI data at the national level?		
6-117	Is there a method for identifying aberrations in ILI data at the site level?		
6-118	Is there a method for identifying aberrations in ILI data at the national level?		
6-119	Are data trends analyzed and observed at the national level?		
6-120	If yes, how frequently?		
6-121	Have national influenza activity baselines been established ?		
6-122	What kind of baseline is in use?		
6-123	Are epidemic alert thresholds set?		
6-124	If yes, describe the method of determining a threshold.		
National Monitoring & Evaluation of SARI Sentinel Sites		**Y/N/DK**	**Long answer/comments**
6-125	How frequently do national surveillance staff visit each sentinel site for evaluation, quality control, or assessments?		
6-126	Describe what sorts of activities are performed on these visits (data quality verification, stock checks, refresher training, etc.)		
6-127	Are hospital admission logbooks verified on site visits to verify that all SARI cases are being identified and documented (monitoring completeness)?		
6-128	*Spend some time looking through logbooks and comparing SARI counts in aggregate data collection sheets or other sources. Try to get a crude idea of how many that you caught via a quick review are recorded.*		
6-129	Are assessments of the percent of eligible patients that are enrolled done?		
6-130	Are feedback and recommendations from monitoring visits documented?		
6-131	Are those documents shared with sites?		
6-132	Does national surveillance staff monitor the quality and completeness of epidemiologic data received from each of the sites?		

6-133	How is that quality monitored? If an indicator checklist has been developed, obtain a copy.		
6-134	How frequently are the quality/completeness monitored?		
6-135	How frequently are those quality findings/comments reported back to sites?		
6-136	Are feedback and recommendations from these findings given to sites individually?		
6-137	If so, how frequently are such feedback and recommendations provided?		
6-138	Do national surveillance staff follow up with sites when timely submissions of aggregate data are not received?		
6-139	What proportion of SARI sites submit their data by the due date on a weekly basis?		
6-140	Do national laboratory staff follow up with sites when specimens are not received on a timely basis?		
6-141	What proportion of SARI sites submit their respiratory specimens by the due date on a weekly basis?		
6-142	Is the national surveillance database used to monitor quality, completeness and timeliness of data from the sites?		
6-143	What actions are taken to correct missing or incorrect data?		
	How often is refresher training provided to surveillance staff in:		
	Item	**Frequency**	**Date of last training**
6-144	SARI case detection		
6-145	Epidemiologic data collection		
6-146	Laboratory specimen packaging, storage, and transportation		
General Comments			

This section correlates to the section on data management, collection and reporting and serves as a quick quality of data check at the national, site and laboratory level for the past calendar year of surveillance.

Data quality and completeness

	National level data completeness	Proportion (%)	Comments
6B-1	Proportion of cases (ILI & SARI) for whom demographic information is complete (age, sex, site)		
6B-2	The proportion of cases where the date of onset field is complete		
6B-3	The proportion of cases where the date of specimen collection is complete		
6B-4	The proportion of cases where a unique identifier is assigned		
6B-5	Proportion of cases where a temperature is recorded		
6B-6	Proportion of cases where the cough field is complete		
6B-7	The proportion of SARI cases where underlying conditions are recorded		
6B-8	Proportion of SARI cases where the outcome field is complete (*if recorded)*		
6B-9	Proportion of cases (ILI & SARI) in compliance with case definition		
	Site level data completeness		
6B-10	Proportion of SARI cases identified in hospital records for which a SARI form was completed/are recorded in the aggregate forms		
6B-11	Proportion of weeks with completed aggregate SARI/ILI form		
6B-12	Proportion of weeks for which the minimum number of ILI specimens were recorded		
	Laboratory data completeness		
6B-13	Proportion of cases with type recorded		
6B-14	Proportion of cases with subtype recorded		
6B-15	Proportion of weeks where specimen receipt meets of exceeds number expected (e.g. the minimum number of specimens stated in protocol)		
6B-16	Proportion of weeks for which all sites submitted		
6B-17	Proportion of weeks laboratory data was submitted to FluNet		

General Comments

Notes

This section is meant to guide a discussion about whether the country currently has the capacity to develop a disease burden estimate. The questions pertain to the availability *of the data, rather than for the data itself. Knowing the data requirements for a burden estimate and which of those the country has will help guide recommendations if a primary goal for the country is to estimate burden of disease.*			
Disease Burden Readiness			
Part 1: SARI Data			
7-1	Number of sentinel sites implementing SARI surveillance		
	Are the following information available for each of the SARI sites:	**Y/N/DK**	**Long answer/comments**
7-2	Hospital type		
7-3	Number of beds (total)		
7-4	Number of beds (pediatric)		
7-5	Number of beds (adult internal medicine wards)		
7-6	Location (city, province)		
7-7	Are the influenza surveillance start (mm/yyyy) and end (mm/yyyy) (if applicable) dates known?		
7-8	Is a list of the most common admission diagnoses among SARI patients, by age group available?		
7-9	For how many years is sentinel surveillance data available?		
7-10	Is the overall influenza detection rate over the study period among SARI cases (study period refers to period listed in previous question) available?		
7-11	Is the influenza detection rate by age group over the study period among SARI cases available?		
7-12	Is the total number of SARI cases (enrolled and non-enrolled) at sentinel sites over the study period available?		
7-13	Is the in-hospital outcome (e.g. death, recovery, referral, etc.) for enrolled patients over the study period known?		
7-14	Is the in-hospital outcome (e.g. death, recovery, referral, etc.) among influenza-positive enrolled patients over the study period known?		
7-15	Is the in-hospital outcome (e.g. death, recovery, referral, etc.) for all SARI cases (enrolled and non-enrolled) over the study period known?		
Part 2: Population data			
This information pertains to the period of implementation of influenza sentinel surveillance			
7-16	Are mid-year population denominators available?		
7-17	If yes, are these estimates available nationally?		
7-18	If yes, are these estimates available by administrative area?		
7-19	If yes, provide the smallest administrative area for which these estimates are available (e.g. Province, District, County, etc.)		
7-20	If yes, are these estimates available by age group?		

7-21	If population estimates are not available nationally, are they available for administrative districts where influenza sentinel surveillance is performed?		
7-22	If yes, are these estimates available by age group?		
7-23	Are these estimates based on a projection of a census?		
7-24	If yes, when was the last census implemented?		
7-25	Have demographic and health surveys (DHS) been implemented in recent years in the country (if yes, provide year and a copy of the report)?		
7-26	If yes, was the health seeking behavior of individuals with respiratory illness investigated?		
7-27	If yes, was the prevalence of common underlying medical conditions investigated?		
General Comments			

SARI Site Visit

0. General Information

INFLUENZA SURVEILLANCE REVIEW - SARI SITE VISIT			
Please complete details in the grey boxes below, additional information can be included in the comment section.			***Comment:***
1	Name of the SARI site (e.g. hospital name)		
	Date of interview (dd/mm/yyyy)		
	Name and position of staff interviewed. If multiple persons are interviewed, please include names and position		
	Name of interviewer and organization *Name*		
	Organization		
2	Have previous interviews/assessments been performed? (Y, N, UNK)		
	If yes, date of latest interview		
	If yes, name of latest interviewer and organization		

GENERAL INFORMATION			***Comment:***
1	Where is this hospital located?		
	Country		
	Address		
	Province		
	City/Town/Village		
2	What year (yyyy) did the site begin to collect data on SARI?		
3	How many surveillance staff members are present at this site?		
	Are these staff members given an incentive to participate? (Y, N, UNK)		
	If yes, what is the incentive?		

	Please describe the surveillance duties assigned to designated surveillance staff (if different for doctor, nurse, lab technician etc. please specify)		
4	What type of hospital is it? (public, private, other)		
	If other, please describe		
	What is the hospital's area of specialization? (general, therapeutic, infectious disease, ...)		
	If other, please describe		
	What level of care is provided at this hospital?	*Please tick the most appropriate box*	
	☐	Primary care (local, non-referral)	
	☐	Secondary care (first level of referral)	
	☐	Tertiary care (highest level of referral)	
	Do all wards of this hospital perform SARI surveillance (i.e. do all wards report and sample SARI cases for surveillance purposes?)		
	Which wards participate in SARI surveillance at this site? (e.g. ICU, adult medicine, pediatric medicine, maternity ward)	*Please tick the box below* *(more than one option can be checked)*	
	☐	ICU ward	
	☐	Adult medicine ward	
	☐	Pediatric medicine ward	
	☐	Maternity ward	
	☐	Other (if other, please specify in comment)	
5	How many beds are in this hospital?		
	Beds (non-ICU)		
	Beds (ICU)		

General Comments/Notes:

1. Case Detection and Data collection

A. SARI case definition			
	Please complete details in the grey boxes below, additional information can be included in the comment section.		***Comment:***
1	Is a standard case definition being used by the sentinel influenza surveillance site? (Y, N, UNK)		
2	What is the standard case definition in use for SARI? (WHO/Europe, WHO global, …) Please see the description of common case definitions below. In case there is a distinction between adults and children, please add this information in the comment section.		
	If another case definition is used, please describe it here:		
	SARI case definition - WHO/Europe <2011: Onset of the following symptoms ≤7 days prior to hospital admission: Fever >38°C AND cough OR sore throat AND shortness of breath or difficulty in breathing. For children aged <5 years the WHO case definition for pneumonia and severe pneumonia is applied. Pneumonia: cough OR difficulty in breathing AND breathing faster than 40 breaths/minute (12 – 59 months); breathing faster than 50 breaths/minute (2 – 11 months); Severe pneumonia: cough OR difficulty in breathing AND any of the following general severe signs: unable to drink or breastfeed OR vomits everything OR convulsions OR lethargy or unconsciousness OR chest in drawing or stridor in a calm child.		
	SARI case definition - WHO/Europe 2011: An acute respiratory illness with onset during the previous 7 days requiring overnight hospitalization that includes: history of fever or measured fever of ≥ 38°C, AND cough, AND shortness of breath or difficulty breathing.		
	SARI case definition - WHO global 2014: An acute respiratory infection with: history of fever or measured fever of ≥ 38 C°; and cough; with onset within the last 10 days; and requires hospitalization.		
	Does the case definition specify a period of symptoms onset? (e.g. onset of symptoms within 7 days before admission) (Y, N, UKN)		
	If yes, what is the time period?		
	If other, please describe:		
	Are any other exclusion criteria in use? (e.g. infants, people with underlying disease)		
	If yes, what are they?		

3	Is there accurate use of the standard case definition by the sentinel site-level staff members?		
	Has the SARI case definition been shared with all staff members involved in surveillance? (e.g. shared on paper at start season, posted/clearly visible in staff office)		
	Please provide common admitting diagnoses for SARI cases, e.g. if the site uses not (only) the SARI case definition but ICD-codes (e.g. ICD-10 code J9–18) for a proxy of SARI cases.		
4	Please describe the standard procedure used to record/identify SARI cases and please indicate whether this is performed at all times (24 hours/7 days per week). Comments can be provided in the comment section.		

B. SARI data collection

5	Are data on SARI admissions and test results collected all year round / during the influenza season?		
	If the data are collected part of the year, please describe:		
6	Using the information collected, is this site and its data gathered representative for the population covered by the hospital? (Y, N, UNK)		
7	*Using the information collected, does this site and its data gathered likely provide a representative sample for the population covered by the hospital of the following population groups?*		
	Criteria	**Please select from drop-down menu below**	
	Age		
	Sex		
	Geography		
	Ethnicity		
	Socio-economic status		
	Risk factors/chronic disease		

8	Does the site use a standard individual report form(s) for each SARI case to collect epidemiological and specimen information? (Y, N, UNK) (Note: this information can be collected on 1 or more forms, if possible please obtain a copy of the form(s))		
	If yes, is the individual case data and specimen data combined on the same form or separate forms?		
	If yes, is this a standard form provided by the national surveillance office/coordinator?		
9	Please indicate which of the following items are collected on the form(s) as referred to in Question 8:		*If any of the data are not collected on the form, but elsewhere, please also specify in the comment below.*
		Y N UNKNOWN	***Comment:***
	Case classification (SARI)		
	Date of symptom onset		
	Date of form completion		
	Date of specimen collection		
	Patient Unique Identifier		
	Sex		
	Date of birth or age (in years or months if year < 1)		
	IF FEMALE		
	Pregnancy status		
	Trimester / No. weeks pregnant		
	Post-partum (up to 6 weeks)		
	Is information on chronic medical conditions collected on form? (Y, N, UNK). If yes, please indicate if information is collected for the medical conditions listed below		
	None - patient has no underlying conditions		
	Chronic respiratory disease		
	Asthma		
	Diabetes		
	Chronic heart disease		
	Chronic kidney disease		
	Chronic liver disease		
	Chronic neurological impairment		
	Immuno-compromised (incl. HIV+/AIDS)		

	Obesity (e.g. BMI>30 or clinically obese)		
	Are other conditions reported on the form which are not described above?		
	If yes, please describe other chronic medical conditions that can be reported on the form:		
	Vaccination status and antiviral use collected on the form		
	Is antiviral use (in the previous 14 days) collected on the form?		
	Is treatment with oseltamivir listed on the form?		
	Is treatment with zanamivir listed on the form?		
	Is treatment with other antivirals listed on the form?		
	If other, please describe the other antivirals that can be reported on the form:		
	Is the vaccination status for the current season collected on the form?		
	Are SARI case criteria collected on the form? (Y, N, UNK). If yes, please indicate if information is collected for the criteria listed below		
	Measured fever ≥ 38˚C, or history of fever		
	Cough		
	Shortness of breath or difficulty breathing		
	Requires hospitalization		
	Are patient outcome (discharged alive, died) and/or severity data collected on the form? (Y, N, UNK) Please also complete the severity data below and indicate if they are collected on the form		
	Discharged alive		
	Died		
	ICU admission		
	Mechanical ventilation		
	Is the type of laboratory specimen collected on the form? (Y, N, UNK)		
	Nasal swab		
	Throat swab		
	Nasopharyngeal swab		
	Bronchoalveolar lavage		
	Other		
	If other type of laboratory specimen is collected, please specify		
	Date of receipt at laboratory		

	Is the laboratory confirmation method collected on the form? (Y, N, UNK)		
	PCR/RT-PCR		
	Viral culture		
	Immunofluorescence (IFA)		
	Other (test)		
	Please list any other test(s) used:		
	Is the laboratory test result collected on the form (Y, N, UNK)		
	Influenza type (A/B)		
	Influenza A by subtype (A/H3N2, A/H1N1)		
	Are samples tested for other influenza types than indicated above? (e.g. H5, H7)		
	If samples are tested for other types influenza, please indicate the type(s)		
	Is the "date of testing" collected on the form?		
	Please list any other criteria, (e.g. testing for other respiratory pathogens) if collected on the form		
10	Does the site use standard aggregate SARI form(s) to record data on e.g. total number on new admissions, number of cases selected for influenza testing during week, etc.? (if possible please obtain a copy of this form(s))		
11	Are above records stratified by age or age group?		
	If yes, please describe the age groups:		
12	**Where possible, review a random selection of records from those patients eligible to be enrolled as SARI cases in order to determine the sensitivity of the SARI surveillance. Use the patient logbook/line list to select this random group of records.**		
	Number of patient records reviewed		
	Number of those records meeting the SARI case definition (12b)		
	Number of cases reviewed that met the SARI case definition AND were identified as SARI in the logbook/line list (12c)		
	Sensitivity (=12c/12b)		

	Number of cases reviewed that were identified as SARI in the logbook/line list but did not meet the SARI case definition		
	Does this review of charts indicate that all or most SARI cases meeting the SARI case definition? Please describe your answer in the comment section.		

General Comments/Notes:

2. Respiratory Specimen Collection, Packaging, Storage and Shipment

C. Respiratory specimen collection			
Please complete details in the grey boxes below, additional information can be included in the comment section.			***Comment:***
1	Is a respiratory sample collected from every identified SARI patient at all times (24 hr/7 days a week)? (E.g. In case only part of the doctors collect respiratory specimens, or samples are collected on week days, please select "no"). In case there are different strategies used during summer, pre-epidemic, epidemic and post-epidemic season, please provide these in the comment section.		
	If no, what is the sampling scheme used for collection of respiratory specimens? Please provide description below, e.g. each 3rd SARI patient is sampled, or samples are collected on certain days of the week.		
2	Based on the information provided do you think the sampling procedure is a systematic method? If possible please assess whether the written protocol is followed by the staff that takes swabs.		
3	Please provide an interpretation of whether the sampling procedure might bias the surveillance data collected (no bias, minimum bias, some bias, ...) including where there are any measures in place to minimize this bias. (In case all SARI cases are sampled as indicated under Question 1, please select "Not applicable")		
4	What is the maximum number of specimens that staff can collect at this site on one day?		
5	What is the maximum number of specimens that can be collected at this site in one week?		
6	Are total numbers of respiratory specimens collected being recorded? (Y, N, UNK)		

7	What type of respiratory specimen(s) is/are collected in this hospital?		
	Sample type	**Y N UNKNOWN**	***Comment:***
	Nasal swab		
	Throat swab		
	Nasopharyngeal (NP) swab		
	Bronchoalveolar lavage (BAL)		
	Nasopharyngeal (NP) aspirates or washes		
	Nasal wash		
	Other		
	If other, please describe		
8	Which staff member(s) is/are taking respiratory samples?		
	If other or different staff members collect specimens, please describe		
9	Does the site have standard operating procedures (SOPs) for how to collect respiratory specimens from cases available? (if possible please obtain a copy of this SOP(s))		
	If no, please describe the process used for standardization of the procedures		
10	Does the site use synthetic swabs as applicators for specimen collection?		
	If no, please describe		
11	Is a unique identifier assigned to the swab which enables linkage between laboratory and epidemiological data?		

D. Packaging, storage and shipment				Comment:
12	Which specimen collection materials are readily available at the site:	**Y N UNKNOWN**	*Please provide info on whether there is reasonable supply below for swabs, vials with VTM, packaging materials and forms:*	
	Tong depressors			
	Specimen swabs			
	Vials containing VTM at 4˚C			
	Disinfectant (e.g. alcohol)			
	Packaging materials for transport			
	PPE (e.g. gloves, safety glasses..)			
	Respiratory specimen collection form/swab form			
	If other, please describe			
13	How are laboratory specimens packaged in this hospital? (Please describe)			
14	Is a triple package system used for transporting respiratory specimens?			
15	Is there a sufficient supply of packaging materials (or a rapid process to procure the packaging materials) available?			
	If yes, please list the materials available:			
16	Are shipping materials returned to the site and reused? Please specify which materials are reused in comment section.			

General Comments/Notes:

3. Personal Protective Equipment (PPE) and Respiratory Sampling Techniques

E. Hygiene			
Please complete details in the grey boxes below, additional information can be included in the comment section.			
Please ask staff members to demonstrate how respiratory samples are collected at the site and observe whether hand hygiene is performed, etc. If there are no patients to swab, ask staff to describe, step-by-step, the procedure for specimen collection that they routinely follow.			
1	Please note which type of appropriate PPE was described /used in the demonstration for respiratory sampling collection.	**Y N UNKNOWN**	***Comment:***
	Gloves		
	Gown/Lab coat		
	Safety glasses		
	Mask		
	Respirator		
	Shoe covers		
	If other, please describe		
2	Was hand washing performed when collecting respiratory specimens?		
	Was hand hygiene performed before specimen collection?		
	Was hand hygiene performed after specimen collection?		
	Is soap available for hand washing?		
	Is there adequate water for hand washing?		
3	Are there SOPs in place describing the method to deal with spillage of a sample?		

F. Laboratory standards			
4	What is the average time (days) that respiratory samples are stored at the sentinel site in a refrigerator (2-8°C) before being sent for testing?		
	If other, please describe:		
5	Is the temperature where the specimens are stored being checked at least daily? Please indicate if there is a monitoring sheet or other record of the temperature in the comment section.		

6	Are results of all specimens (positive and negative) routinely reported from laboratory to the surveillance site (coordinator)?		
	If results are reported to the site (coordinator), how often are they reported?		
	What is the time between sending the respiratory sample and receipt of results from the laboratory to the site (coordinator)?		
	If other, please describe:		
7	Are laboratory results reported back to clinicians?		
	If yes, what proportion of laboratory results is reported to clinicians?		
	What is the time between sending the respiratory sample and receipt of results for the clinician?		
	If other, please describe:		

G. Respiratory specimen testing			***Comment:***
8	Where is routine influenza testing performed?		
9	For the routine testing of specimens for influenza, within what time frame are the specimens tested? (please specify in comment section if differences in testing during the start of season, peak and out-of-season) exist		
	If other, please describe:		
10	If specimens are routinely tested on-site or at a regional laboratory, are subsets of specimens sent to the national influenza laboratory for confirmatory testing?		
	If yes, how often?		
	If other, please describe:		
11	What means are used to transport laboratory specimens to the laboratory? (Please describe and specify if it involves transport to on-site or off-site laboratory and if it differs by time of year)		

On-site laboratory testing			
12	If routine testing is performed on-site, what laboratory tests are performed?	*Please select "yes" if the method is routinely used at this site*	
	Rapid-test		
	Immunofluorescence assay		
	(RT-)PCR (typing)		
	(RT-)PCR (typing and subtyping)		
	Viral culture		
	Hemagglutinin inhibition		
	Other		
	If other, please describe:		

General Comments/Notes:

4. Data Reporting, Management, Analysis and Quality

H. Data reporting, Management, and Analysis			Comment:
1	Is there an appointed SARI surveillance coordinator at this site?		
	If yes, please indicate name & surname SARI coordinator		
	Position SARI coordinator		
2	What method is primarily used to routinely report sentinel surveillance data to the national (or regional) level by the sentinel site? If multiple methods are used please provide information in the comment section.		
	If other, please describe		
3	With what frequency is this reporting to the national level done? Please indicate in the comment section if data are also provided to the regional level.		
	If other, please describe		
	Is a standard reporting template available?		
4	How are surveillance data stored at the site?		
	If other, please describe		
If no ELECTRONIC or WEB-BASED SYSTEM is used at the site - go to question 5			
	Which computer program/software is used at the site?		
	How often is data entered into the electronic system at the site?		
	If other, please describe		
	Who is responsible for data entry at the site? (Title, Position)		
5	How often are all cases meeting the case definition tallied at this site?		
	If other, please describe		
6	How often are total all-cause admissions tallied at this site?		
	If other, please describe		
7	Are above data tallied by age group?		
	If yes, please describe the age groups:		
8	Is any SARI data analysis performed on-site?		
	If yes, what analysis is performed? (e.g. SARI cases/week, SARI by age group, % positive for influenza etc.)		

9	*Is the sentinel influenza surveillance site capable of identifying sudden increases /abnormal respiratory disease activity?*		
	If yes, how is that assessed?		
	If a change in activity is observed, to whom is this change reported?		
	Are actions taken if sudden increases /abnormal SARI activity is observed? Please describe what action were taken under comments		
	Have any actions been taken in the past 12 months as response to abnormal SARI activity?		
	If no activity was taken in responses to abnormal SARI activity, why not?		
10	*Does the sentinel influenza surveillance site compile and prepare reports on SARI activity?*		
	If yes, is a standard report template used?	*Check all that apply*	
	With whom are these reports shared? ☐	National level	
	☐	Surveillance staff at site	
	☐	Local/regional public health office	
	☐	Physicians at surveillance site	
	☐	Physicians in country/city/region	
	☐	Other	
	If other, please describe		

I. Quality monitoring			***Comment:***
11	Are all cases fulfilling the case definition recorded regardless of whether or not a respiratory sample is collected from the case? (if possible, ask to see a logbook with diagnoses. (If epidemiological data are collected from SARI cases recorded -but are not sampled, please describe in the comment section)		

12	Is data quality monitored at the site?		
	If yes, what methods are used to monitor data quality?		
	If yes, how frequently is data quality monitored?		
	If other, please describe		
13	Does the sentinel influenza surveillance site receive feedback on surveillance data quality issues from the national level?		
	If yes, how often?		
	If other, please describe		
	How often are actions taken in case of data quality issues?		
	If other, please describe		
14	Do staff members from national level/surveillance coordinators perform sentinel site visits? (e.g. to perform quality assurance assessments)		
	If yes, how often?		
	If other, please describe		

J. Training			***Comment:***
15	Have the site-level staff members participated in a training on implementation of sentinel surveillance (e.g. in case detection, specimen collection, storage of specimens, spillage of sample)?		
	If yes, please describe:		
	If yes, did they received training in the last 12 months?		
	If answered no, when was the last training?		
16	Do site-level staff members receive training from the national level in response to data quality issues?		
	If yes, how often do these trainings take place?		
	If other, please describe		

General Comments/Notes:

Notes

0. General Information

INFLUENZA SURVEILLANCE REVIEW - ILI SITE VISIT			
	Please complete details in the grey boxes below, additional information can be included in the comment section.		***Comment:***
1	Name of the ILI site/facility		
	Date of interview (dd/mm/yyyy)		
	Name and position of staff interviewed. If multiple persons are interviewed, please include names and position		
	Name interviewer and organization		
2	Have previous interviews/assessments been performed? (Y, N, UKN)		
	If yes, date of latest interview		
	If yes, name of latest interviewer and organization		

GENERAL INFORMATION			
			Comment:
1	Where is this facility located?		
	Country		
	Address		
	Province		
	City/Town/Village		
2	What year (yyyy) did the site begin to collect data on ILI?		

3	How many surveillance staff members are present at this site?		
	Are these staff members given an incentive to participate? (Y, N, UKN)		
	If yes, what is the incentive?		
	Please describe the surveillance duties assigned to designated surveillance staff (if different for doctor, nurse, lab technician etc. please specify)		
4	What type of site/facility is it? (public, private, other)		
	If other, please describe		
	What type of facility is this? (outpatient facility/GP, polyclinic, pediatric clinic, …)		
	If other, please describe		
5	How many patients does this facility typically see on a weekly basis?		

General Comments/Notes:

1. Case Detection and Data Collection

A. ILI case definition			
	Please complete details in the grey boxes below, additional information can be included in the comment section.		***Comment:***
1	Is a standard case definition being used by the sentinel influenza surveillance site? (Y, N, UNK)		
2	What is the standard case definition in use for ILI? (WHO, ECDC, …) Please see the description of common case definitions below. In case there is a distinction between adults and children, please add this information in the comment section.		
	If another case definition is used, please describe it here:		
	ILI case definition - WHO/Europe 2011: Sudden onset of fever >38 C° AND cough OR sore throat in the absence of other diagnosis		
	ILI case definition -WHO global 2014: An acute respiratory infection with: measured fever of ≥ 38 C° and cough; with onset within the last 10 days.		
	ILI case definition - ECDC: Sudden onset of symptoms and at least one of the following four systemic symptoms: fever or feverishness, malaise, headache, myalgia and at least one of the following three respiratory symptoms: cough, sore throat or shortness of breath		
	Does the case definition specify a period of symptoms onset? (e.g. onset of symptoms within 7 days before consultation (Y, N, UNK)		
	If yes, what is the time period?		
	If other, please describe:		
	Are any other exclusion criteria in use? (Y, N, UNK)		
	If yes, what are they?		
3	Is there accurate use of the standard case definition by the sentinel site-level staff members?		
	Has the ILI case definition been shared with all staff members involved in surveillance? (e.g. shared on paper at start season, posted/clearly visible in staff office)		
	Please provide common diagnoses for ILI cases, e.g. if the site uses not (only) the ILI case definition but uses ICD-codes for a proxy of ILI cases.		

4	Please describe the standard procedure used to record/identify ILI cases and please indicate whether this is performed at all times (24 hours/7 days per week). Comments can be provided in the comment section.		

B. ILI data collection				***Comment:***
5	Are data on ILI consultations and test results collected all year round / during the influenza season?			
	If the data are collected part of the year, please describe:			
6	Using the information collected, is this site and its data gathered representative for the population covered by the sentinel site? (Y, N, UNK)			
7	Using the information collected, does this site and its data gathered likely provide a representative sample for the population covered by this sentinel site of the following population groups?			
	Criteria	**Please select from drop-down menu below**	**Please explain**	
	Age			
	Sex			
	Geography			
	Ethnicity			
	Socio-economic status			
	Risk factors/chronic disease			
8	Does the site use a standard individual report form(s) for each ILI case to collect epidemiological and specimen information (Y, N, UNK) (Note: this information can be collected on 1 or more forms, if possible please obtain a copy of the form(s))			
a	*If yes, is the individual case data and specimen data combined on the same form or separate forms?*			
b	*If yes, is this a standard form provided by the national surveillance office/coordinator*			

9	Please indicate which of the following items are collected on the form(s) as referred to in Question 8:		*If any of the data are not collected on the form, but elsewhere, please also specify in the comment below.*
		Y N UNKNOWN	**Comment:**
	Case classification (ILI)		
	Date of symptom onset		
	Date of form completion		
	Date of specimen collection		
	Patient Unique Identifier		
	Sex		
	Date of birth or age (in years or months if year < 1)		
	Vaccination status and antiviral use collected on the form		
	Is antiviral use (in the previous 14 days) collected on the form?		
	Is treatment with oseltamivir listed on the form?		
	Is treatment with zanamivir listed on the form?		
	Is treatment other antivirals listed on the form?		
	If other, please describe the other antivirals that can be reported on the form:		
	Is the vaccination status for the current season collected on the form?		
	Are ILI case criteria collected on the form? (Y, N, UNK) Please also complete the criteria below and indicate if they are collected on the form		
	Measured fever ≥ 38˚C, or history of fever		
	Cough		
	Sore throat		
	Myalgia		
	Malaise		
	Headache		
	Other		
	Are other case criteria reported on the form which are not described above? If yes, please describe in the comment section		

	Is the type of laboratory specimen collected on the form? (Y, N, UNK)		
	Nasal swab		
	Throat swab		
	Nasopharyngeal swab		
	Bronchoalveolar lavage		
	Other		
	If other type of laboratory specimen is collected, please specify:		
	Date of receipt at laboratory		
	Is the laboratory confirmation method collected on the form? (Y, N, UNK)		
	PCR/RT-PCR		
	Viral culture		
	Immunofluorescence (IFA)		
	Other (test)		
	Please list any other test(s) used:		
	Is the laboratory test result collected on the form (Y, N, UNK)		
	Influenza type (A/B)		
	Influenza A by subtype (A/H3N2, A/H1N1)		
	Are samples tested for other influenza types than indicated above? (e.g. H5, H7)		
	If samples are tested for other types influenza, please indicate the type(s)		
	Is the "date of testing" collected on the form?		
	Please list any other criteria, (e.g. testing for other respiratory pathogens) if collected on the form		
10	Does the site use standard aggregate ILI form(s) to record data on e.g. total number on new consultations, number of cases selected for influenza testing during week, etc.? (if possible please obtain a copy of this form(s))		
11	Are above records stratified by age or age group?		
	If yes, please describe the age groups:		

General Comments/Notes:

2. Respiratory Specimen Collection, Packaging, Storage and Shipment

C. Respiratory specimen collection				
Please complete details in the grey boxes below, additional information can be included in the comment section.				
1	Please describe the standard method(s) for selecting ILI cases for respiratory specimen collection. In case the method differs between winter (influenza) season and summer (inter-season) period, please describe below.			***Comment:***
	Does the sampling of ILI cases occur at all times (24 hr per day/7 days a week)?			
	If no, when are patients sampled? (for a detailed sampling scheme please complete Question 2)			
2	If sampling does not occur at all times, what is the sampling scheme in use for the collection of ILI specimens?			
	Day	**Y N UNKNOWN**	**Time of day (e.g. morning, afternoon, all day, etc.)**	
	Monday			
	Tuesday			
	Wednesday			
	Thursday			
	Friday			
	Saturday			
	Sunday			
3	Based on the information provided do you think the sampling procedure is a systematic method? If possible please assess whether the written protocol is followed by the staff that takes swabs.			
4	Please provide an interpretation of whether the sampling procedure might bias the surveillance data collected (no bias, minimum bias, some bias, ...), including where there are any measures in place to minimize this bias. More details can be provided in the comment section.			
5	What is the maximum number of specimens that staff can collect at this site on one day?			
6	What is the maximum number of specimens that staff can collect at this site in one week?			
7	Are total numbers of respiratory specimens collected being recorded? (Y, N, UNK)			

8	What type of respiratory specimen(s) is/are collected in this facility?		
	Sample type	**Y N UNKNOWN**	
	Nasal swab		
	Throat swab		
	Nasopharyngeal (NP) swab		
	Bronchoalveolar lavage (BAL)		
	Nasopharyngeal (NP) aspirates or washes		
	Nasal wash		
	Other		
	If other, please describe		
9	Which staff member(s) is/are taking respiratory samples?		
	If other or different staff members collect specimens, please describe		
10	Does the site have standard operating procedures (SOPs) for how to collect respiratory specimens from cases available? (if possible please obtain a copy of this SOP(s))		
	If no, please describe the process used for standardization of the procedures		
11	Does the site use synthetic swabs as applicators for specimen collection?		
	If no, please describe:		
12	Is a unique identifier assigned to the swab which enables linkage between laboratory and epidemiological data?		

D. Packaging, storage and shipment				Comment:
13	Which specimen collection materials are readily available at the site:	**Y N UNKNOWN**	*Please provide info on whether there is reasonable supply below for swabs, vials with VTM, packaging materials and forms:*	
	Tongue depressors			
	Specimen swabs			
	Vials containing VTM at 4˚C			
	Disinfectant (e.g. alcohol)			
	Packaging materials for transport			
	PPE (e.g. gloves, safety glasses..)			
	Respiratory specimen collection form/swab form			
	If other, please describe:			
14	How are laboratory specimens packaged in this facility? (Please describe)			
15	Is a triple package system used for transporting respiratory specimens?			
16	Is there a sufficient supply of packaging materials (or a rapid process to procure the packaging materials) available?			
	If yes, please list the materials available:			
17	Are shipping materials returned to the site and reused? Please specify which materials are reused in comment section.			

General Comments/Notes:

3. Personal Protective Equipment (PPE) and Respiratory Sampling Techniques

E. Hygiene			
Please complete details in the grey boxes below, additional information can be included in the comment section.			
Please ask staff members to demonstrate how respiratory samples are collected at the site and observe whether hand hygiene is performed, etc. If there are no patients to swab, ask staff to describe, step-by-step, the procedure for specimen collection that they routinely follow.			
1	Please note which type of appropriate PPE was described /used in the demonstration for respiratory sampling collection.	**Y N UNKNOWN**	***Comment:***
	Gloves		
	Gown/Lab coat		
	Safety glasses		
	Mask		
	Respirator		
	Shoe covers		
	If other, please describe:		
2	Was hand washing performed when collecting respiratory specimens?		
	Was hand hygiene performed before specimen collection?		
	Was hand hygiene performed after specimen collection?		
	Is soap available for hand washing?		
	Is there adequate water for hand washing?		
3	Are there SOPs in place describing the method to deal with spillage of a sample?		

F. Laboratory standards			***Comment:***
4	What is the average time (days) that respiratory samples are stored at the sentinel site in a refrigerator (2-8°C) before being sent for testing?		
	If other, please describe:		

5	Is the temperature in the specimen storage area monitored at least daily? Please indicate if there is a monitoring sheet or other record of the temperature in the comment section.		
6	Are results of all specimens (positive and negative) routinely reported from laboratory to the surveillance site (coordinator)?		
	If results are reported to the site (coordinator), how often are they reported?		
	What is the time between sending the respiratory sample and receipt of results from the laboratory to the site (coordinator)?		
	If other, please describe:		
7	Are laboratory results reported back to clinicians?		
	If yes, what proportion of laboratory results is reported to clinicians?		
	What is the time between sending the respiratory sample and receipt of results for the clinician?		
	If other, please describe:		

G. Respiratory specimen testing			***Comment:***
8	Where is influenza testing routinely performed?		
9	For the routine testing of specimens for influenza, within what time frame are the specimens tested? (please specify in comment section if differences in testing during the start of season, peak and out-of-season) exist		
	If other, please describe:		
10	If specimens are routinely tested on-site or at a regional laboratory, are subsets of specimens sent to the national influenza laboratory for confirmatory testing?		
	If yes, how often?		
	If other, please describe:		

11	What means are used to transport laboratory specimens to the laboratory? (Please describe and specify if it involves transport to on-site or off-site laboratory and if it differs by time of year)		
On-site laboratory testing			
12	If routine testing is performed on-site, what laboratory tests are performed?	*Please select "yes" if the method is routinely used at this site*	
	Rapid-test		
	Immunofluorescence assay		
	(RT-)PCR (typing)		
	(RT-)PCR (typing and subtyping)		
	Viral culture		
	Hemagglutinin inhibition		
	Other		
	If other, please describe:		
General Comments/Notes:			

4. Data Reporting, Management, Analysis and Quality

H. Data reporting, Management, and Analysis			Comment:
1	Is there an appointed ILI surveillance coordinator at this site?		
	If yes, please indicate name & surname ILI coordinator		
	Position ILI coordinator		
2	What method is primarily used to routinely report sentinel surveillance data to the national level by the sentinel site? If multiple methods are used please provide information in the comment section.		
	If other, please describe:		
3	With what frequency is this reporting to the national level done? Please indicate in the comment section if data are provided to the regional level.		
	If other, please describe:		
	Is a standard reporting template available?		
4	How are surveillance data stored at the site?		
	If other, please describe:		
If no ELECTRONIC or WEB-BASED SYSTEM is used at the site- go to question 5			
	Which computer program/software is used at the site?		
	How often is data entered into the electronic system at the site?		
	If other, please describe:		
	When is data entered into the electronic system at the site? (E.g. every day, every Friday, last day of month, etc.)		
	Who is responsible for data entry at the site? (Title, position)		
5	How often are all cases meeting the case definition tallied at this site?		
	If other, please describe:		
6	How often are total primary care (all-cause) consultations tallied at this site?		
	if other, please describe:		

7	Are above data tallied by age group?		
	If yes, please describe the age groups:		
8	Is any ILI data analysis performed on-site?		
	If yes, what analysis is performed? ((e.g. ILI cases/week, ILI by age group, % positive for influenza etc.)		
9	Is the sentinel influenza surveillance site capable of identifying sudden increases /abnormal respiratory disease activity?		
	If yes, how is that assessed?		
	If a change in activity is observed, to whom is this change reported?		
	Are actions taken if sudden increases /abnormal ILI activity is observed? Please describe what actions were taken under comments.		
	Have any actions been taken in the past 12 months as response to abnormal ILI activity?		
	If no activity was taken in responses to abnormal ILI activity, why not?		
10	Does the sentinel influenza surveillance site compile and prepare reports on ILI activity?		
	If yes, is a standard report template used?		
	With whom are these reports shared?	*Check all that apply*	
	☐	National level	
	☐	Surveillance staff at site	
	☐	Local/regional public health office	
	☐	Physicians at surveillance site	
	☐	Physicians in country/city/region	
	☐	Other	
	if other, please describe:		

I. Quality monitoring			***Comment:***
11	Are all cases fulfilling the case definition recorded regardless of whether or not a respiratory sample is collected from the case? (if possible, ask to see a logbook with diagnoses)		
	If yes, is temperature (or history of fever) recorded for ALL patients recorded as ILI?		
	Is this record of ILI cases maintained by age group?		

12	Is data quality monitored at the site?		
	If yes, what methods are used to monitor data quality?		
	If yes, how frequently is data quality monitored?		
	If other, please describe:		
13	Does the sentinel influenza surveillance site receive feedback on surveillance data quality issues from the national level?		
	If yes, how often?		
	If other, please describe:		
	How often are actions taken in case of data quality issues?		
	If other, please describe:		
14	Do staff members from national level/surveillance coordinators perform sentinel site visits? (e.g. to perform quality assurance assessments)		
	If yes, how often?		
	If other, please describe:		

J. Training			***Comment:***
15	Have the site-level staff members received training in implementation of sentinel surveillance? (e.g. in case detection, specimen collection, storage of specimens, spillage of sample)		
	If yes, please describe:		
	If yes, did they received training in the last 12 months?		
	If answered no, when was the last training?		
16	Do site-level staff members receive training from the national level in response to data quality issues?		
	If yes, how often do these trainings take place?		
	If other, please describe:		

General Comments/Notes: