

# Interim assessment protocol for national SARS preparedness



WHO Western Pacific Regional Office  
2003

Interim assessment protocol for national SARS preparedness

© World Health Organization 2003

All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The World Health Organization does not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

Publications of the World Health Organization, Western Pacific Regional Office can be obtained from Publications Office, World Health Organization, Regional Office for the Western Pacific, P.O. Box 2932, 1000, Manila, Philippines. Requests for permission to reproduce WHO- Western Pacific Regional publications, in part or in whole, or to translate them – whether for sale or for noncommercial distribution – should be addressed to Publications Office, at the above address (fax. No. (632 521-1036, email: [publications@wpro.who.int](mailto:publications@wpro.who.int)).

## **Foreword**

This protocol has been published to enable in-country assessment of preparedness for severe acute respiratory syndrome (SARS). It should be used in conjunction with the WPRO *Interim Guidelines for National SARS Preparedness*. As both of these were written in response to the newly evolving SARS outbreak, countries undergoing an in-country assessment should ensure they have the latest copy of these documents from on the WPRO website, or contact a member of the WPRO SARS response team. The protocol has been prepared primarily for countries that have not yet experienced any SARS cases, although SARS-affected countries may also find them useful to monitor their response to SARS.

This is an interim protocol, prepared in response to a new and still imperfectly understood health threat. Comments and suggested modifications would be much appreciated. Please send your comments to: [outbreak@wpro.who.int](mailto:outbreak@wpro.who.int)

### **Contacting the WPRO SARS response team:**

Telephone: +63 2 528 9833  
Facsimile: +63 2 528 9075  
Email: [outbreak@wpro.who.int](mailto:outbreak@wpro.who.int)  
SARS website: [www.wpro.who.int/sars](http://www.wpro.who.int/sars)

## Preparing for SARS – a national assessment protocol

### What is this document to be used for?

This manual has been developed by the Western Pacific Regional Office (WPRO) of WHO for use by staff carrying out in-country assessments for severe acute respiratory syndrome (SARS) preparedness. It will assist WHO staff and national health authority staff to report on national preparedness, including the establishment of a national SARS surveillance and response process. It will also assist local health authorities and designated SARS referral hospitals assess adequacy of infection control preparations, including stockpiling of barrier nursing equipment. This document should be used in conjunction with the WPRO *Country Checklist* and the WPRO *Interim Guidelines for National SARS Preparedness*.

### Why do countries need to be prepared for SARS?

SARS is a newly recognised communicable disease. At present, no SARS pathogen has been identified and there is no diagnostic test for the illness. The first cases of SARS were reported as an outbreak of atypical pneumonia during November 2002 in southern China.

The clinical picture associated with SARS is that of a progressively worsening respiratory illness. After an incubation period of between 2 and 10 days, clinical symptoms appear. The major early symptom is high fever (>38°C), but others typical of viral respiratory illness (including muscle aches, headache, dizziness, tiredness, and dry cough) are also common. After 1 to 2 days, the illness may progress into a lower respiratory phase with shortness of breath and worsening cough. By day 5 to 6, about 10% of patients will have progressed to a serious lower respiratory phase requiring more intensive support such as regular supplemental oxygen, intensive care, intubation and mechanical ventilation. The other 90% of cases will still have a relatively long and severe illness but will not require intensive care. In approximately 4% of patients, the illness will result in death.

At the time of writing there had been 2416 cases of SARS identified in 18 countries, with 89 deaths. Individuals at highest risk of acquiring SARS are those who have close contact with an identified case. Early on the disease targeted health care workers (HCWs) who cared for a SARS patient.

In some hospitals where transmission of SARS has occurred, the effect has been dramatic and leaves no doubt about the high risk to HCWs and the ability of SARS to devastate the health sector. Frontline health care workers, who looked after early patients, themselves became SARS patients, draining the hospital of trained professional staff with impacts on levels of care and institutional moral.

Early identification of possible SARS patients and immediate patient isolation with strict barrier nursing will minimise the potential for local transmission. Without a sensitive and effective surveillance system for identifying SARS patients, it is difficult to prevent ongoing transmission and outbreaks. Local hospitals and national health authorities could soon be overwhelmed by the demands of a SARS outbreak. Preparation at all levels is necessary to avoid this circumstance.

### What are the aims and objectives of the assessment?

Conducting a national assessment for SARS preparedness should bring together all those in a country who have responsibility for managing the surveillance and control of communicable diseases, with the aim of formally assessing national SARS preparedness activities. This assessment should lead to an agreed, prioritised plan of action for addressing identified gaps in preparation.

The objectives of the assessment are:

- 1 To obtain baseline information about national and local health infrastructure and activities undertaken to date for SARS preparedness
- 2 To determine country needs for strengthening national readiness for potential SARS cases
- 3 To identify gaps and opportunities to better prepare local health authorities, designated hospitals and laboratories, including resources required, for a co-ordinated SARS response
- 4 To work with the national health authority to developing a prioritised action plan, based on the assessment findings, and identify the means of implementing the plan in a short time frame.

### **Which countries should be assessed by in-country WHO assessment teams?**

Every country should review their SARS preparedness and are encouraged to use this document to guide that process. Some countries in the region will be offered an in-country assessment by WHO staff. Priority should be given to individual countries based on the following criteria:

- Likelihood of importation of a SARS case based on frequency of direct flights or other transportation links with SARS-affected areas (for WHO listing of currently affected areas see <http://www.who.int/csr/sarsareas/en/>)
- Likely impact of a SARS outbreak on national health infrastructure
- Countries where a probable SARS case has not yet been identified (that is, they are still in a preparedness phase, not a response phase), and the effectiveness of SARS preparedness planning to date.

At the time of writing there was concern about the possibility of local community transmission of SARS in two areas: Hong Kong Special Administrative Region of China, and Guangdong province, China. WHO has issued advice that all travellers consider postponing all but essential travel to these areas. Given this, particular attention should be paid to regions that have direct local flights from Hong Kong and Guangdong.

### **Who will do the in-country assessment?**

The WHO SARS preparedness assessment team will ideally consist of two team members. One will have an expertise in public health management and surveillance issues and the other will be an infection control specialist. The tasks assigned to the team members will be approximately divided according to these areas of expertise. Depending on the availability of staff and the requirements of the country, a team may only consist of a public health person with training in SARS-specific infection control, or the team may include two infection control specialists, so that simultaneous on-site review of designated hospitals can take place.

## What should be assessed?

The priority areas of national SARS preparedness are outlined in the WPRO document *Interim Guidelines for National SARS Preparedness*. These priority areas are:

- Country management structure
- Hospital Infection control practices, including the stockpiling of sufficient barrier nursing equipment
- Enhanced surveillance for SARS
- Infection control in the community
- International travel
- Collection and transportation of laboratory specimens.

## Procedures

WHO will formally offer an identified country an in-country assessment of SARS preparedness. If the country accepts, arrangements will be made for the timing and agenda for the visit.

It is envisaged that the initial in-country assessment will take one to two days. Countries should use the time before the visit to prepare the requested material related to the SARS assessment. This preparation should be as thorough as possible to maximise the potential benefits of the review.

The major areas for review during the assessment will be loosely divided along broad public health and infection control topics. To maximise efficiency where there is a public health person and infection control person conducting the assessment, these two parallel assessments of each aspect may be conducted separately with the team coming together at the end of the assessment to discuss the findings, and work with health authorities to produce a prioritised action plan. Part of the action plan may include a follow-up visit by the assessment team, depending on the findings of the initial assessment.

## Activities

### **Activities before the assessment**

Countries should plan for the assessment prior to arrival of the WHO team. This planning is essential for the success of the assessment.

#### **1 Identify participants**

Personnel to be involved in the assessment should be identified at both the national health authority and at the designated hospital/s included in the review. The number and background of the participants should be discussed with a member of the assessment team prior to the visit. Where applicable, this should include:

- The MOH SARS focal person representing the national health authority and responsible for overseeing the assessment and liaising with WHO team. This person is an integral part of the assessment team, and should be involved with the entire planning and conduct of the review
- The head and other key members of the national task force responsible for SARS preparedness planning
- Health authority staff charged with the co-ordination and implementation of the national SARS response
- Health authority staff responsible for the surveillance and control of SARS in the country
- Nursing and medical staff from the designated SARS hospital responsible for isolation and direct patient care of SARS patients

- Staff from the designated SARS hospital responsible for the management of SARS related infection control issues, including the ordering and distribution of SARS barrier nursing material
- WHO WR or CLO.

It may also include:

- Staff from the designated SARS laboratory
- Representatives from clinical services management at the designated hospital/s responsible for caring for SARS patients.

## **2 Review these guidelines in conjunction with the WPRO *Interim Guidelines for National SARS Preparedness***

- Under the identified headings, summarise the national and local preparedness plan for SARS
- Where possible, provide the assessment team with a copy of these findings prior to the visit
- This review should be as honest and frank as possible
- Many countries will have areas of weakness in their response to SARS
- The best way to deal with this is by identifying these issues prior to or at the assessment, and including them in the prioritised action plan.

## **3 Prepare the agenda and itinerary for the visit**

- The agenda should focus on any particular areas that require attention
- The agenda and itinerary will be guided by the pre-visit review and other issues identified by assessment team
- The agenda should allow all important areas to be examined and dealt with in an efficient manner.

### ***Activities during the assessment***

A suggested agenda for the visit is given in Annex 1. This agenda contains public health and infection control components running in parallel, and can be modified depending on timing and availability of WHO staff. Suggested checklists for the public health and infection control components of the visit are given in Annexes 2 and 3. These can also be modified depending on the needs of the country being assessed.

An in-country assessment should not only be a review of SARS preparedness to date, but should also involve a process for identifying practical responses to identified gaps in planning.

Some attempt to quantify a country's ability to respond to SARS cases should be part of the assessment. As much as possible, this process should objectively measure the key components of the country's preparedness, using the following baseline criteria and examples of ranking:

### **1 National management and preparedness structure**

*Example of findings in a well-prepared country:*

- Well resourced, functioning primary health care system with hospital support
- National committee for SARS response established, meeting regularly, and a national response plan prepared
- An individual from the national health authority given responsibility for overseeing SARS preparedness and response

*Example of findings in a less prepared country:*

- Basic primary care structure in the country, with minimal co-ordination
- No national committee established or committee established with meetings but no SARS preparedness activities undertaken, no planning for SARS undertaken
- Responsibility for SARS preparedness and response at national health authority level unclear

## 2 Surveillance and response procedures

*Example of findings in a well-prepared country:*

- National communicable diseases surveillance system in place, with previously good response and outbreak control for other communicable diseases
- SARS specific surveillance mechanism in place (using an enhanced SARS case definition), daily or regular reports of suspected SARS presentations and admissions prepared and distributed to appropriate people
- Clinicians at designated hospital and other health facilities aware of how to notify SARS case
- Mechanism for assessing SARS rumours in place

*Example of findings in a less prepared country:*

- Poorly functioning national communicable diseases surveillance system, no mechanism for responding to outbreaks
- No SARS specific surveillance system in development or in place
- Clinicians had no formal communication from national health authority about SARS, no knowledge of how to report suspected SARS cases
- No mechanism for evaluating SARS rumours

## 3 Infection control

*Example of findings in a well-prepared country:*

- A culture of awareness about infection control issues and practices in place at designated hospital and health facilities generally
- Specific SARS related infection control information provided for clinical staff at designated hospital
- Hand washing facilities and personal protective equipment (PPE) available at all clinical facilities

*Example of findings in a less prepared country:*

- No awareness of infection control issues at all levels of health care system
- No SARS specific infection control information available
- Hand washing facilities absent, no PPE available or rarely used

## 4 Isolation facilities

*Example of findings in a well-prepared country:*

- Specific SARS available isolation facilities identified and available
- Number of isolation rooms / ward able to cope with a moderate number of SARS cases
- Capacity for expansion if required (eg multiple bed wards identified if cohort nursing required, contingency to recruit other parts of hospital)

*Example of findings in a less prepared country:*

- No isolation facilities available
- Alternative isolation areas would be quickly overwhelmed, even with a small number of cases

## 5 Staffing / human resources

*Example of findings in a well-prepared country:*

- SARS specific nursing cohort identified in designated hospital

- Adequate numbers for handling 24-hour care of a moderate numbers of cases, including leave and sickness requirements for staff
- Barrier nursing refresher training conducted, protocols available

*Example of findings in a less prepared country:*

- No designated hospital or nursing staff identified
- No training conducted

Following this ranking exercise, the assessment team should identify a number of SARS cases beyond which a WHO response would be required. Other issues, such as the geographic spread of cases, might also determine this response. For example, three cases in one country might not require a response if they are all in one institution, but a response may be needed if they were at three different hospitals spread throughout the country. The WHO response would include an in-country team with public health/epidemiology, infection control and case management components. The three broad response timeframes are:

*1 case of probable SARS diagnosed*

- **In an unprepared country:** would require immediate in-country response to a single case of probable SARS

*2 to 5 cases of probable SARS diagnosed*

- **In a moderately prepared country:** might deal with one (or two) sporadic cases of SARS, but could not manage further transmission or more than a couple of sporadic cases

*>5 cases of probable SARS diagnosed*

- **Even in a well prepared country:** even well prepared countries would be offered in-country WHO support if more than five cases occurred, in an attempt to limit further spread.

**Activities after the assessment**

- 1 Assessed countries should identify individuals responsible for the implementation of the agreed, prioritised action plan
- 2 Identify budget resources and/or in collaboration with WHO and international partners, activate in-country donor co-ordination mechanisms to identify donor support for implementing the plan
- 3 Maintain frequent contact with WR/CLO or the assessment team as required to progress SARS preparedness
- 4 Prepare material for formal monitoring by teleconference or further in-country visit
- 5 Information learnt and the prioritised action plan should be distributed to appropriate people in-country who were not able to attend the assessment, but for who the assessment results and findings are important. Such people would include management and clinical staff from regional designated isolation hospitals, personal from non-designated laboratories that might be able to offer support in response to a SARS case, and regional epidemiologists and public health workers responsible for surveillance and disease control.

## Annex 1 Suggested agenda for SARS preparedness assessment

### **Suggested agenda for SARS preparedness assessment**

- Initial meeting between WHO team and those to be involved in the assessment, with discussion of the aims for the review
- Presentation of review already done by country using the SARS preparedness assessment protocol
- Identification of priority areas for review during the day / each day of the visit
- Team divides into public health and infection control components. Where possible, the infection control component should go to designated SARS hospital(s) for on-site review.

<b>Public health assessment</b>	<b>Infection control assessment</b>
<ul style="list-style-type: none"> <li>▪ Review of management structure for the development and implementation of SARS preparedness</li> <li>▪ Review of surveillance mechanism</li> <li>▪ Review policies for preventing international importation of SARS – screening and management of incoming passengers from affected areas</li> <li>▪ Review policies for limiting the spread of infection in the community – isolation and infection control measures for close contacts / travellers from affected regions</li> <li>▪ If present, discuss and review services available for SARS assessment and management with clinical representative</li> <li>▪ Discuss and review services available for the collection, transport, storage and diagnostic testing of specimens from SARS cases, and the ability to monitor clinical course using laboratory tests with laboratory representative</li> <li>▪ Review of communication strategy for both the clinical services involved in the assessment and care of SARS patients, and the general public</li> </ul>	<ul style="list-style-type: none"> <li>▪ Visit designated hospital(s)</li> <li>▪ Assess availability and layout of isolation facilities and contingencies available in the event of multiple SARS cases</li> <li>▪ Review isolation, infection control and cleaning procedures</li> <li>▪ Give a practical demonstration of the use of personal protective equipment (PPE). This includes how to put on a mask, gloves and goggles, handwashing, safe removal and disposal of PPE</li> <li>▪ Conduct an inventory of barrier nursing material and ensure it is adequate to meet demand in the first few days of caring for a SARS case</li> <li>▪ Assess plans for identifying and gaining access to further supplies in the event of a SARS case or outbreak</li> <li>▪ Identify method of dissemination of information about SARS response and preparedness to staff, particularly infection control management in the triage area and SARS ward area</li> <li>▪ Discuss the planning in other SARS designated hospitals in the country – this may be done through a teleconference</li> <li>▪ Discuss the availability of infection control guidance in major clinical services and hospitals likely to be the primary point of presentation for SARS cases</li> </ul>

- Team reconvenes to discuss the findings from the review
- Identify areas of strength and weakness in the SARS preparedness of the country
- In conjunction with the local team, prepare a prioritised action plan for dealing with any issues identified, and identify a person/people responsible for implementing it
- Quantify the likely capacity of the country to cope with SARS, using the method described in Activities during the assessment section.
- Identify the timeframe for an offer of in-country support from WHO based on preparedness ranking exercise.
- Make plans for formal review of progress within in one or two weeks – this can be done by teleconference where appropriate
- Where needed, make plans for a follow-up in-country review of preparedness

**Annex 2 Suggested checklist for SARS preparedness: Public health assessment**

Public health assessment: task and suggested standard	Meets standard?			Current details / future alternatives
	Yes	No	NA	
<b>1 National management of preparedness</b>				
▪ National expert committee established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▪ National surveillance mechanisms in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Identification of designated hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Good lines of communication between committee, national health authority, designated hospital and designated laboratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
▪ Assessment of national stockpile of PPE and contingency plans to access further supplies in the event of SARS cases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>2 Surveillance for SARS and community control</b>				

Public health assessment: task and suggested standard	Meets standard?			Current details / future alternatives
	Yes	No	NA	
<ul style="list-style-type: none"> <li>Evidence of local enhancement of SARS surveillance (such as monitoring for atypical pneumonia and/or fever presentations in major hospital; monitoring malaria slide negative ratio in malaria prone regions)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Identify reporting mechanisms for SARS surveillance: are regular (eg daily) summaries being compiled and distributed to appropriate individuals within in the health authority, hospitals, WHO WR/CLO. Summary should contain potential SARS cases being investigated, suspect or probable SARS cases admitted, discarded and discharged patients</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Response mechanisms for a SARS case: control and outbreak management in place</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Ability to add quality control mechanisms into surveillance process, for example, on-going assessment of indicators such as notification delay, local response delay, local health authority delay in responding to SARS case</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Mechanism for the urgent reporting of SARS cases from health care workers and members of the public</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Public health assessment: task and suggested standard	Meets standard?			Current details / future alternatives
	Yes	No	NA	
<ul style="list-style-type: none"> <li>Country SARS telephone hotline for reporting of SARS cases – 24 hours</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Dissemination of information about SARS to health care workers including regular updates</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Dissemination of information about SARS to members of the public</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Hospital based surveillance in place</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>System for the investigation of SARS rumours</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Local network established involving public health, clinical, infection control, laboratory representatives and the WHO WR/CLO</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Public health assessment: task and suggested standard	Meets standard?			Current details / future alternatives
	Yes	No	NA	
<ul style="list-style-type: none"> <li>Dissemination and use of more sensitive case definition for SARS cases in high risk areas</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Clearly stated policy for the management of close contacts of a SARS case in the community</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>3 International measures</b>				
<ul style="list-style-type: none"> <li>Clearly described plan for border control</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Liaison with international airports agencies receiving international flights from at least the identified SARS affected areas</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Guidelines in place and distributed for the management of a suspect SARS case identified during flight</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>4 Laboratory</b>				

Public health assessment: task and suggested standard	Meets standard?			Current details / future alternatives
	Yes	No	NA	
<ul style="list-style-type: none"> <li>▪ Identification of designated laboratory (BSL3 laboratory or BSL2 laboratory using BSL3 practices)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Appropriate equipment including PPE</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Specimen collection guidelines available and disseminated</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Packaging guidelines developed</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Specimen transportation in place for when needed, including the identification of courier or other transport service</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Ability to perform differential diagnosis testing or mechanism identified for other laboratory support to do this</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Public health assessment: task and suggested standard	Meets standard?			Current details / future alternatives
	Yes	No	NA	
<ul style="list-style-type: none"> <li>Capacity to monitor clinical progress of disease using laboratory tests, eg white cell count, platelet count, or mechanism identified for other laboratory support to do this</li> </ul>				
<ul style="list-style-type: none"> <li>Dissemination of details of SARS laboratory contact information</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>5 Communications</b>				
<ul style="list-style-type: none"> <li>Developed strategy for dealing with the media on SARS</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Distributed information material to clinicians and health care workers about SARS</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> <li>Easily understood material about SARS accessible to the public</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Public health assessment: task and suggested standard	Meets standard?			Current details / future alternatives
	Yes	No	NA	
<ul style="list-style-type: none"><li>Established a 24-hour SARS contact number for information and reports of SARS cases for doctors or general public</li></ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## Annex 3 Suggested checklist for SARS preparedness: Infection control assessment

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<b>1 Use of WHO SARS kit</b>					
▪ SARS kits intact and available where required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
▪ Access to kit available 24-hours a day?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>2 Infection control in reception / Triage area</b>					
<ul style="list-style-type: none"> <li>• Human resources <ul style="list-style-type: none"> <li>▪ SARS team established</li> <li>▪ Training material available and sessions to train staff conducted</li> <li>▪ Drills / dry runs for managing a suspect case, infection control conducted</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• Isolation room/area possible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• Masks (N95 or surgical) available for suspect case?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• Assess ventilation – air-conditioning / separate supply to isolation area / windows open to non-public area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<ul style="list-style-type: none"> <li>• Full PPE available for HCW staff 24-hours a day?               <ul style="list-style-type: none"> <li>▪ Mask (N95 or surgical)</li> <li>▪ Goggles</li> <li>▪ Gloves</li> <li>▪ Gown / Coverall</li> <li>▪ Overshoes</li> <li>▪ Caps</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Patient care and cleaning material available?               <ul style="list-style-type: none"> <li>▪ Linen</li> <li>▪ Paper towels</li> <li>▪ Containers with lids/bags for disposal</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Restricted staff numbers assigned for work in area?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Triage area close to isolation area, isolation ward?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Handwashing               <ul style="list-style-type: none"> <li>▪ Water basin</li> <li>▪ Liquid soap/hand rub</li> <li>▪ Towels</li> <li>▪ No hot air dryers</li> <li>▪ Alcohol hand rub</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<b>3 Isolation room / ward</b>					
<ul style="list-style-type: none"> <li>• Human resources <ul style="list-style-type: none"> <li>▪ SARS team established</li> <li>▪ Training material available and sessions to train staff conducted</li> <li>▪ Drills / dry runs for managing a suspect case, infection control conducted</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Isolation room / area (see annex 4) <ul style="list-style-type: none"> <li>▪ Record type of room</li> <li>▪ Is the set up appropriate for single patient or cohort nursing?</li> <li>▪ Is it able to be isolated?</li> <li>▪ At the end of a corridor?</li> <li>▪ Are doors present? Able to be closed?</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<ul style="list-style-type: none"> <li>• Anteroom or separate entry room for changing and storage of supplies? <ul style="list-style-type: none"> <li>▪ Wash basin present?</li> <li>▪ Containers with lids for disinfection?</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Ventilation <ul style="list-style-type: none"> <li>▪ Negative pressure room with door?</li> <li>▪ Centralised air conditioning?</li> <li>▪ Room able to be isolated</li> <li>▪ Individual air conditioning for room – disconnect or switch off</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Windows <ul style="list-style-type: none"> <li>▪ Able to be opened?</li> <li>▪ Open onto a non-public area (or an area that can be cordoned off)</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Toilet / bathing facilities <ul style="list-style-type: none"> <li>▪ Ensuite?</li> <li>▪ Near toilet facilities? Personal toilet attached to room or able to be isolated to that room?</li> <li>▪ Bed pans / commode</li> <li>▪ Bathroom nearby? Able to be isolated?</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<ul style="list-style-type: none"> <li>• Supplies <ul style="list-style-type: none"> <li>▪ Available 24-hours a day?</li> <li>▪ Linen</li> <li>▪ Paper towels</li> <li>▪ Containers with lids or bags for disposal</li> <li>▪ Disinfectant</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Full PPE available for HCW staff 24-hours a day? <ul style="list-style-type: none"> <li>▪ Mask (N95 or surgical)</li> <li>▪ Goggles</li> <li>▪ Gloves</li> <li>▪ Gown / Coverall</li> <li>▪ Overshoes</li> <li>▪ Caps</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Hand washing and hand drying facilities <ul style="list-style-type: none"> <li>▪ Water supply</li> <li>▪ Hand basins close to isolation area</li> <li>▪ Soap (preferably liquid)</li> <li>▪ Alcohol hand rub/gel</li> <li>▪ Towels – preferably paper</li> <li>▪ Linen – single use preferably</li> <li>▪ Containers for clean towels</li> <li>▪ Containers for used towels</li> <li>▪ No hot air dryers</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<ul style="list-style-type: none"> <li>• Patient care equipment for each patient, preferably single use (NB minimise patient care procedures, eg taking temperature) <ul style="list-style-type: none"> <li>▪ Thermometer</li> <li>▪ Stethoscope</li> <li>▪ Sphygmomanometer (BP cuff and machine)</li> <li>▪ Tourniquet</li> <li>▪ IV and pole</li> <li>▪ Basin</li> <li>▪ Screens</li> <li>▪ Bedpan</li> <li>▪ Other</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Cleaning <ul style="list-style-type: none"> <li>▪ Hot water</li> <li>▪ Detergent</li> <li>▪ Single use cloths – damp dust</li> <li>▪ Sodium hypochlorite (bleach) liquid</li> <li>▪ Mops</li> <li>▪ Buckets</li> <li>▪ Bowls</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Waste management in the room <ul style="list-style-type: none"> <li>▪ Containers with lids for used PPE</li> <li>▪ Containers with lids for general waste</li> <li>▪ Containers with lids for medical equipment</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

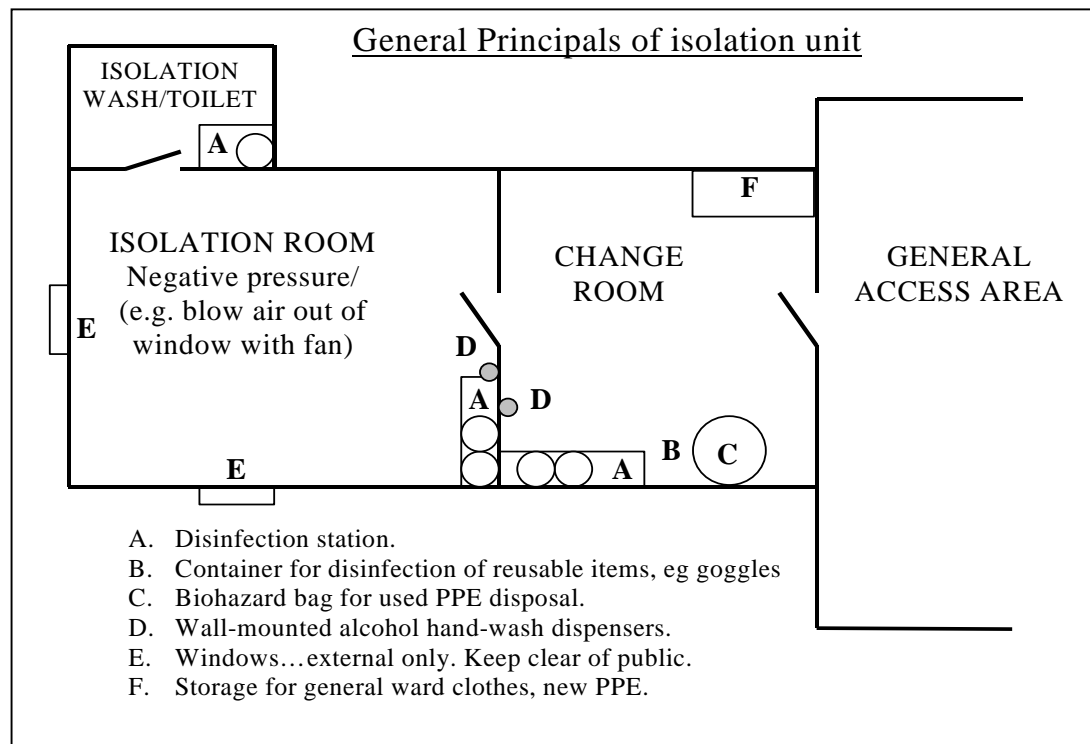
Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<ul style="list-style-type: none"> <li>• Care for patient by family members               <ul style="list-style-type: none"> <li>▪ Kept to one person or as few as possible</li> <li>▪ Training in infection control for designated family member</li> <li>▪ PPE available for carer</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>4 Issues outside the isolation room</b>					
<ul style="list-style-type: none"> <li>• Medical treatment areas               <ul style="list-style-type: none"> <li>▪ Postpone all non-essential treatment</li> <li>▪ Isolation and infection control practiced in other areas to be used by the SARS case (x-ray)</li> <li>▪ Transport using full PPE and mask for patient</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Transporting patients outside the ward               <ul style="list-style-type: none"> <li>▪ Staff accompanying patient wearing full PPE</li> <li>▪ Mask available for patient to wear at all times</li> <li>▪ If moving outside of hospital, vehicle disinfection according to WHO guidelines</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Waste management outside the room               <ul style="list-style-type: none"> <li>▪ Sewer system</li> <li>▪ Septic system</li> <li>▪ Landfill</li> <li>▪ Containers with lids for used PPE</li> <li>▪ Containers with lids for general waste</li> <li>▪ Containers with lids for medical equipment</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<ul style="list-style-type: none"> <li>• Waste management disposal               <ul style="list-style-type: none"> <li>▪ Incineration</li> <li>▪ Landfill</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Transporting waste               <ul style="list-style-type: none"> <li>▪ Trolley / cart / truck</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Cleaning               <ul style="list-style-type: none"> <li>▪ PPE used</li> <li>▪ Safe practice for cleaning, disinfection, sterilisation</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Laundry               <ul style="list-style-type: none"> <li>▪ Hot water available (&gt;70°C)</li> <li>▪ Machine available</li> <li>▪ PPE to be used by staff laundering isolation room material</li> <li>▪ Sodium hypochlorite (bleach) 1:500ppm</li> <li>▪ Drying – dryer or line drying</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Utensils               <ul style="list-style-type: none"> <li>▪ Disposable utensils where possible</li> <li>▪ Crockery and cutlery separate</li> <li>▪ Trays</li> <li>▪ Cooking facilities</li> <li>▪ Washing and drying dishes</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Infection control assessment: task and suggested standard	Meets standard?			Currently in place and future alternatives	
	Yes	No	N/A	Current Situation	Alternatives
<ul style="list-style-type: none"> <li>• Cleaning, disinfection, sterilisation               <ul style="list-style-type: none"> <li>▪ Separate room area for these processes</li> <li>▪ Full PPE worn</li> <li>▪ Restricted number of staff</li> <li>▪ Manual or automatic cleaning process</li> <li>▪ Clear and correct instructions on how to clean</li> <li>▪ Appropriate sterilisation available for needs?</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<ul style="list-style-type: none"> <li>• Education process               <ul style="list-style-type: none"> <li>▪ Staff</li> <li>▪ Patient</li> <li>▪ Visitors (limit)</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Annex 4 Checklist for isolation room layout / design**

Isolation unit	Meets standard?		
	Yes	No	N/A
1 Isolation room available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Doors that can close	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Single patient room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Multiple patient rooms able to be co-opted if required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Separate anteroom for changing, storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Disinfection stations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7 Container for disinfection of reusable items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8 Biohazard bags for used PPE disposal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9 Wall mounted alcohol hand wash dispensers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 Windows – external only, clear of public areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Comments on isolation arrangements**
