



INTERNATIONAL SOCIETY
FOR INFECTIOUS DISEASES



Navigation

- [Home](#)
- [Search Archives](#)
- [Announcements](#)
- [Recalls/Alerts](#)
- [Calendar of Events](#)
- [Maps of Outbreaks](#)
- [Submit Info](#)
- [Subscribe/Unsubscribe](#)
- [FAQs](#)
- [About ProMED-mail](#)
- [Who's Who](#)
- [Awards](#)
- [Citing ProMED-mail](#)
- [Links](#)
- [Donations](#)

Archive Number 20030817.2061

Published Date 17-AUG-2003

Subject PRO/EDR> SARS - worldwide (166): cases

SARS - WORLDWIDE (166): CASES

A ProMED-mail post

<<http://www.promedmail.org>>

ProMED-mail is a program of the
International Society for Infectious Diseases

<<http://www.isid.org>>

[1]

Date: 16 Aug 2003

From: ProMED-mail <promed@promedmail.org>

Source: World Health Organization (WHO) SARS website 15 Aug 2003

<http://www.who.int/csr/sars/country/en/country2003_08_15.pdf>

Summary table of SARS cases by country, 1 Nov 2002 to 7 Aug 2003

Areas: Female/ Male// Total//Median age (range)/ No. cases currently in
hospital/ No. cases recovered/ No. deaths/ CFR (per cent) */ No. imported
cases (percent)/ No.HCW affected (percent)/ Date onset 1st probable case/
Date onset last probable case
Australia: 4 / 2 // 6 // 15(1-45) / 0 / 6 / 0 / 0 / 6(100) / 0(0) / 24 Mar
/ 1 Apr
Brazil: 1 / 1 // 4 // 0 / 1 / 0 / 0 / 1(100) / 0(0) / 3 Apr / 3 Apr
Canada: 151 / 100 // 251 // 49(1-98) / 10 / 200 / 41 / 17 / 5(2) / 108(43)
/ 23 Feb / 12 Jun
China: pending / pending // 5327 // pending / 29 / 4949 / 349 / 7 / NA /

1002(19) / 16 Nov / 25 Jun
 China, Hong Kong SAR: 977 / 778 // 1755 // 40(0-100) / 7 / 1448 / 300 / 17
 / NA / 386(22) / 15 Feb / 31 May
 China, Macao SAR: 0 / 1 // 1 // 28 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 5 May
 / 5 May
 China, Taiwan: 349*** / 319*** // 665 // 46(2-79) / 10 / 475 / 180 / 27 /
 50(8) / 86(13) / 25 Feb / 15 Jun
 Colombia: 1 / 0 // 1 // 28 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 2 Apr / 2 Apr
 Finland: 0 / 1 // 1 // 24 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 30 Apr / 30 Apr
 France: 1 / 6 // 7 // 49(26-61) / 0 / 6 / 1 / 14 / 7(100) / 2**(29) / 21
 Mar / 3 May
 Germany: 4 / 5 // 9 // 44 / (4-73) / 0 / 9 / 0 / 0 / 9(100) / 1(11) / 9 Mar
 / 6 May
 India: 0 / 3 // 3 // 25(25-30) / 0 / 3 / 0 / 0 / 3(100) / 0(0) / 25 Apr / 6
 May
 Indonesia: 0 / 2 // 2 // 56(47-65) / 0 / 2 / 0 / 0 / 2(100) / 0(0) / 6 Apr
 / 17 Apr
 Italy: 1 / 3 // 4 // 31(25-54) / 0 / 4 / 0 / 0 / 4(100) / 0(0) / 12 Mar /
 20 Apr
 Kuwait: 1 / 0 // 1 // 50 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 9 Apr / 9 Apr
 Malaysia: 1 / 4 // 5 // 30(26-84) / 0 / 3 / 2 / 40 / 5(100) / 0(0) / 14 Mar
 / 22 Apr
 Mongolia: 8 / 1 // 9 // 32(17-63) / 0 / 9 / 0 / 0 / 8(89) / 1(11) / 31 Mar
 / 6 May
 New Zealand: 1 / 0 // 1 // 67 / 0 / 1 / 0 / 0 / 1(100) / 20 Apr / 20 Apr
 Philippines: 8 / 6 // 14 // 41(29-73) / 0 / 12 / 2 / 14 / 7(50) / 4(29) /
 25 Feb / 5 May
 Republic of Ireland: 0 / 1 // 1 // 56 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 27
 Feb / 27 Feb
 Republic of Korea: 0 / 3 // 3 // 40(20-80) / 0 / 3 / 0 / 0 / 3(100) / 0(0)
 / 25 Apr / 10 May
 Romania: 0 / 1 // 1 // 52 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 19 Mar / 19 Mar
 Russian Federation: 0 / 1 // 1 // 25 / 1 / 0 / 0 / NA / 0(0) / 5 May / 5 May
 Singapore: 161 / 77 // 238 // 35(1-90) / 0 / 205 / 33 / 14 / 8(3) / 97(41)
 / 25 Feb / 5 May
 South Africa: 0 / 1 // 1 // 62 / 0 / 0 / 1 / 100 / 1(100) / 0(0) / 3 Apr /
 3 Apr
 Spain: 0 / 1 // 1 // 33 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 26 Mar / 26 Mar
 Sweden: 1 / 2 // 3 // 33 / 0 / 3 / 0 / 0 / 3(100) / 0(0)
 Switzerland: 0 / 1 // 1 // 35 / 0 / 1 / 0 / 0 / 1(100) / 0(0) / 9 Mar / 9 Mar
 Thailand: 5 / 4 / 9 / 42(2-79) / 0 / 7 / 2 / 22 / 9(100) / 1**(11) / 11 Mar

/ 27 May
United Kingdom: 2 / 2 // 4 // 59(28-74) / 0 / 4 / 0 / 0 / 4(100) / 0(0) / 1
Mar / 1 Apr
United States: 16 / 17 // 33 // 36(0-83) / 7 / 26 / 0 / 0 / 31(94) / 1(3) /
9 Jan / 13 Jul
Viet Nam: 39 / 24 // 63 // 43(20-76) / 0 / 58 / 5 / 8 / 1(2) / 36(57) / 23
Feb / 14 Apr
Total: 8422 / 64 // 7442 // 916 / 11 / 1725(20)

* Case fatality based on cases with known outcome and irrespective of immediate cause of death

** Includes imported cases in HCWs occupationally exposed

*** Following discarding of 3 cases, new breakdown by sex pending

[2]

Date: 16 Aug 2003

From: PROMED-mail <promed@promedmail.org>

Source: WHO SARS website (14 Aug 2003) [edited]

<<http://www.who.int/csr/sars/postoutbreak/en/>>

Alert, verification and public health management of SARS in the post-outbreak period

1. Rationale for continued vigilance for SARS

First recognized as a global threat in mid-March 2003, severe acute respiratory syndrome (SARS) was successfully contained in less than 4 months. On 5 Jul 2003, WHO reported that the last human chain of transmission of SARS had been broken. While much has been learned about this syndrome since March 2003, including its causation by a new coronavirus (SARS-CoV), our knowledge about the epidemiology and ecology of SARS coronavirus infection and of this disease remains limited. Resurgence of SARS remains a distinct possibility and does not allow for complacency.

In the post-outbreak period, all countries must remain vigilant for the recurrence of SARS and maintain their capacity to detect and respond to the re-emergence of SARS should it occur. The WHO case definitions during the outbreak period relied heavily on epidemiological criteria to increase the specificity of syndromic clinical criteria for atypical pneumonia or

respiratory distress syndrome (RDS). However, epidemiological links to cases of SARS and areas reporting recent local transmission are no longer of use in helping to define incident cases. Furthermore, the non-specific clinical features of SARS, the lack of a current rapid diagnostic test that can reliably detect SARS-CoV in the first few days of illness, and the seasonal occurrence of other respiratory diseases, including influenza, may confound any surveillance for SARS or demand a level of quality and intensity which few health care systems worldwide can sustain. Even with the most sophisticated surveillance systems, the first case of SARS in the post-outbreak period may escape early detection.

This document describes a SARS alert mechanism for the post-outbreak period. It provides guidance for managing a SARS "alert" through to laboratory confirmation or exclusion of people under investigation as SARS cases. The document does not address complex surveillance issues or case categorization for SARS.

It also provides guidance to clinicians on the clinical presentation, laboratory and radiological findings to assist in diagnosis of SARS and in decisions to implement transmission-based infection control.

2. Risk assessment

Ideally, each member state should determine the intensity of its surveillance for SARS in the post-outbreak period on the basis of a risk assessment. WHO has defined 3 major areas that take into account the experience during the recent outbreak of SARS and the potential for resurgence:

Potential zone of re-emergence of SARS-CoV

Identified as source(s) of the previous outbreak in November 2002 or areas with an increased likelihood of animal to human transmission of SARS-CoV infection.

Nodal areas

Sustained local transmission experienced during the previous outbreak or entry of large numbers of people from the potential zone of re-emergence of SARS-CoV.

Low risk areas

Never reported cases, reported only imported cases or experienced only limited local transmission during the previous outbreak.

Thus, WHO recommends a staged approach to surveillance:

Potential zone of re-emergence of SARS

- SARS Alert AND
- enhanced surveillance for SARS AND
- special studies for SARS-CoV infections in animal and human populations

Nodal areas

- SARS Alert AND
- enhanced surveillance for SARS

Low risk areas

- Surveillance for clusters of "alert" cases among health care workers, other hospital staff, patients and visitors in the same health care unit (see section 3 - The SARS Alert)

3. The SARS Alert

The SARS Alert is an operational definition to ensure that appropriate infection control and public health measures are implemented until SARS has been ruled out as a cause of the atypical pneumonia or RDS.

3.1 Objectives of the SARS Alert

Provide early warning of the potential recurrence of SARS to:

- rapidly implement appropriate infection control measures
- expedite diagnosis
- activate the public health response

Raise a global alert if indicated

Definition of a SARS Alert: 2 or more health care workers in the same health care unit fulfilling the clinical case definition of SARS (see section 3.3) and with onset of illness in the same 10 day period;

OR

hospital acquired illness in 3 or more people (health care workers and/or other hospital staff and/or patients and/or visitors) in the same health care unit fulfilling the clinical case definition of SARS (see section 3.3) and with onset of illness in the same 10 day period.

A jurisdiction may chose, based on its experience, to increase the minimum number of "alert" cases defining a cluster. The definition of the health care unit in which the cluster occurs will depend on the local situation. Unit size may range from an entire health care facility if small, to a

single department or ward of a large tertiary hospital.

3.2 Case description of SARS

See Annex 1 Clinical description of SARS. The case description provides details of the clinical evolution of SARS and radiological and laboratory findings to assist clinicians with its diagnosis. It provides information on the spectrum of the disease, including atypical presentations.

3.3 Case Definitions

Clinical case definition of SARS

The following clinical case definition has been developed for public health purposes.

A person with a history of:

- fever (= 38°C)

- AND one or more symptoms of lower respiratory tract illness (cough, difficulty breathing, shortness of breath);

- AND radiographic evidence of lung infiltrates consistent with pneumonia or RDS OR autopsy findings consistent with the pathology of pneumonia or RDS without an identifiable cause;

- AND no alternative diagnosis can fully explain the illness.

Laboratory case definition of SARS

A person with symptoms and signs that are clinically suggestive of SARS AND with positive laboratory findings for SARS-CoV based on one or more of the following diagnostic criteria:

a) polymerase chain reaction (PCR) positive for SARS-CoV

PCR positive using a validated method from:

at least 2 different clinical specimens (for example, nasopharyngeal and stool) OR

the same clinical specimen collected on 2 or more occasions during the course of the illness (for example, sequential nasopharyngeal aspirates) OR 2 different assays or repeat PCR using a new RNA extract from the original clinical sample on each occasion of testing.

b) Seroconversion by ELISA or IFA

Negative antibody test on acute serum followed by positive antibody test on convalescent phase serum tested in parallel OR

fourfold or greater rise in antibody titre between acute and convalescent phase sera tested in parallel.

c) Virus isolation

Isolation in cell culture of SARS-CoV from any specimen AND PCR confirmation using a validated method. Testing should only be undertaken in a national or regional reference laboratory as per WHO recommendations (Use of laboratory methods for SARS diagnosis). WHO will assist resource poor countries to confirm their first cases of SARS through laboratory collaboration.

3.4 Public health management of a SARS Alert

When a SARS Alert is raised:

1. Patient(s) should be immediately isolated and transmission-based precautions instituted, if not already in place (see clinical management guidelines)
2. The diagnosis should be expedited (see Annex 2 Guidance regarding the diagnosis of SARS in the post-outbreak period - A concern for all health care workers). WHO will assist in the investigation of SARS alerts as appropriate, including the facilitation of access to laboratory services (see Annex 3 WHO Focal Points for SARS).
3. Contacts of people under investigation for SARS should be traced and quarantined until SARS has been ruled out as the cause of the illness.

3.1 A contact is a person who is at greater risk of developing SARS because of exposure to a SARS case. Risky exposures include having cared for, lived with, or having had direct contact with the respiratory secretions, body fluids, and/or excretions (such as faeces) of cases of SARS.

3.2 Individuals with risky exposures to a person or persons in a SARS alert cluster should be managed as contacts until SARS has been ruled out as the cause of the illness.

3.3 Contact within the health care setting should be managed in the following way:

Inpatient contacts should be isolated or cohorted away from unexposed patients and transmission-based precautions instituted. They should be placed on fever surveillance. Exposed staff should be placed on active fever surveillance, and either cohorted to care for exposed patients (as above) or placed on home quarantine depending on local circumstances.

3.4 Community contacts should be:

- given information on the clinical picture, transmission, etc. of SARS
- placed under active surveillance for 10 days and voluntary home quarantine recommended
- visited or telephoned daily by a member of the public health care team
- temperature recorded daily.
- if the contact develops disease symptoms, they should be investigated

locally at an appropriate health care facility.

- the most consistent first symptom that is likely to appear is fever.

3.5 National public health authorities should report every laboratory confirmed case of SARS to WHO (see below).

International reporting of SARS

A new outbreak of SARS is defined as the occurrence of one or more clinically compatible, laboratory-confirmed cases of SARS in any country based on definitive laboratory investigations. The reappearance of SARS in the human population would be considered a global public health emergency.

For the purposes of the international reporting of SARS in the post-outbreak period, Member States are requested to inform WHO of laboratory-confirmed cases only.

Laboratory confirmed cases of SARS could be detected through a SARS alert verification process but also as sporadic case(s) of acute respiratory illness on which SARS-CoV testing was undertaken (that is, fulfil the case definition described in section 3.3). Reporting to WHO should include both of these scenarios but should exclude asymptomatic people with a positive laboratory test or symptomatic people without laboratory confirmation. No nil reporting is required.

WHO requests that member states immediately inform the focal points at regional offices or headquarters of every person meeting the laboratory-confirmed case definition of SARS (see Annex 3 WHO Focal Points for SARS). This will allow WHO to assess the need for a global alert and re-institute global surveillance for SARS on the basis of that notification as appropriate.

The development of new case definitions applicable to the new situation, surveillance standards and a step-down strategy may be required once laboratory-confirmed cases have been reported.

In the event of an international traveller being investigated for SARS, all member states involved in international contact tracing around the case(s) should communicate directly with each other during the investigation. WHO should be informed only when the incident is laboratory confirmed.

WHO will continue to identify and verify rumours of events of international public health concern, including rumours about SARS, through its usual

well-established mechanisms.

Indicators of the quality of the SARS alert mechanism

WHO recommends that national public health authorities monitor the quality of the SARS alert mechanism -- for example, by establishing indicators based on:

- the number of alerts expected and reported by health facilities over time
- the time taken to implement transmission-based precautions and expedite diagnosis
- the time taken to alert local public health authorities, national public health authorities
- the time taken to complete contact tracing and quarantine contacts.

This list is not meant to be exhaustive but rather a suggested approach to monitoring the alert mechanism.

4. Enhanced surveillance and special studies for SARS-CoV infections in animal and human populations

Jurisdictions in nodal areas and areas of potential re-emergence have maintained heightened SARS surveillance established during the outbreak period, and continue doing so for the foreseeable future. WHO will encourage these jurisdictions to make available to the global community the details of these surveillance activities and will offer its assistance in summarizing and updating available information on its website.

Depending on risk assessment and available resources, nodal areas and areas of potential re-emergence may include one or more of the following activities:

Surveillance for atypical pneumonia in settings such as nursing homes, rehabilitation units, community health care centres and in private practice (see Annex, Guidance regarding the diagnosis of SARS in the post-outbreak period - A concern for all health care workers)

surveillance of people discharged from hospital with a diagnosis of unspecified atypical pneumonia

surveillance for absenteeism among health care workers

laboratory-based surveillance of SARS-CoV infection

surveillance for requests for laboratory testing of respiratory pathogens or SARS-CoV

surveillance for unexplained deaths following an acute respiratory illness

serological surveillance of high risk populations (health care workers, animal handlers, market vendors, hunters, etc)

community-based serological surveys to monitor changes in the seroprevalence of SARS-CoV infection serosurveys among animal populations.

This list is not meant to be exhaustive but rather a suggested approach to enhanced surveillance.

--

ProMED-mail

[<promed@promedmail.org>](mailto:promed@promedmail.org)

[As of 7 Aug 2003 there have been a cumulative total of 8422 cases of SARS with 916 deaths (case fatality rate 11.0 per cent) attributable to SARS reported (note that during the past week there have been 2 additional deaths reported in Canada thereby raising the total number of deaths due to SARS in Canada to 43, and overall to 918 with the case fatality rate still at 10.9). Sixty-four cases of SARS are still in hospital; 7442 cases have recovered (88.4 per cent). Of the reported cases, 1725 (20 per cent) were health care workers. The above table presents additional information by country including the male/female distribution of cases, the median age of cases and the range of ages, the number of imported cases and the dates of onset of the first and last probable case reported.

The second part of this posting contains the key strategies for heightened surveillance in the post-SARS period. The full information can be found at the web address shown. The recent report of possible identification of the SARS coronavirus or a closely related virus associated with an outbreak of a milder respiratory illness (see ProMED-mail posting Acute respiratory syndrome - Canada (BC): non-severe [20030815.2035](http://www.promedmail.org/pls/askus/f?p=2400:1001:331892668290...:NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1000,22570)) is currently under study. The health authorities in British Columbia have implemented precautions consistent with a suspected SARS outbreak while further information is pending. The clinical case descriptions in that outbreak are not consistent with the case descriptions used for SARS (see <http://www.who.int/csr/sars/postoutbreak/en/>) : a person with a history of: fever (= 38°C); AND one or more symptoms of lower respiratory tract illness (cough, difficulty breathing, shortness of breath); AND radiographic evidence of lung infiltrates consistent with pneumonia or RDS OR autopsy findings consistent with the pathology of pneumonia or RDS without an identifiable cause; AND no alternative diagnosis can fully explain the illness. In addition the laboratory case definition of SARS used is: a person with symptoms and signs that are clinically suggestive of

SARS AND with positive laboratory findings for SARS-CoV based on one or more of the following diagnostic criteria presented.) Thus, in accordance with the currently established case definitions, the ongoing outbreak in British Columbia is not currently considered to be an outbreak of SARS. - Mod.MPP]

[see also:

Acute respiratory syndrome - Canada (BC): non-severe	20030815.2035
SARS - worldwide (165): cases, China	20030729.1861
SARS worldwide (164): etiology	20030723.1800
SARS - worldwide (162): the end?	20030706.1657
SARS - worldwide (161): cases	20030703.1636
SARS - worldwide (160): cases	20030701.1625
SARS - worldwide (159): cases	20030630.1605
SARS - Worldwide (158): cases	20030627.1588
SARS - worldwide (157): cases	20030626.1580
SARS - worldwide (156): cases	20030625.1566
SARS - worldwide (93): etiology	20030505.1122
SARS - worldwide (87): case definition and diagnostics	20030502.1103
Severe acute respiratory syndrome - worldwide (17)	20030322.0713
Severe acute respiratory syndrome - Worldwide: alert (03)	20030316.0660
Severe Acute Respiratory Syndrome - Worldwide	20030315.0637
Acute respiratory syndrome - Canada (Ontario)	20030314.0631
Acute respiratory syndrome - East Asia	20030314.0630
Acute respiratory syndrome - China (HK), VietNam (03)	20030313.0624
Undiagnosed illness - Vietnam (Hanoi): RFI	20030311.0595
Pneumonia - China (Guangdong) (07)	20030221.0452
Pneumonia - China (Guangdong): RFI	20030210.0357

.....mpp/sh

#####
ProMED-mail makes every effort to verify the reports that are posted, but the accuracy and completeness of the information, and of any statements or opinions based thereon, are not guaranteed. The reader assumes all risks in using information posted or archived by ProMED-mail. ISID and its associated service providers shall not be held

responsible for errors or omissions or held liable for any damages incurred as a result of use or reliance upon posted or archived material.

Visit ProMED-mail's web site at <<http://www.promedmail.org>>.

Send all items for posting to: promed@promedmail.org

(NOT to an individual moderator). If you do not give your full name and affiliation, it may not be posted. Send

commands to subscribe/unsubscribe, get archives, help,

etc. to: majordomo@promedmail.org. For assistance from a

human being send mail to: owner-majordomo@promedmail.org.

#####

#####

[about ISID](#) | [membership](#) | [programs](#) | [publications](#) | [resources](#)
[11th ICID](#) | [site map](#) | [ISID home](#)

©2001 International Society for Infectious Diseases
All Rights Reserved.

Read our [privacy guidelines](#).

Use of this web site and related services is governed by the [Terms of Service](#).