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Working Paper

SARS

Severe Acute Respiratory Syndrome

SARS

Practical and administrative responses to an infectious disease in the workplace

InFocus Programme on Safety and Health at Work and
the Environment (SafeWork)- Geneva

ILO Sub-regional Office for East Asia - Bangkok

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Foreword

In July 2003, Senior Labour Officials from ASEAN countries met in Manila to share their experience coping with the employment impact of SARS. They had dealt with sudden job losses and business closures, new occupational hazards in the health-care sector, medical screening procedures in the travel industry and the urgent need to protect workers, in all sorts of workplaces, from a new risk to their health. One of the recommendations of that meeting was that the ILO publish a set of informal guidelines on coping with the threat of SARS at the workplace, drawing from internationally agreed standards on occupational safety and health, fundamental rights of workers, WHO guidance on SARS, and the lessons from dealing with other new diseases at the workplace, such as HIV/AIDS.

This Working Paper is the ILO's response to that request. It emphasizes the importance of preparation at all levels to contain such epidemics and is aimed at promoting discussion, planning and activities to stimulate and encourage an appropriate future response to SARS. Although the national and international response to SARS in 2003 was effective in controlling the disease, new issues, problems and questions have inevitably been raised by the new challenges that SARS, or other similar infections, could present.

This paper also aims to link the situation with SARS to pre-existing ILO standards on occupational safety and health and working conditions. For this reason, throughout the paper, the most relevant ILO standards relating to the text are printed at the bottom of the page. The reader can then immediately link the ILO standard to the issue under discussion. Other recommendations in the paper are based on more general medical, ethical or legal concepts or approaches from various research sources, including ILO and WHO. These recommendations are for serious consideration and discussion, as part of a planned response to the threat of SARS.

The reader is also encouraged to delve into the subject more deeply, by using the Internet links supplied, both to review the relevant ILO standards in full and also to obtain more technical details on the setting up of systems to control SARS.

The information and application of international standards and effective preventive and response practices summarized in this Working Paper may also be relevant to coping with other infectious diseases besides SARS. Countries, regions, and the global community may well find themselves facing other, new epidemics, which also spread rapidly from place to place, ahead of effective treatments and even of scientific understanding of their causes. As we go to print, without indications of a recurrent SARS epidemic, but with many countries in Asia coping with the health and economic ramifications of a severe outbreak of avian flu in early 2004, we hope that this set of practical information and compilation of good practices will be helpful to the workers, the employers, and their organizations, Labour Ministries and Health Ministries, and other agencies or institutions concerned in coping with future emergencies caused by SARS and, possibly, other infectious diseases.

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Contents

	<i>Page</i>
Foreword	iii
1. Introduction.....	1
1.1. The threat of SARS.....	1
1.2. SARS as an occupational health hazard.....	1
1.3. Action at national and workplace level.....	2
2. Overview of current knowledge about SARS.....	3
2.1. Cause	3
2.2. Transmission.....	3
2.3. Symptoms	4
2.4. Diagnosis	4
2.5. Treatment and prevention	4
3. Practical workplace strategies	6
3.1 Prevention of SARS in the workplace	6
3.1.1. Workplaces with no increased risk.....	7
3.1.2. Workplaces with a slightly increased risk.....	9
3.1.3. Workplaces with a significantly increased risk	11
3.2. Response to a possible case of SARS in the workplace	12
3.3. Return of a recovered case of SARS to the workplace	13
4. Administrative action to be ready for an outbreak of SARS.....	14
4.1. National level.....	14
4.1.1. National coordination and surveillance.....	15
4.1.2. Knowledge-sharing	16
(a) Education	16
(b) Training	17
(c) Communication.....	17
4.1.3. Provision of facilities and equipment.....	18
(a) Hospital and isolation facilities and equipment	18
(b) Quarantine facilities	18
(c) Protective equipment for workers	18
4.1.4. Social protection.....	19
(a) Medical care and sickness benefit.....	19
(b) Employment injury benefit	22
(c) Survivors' benefit.....	23
(d) Maternity benefit.....	25
(e) Unemployment benefit.....	26
4.1.5. Enforcement	27
(a) Legislation	27
(b) Empowerment.....	27

4.2.	Workplace level	27
4.2.1.	Workplace coordination.....	28
4.2.2.	Knowledge-sharing.....	28
(a)	Education.....	28
(b)	Training.....	29
(c)	Communication	29
4.2.3.	Provision of facilities and equipment	29
4.2.4.	Social protection	31
4.2.5.	Enforcement	32
(a)	Failure to attend or perform workplace duties.....	32
(b)	Dismissal	34
5.	Ethical and psychological considerations concerning SARS.....	35
5.1.	Confidentiality	35
5.2.	Quarantine.....	35
5.3.	Psychological considerations	38
5.3.1.	The general public	38
5.3.2.	Workers with an occupational health risk of SARS	38
6.	Summary	40
 Annexes		
1.	Resolution of the World Health Assembly	41
2.	Internet links.....	42
	Bibliography	45

1. Introduction

1.1. The threat of SARS

Even the name SARS or Severe Acute Respiratory Syndrome indicates the recent discovery of the disease, as the name describes only the observed, clinical condition produced by this new illness, for which doctors in early 2003 could identify no previously known cause or cure.

On 16 November 2002, the first case of an unidentified “atypical pneumonia” was described in Guangdong Province, China. Three months later, on 11 February 2003, the Chinese Ministry of Health informed WHO (World Health Organization) about an outbreak of an acute respiratory syndrome with 300 cases and 5 deaths in the same province.ⁱ The worry was that tests for the usual pathogens, such as influenza virus, were negative and the underlying cause of the outbreak was therefore unknown.

From then on the SARS epidemic was traced as it spread out from Guangdong Province to other parts of China including Hong Kong and Taiwan, and internationally to Viet Nam, Thailand, Singapore, Canada and eventually a total of 26 countries around the world.ⁱⁱ Nonetheless, with the aid of international communication, cooperation and emergency measures to control the outbreak, in conjunction with the tireless and dedicated work of many individuals, the virus was identified, the human chain of transmission interrupted and the epidemic stopped by July 2003. Left in the wake of this SARS epidemic, however, were 774 deaths out of a total of 8098 cases,ⁱⁱⁱ as well as significant economic losses, especially in the aviation and tourist industries.^{iv}

After the epidemic finished in July 2003, no one knew when or if, the SARS virus would re-emerge in the human population. Indeed, the natural habitat of the SARS virus and how it had originally caused human infection continue to remain unclear.

Between August 2003 and February 2004 however, two cases of SARS occurred in laboratory workers in Singapore and Taiwan, China and following this, four more cases of unknown origin were confirmed in Guangdong province, China.^v

It seems therefore, with the ability of some sick SARS patients to infect many of their close contacts and a case-fatality rate of 9.6 per cent,^{vi} that this new disease may still be a significant threat to human health worldwide.

1.2. SARS as an occupational health hazard

As close contact with an infected individual is the usual means of transmission of SARS, cases have mainly occurred in household and health-care settings. SARS can therefore be considered a potential occupational health hazard for any workers in the health-care setting, who are required to have contact with SARS cases or with their secretions. Such workers could therefore have several different types of occupation, in or around, health-care facilities.

Also, at the very beginning of the epidemic in Guangdong province, China, more than a third of the cases were in food handlers.^{vii} Thus, it is possible that some workers, in specific wildlife trading and food-handling industries in southern China, have an increased occupational risk of SARS from the animals they handle.

1.3. Action at national and workplace level

In view of the possible threat of another resurgence of SARS, ongoing vigilance is advisable to quickly contain any recurrent epidemic spread before it threatens a whole community. Nations need to decide on their methods of surveillance depending on the likelihood that a new outbreak of SARS might occur in their territory.^{viii}

Workplaces also need to be protected by ethical public health and social protection strategies and so, any workers sick with SARS, do not bring the disease into the workplace.

Similarly, workers with a potential occupational health risk of SARS need to be reassured that adequate measures have been taken to protect them, should an outbreak recur.

It is therefore to be recommended that governments, employers and employees, all review the systems that they have in place to contain a new outbreak of SARS and so, in the face of a resurgence of the disease, the cost in human suffering and economic loss can be kept to a minimum.

2. Overview of current knowledge about SARS

One of the reasons to include, at the beginning of this paper, a detailed review of the nature of SARS, is to underline the importance of understanding the specific characteristics of a disease before designing a programme to eradicate or control it. As mentioned in the foreword, several of the measures in this paper, related to occupational safety and health in the workplace and social protection, could be relevant to infectious diseases other than SARS, but nonetheless when giving more technical and medical advice, each disease must be studied and responded to separately, according to its own particular characteristics.

2.1. Cause

SARS is a viral illness caused by a coronavirus, named SARS-CoV, which was first identified in April 2003.^{ix} The SARS-CoV coronavirus is significantly different from any previously known human coronavirus and it remains unclear exactly how it entered the human population although similar coronaviruses have been found in some wildlife species indigenous to China. It is therefore thought likely that human infection occurred after transmission from infected wildlife, such as found in food markets in southern China. Indeed it is interesting to note that 40 per cent (8/20) of the wildlife traders who work in the Guangdong market were seropositive for SARS-CoV when tested in Spring 2003, yet none reported SARS-like symptoms in the preceding 6 months.^x

Nevertheless, the natural reservoir(s) of SARS-CoV-like viruses have not yet been identified and research is still ongoing.

2.2. Transmission

Transmission of SARS from person to person is usually by close contact with a SARS patient, such as in a home or health-care setting. Usually transmission occurs when infected droplets from the respiratory tract of a SARS patient come in contact with the eyes, nose or mouth of a person close by. These infected droplets are formed particularly when a SARS patient coughs or sneezes, thus propelling their respiratory secretions into the air around them. Certain hospital procedures, such as suction of secretions from the respiratory tract or artificial ventilation of a patient, may also increase the risk of creating infected droplets in the air^{xi} and thus are especially hazardous for health-care staff. Indeed due to their close contact with SARS patients and their giving of medical or nursing care to such patients, 21 per cent of all SARS cases in the 2003 epidemic were health-care workers.^{xii}

There is also the possibility of transmission of SARS from contamination of surfaces by secretions from a SARS patient, such as from their urine, stool or respiratory secretions. For instance, in the 2003 epidemic, contamination of a sewage system, by a SARS patient with diarrhoea, did lead to the outbreak of SARS in the Amoy Gardens in Hong Kong.^{xiii}

Very few SARS patients appear to transmit infection to others in the early stages of the disease. The risk of transmission increases after 4 days of illness and is maximal during the second week of illness, especially if the patient is very sick or deteriorating rapidly. To date there are no reports of SARS being transmitted from someone without symptoms of illness.^{xiv} This character of the SARS-CoV virus, to only make someone infectious when they are already unwell, has been of enormous benefit in the containment of SARS outbreaks. It has meant that the rapid isolation of suspected SARS cases and quarantine of their contacts has stopped the ongoing community spread of the disease.

Following illness with SARS, there are no reports of transmission of the disease from a convalescent patient, once they have been without fever for 10 days.^{xv} Isolation of a SARS patient is therefore usually stopped when the chest x-ray has returned to normal and no fever has been recorded for 10 consecutive days.

Chronic carriage of the SARS virus appears very unlikely, as there has been no re-emergence of the virus in previously affected areas outside of southern China. Nonetheless, research is recommended to ensure there is no possibility of some people developing a carrier-state and thus posing a risk to the community over a longer period of time.

2.3. Symptoms

The common earliest symptoms of SARS are fever, chills, rigors, muscle pains, headache, diarrhoea, sore throat and a runny nose but these symptoms may not all be present.^{xvi}

This early stage can then be followed by mild to moderate respiratory illness, with a fever above 38°C and cough, shortness of breath or breathing difficulty.

The majority of people who are infected with SARS develop antibodies to the virus and gradually get better as they eliminate the virus from their bodies. Overall, about 9.6 per cent of those who develop the symptoms of SARS may die from the disease,^{xvii} but the distribution of those who die is very varied, depending on the age of the patient and whether they suffer from other illnesses as well as SARS. Thus the risk of death is much higher in the chronically sick and elderly than in the young.^{xviii}

2.4. Diagnosis

The initial symptoms of SARS are similar to those of many viral illnesses, particularly influenza, and so, when the SARS epidemic began, it was thought likely to be caused by a new strain of influenza. Also, the atypical pneumonia, which SARS produces, is similar to other atypical pneumonias caused by other micro-organisms. It is therefore essential for clinical staff to be aware of the possibility of SARS and to report any unusual increase in cases of SARS-like illnesses, in which other causative organisms cannot be found. In fact, the case definition of suspected SARS, relies not only on symptoms or clinical data, but also on the likelihood of exposure to someone else with SARS (epidemiological data).^{xix}

Diagnosis of SARS can be confirmed by testing for the presence of antibodies in unwell or convalescent SARS patients. Unfortunately, so far, no such test for SARS turns positive quickly enough after infection to be used as a screening test to control the transmission of SARS, which is why the diagnosis and decision to isolate is still based on clinical and epidemiological data.

2.5. Treatment and prevention

As yet, there are no proven specific treatment modalities for SARS, although many different drugs and supportive measures were tried during the 2003 epidemic. Hospital intervention can nonetheless, be life-saving. For example, ventilating a patient artificially may keep them alive long enough to allow their body enough time to recovery naturally.

To date no vaccine has been developed to protect against infection by SARS-CoV. At the end of 2003, WHO held a consultation on SARS vaccine research and development, which was attended by 50 leading SARS researchers from 15 different countries.^{xx} This consultation recommended that research should continue using several vaccine development strategies, in order to increase the possibility of finding an effective vaccine as soon as possible. Phase I clinical trials of at least three possible vaccine candidates are expected to start in early 2004. In the meantime control of an outbreak of SARS has to be achieved by the conventional public health measures of rapid diagnosis of cases and their isolation, tracing and quarantine of contacts, hospital infection control and other community-based public health measures.

3. Practical workplace strategies

The ILO already has general conventions covering the responsibility of employers to ensure employees are protected from risks to their own health in the workplace.¹ The strategies listed in the three sections below are practical ways to implement such protection against the health risks of SARS.

3.1 Prevention of SARS in the workplace

Overview

The general concepts behind the prevention of SARS in the workplace are relatively simple. Basically the aim is to ensure that any suspect SARS patient does not come to work, but that if such a sick person does unfortunately enter the workplace, good sanitary procedures exist to protect the workforce, while the patient gets rapidly moved to an appropriate and pre-designed isolation unit.

To achieve this, the following basic principles are used:

- (a) All workplaces should protect the health of their staff by providing satisfactory sanitation and hygiene and by ensuring unwell workers go on sick leave and receive medical treatment as appropriate.
- (b) Workplaces where sick people, but not known SARS contacts, are being looked after should ensure good infection control practices, to minimize the risk of transmission of disease to their staff. They should also be particularly aware of the symptoms and clinical features of SARS to quickly refer any suspect case to appropriate isolation facilities.
- (c) Workplaces where suspect SARS cases are isolated and treated need to give full personal protective equipment (PPE) to their staff and have scrupulous policies on isolation, barrier nursing, cleaning and ventilation to ensure the disease cannot be spread to workers.

Thus, three different workplace settings can be defined according to the risk of infection by contact with a case of SARS, i.e. workplaces with no, slightly or significantly increased risk.

¹ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Article 16

- 1. Employers shall be required to ensure that, so far as is reasonably practicable, the workplaces, machinery, equipment and processes under their control are safe and without risk to health.
- 2. Employers shall be required to ensure that, so far as is reasonably practicable, the chemical, physical and biological substances and agents under their control are without risk to health when the appropriate measures of protection are taken.
- 3. Employers shall be required to provide, where necessary, adequate protective clothing and protective equipment to prevent, so far as is reasonably practicable, risk of accidents or of adverse effects on health.

3.1.1. Workplaces with no increased risk

This is the usual workplace situation and applies to the vast majority of workers throughout the world.

The precautions against SARS advised in this situation are mostly general public health measures and so, if implemented, could protect against the spread of many transmissible diseases in the workplace. They could therefore be considered cost-effective in the long term, even if SARS no longer poses a significant risk. Also, ILO standards² already support the implementation of such measures.

The following practices can be recommended:^{xxi}

1. The provision of clean toilets, liquid soap and hand washing facilities.
2. The provision of individual towels or hand dryers for hand drying.
3. The provision of covered rubbish bins for used towels, handkerchiefs or litter.
4. Encouraging workers to wash their hands after they use the toilet and before eating.
5. The provision of individual, clean utensils for eating and drinking.
6. Encouraging workers to use tissues to contain respiratory secretions, to dispose of the tissues immediately after use in a covered bin, and then to wash their hands.
7. Not allowing spitting in the workplace.
8. Ensuring daily cleaning of workplace areas and toilets, using normal household disinfectants or diluted household bleach.

² **The ILO Hygiene (Commerce and Offices) Convention, 1964 (No. 120)**

Article 7

All premises used by workers, and the equipment of such premises, shall be properly maintained and kept clean.

Article 8

All premises used by workers shall have sufficient and suitable ventilation, natural or artificial or both, supplying fresh or purified air.

Article 12

A sufficient supply of wholesome drinking water or of some other wholesome drink shall be made available to workers.

Article 13

Sufficient and suitable washing facilities and sanitary conveniences shall be provided and properly maintained.

The Occupational Safety and Health Recommendation, 1981 (No. 164)

II. Technical Fields of Action

- (o) sanitary installations, washing facilities, facilities for changing and storing clothes, supply of drinking water, and any other welfare facilities connected with occupational safety and health;

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9. Ensuring workplace cleaners are trained in cleaning techniques and are supplied with utility gloves and adequate cleaning materials, to protect both themselves from injury and workers from contamination.
 10. Ensuring a continual supply of fresh air, or if the workplace is mechanically ventilated, adequate maintenance, filtration and cleaning of the system, to prevent any airborne circulation of micro-organisms.
 11. Ensuring acutely sick or febrile workers or visitors do not come into the workplace, especially if they are coughing, sneezing, vomiting or have diarrhoea.
 12. Encouraging sick employees to seek a medical opinion before returning to work, if they have persistent fever, respiratory or gastrointestinal symptoms.

The last two measures listed are particularly protective during a SARS outbreak. Indeed, if SARS cases are occurring locally, or people are coming to the workplace from SARS affected areas, employers may feel it appropriate to institute active screening, for fever and symptoms, to ensure sick people are prevented from coming into the workplace.

Such active screening for fever and symptoms was vigorously implemented during the 2003 SARS epidemic in affected countries, to prevent sick people from coming to work, from going to public places or from travelling.^{xxii} Indeed the knowledge that active, objective screening for symptoms would take place prior to travel or attendance at work may have done much to reduce the spread of SARS. Both WHO and ILO instituted such screening during their international conferences in 2003, when active transmission of SARS was continuing to occur in various regions.³

Nonetheless, even if SARS is not known to be occurring locally, measures 11 and 12 are still to be recommended, although active screening and enforcement might not be appropriate. If implemented, these measures could have a protective effect against the spread of many common pathogens, including influenza, tuberculosis and gastroenteritis.

Additional measures only required during a SARS outbreak

13. Prevention of close or physical contact in the workplace, such as handshaking or kissing as forms of greeting.
14. Preparation of a suitable isolation area in the workplace for the assessment and clinical care of suspected SARS case(s) and storage of personal protective equipment (PPE), to use if a suspected case comes into the workplace.

In general the above two measures are unnecessary in normal workplaces with low or virtually no risk of SARS, but if a high rate of transmission of SARS is occurring outside the workplace these measures may be adopted.

Workplaces that involve contact with the general public

Many workers jobs involve meeting, not only work colleagues, but also members of the general public. Such jobs are found, for instance, in shops, banks, restaurants, sports and tourist facilities, educational institutions, conference centres and places of religious worship.

³ Guidance for Mass Gatherings: hosting persons arriving from an area with recent local transmission of SARS: <http://www.who.int/csr/sars/guidelines/gatherings/en/>

As SARS is usually only transmitted by close contact with a sick person the risk of transmission of SARS in these situations remains low, so long as the principals of infection control described above are adhered to.

Nonetheless, it is important that in these situations, employers empower workers to take action if they feel that their right to a safe and healthy workplace is being jeopardized by a member of the general public. For instance, if a sick person enters the workplace, or if someone breaks basic sanitation rules, for example by spitting or fouling bathroom facilities, the worker should have the right to take corrective action. In such situations, workers could be allowed to ask the offending people to leave their workplace or could contact a suitably qualified person for advice on what to do. As supported in ILO standards, if the worker feels that the person concerned poses a significant risk to their health, the worker should not be obliged to continue working with them.⁴

In general however, workers who work with the general public are not considered to have a particular occupational risk of SARS. Those who are considered to have an occupational risk are those who are obliged to work with SARS sufferers as part of their job requirement.⁵

3.1.2. Workplaces with a slightly increased risk

These are workplaces, usually in the health-care setting, where although there are no known suspect cases of SARS, workers are dealing with sick people who may have symptoms similar to those of SARS. Thus, this would include workplaces such as primary care clinics, hospitals or convalescent nursing homes.

All the usual public health measures listed in section 3.1.1. need to be applied, as well as the following basic infection control measures, which are more specifically for health-care settings:⁶

1. Patients as well as employees should be encouraged to comply with the basic hygiene measures regarding toilets, nasal secretions and eating practices mentioned in section 3.1.1.
2. Hand washing (using soap and water or an alcohol-based hand rub)^{xxiii} before and after direct patient contact and promptly after contact with potentially infected material.

⁴ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Part IV. Action at the Level of the Undertaking

Article 19

- (f) a worker reports forthwith to his immediate supervisor any situation which he has reasonable justification to believe presents an imminent and serious danger to his life or health; until the employer has taken remedial action, if necessary, the employer cannot require workers to return to a work situation where there is continuing imminent and serious danger to life or health.

⁵ **The Employment Injury Benefits Convention, 1964 [Schedule I amended in 1980] (No. 121)**

Schedule List of Occupational Diseases

29. Infectious or parasitic diseases contracted in an occupation where there is a particular risk of contamination.

⁶ See also: Appendix II of Supplement I: Infection Control in Healthcare, Home, and Community Settings: <http://www.cdc.gov/ncidod/sars/guidance/i/pdf/i.pdf>

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3. Changing into clothing designated for the workplace and removing such clothing before returning home, or else using protective, clean overalls covering usual clothing, while at work.
 4. Using a “no touch” technique where possible.
 5. Wearing gloves for contact with body fluids, non-intact skin, mucous membranes and potentially contaminated items.
 6. Wearing a mask, eye protection and gown if blood or other body fluids might splash.
 7. Avoiding unnecessary invasive procedures.
 8. Promptly cleaning spills of blood and other body fluids using gloves.
 9. Separating patients whose blood or body fluids might contaminate other patients or surfaces.
 10. Adequate sterilizing or disinfecting of patient-care equipment or linen between each patient use.
 11. Safely handling and disposing of needles and other sharps.
 12. Safely disposing of waste.
 13. Promptly isolating any person suspected of having SARS, with concurrent advice to that person about self-hygiene and the wearing of a facemask, to reduce their infectivity to others (see section 3.2).
 14. Training of all staff in the use of personal protective equipment (PPE) and cleaning methods for contaminated areas. Both of these protective measures should be easily available and used when dealing with a suspect SARS case.
 15. Promptly referring a suspected SARS case to a suitable isolation centre for further investigation and treatment.
 16. Making immunization against influenza available for staff. This will not only protect the staff from influenza, but also reduce influenza epidemics, which could mask a new SARS outbreak, in health-care workplaces.

When health-care workers should be concerned about the possibility of SARS in a patient

Due to the nature of work in health-care settings, many patients with fever, respiratory symptoms and diarrhoea are seen on a daily basis. WHO has therefore given certain case definitions and guidelines for when the possibility of SARS should be raised more widely.⁷

⁷ **Alert, verification and public health management of SARS in the post-outbreak period**, WHO: <http://www.who.int/csr/sars/postoutbreak/en/print.html>

WHO suggests that if two or more health-care workers in the same health-care unit fulfil the clinical case definition for SARS⁸ and both became sick within the same 10-day period, a “SARS Alert” should be raised. A SARS Alert should similarly be raised if three or more people with links to the same hospital or health-care unit fulfil the clinical case definition of SARS and became unwell within 10 days of each other.

Using the above definitions it is of course possible that the health-care workers who deal with the first case in a SARS outbreak, before another one or two cases have been identified, could be exposed to the disease, but as WHO also defines, this is very unlikely in areas of the world where there has never been a history of sustained local transmission of SARS. Nonetheless, to protect against this possibility (as well as to reduce the risk of transmission of other diseases) the above infection control measures are advised for all health-care workers during their routine daily work.

3.1.3. Workplaces with a significantly increased risk

In these situations employees are working with or near people who may be actively secreting the SARS virus and therefore could be extremely infectious and a high risk to the workers. In order to protect staff, the aim is to create barriers between the workers and the potentially infectious person and so there is no physical way that the SARS-CoV virus can cross the barriers to infect the workers. In order to create these barriers two main methods are used:

Isolation

The patient who may be excreting the SARS-CoV virus is isolated in a contained area, including bathroom facilities, which they are not allowed to leave. Nothing is allowed to be taken out of the area without being fully cleaned or bagged for disposal, by a worker wearing personal protective equipment (PPE). Nobody is allowed to enter the isolation area without wearing PPE, which is then changed and cleaned on leaving the isolation area. The isolation area itself is made using easy to clean surfaces, to reduce any build up of viral contamination.

Even the air in the isolation area is kept separate from external air by ensuring a constant negative air pressure in the isolation area and so air is sucked in from the outside and then disposed of safely, via systems of filtration and cleaning.

Immediately outside the isolation area is an area for decontamination, where workers in the isolation area can wash and change in or out of protective clothing.

⁸ **Alert, verification and public health management of SARS in the post-outbreak period,**
WHO:

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 ($\geq 38^{\circ}\text{C}$);
- *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.

Personal protective equipment (PPE)

The aim of this equipment (or clothing) is to completely cover the worker with a physical barrier to the SARS virus and so the virus cannot touch the skin or mucous membranes of the worker even when they enter the isolation area. It is equally important that the virus cannot reach the respiratory tract via inhaled air and so only masks providing adequate air filtration can be used. Great care also needs to be taken while putting on and wearing the protective clothing to ensure the protective barrier is not inadvertently broken by maladjustment. Similarly, great care is needed on removal of the PPE, to avoid contamination by touching the outer surface of the clothing.

The typical requirements for PPE in the care of SARS patients might include:

- disposable gloves;
- disposable respirator (eg. N-95, N-99, N-100);
- disposable gown or other protective overall;
- waterproof apron;
- waterproof boots;
- goggles as eye protection;
- a face shield;
- a head cover.

As can be imagined, the utilization and exact requirements for such personal protective equipment and isolation techniques are relatively complex and may vary depending on the actual clinical situation and level of risk of infection. For further details specialist web sites and literature, such as provided by WHO,⁹ CDC¹⁰ and other national bodies, can be consulted (see Annex 2). Certainly administrations and employers should seek up-to-date and detailed information on the exact technical standards required before ordering or installing any such equipment.

Workers who must be protected by the use of isolation techniques and PPE during a SARS epidemic include all health-care workers caring for suspect SARS cases. In addition, anyone in whatever job, who is asked to have contact with a suspect or actual SARS case, or deal with their bodily secretions, will need to be protected from transmission of the SARS virus by such techniques.

3.2. Response to a possible case of SARS in the workplace

If, despite the recommendations in section 3.1.1, a worker with fever or symptoms of SARS does come to the workplace from an area where there is known to be an outbreak of SARS, the sick worker should be isolated as soon as possible.

Ideally the isolation area should have good external ventilation, be easy to clean and without carpeting.

⁹ Hospital Infection Control Guidance for Severe Acute Respiratory Syndrome (SARS):

<http://www.who.int/csr/sars/infectioncontrol/en/print.html>

¹⁰ Supplement I: Infection Control in Healthcare, Home, and Community Settings:

<http://www.cdc.gov/ncidod/sars/guidance/i/pdf/i.pdf>

The local health services should then be contacted and asked to assess and transfer the worker as appropriate. If personal protective equipment (PPE) is not available in the workplace, the health services should be informed of this and asked to supply their own equipment.

If available, the patient should wear a facemask or cover their mouth and nose with a cloth, and also be advised to dispose of any tissues in a covered bin as well as to keep excellent hand and personal hygiene.

As few people as possible should deal with the sick person and if PPE is not available, people helping should not touch or go within at least one metre of the sick person.

Following removal of the sick person from the isolation area it should be cleaned. Toilets and washing facilities, which the patient used, should also be cleaned. The cleaner should wear PPE and use bleach or household detergents for cleaning.

It is advisable to make a list of all those in the workplace who were in contact with the patient, but so long as they remain well and there is no advice to the contrary by local public health authorities, they can continue as normal.

3.3. Return of a recovered case of SARS to the workplace

As the decision that the person is no longer infective rests on some clinical criteria, such as absence of fever for at least 10 days and a normal chest X-ray, it is advisable that each recovered SARS patient supplies a medical note of “fitness to work” from their treating doctor, prior to re-entering the workplace, to ensure that they have completed a full period of convalescence.¹¹

Following this, as they will have developed antibody protection against the SARS virus, the recovered SARS patient is unlikely to suffer a recurrence of the disease and, once certified fit, can safely return to work.

Nonetheless, it is not known how long any immunity to re-infection by SARS lasts and so returned workers should continue to respect all the usual isolation, PPE and health and safety provisions in the workplace, both for themselves and for their workplace colleagues.

In addition, the returning workers may be in need of some psychological support to come to terms with the trauma they have undergone, or further medical outpatient follow-up to assess their long-term progress. Employers should allow sick leave for such appointments if they can only be provided during working hours.

The workforce itself, will also need education and encouragement to understand that the returning workers carry no significant health threat and that they should be treated with support and sympathy.

¹¹ WHO hospital discharge and follow-up policy for patients who have been diagnosed with Severe Acute Respiratory Syndrome (SARS): <http://www.who.int/csr/sars/discharge/en/>

4. Administrative action to be ready for an outbreak of SARS

4.1. National level

In the ILO Occupational Safety and Health Convention, 1981 (No 155), it is already clearly recommended that, in the field of occupational safety and health, national institutions need to develop coherent national policy to ensure effective occupational safety and health systems in organizations. Furthermore it is advised that these national policies, be supported by national laws and regulations.¹²

Regarding the containment of a SARS outbreak, such national policies and laws are essential, to help organizations react appropriately and quickly to the threat of SARS. Indeed, in a SARS epidemic, it would be virtually impossible to develop any effective control against the spread of the disease without cooperation at a national level. For instance, if there were no national laws to authorize contact tracing and quarantine, regardless of the workers' organizations, the future health of the whole nation could be put at risk. Similarly, if there was no national policy in place to ensure the availability of protective equipment for health-care workers, the rates of infection could rise rapidly, in conjunction with a justified unwillingness of health-care workers to carry on working.

The experience from areas, which have already suffered a SARS epidemic, is that a concerted and well-coordinated national effort needs to be rapidly implemented to stop a potential health and economic disaster. The purpose of this section is to encourage national planning prior to an outbreak, to avoid such a disaster in the future.

This recommendation, to plan a national-level response to the threat of emerging infectious diseases including SARS, was fully endorsed by the World Health Organization (WHO) in its 56th World Health Assembly in May 2003.¹³ Furthermore, WHO is currently revising its International Health Regulations and recommending, "health administrations develop and maintain the capacity to respond promptly and effectively to public health risks and public health emergencies of international concern."^{xxiv} Such international health concerns would include SARS as well as other epidemic diseases such as influenza or ebola haemorrhagic fever.

¹² **The Occupational Safety and Health Convention, 1981 (No. 155)**

Article 4

1. Each Member shall, in the light of national conditions and practice, and in consultation with the most representative organizations of employers and workers, formulate, implement and periodically review a coherent national policy on occupational safety, occupational health and the working environment.
2. The aim of the policy shall be to prevent accidents and injury to health arising out of, linked with or occurring in the course of work, by minimising, so far as is reasonably practicable, the causes of hazards inherent in the working environment.

Article 8

Each Member shall, by laws or regulations or any other method consistent with national conditions and practice and in consultation with the representative organizations of employers and workers concerned, take such steps as may be necessary to give effect to Article 4 of this Convention.

¹³ **See Annex 1**

It, therefore, would be prudent for health administrations to ensure separate funding is available for such international public health emergencies. This separate funding is required, not only to pay for the medical facilities and equipment needed to deal with the victims of any such epidemics, but also to provide occupational safety and health measures, training and education, legal backing and social protection, to the workers involved in the fight against the epidemic.

Nonetheless, despite the best intentions, some countries may experience financial and technical difficulties in implementing the ILO and WHO standards advised to ensure worker's protection and health care during a SARS or other infectious disease epidemic. In the light of this eventuality, the ILO Declaration on the Fundamental Principles and Rights at Work (June 1998), would hope to encourage Members to offer assistance to others to attain these objectives by utilising, not only the ILO resources, but also the resources of other international organizations and the international community at large.

4.1.1. National coordination and surveillance

One of the main responsibilities of national governments is to ensure the presence of an effective national policy in response to the threat of SARS and other epidemic infectious diseases, which is applicable and relevant to all sectors of society. Such policy should cover all aspects of daily life including the working environment and may be formulated as laws, recommendations, guidance, practical provisions, financial support and educational measures.

In order to ensure good policy governments need to consult and coordinate with agencies that represent the different sectors of society, such as management from the public and private sectors as well as workers' and voluntary organizations.¹⁴

The national effort also needs to take care that no section of society is left outside the scope of any infection control provisions, as clearly epidemic diseases themselves can attack all people, including those living on the fringes of society. National policy therefore needs to include such groups as unemployed people, migrant workers, immigrants, vagrants and prisoners.

It is also essential to have national systems of surveillance, to rapidly recognize and actively detect epidemic diseases such as SARS, as soon as they appear in a community.^{xxv} Without such networks of surveillance and disease reporting, the task and expense of containing an established epidemic could be multiplied many-fold.

In addition, in order to protect the community at large, the government may find it necessary to institute systems to screen the general public for symptoms of SARS. This could be done by methods such as questionnaires, fever detectors or assessment by medical personal. Such systems of screening were recommended by WHO at airports during the 2003 epidemic^{xxvi} to ensure SARS was not spread internationally, but might also be a useful tool to prevent community spread in certain public places.

¹⁴ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

III. Action at the National Level

8. There should be close cooperation between public authorities and representative employers' and workers' organizations, as well as other bodies concerned in measures for the formulation and application of the policy referred to in Article 4 of the Convention.

4.1.2. Knowledge-sharing

Despite the many differences between infection by the HIV or SARS-CoV viruses,^{xxvii} one thing that can be learnt from the experience with the HIV epidemic is that knowledge-sharing is a key weapon in the fight against a disease.^{xxviii} If people are not informed about the mode of transmission and ways of avoiding spread of a disease, they cannot effectively protect themselves. In addition, lack of factual information can lead to false rumours and unfounded myths being spread, which can not only endanger the health of the community but can also lead to discrimination against the infected people.

Provision therefore needs to be made for knowledge-sharing when planning a response to a SARS outbreak.

(a) Education

Education needs to be aimed at several different groups:

The general public

- Information on the symptoms of SARS and who may be at risk.
- Information on ways to prevent infection by SARS and reduce transmission of the disease.
- Explanation of why and when quarantine and isolation measures are needed, what financial support and job-protection the government is offering and also, what penalties will be imposed for lack of cooperation.
- Information to avert panic in the general population with reassurances against unfounded anxieties about SARS.
- Information about the general state of the outbreak with regularly up-dated bulletins.

Those in positions of responsibility

Guidelines need to be developed to advise on clinical management, infection control, public health policy, legislation and means of enforcement, social protection and occupational health and safety, to ensure that the national response to SARS is well coordinated and uniformly follows good practice.¹⁵

Research agencies

Governments need to support hospital; laboratory or university research endeavours in the fight against SARS to ensure increasing knowledge and improving techniques to

¹⁵ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

III. Action at the National Level

4. (a) issue or approve regulations, codes of practice or other suitable provisions on occupational safety and health and the working environment, account being taken of the links existing between safety and health, on the one hand, and hours of work and rest breaks, on the other;
4. (b) from time to time review legislative enactments concerning occupational safety and health and the working environment, and provisions issued or approved in pursuance of clause (a) of this Paragraph, in the light of experience and advances in science and technology;

contain the disease in future.¹⁶ Ideally new data will be published rapidly with free, full Internet access and so other research agencies can quickly use and develop the up to date information.

(b) Training¹⁷

Managerial

Managers will need training in how to implement the national laws, policies and guidelines that are relevant to the institutions in which they work.

Practical

Employers and workers will need training in the practical use of equipment and infection control methods for combating SARS and in their responsibility to adhere to practical health and safety recommendations.

(c) Communication

In order to implement education and training, systems of rapid communication are needed. The following systems could be considered:

- Internet sites.
- TV channels.
- Radio.
- Telephone help-lines.
- Brochures.
- Newspapers and magazines.
- Advertisements and hoardings.
- Newsletters.

It is also essential that those in positions of responsibility during a SARS outbreak can be contacted easily via telephone or electronic links.^{xxix}

¹⁶ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

III. Action at the National Level

- 4 (c) undertake or promote studies and research to identify hazards and find means of overcoming them;

¹⁷ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Part II. Principles of National Policy

Article 5

- (c) training, including necessary further training, qualifications and motivations of persons involved, in one capacity or another, in the achievement of adequate levels of safety and health;

4.1.3. Provision of facilities and equipment

(a) Hospital and isolation facilities and equipment

Prior to an outbreak of SARS it would be advisable for national authorities to define the hospital, isolation and intensive care facilities they have available that could be used during an outbreak and to plan for a sudden surge in numbers of people needing such specialist care.

To prevent the spread of SARS during transportation, triage and hospitalization of suspect SARS cases, clear protocols should be drawn up, to define the vehicles, teams and equipment to be used during transportation as well as the reception areas and receiving wards for suspect SARS cases.

Decisions need to be made about whether all hospitals should aim to have the capability to receive suspect SARS cases, or whether the capacity should be restricted to a few specialized hospitals. If only some hospitals are to be used to care for SARS patients, the recognition and transfer of suspect SARS cases from other general hospitals also need to be considered.

During a SARS outbreak there is a high demand for isolation and intensive care facilities, both of which are expensive. Indeed, even in countries with strong economies there is often only one intensive care facility in any hospital to deal with all the most unwell patients and even without SARS, the demand on such beds is high. Therefore, unless plans to provide isolation on intensive care units have been previously defined, freeing up of beds to take and isolate SARS cases at short notice may prove difficult and compromise the health of other very sick patients in the hospital.

Similarly the number of isolation rooms with negative pressure ventilation are often very limited and contingency plans need to be made if they are to be available for SARS cases.

(b) Quarantine facilities

An outbreak of SARS could lead to the sudden need for quarantine facilities to accommodate a large number of people, all of whom would require health monitoring, food, drink and toilet facilities as well as means of communicating with the outside world.

Although many people could be quarantined in their own homes some may require specific alternative accommodation, for instance if there are fears of spreading SARS to other family members or if the authorities feel it necessary to be sure quarantine is enforced.

Once again national authorities are encouraged to plan for such contingencies prior to a SARS outbreak in order to be prepared if the eventuality arises.

(c) Protective equipment for workers

It would be ethically unjustifiable to request workers to care for suspect SARS cases without suitable personal protective equipment (PPE).¹⁸ The storage of basic amounts

¹⁸ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

II. Technical Fields of Action

3. (n) design, manufacture, supply, use, maintenance and testing of personal protective equipment and protective clothing;

such equipment at local level, with the back up of a central stockpile for rapid distribution during an outbreak, is therefore recommended.

4.1.4. Social protection

Since its inception the ILO has been advocating social protection for workers and the risk of a SARS outbreak only underlines the necessity for such protection. Governments also need to consider how to include the more marginalized sectors of society under the umbrella of social protection, such as the migrant,¹⁹ part-time²⁰ or self-employed workers.

The five categories discussed below are all well recognized as basic types of social protection but the disruption and distress caused by the lack of them would quickly become apparent in a SARS epidemic.

(a) Medical care and sickness benefit

Since the Sickness Insurance Conventions (Nos. 24 and 25) of 1927, the ILO has been advising on national systems of sickness insurance. In 1969, the ILO Medical Care

¹⁹ **The Migrant Workers (Supplementary Provisions) Convention, 1975 (No. 143)**

Part II. Equality of Opportunity and Treatment

Article 10

Each Member for which the Convention is in force undertakes to declare and pursue a national policy designed to promote and to guarantee, by methods appropriate to national conditions and practice, equality of opportunity and treatment in respect of employment and occupation, of social security, of trade union and cultural rights and of individual and collective freedoms for persons who as migrant workers or as members of their families are lawfully within its territory.

²⁰ **The Part-Time Work Convention, 1994 (No. 175)**

Article 1

For the purposes of this Convention:

- (a) the term part-time worker means an employed person whose normal hours of work are less than those of comparable full-time workers;

Article 4

Measures shall be taken to ensure that part-time workers receive the same protection as that accorded to comparable full-time workers in respect of:

- (a) the right to organize, the right to bargain collectively and the right to act as workers' representatives;
- (b) occupational safety and health;
- (c) discrimination in employment and occupation.

Article 7

Measures shall be taken to ensure that part-time workers receive conditions equivalent to those of comparable full-time workers in the fields of:

- (a) maternity protection;
- (b) termination of employment;
- (c) paid annual leave and paid public holidays; and
- (d) sick leave,

it being understood that pecuniary entitlements may be determined in proportion to hours of work or earnings.

and Sickness Benefits Convention adopted the principal of providing medical care and sickness benefit to the majority of the population.²¹

The advantages of having national systems to ensure widespread medical and sickness benefits to populations would be only too obvious during a SARS epidemic. In order to contain an epidemic, rapid medical intervention, systems of quarantine, isolation and intensive-care treatment need to be readily available. If people who developed symptoms of SARS avoided seeking medical help or taking sick leave because they had no social protection, the whole community could be endangered. Not only would difficult ethical issues arise if very sick people with no means of payment were turned away from isolation and intensive-care units but risks would also increase. The most severely ill patients with SARS are the most infectious and so it benefits all if they are properly isolated and treated.

Indeed, it could be recommended, that *during a SARS outbreak*, governments make available a basic provision for medical care and sickness benefit to all SARS patients, just to ensure that those with symptoms of SARS and no such social protection, do quickly seek help from the health-care services. The risk of people hiding their symptoms, because of fears about the cost of treatment, may limit the effectiveness of disease control if such protection is not available.

²¹ **The ILO Medical Care and Sickness Benefits Convention, 1969 (No. 130)**

Part II. Medical Care

Article 10

The persons protected in respect of the contingency referred to in subparagraph (a) of Article 7 shall comprise:

- (a) all employees, including apprentices, and the wives and children of such employees; or
- (b) prescribed classes of the economically active population, constituting not less than 75 per cent of the whole economically active population, and the wives and children of persons in the said classes; or
- (c) prescribed classes of residents constituting not less than 75 per cent of all residents.

Part III. Sickness Benefit

Article 19

The persons protected in respect of the contingency specified in subparagraph (b) of Article 7 shall comprise:

- (a) all employees, including apprentices; or
- (b) prescribed classes of the economically active population, constituting not less than 75 per cent of the whole economically active population;
- (c) all residents whose means during the contingency do not exceed limits prescribed in such a manner as to comply with the requirements of Article 24.

Regarding quarantine, Convention No. 130, Article 7 describes the need for medical care of a curative and also a preventive nature.²²

The provision of medical cover for the curative care of SARS patients, is clear-cut with provision being laid down for domiciliary, general practitioner and hospital care as well as medication and rehabilitation.²³

The indications for medical care of a preventive nature, as described in Article 7, are not defined but might be considered relevant to situations of quarantine, where quarantine is being imposed as prevention against the spread of SARS, to protect not only the worker, but also the community at large. If this concept of quarantine as medical care of a preventive nature is accepted, it falls within the recommendations of Convention No. 130, laying down an entitlement of workers to sickness benefit during periods of quarantine.

Indeed, the ILO Medical care and Sickness Benefits Recommendation (No. 134), 1969, supports this position, itself advising a cash benefit during a period of quarantine, which results in loss of earnings.²⁴

The ILO Sickness Insurance Recommendation, 1927 (No. 29) also supports the giving of sickness insurance as a means of preventing the spread of disease to protect

²² **The ILO Medical Care and Sickness Benefits Convention, 1969 (No. 130)**

Article 7

The contingencies covered shall include:

- (a) need for medical care of a curative nature and, under prescribed conditions, need for medical care of a preventive nature;
- (b) incapacity for work resulting from sickness and involving suspension of earnings, as defined by national legislation.

Part II. Medical Care

Article 8

Each Member shall secure to the persons protected, subject to prescribed conditions, the provision of medical care of a curative or preventive nature in respect of the contingency referred to in subparagraph (a) of Article 7.

²³ **The ILO Medical Care and Sickness Benefits Convention, 1969 (No. 130)**

Article 13

The medical care referred to in Article 8 shall comprise at least:

- (a) general practitioner care, including domiciliary visiting;
- (b) specialist care at hospitals for in-patients and out-patients, and such specialist care as may be available outside hospitals;
- (c) the necessary pharmaceutical supplies on prescription by medical or other qualified practitioners;
- (d) hospitalization where necessary;
- (e) dental care, as prescribed; and
- (f) medical rehabilitation, including the supply, maintenance and renewal of prosthetic and orthopaedic appliances, as prescribed.

²⁴ **The ILO Medical Care and Sickness Benefits Recommendation, 1969 (No. 134)**

- 8. A person protected for sickness benefit should be granted a cash benefit in cases of absence from work involving loss of earnings which is justified on the ground that:
 - (a) he is required to undergo curative or preventive medical care;
 - (b) he is isolated for the purpose of quarantine.

national health interests. It advocates using sickness insurance to allow an alert policy of prevention to avert unnecessary economic and health costs.²⁵ Quarantine could certainly be considered just such an alert preventive measure to protect against worse outcomes.

Finally, it might be interesting to note that all the countries that were significantly affected by the SARS epidemic, put in place some kind of system of financial recompense for quarantined workers, as compliance with quarantine was considered an essential part of the fight against the disease. Indeed, the recommendation in a report prepared in the U.S. for the Centres for Disease Control and Prevention was that “Providing income replacement for employees and self-employed persons is essential to ensure a high rate of compliance with quarantine.”^{xxx}

(b) Employment injury benefit

On average, health-care workers accounted for 21 per cent of all cases of SARS in the 2003 epidemic, but in Canada they made up 43 per cent of cases.^{xxxi}

SARS should therefore be considered an occupational disease for health-care workers, as listed in the ILO Employment Injury Benefits Convention.²⁶

In addition, during a SARS outbreak, other workers as well as health-care workers, might have a particular occupational risk of SARS infection. The list below (which is not exhaustive) summarizes the workers whose jobs might involve an occupational risk of SARS.

- Nurses and midwives.
- Doctors.
- Health assistants and carers in hospitals, convalescent and nursing homes.

²⁵ **The ILO Sickness Insurance Recommendation, 1927 (No. 29)**

C. Sickness Prevention

12. As most diseases can be prevented, an alert policy of prevention is calculated to avert loss of productive efficiency, to render available for other purposes the financial resources which are absorbed by avoidable illness, and to promote the material, intellectual and moral well-being of the community.

Sickness insurance should assist in inculcating the practice of the rules of hygiene among the workers. It should give preventive treatment and grant the same to as large a number of individuals as possible as soon as the premonitory symptoms of disease appear. It should be capable of contributing towards the prevention of the spread of disease and the improvement of the national health, in pursuance of a general policy coordinating all the various activities towards these ends.

²⁶ **The ILO Employment Injury Benefits Convention, 1964 (No. 121)**

Schedule I. List Of Occupational Diseases

- 29. Infectious or parasitic diseases contracted in an occupation where there is a particular risk of contamination.**
- (a) Health or laboratory work.
 - (b) Veterinary work.
 - (c) Work handling animals, animal carcasses, parts of such carcasses, or merchandise which may have been contaminated by animals, animal carcasses, or parts of such carcasses.
 - (d) Other work carrying a particular risk of contamination.

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- Laboratory staff.
 - Mortuary staff.
 - Radiography technicians.
 - Physiotherapists and rehabilitation staff.
 - Phlebotomists, ECG and other clinical technicians.
 - Maintenance technicians and porters in health-care facilities.
 - Cleaners and laundry workers in health-care facilities.
 - Administrators and receptionists in health-care facilities.
 - Emergency service staff.
 - Law enforcement agency staff.
 - Public health staff and isolation and quarantine officers.
 - Students working in any of the above fields.
 - Vets and workers handling certain wildlife in southern China that might harbour SARS.

It is important to specify however, that not all workers in the above jobs will have an occupational risk of SARS or be able to claim Employment Injury Benefit for SARS. Only those workers who are asked, as part of their job, to work in areas where there are actual or suspect SARS cases, or areas which might be contaminated by the secretions of SARS sufferers, would normally qualify.

Ideally, medical cover and sickness benefit as described in section (a) above, will already protect workers who have an occupational risk of SARS, but nonetheless, if there is an additional risk of occupational exposure to SARS, such workers should also have employment injury benefit protection. Indeed, because of the relatively short natural history of an infection by SARS (the patient is usually either better or dead within a few weeks of onset) and the essential need to keep a well-motivated health-care workforce during a SARS outbreak, it could be recommended that those workers in the highest risk areas receive full allowances for SARS-related illness, under such employment injury benefit schemes. For instance, for up to a six-week period, from the time of onset of symptoms, medical care and sickness benefit could be reimbursed at 100 per cent, to avoid any penalty to those who had fallen sick directly due to their work. Once the episode of SARS was over, or after a six-week delay, benefits could return to the usual levels of compensation provided for occupational diseases.

It can also be remembered that much of the cost of treating SARS patients is due to the salaries of the health-care workers themselves, and so it might be considered unreasonable to indirectly ask unaffected health-care workers to charge their sick colleagues for their services, if reimbursement for acute medical treatment was given much below 100 per cent.

(c) Survivors' benefit

The main function of the survivors' benefit is to ensure that any children of a breadwinner, who dies, can continue to be cared for by the surviving parent due to the

financial allowances given by the benefit. This protection for the children and surviving parent also protects the future generation in any society. In general, children do better and are happier remaining in their own families than being institutionalized or roaming unprotected due to parental poverty. In addition, leaving aside the usual ethical justifications for providing such benefits to children, the cost of providing survivors' benefit can be offset by the cost of providing institutions for destitute children and in dealing with the consequences of lack of education and potential delinquency as the children grow up.

ILO has therefore generally endorsed the giving of survivors' benefit in its Invalidity, Old-Age and Survivors' Benefits Convention.²⁷ Similarly, for those workers with an occupational risk of contracting SARS, the previously mentioned Employment Injury Benefits Convention specifies the giving of survivors' benefit, unless it is already provided to a minimum standard by other social security schemes.²⁸

Funeral expenses

These are usually covered by the allowances provided by a survivors' benefit scheme such as above but, if not, are covered by the Medical Care and Sickness Benefit Convention.²⁹ Clearly in a SARS epidemic, due to the risk of infection from corpses, good

²⁷ **The ILO Invalidity, Old-Age and Survivors' Benefits Convention, 1967 (No. 128)**

Part IV. Survivors' Benefit

Article 21

1. The contingency covered shall include the loss of support suffered by the widow or child as the result of the death of the breadwinner.

Article 23

The survivors' benefit shall be a periodical payment.

²⁸ **The ILO Employment Injury Benefits Convention, 1964 (No. 128)**

Article 18

1. The cash benefit in respect of death of the breadwinner shall be a periodical payment to a widow as prescribed, a disabled and dependent widower, dependent children of the deceased and other persons as may be prescribed; this payment shall be calculated in such a manner as to comply either with the requirements of Article 19 or with the requirement of Article 20: Provided that it shall not be necessary to make provision for a benefit to a disabled and dependent widower where the cash benefits to other survivors are appreciably in excess of those required by this Convention and where social security schemes other than employment injury schemes provide to such widower benefits which are appreciably in excess of those in respect of invalidity required under the Social Security (Minimum Standards) Convention, 1952.
2. In addition, a funeral benefit shall be provided at a prescribed rate which shall not be less than the normal cost of a funeral: Provided that where cash benefits to survivors are appreciably in excess of those required by this Convention the right to funeral benefit may be made subject to prescribed conditions.

²⁹ **The Medical Care and Sickness Benefits Convention, 1969 (No. 130)**

1. In the case of the death of a person who was in receipt of, or qualified for, the sickness benefit referred to in Article 18, a funeral benefit shall, under prescribed conditions, be paid to his survivors, to any other dependants or to the person who has borne the expense of the funeral.
2. A member may derogate from the provision of paragraph 1 of this Article where:
 - (a) it has accepted the obligations of Part IV of the Invalidity, Old-Age and Survivors' Benefits Convention, 1967;
 - (b) it provides in its legislation for cash sickness benefit at a rate of not less than 80 per cent of the earnings of the persons protected; and

systems are needed to provide safe funeral practices and adequate funds should be available for this. To ensure such safe systems of corpse disposal, national institutions need to develop policy, in conjunction with undertakers and funeral parlours, which protect the community and mortuary staff from risk of infection, but also provide the bereaved with a dignified and acceptable way to grieve in the preparations for and during the funeral itself.

(d) **Maternity benefit**

A SARS outbreak would cause no diminution of the usual protection required by pregnant and breastfeeding women, as laid down in the ILO, Maternity Protection Convention, 2000 (No. 183).

Specific questions concerning pregnancy

Questions arise however on whether pregnant women should ever be asked to work in areas of “significantly increased risk” of SARS infection, such as intensive care or isolation units. Obviously the risks of SARS in such cases are relevant not only to the pregnant worker herself, but also to the unborn child.

As yet insufficient data exists on the mortality rates of pregnant women infected with SARS when compared to the general population.^{xxxii} Nonetheless the data that is available, suggests an increase in both foetal loss during early pregnancy and maternal mortality in later pregnancy.^{xxxiii}

There are as yet, no reported cases of vertical transmission of SARS from mother to baby.^{xxxiv} Nonetheless, once the baby was born, it could potentially be infected by droplet transmission from the mother herself, if she was unwell with SARS and still excreting the virus.

In view of the abovementioned possibility of increased risk to the pregnant worker and her unborn child, in conjunction with the ILO Maternity Protection Convention,³⁰ national authorities can be advised to take measures to prevent pregnant women and pregnant workers from entering workplaces with a significant risk of SARS transmission.

Specific questions concerning breastfeeding

It has been well established that breastfeeding is; in most circumstances, the healthiest nourishment for a young baby,^{xxxv} yet if a breastfeeding mother develops SARS she may need to be isolated from her baby to prevent transmission to the baby. Such early separation of mother and baby would prove very stressful for both, as well as depriving the baby of breast milk. Thus national authorities may find it appropriate to legislate to protect breastfeeding as well as pregnant mothers from working in higher-risk environments during a SARS outbreak.

- (c) the majority of persons protected are covered by voluntary insurance which is supervised by the public authorities and which provides a funeral grant.

³⁰ **The ILO Maternity Protection Convention, 2000 (No. 183)**

Health Protection

Article 3

Each Member shall, after consulting the representative organizations of employers and workers, adopt appropriate measures to ensure that pregnant or breastfeeding women are not obliged to perform work which has been determined by the competent authority to be prejudicial to the health of the mother or the child, or where an assessment has established a significant risk to the mother’s health or that of her child.

(e) Unemployment benefit

In 1988, the ILO adopted the Employment Promotion and Protection against Unemployment Convention (No. 183). The aim of this Convention was not only to give employees protection against unemployment, but also to encourage governments to promote productive employment by guidance, training and the creation of job opportunities.³¹

During the 2003 SARS epidemic there was enormous concern about the economic impact of SARS and indeed several industries were badly affected by the crisis with decreased revenues leading inevitably to job losses. The tourist industry, which accounts for around 10 per cent of some Asian countries' GDPs^{xxxvi} was suddenly plunged into a major economic slump with knock-on effects in the catering, retail and international trading sectors. Many of these economic changes were unpredictable and occurred very quickly after the onset of the SARS outbreak. Industries, therefore, had little time to make contingency plans to deal with these sudden changes.

During another outbreak of SARS such rapid economic changes could quickly recur and so workers in certain sectors, might rightly continue to feel anxious about the ongoing possibility of future unemployment. Also, this risk of sudden unemployment is not specific to SARS, other pandemics could create similar rapid changes in international behaviour leading to economic crises.

Thus, the implementation of social protection against unemployment, as already laid down by ILO Conventions, is to be strongly advocated in the face of a SARS outbreak.

Along with this, the implementation of job creation schemes, to allow workers to be trained for different types of work, if rendered unemployed by international shifts in market-demand, would be highly beneficial.³²

³¹ **The Employment Promotion and Protection against Unemployment Convention, 1988 (No. 168)**

II. Promotion of Productive Employment

Article 7

Each Member shall declare as a priority objective a policy designed to promote full, productive and freely chosen employment by all appropriate means, including social security. Such means should include, inter alia, employment services, vocational training and vocational guidance.

Article 8

1. Each Member shall endeavour to establish, subject to national law and practice, special programmes to promote additional job opportunities and employment assistance and to encourage freely chosen and productive employment for identified categories of disadvantaged persons having or liable to have difficulties in finding lasting employment such as women, young workers, disabled persons, older workers, the long-term unemployed, migrant workers lawfully resident in the country and workers affected by structural change.

³² **The Human Resources Development Convention, 1975 (No. 142)**

Article 1

1. Each Member shall adopt and develop comprehensive and coordinated policies and programmes of vocational guidance and vocational training, closely linked with employment, in particular through public employment services.
2. These policies and programmes shall take due account of:

4.1.5. Enforcement

(a) Legislation

It would be unrealistic to assume that, when confronted with a SARS outbreak, everyone would willingly comply with public health measures such as isolation and quarantine. Indeed the experience in 2003 was that there were violations of quarantine in virtually all jurisdictions^{xxxvii} and even those with symptoms of SARS, travelled contrary to medical advice, to seek treatment in different regions or to be near their families.

In addition there were public reactions against some national infection-control measures, for instance, the screening of traffic or the setting up of quarantine facilities in certain areas.

It is therefore logical that national laws must be in place to ensure that governments have the power to enforce their actions, in order to deal effectively with public health emergencies such as a SARS outbreak.

It is equally important that social and occupational health and safety legislation is in place to protect the population from unjust risks and hardships during a SARS epidemic. There is also a necessity to ensure that workers have legal protection against dismissal from work, during an outbreak, if they are following officially authorized public health recommendations, such as quarantine, or are taking sick leave for viral illnesses similar to SARS.³³

(b) Empowerment

Once public health legislation is in place, the appropriate governmental agencies can be mobilized to apply and, where necessary, enforce the law. Nonetheless prior to enforcement, every attempt should be made to achieve spontaneous public cooperation with the agreed legislation.

Legislation needs to be enforced not only to protect the community from the risk of SARS, but also, to protect the individual from health-risk or injustice in the workplace or community, due to an inappropriate local response to the risk of SARS.

4.2. Workplace level

It is important that employers and employees start to familiarize themselves with the workplace responsibilities that would fall upon them during a SARS epidemic. Although many of the workplace recommendations relevant to an outbreak of SARS, are already described in existing standards on working conditions and health and safety regulations, if these standards are not currently being met there may be no time, once an epidemic has struck, to correct them.

employment needs, opportunities and problems, both regional and national;

³³ **The ILO Termination of Employment Convention, 1982 (No. 158)**

Article 6

1. Temporary absence from work because of illness or injury shall not constitute a valid reason for termination.

4.2.1. Workplace coordination

In preparing workplace policy on SARS, employers are advised to consult ILO standards and guidelines³⁴ and national guidelines, in conjunction with, the workers and workers' representatives in their organizations.³⁵ It may be appropriate for management, occupational health services and workers' representatives to form committees to deal with the following issues concerning SARS:

- The application of national laws, regulations, policies and guidelines.
- The revision of relevant health and safety provisions already in the workplace.
- The listing of areas of deficiency in the workplace, where provisions against SARS are still inadequate.
- The planning of action to correct the defined areas of deficiency.
- The communication of the workplace policies, guidelines and action-plans to the workforce.
- The application of a system of appraisal to monitor the adherence to and the effectiveness of measures taken in the workplace against SARS.
- The creation of a means for workers to express their ideas, questions and grievances about SARS to the employer.

4.2.2. Knowledge-sharing

(a) Education

Education on the prevention and control of SARS is needed in the workplace, in conjunction with interactive forums when the workers can ask their own questions about SARS in relation to their work and health.³⁶

³⁴ A particularly relevant document providing such guidelines is the **ILO Guidelines on Occupational Safety and Health Management Systems ILO-OSH 2001**.

³⁵ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Article 19

- (e) workers or their representatives and, as the case may be, their representative organizations in an undertaking, in accordance with national law and practice, are enabled to enquire into, and are consulted by the employer on, all aspects of occupational safety and health associated with their work; for this purpose technical advisers may, by mutual agreement, be brought in from outside the undertaking;

Article 20

Cooperation between management and workers and/or their representatives within the undertaking shall be an essential element of organizational and other measures taken in pursuance of Articles 16 to 19 of this Convention.

³⁶ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Article 19

- (c) representatives of workers in an undertaking are given adequate information on measures taken by the employer to secure occupational safety and health and may consult their representative organizations about such information provided they do not disclose commercial secrets;

(b) Training

The ILO Standards on Occupational Safety and Health cover the need for training, both at the employer and worker level, to ensure the safety of workplaces. Organizations therefore need to ensure that staff are sufficiently trained in infection control and techniques of isolation and personal protective equipment to be ready for a SARS outbreak.³⁷

(c) Communication

Employers and workers' unions and representatives need to work together, using new and pre-existing systems of communication, to rapidly dissipate updated information to the workforce.³⁸

Employers and workers' representatives could also work with occupational health services and local public health services to obtain relevant information and links with health-related media systems, such as telephone hotlines, Internet connections or radio and television information services.

4.2.3. Provision of facilities and equipment

As discussed in section 3 above, depending on the level of risk of SARS in any workplace, certain preventive measures concerning sanitation, isolation and personal protective equipment need to be available.

For the vast majority of workplaces only the measures discussed in 3.1.1, are necessary and employers should concentrate on ensuring their immediate availability. Employers need to understand that if transmission of SARS, or another infectious disease, occurs in the workplace, it might lead to the absence of many members of staff, on sick

³⁷ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Part IV. Action at the Level of the Undertaking

Article 19

- (d) workers and their representatives in the undertaking are given appropriate training in occupational safety and health;

The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)

IV. Action at the Level of the Undertaking

Article 10

- (b) to give necessary instructions and training, taking account of the functions and capacities of different categories of workers;
- (c) to provide adequate supervision of work, of work practices and of application and use of occupational safety and health measures;
- (d) to institute organizational arrangements regarding occupational safety and health and the working environment adapted to the size of the undertaking and the nature of its activities;

³⁸ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

IV. Action at the Level of the Undertaking

- 12.(2) Workers' safety delegates, workers' safety and health committees, and joint safety and health committees or, as appropriate, other workers' representatives should:
- (f) have access to all parts of the workplace and be able to communicate with the workers on safety and health matters during working hours at the workplace;

leave or in quarantine, with significant social and economic costs. Thus protecting the health of their staff, by the sanitary methods advised, is in everyone's interest.

For the workplaces with a slight or significant risk of SARS infection the general requirements for technical equipment and facilities are more detailed and, as well as reviewing the information in this paper, employers could seek further advice from national and international bodies, to be sure they are adhering to any more specific, national guidelines of infection control.

Nonetheless, whatever the level of risk of SARS, it is inherent on employers themselves to ensure safe working environments for their employees, without the need for any financial expenditure by the employees and in consultation and cooperation with their employees.³⁹

It is also inherent on employers to submit to workplace labour inspections, to ensure that workers' health is being satisfactorily protected and to understand that legal penalties may be taken against them, if they fail to comply with adequate health and safety regulations.⁴⁰

³⁹ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Article 16

1. Employers shall be required to ensure that, so far as is reasonably practicable, the workplaces, machinery, equipment and processes under their control are safe and without risk to health.
2. Employers shall be required to ensure that, so far as is reasonably practicable, the chemical, physical and biological substances and agents under their control are without risk to health when the appropriate measures of protection are taken.
3. Employers shall be required to provide, where necessary, adequate protective clothing and protective equipment to prevent, so far as is reasonably practicable, risk of accidents or of adverse effects on health.

Article 20

Cooperation between management and workers and/or their representatives within the undertaking shall be an essential element of organizational and other measures taken in pursuance of Articles 16 to 19 of this Convention.

Article 21

Occupational safety and health measures shall not involve any expenditure for the workers.

⁴⁰ **The ILO Labour Inspection Convention, 1947 (No. 81)**

Article 3

1. The functions of the system of labour inspection shall be:
 - (a) to secure the enforcement of the legal provisions relating to conditions of work and the protection of workers while engaged in their work, such as provisions relating to hours, wages, safety, health and welfare, the employment of children and young persons, and other connected matters, in so far as such provisions are enforceable by labour inspectors;

Article 18

Adequate penalties for violations of the legal provisions enforceable by labour inspectors and for obstructing labour inspectors in the performance of their duties shall be provided for by national laws or regulations and effectively enforced.

4.2.4. Social protection

As described in the section National Level, ILO standards have already defined the need for basic social protection regarding medical care and sickness benefit, employment injury benefit, survivor's benefit, maternity benefit and unemployment benefit. Just as national bodies should be endeavouring to introduce and maintain these standards for the whole population, employers should be endeavouring to ensure their workforce are protected by them.

Employers need to find out if their workers have social protection under national schemes and if not, find ways to encourage workers to cooperate with company or private schemes of social insurance.

As mentioned above, social protection is especially important in a SARS outbreak to ensure workers cooperation with medical care, quarantine and sick leave regulations. If workers do not seek medical help when unwell with SARS, or take sick leave, they could start a chain of transmission of SARS in the workplace, which could have much more expensive consequences than the timely provision of social protection.

Employers therefore need to decide how they will interact with any of their workforce who become sick with SARS and for whatever reason, are not protected by social protection. Employers may consider providing a ubiquitous form of protection *in a SARS outbreak*, to cover the basic costs of medical care or quarantine for any of their workers who are affected by SARS, to ensure that sick workers do not attempt to work when unwell or in quarantine.

The employer is therefore well advised to ensure that the employees are fully informed of the need for social protection, the extent to which they are already protected by the government or the company and the possibility of increasing that protection privately, if they so desire.

Regarding workers who are asked to work in jobs with an increased risk of contracting SARS, for instance during a SARS outbreak; it would be unethical to employ them without any employment injury protection against SARS. Therefore it is essential that even short-term, migrant or daily labourers, who take on employment as part of a response to a SARS outbreak, should have a provision for employment injury protection in their, albeit minimal, contracts. Also that, if these short-term workers have no medical care or sickness benefit themselves, these should both be provided to cover SARS infection, as part of the employment injury package. Such short-term workers should also be fully informed, prior to starting work, of any increased risk to which they might be exposed in their job and the exact amount of social protection they are being offered with their contract.

Workers also, need to have a responsible attitude to issues of social protection and consider for themselves, whether they have made enough insurance or financial provision for emergencies such as a SARS epidemic. All workers, including the self-employed and those on short-term contracts, need to cooperate with government schemes when asked to declare their earnings and so they can be assured that they will qualify for available national social protection schemes.

4.2.5. Enforcement

(a) Failure to attend or perform workplace duties

Employers have a contractual right to request employees to perform the duties for which they are employed, so long as the employer has taken adequate steps to protect the health and safety of the employees. Nonetheless, in the face of a new epidemic, requesting workers to continue to perform certain procedures, which have usually been performed without safety concern in the past, may no longer be appropriate as the new health risks, caused by the epidemic, may outweigh the benefits of the procedures in question. Employers, therefore, have to be prepared to change usual practice in the face of an epidemic and work with technical experts and their workforce to achieve a reasonable balance of safety versus obligation to work.

It is to be expected that during a SARS epidemic, many workers may be reluctant to enter workplaces with a significantly higher risk of SARS infection, for instance, isolation units or areas when intensive medical treatment is being performed on SARS patients.

Such fears by workers are understandable and depending on the safety of the workplace situation may or may not be justified. As discussed below, some workers may also have individual reasons that they feel make them, or their families, at greater risk than others during a SARS epidemic. These concerns and fears are normal and should be addressed in an objective forum and so the workers do not feel their concerns are being ignored or overridden.

It is therefore recommended that prior to any outbreak of SARS, managers of staff who might be expected to work with SARS cases during an outbreak, enter into discussion with workers to jointly agree on parameters that would define the workers' and management's responsibilities when dealing with SARS cases.⁴¹

During such discussions with workers the following issues could be raised:

- The responsibility of management to remove sick people from the workplace or to provide adequate systems of isolation.
- The responsibility of management to provide appropriate PPE, if relevant to the actual workplace situation.
- The responsibility of management to provide protection, such as medication or immunization against SARS, when available, to those at increased workplace risk.

⁴¹ **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Article 20

Cooperation between management and workers and/or their representatives within the undertaking shall be an essential element of organizational and other measures taken in pursuance of Articles 16 to 19 of this Convention.

The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)

IV. Action at the Level of the Undertaking

- 12.(1) The measures taken to facilitate the cooperation referred to in Article 20 of the Convention should include, where appropriate and necessary, the appointment, in accordance with national practice, of workers' safety delegates, of workers' safety and health committees, and/or of joint safety and health committees; in joint safety and health committees workers should have at least equal representation with employers' representatives.

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- The responsibility of workers to cooperate with the occupational health and safety measures provided by the employer.⁴²
 - The responsibility of management to help workers ensure adequate social protection.
 - The setting up of joint management – workers committees to discuss workplace safety concerns, especially regarding the safety of known high-risk procedures sometimes used in the treatment of SARS cases and whether the risk to the workers and community could outweigh the potential benefit to the patient.
 - The involvement of the workforce in policy decisions on who could reasonably be excused from service in increased-risk areas. If there are no pre-existing national guidelines, the following groups could be discussed:
 - pregnant workers;
 - breastfeeding workers;
 - elderly workers (SARS has increased mortality with increasing age);
 - workers with medical conditions that might increase their risk of catching or dying from SARS;
 - workers with social or psychological difficulties;
 - workers requesting compassionate leave after bereavement.
 - The possibility of incentives or community recognition for those willing to work in areas of increased risk, for example: by assurance of maximum social protection, increased earnings, extra vacations, rewards and recognition for services rendered, etc.

⁴² **The ILO Occupational Safety and Health Convention, 1981 (No. 155)**

Article 19

There shall be arrangements at the level of the undertaking under which:

- (a) workers, in the course of performing their work, cooperate in the fulfilment by their employer of the obligations placed upon him;

The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)

IV. Action at the Level of Undertaking

- 16. The arrangements provided for in Article 19 of the Convention should aim at ensuring that workers:
 - (a) take reasonable care for their own safety and that of other persons who may be affected by their acts or omissions at work;
 - (b) comply with instructions given for their own safety and health and those of others and with safety and health procedures;
 - (c) use safety devices and protective equipment correctly and do not render them inoperative;
 - (d) report forthwith to their immediate supervisor any situation which they have reason to believe could present a hazard and which they cannot themselves correct;
 - (e) report any accident or injury to health which arises in the course of or in connection with work.

- The ongoing commitment of management to respond appropriately if a worker has a particular safety concern.⁴³
- The protection of workers from any disciplinary action if they, in good faith, felt there was a breach in occupational safety and health that caused them to complain about their working conditions.⁴⁴

Once the management and workers have developed a system, based on national guidelines, that offered a reasonable balance between the protection and the responsibilities of the workforce, the workforce would need to be informed and comply with its decisions if they wanted to remain in the same employment. Any individual decision then, to not attend work, could be licensed as usual.

(b) Dismissal

As discussed in the section above, if good occupational safety and health policy is in place, workers could be dismissed, following the usual dismissal procedures, for failure to satisfactorily perform their duties during a SARS outbreak. Nonetheless, in such cases dismissed workers should have the right of appeal to an external national or regulatory body, to ensure that the decisions taken on occupational safety and health in the worker's organization, complied with external or national standards.⁴⁵

⁴³ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

IV. Action at the Level of Undertaking

16. The arrangements provided for in Article 19 of the Convention should aim at ensuring that workers:
 - (f) a worker reports forthwith to his immediate supervisor any situation which he has reasonable justification to believe presents an imminent and serious danger to his life or health; until the employer has taken remedial action, if necessary, the employer cannot require workers to return to a work situation where there is continuing imminent and serious danger to life or health.

⁴⁴ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

IV. Action at the Level of the Undertaking

17. No measures prejudicial to a worker should be taken by reference to the fact that, in good faith, he complained of what he considered to be a breach of statutory requirements or a serious inadequacy in the measures taken by the employer in respect of occupational safety and health and the working environment.

⁴⁵ **The ILO Termination of Employment Convention, 1982 (No. 158)**

Division C. Procedure of Appeal Against Termination

Article 8

1. A worker who considers that his employment has been unjustifiably terminated shall be entitled to appeal against that termination to an impartial body, such as a court, labour tribunal, arbitration committee or arbitrator.

5. Ethical and psychological considerations concerning SARS

5.1. Confidentiality

During an outbreak of SARS it is to be expected that public health authorities be authorized by governments to perform medical screening of populations, contact tracing, quarantine and isolation of cases. Indeed such public health measures may be backed by national legislation and so citizens are obliged to cooperate with the measures imposed.^{xxxviii} Such legislation can be considered ethically correct as it strives to protect the whole community from harm by SARS infection.

Nonetheless, any medical or personal information gained as part of a national effort to control SARS, should be kept within the usual boundaries of medical confidentiality and information gathering.⁴⁶ Thus although legislation may be in place to insist that relevant information is passed, with or without consent, to authorized public health bodies who have the specific task of controlling the outbreak, it does not mean that such information can enter the public domain. The medical information itself should be stored separately from other personal data and access to the medical records should only be given to authorized health-care professionals.⁴⁷ Also, the medical information collected should only be that relevant to the control of SARS, unless the worker gives specific informed consent to the recording of more general medical information.

For instance if workers are screened for SARS in the workplace, medical information will be gathered about them, such as their temperature or any symptoms they may have. This information is confidential to everyone, except those medically authorized to record and use it. Similarly, if a sick worker is discovered and requested to leave the workplace by the public health authorities, the medical details of the worker should be kept confidential. Clearly the organization should be informed that the worker has been found unfit to work but the general principles of medical confidentiality should be respected. Even in the case of a suspect SARS case being removed from the workplace and all his contacts being quarantined, there is no right for the quarantined co-workers or organization itself, to know the personal medical details of the suspect case.

In general however, so long as the usual respect for confidentiality and medical ethics are in place, workers are strongly recommended to cooperate fully with any public health measure implemented during a SARS outbreak and it is quite reasonable that national authorities enforce legislation with penalties for those who refuse to cooperate.

5.2. Quarantine

One of the most effective ways to control an outbreak of SARS is to impose a system of quarantine for those people who have had close contact with a suspect or confirmed SARS patient, or exposure to their secretions.

⁴⁶ **The ILO Code of Practice on Protection of workers' personal data, 1997**

⁴⁷ **ILO Technical and Ethical Guidelines for Workers' Health Surveillance, 1998**

These people who are to go into quarantine are not ill, the only reason they are being quarantined is because of their exposure to the risk of SARS.

So long as the people in quarantine remain well they present little risk to others, but as soon as they develop any symptoms of illness they may begin excreting the SARS virus.

One of the main reasons for quarantine therefore, is to greatly reduce the movement of people who may develop SARS over the next few days. Then, if they do become unwell, they will not have been able to expose many other people to the disease and the chain of transmission can be broken.

The currently agreed period of quarantine for SARS is ten days from the time of the last exposure.^{xxxix}

People in quarantine are well people and will feel quite capable of performing their work and usual daily tasks. It is therefore important that those requested to go into quarantine understand why the request is made in order to increase their compliance. It is equally important, to ensure voluntary compliance, that some recompense for loss of earnings be made to quarantined workers. This recompense may only be a percentage of usual earnings, but, at least, needs to ensure that basic living expenses for food and accommodation can still be met. Workers also need to be assured that they will be legally protected from dismissal at work if, in complying with quarantine orders, they have to be absent from work.⁴⁸

It is also vital that legislation is in place to take action against those who break quarantine because, even regardless of financial loss, some people will resist the restriction on their usual freedom of movement and disobey quarantine rules to fulfil their own personal agendas.

Quarantine may take place in the home or in specially provided institutions. In the 2003 epidemic it was found that some people chose to stay at home while others preferred to be quarantined away from their families.^{xl} If practical, it would therefore be ideal to offer people a choice regarding place of quarantine.

In order to protect the health of the quarantined people themselves, they should not be mixed with large numbers of others in quarantine. This need to limit excessive contact between quarantined people should be particularly respected in institutional situations.

⁴⁸ **The ILO Termination of Employment Convention, 1982 (No. 158)**

Article 6

1. Temporary absence from work because of illness or injury shall not constitute a valid reason for termination.

The Termination of Employment Recommendation, 1982 (No. 166)

Justification for Termination

5. In addition to the grounds referred to in Article 5 of the Termination of Employment Convention, 1982, the following should not constitute valid reasons for termination:
 - (b) absence from work due to compulsory military service or other civic obligations, in accordance with national law and practice.

Provision needs to be made for those in quarantine in the following areas:

- A regular delivery of food, drink and, if necessary, medicaments. (The cost of the groceries can be charged to the person in quarantine but ideally the cost of delivery should be waived.)
- Adequate toilet and washing facilities.
- Adequate waste disposal facilities.
- A means of communication to the outside world, for instance by telephone, to request help if symptoms or other needs develop, and to reduce the sensation of isolation. (If such means of communication are not available, symptoms and other personal needs can be reported to an authorized visitor who attends regularly to supervise quarantine.)
- Free transportation by a dedicated vehicle to a local health facility dealing with SARS cases in the event of symptoms developing.
- The assurance that support will be available for some measure of medical care if symptoms of SARS develop and the patient is not already covered by a health-care scheme or does not have sufficient financial means to pay.
- Information about and, if possible, some means of communication with relatives or close friends who are unwell with SARS and in isolation.
- Supervision, to ensure that those in quarantine are adhering to their quarantine restrictions.

Working in quarantine

It may be that a worker is requested by an employer to continue to do some work while in quarantine. For instance it may be possible for the worker to access a computer with links to the workplace or to do some other light indoor work.

In such cases the worker and employer would have to negotiate an agreement regarding salary to be paid, hours to be worked and general conditions while quarantine lasted. Care should also be taken that occupational health and safety rules are respected if work is to be done in the home⁴⁹ and that quarantine rules are not violated if papers or materials have to be passed between the worker and employer.

⁴⁹ **The Home Work Convention, 1996 (No. 177)**

Article 4

2. Equality of treatment shall be promoted, in particular, in relation to:
 - (c) protection in the field of occupational safety and health;
 - (d) remuneration;

5.3. Psychological considerations

Two categories of people will be affected by increased anxieties and stresses during a SARS outbreak, the general public and also workers who work in areas of increased occupational risk.

5.3.1. The general public

As was seen in the 2003 epidemic, the general public may overreact to a minor threat of SARS and in their panic increase confusion and economic hardships. For instance, a sudden avoidance of travel, even in areas with no transmission of SARS, could lead to unnecessary loss of jobs and income in the travel industry.

To avoid such panic the public need to be regularly advised on the facts of the disease, the actual measures needed to protect themselves, as well as reassurance when no or little risk is present.

Attempts should also be made to ask the local and national media networks to take a responsible attitude to minimize panic, for instance, by not skewing information in only reporting bad news or unlucky eventualities.

Ways need to be found to allow the general public to express their concerns about SARS to trained specialists and so they have a means of obtaining practical answers to their particular anxieties. This could be achieved for instance, by radio or television 'phone-in programmes or discussions in magazines and newspapers. 24-hour telephone hotline services could also provide answers to specific questions.

In the case of members of the general public who are suffering, or who have relatives suffering from SARS, some kind of organizational structures would ideally be available to offer psychological support. In a SARS outbreak, the hospital nursing and medical staff may already be overworked and have no time to address psychological anxieties or the distress of bereavement. Ideally therefore other professionals could try to meet this need, for instance, occupational health services, psychiatric and counselling services as well as willing helpers from the voluntary sector.

5.3.2. Workers with an occupational health risk of SARS

Many of the workers who would be called to join in the fight against SARS are in jobs that are already considered to carry relatively high levels of stress. Such workers include nurses;^{xli} doctors; care assistants; emergency service and law enforcement personnel.

During an epidemic it is to be expected that the workload on such workers might increase dramatically, together with the possibility that several of the workers themselves might fall sick with SARS or need to be quarantined. Some colleagues might even die from SARS, adding to the stress felt by the workers around them.

In addition, the very measures in place to protect the workers such as isolation techniques and PPE, will actually slow down the speed at which they can work, as they have to change in and out of protective equipment, keep scrupulous personal hygiene and ensure no cross-contamination occurs.^{xlii}

It is therefore essential, that these extra physical and mental stresses on such workers are recognized and addressed properly, as another health risk, in addition to the risk of infection by SARS.⁵⁰

As discussed in section 4.2.5, it is very important for workers, with an occupational health risk of SARS, to be able to participate in health and safety planning and to be able to express their own concerns regarding safety to employers. Such discussions should also be aimed at encouraging workers to continue their jobs, knowing that their safety concerns are being addressed, as a further significant cause of stress to workers would be absenteeism amongst their colleagues.

Employers, in conjunction with occupational health, psychiatric and counselling services, also need to find ways to provide psychological support to staff and so their sense of isolation as well as their anxieties can be reduced. Some system of screening to find and help any workers who actually develop mental illness could also be developed.

The physical stresses of fatigue, overwork and lack of recreation must also not be ignored⁵¹ and ways of recruiting additional staff to help overstretched workers need to be found.

⁵⁰ **The ILO Occupational Safety and Health Recommendation, 1981 (No. 164)**

II. Technical Fields of Action

3.(e) prevention of harmful physical or mental stress due to conditions of work;

IV. Action at the Level of the Undertaking

10.(f) to ensure that work organization, particularly with respect to hours of work and rest breaks, does not adversely affect occupational safety and health;

10.(g) to take all reasonably practicable measures with a view to eliminating excessive physical and mental fatigue;

⁵¹ **The Nursing Personnel Convention, 1977 (No. 149)**

Article 1

1. For the purpose of this Convention, the term nursing personnel includes all categories of persons providing nursing care and nursing services.

2. This Convention applies to all nursing personnel, wherever they work.

Article 6

Nursing personnel shall enjoy conditions at least equivalent to those of other workers in the country concerned in the following fields:

- (a) hours of work, including regulation and compensation of overtime, inconvenient hours and shift work;
- (b) weekly rest;
- (c) paid annual holidays;
- (d) educational leave;
- (e) maternity leave;
- (f) sick leave;
- (g) social security.

6. Summary

During the last year we have already seen how SARS can be contained using the public health measures described above. Now, still without a vaccine or effective cure for SARS, it is hoped that such measures would succeed again should SARS return.

What is not known, but we might also like to consider, is how the increased knowledge we are gaining in fighting SARS could help us control different, as yet unknown, epidemic diseases in the future.

Several of the issues discussed in this paper could be relevant, as part of a planned response, to other emerging epidemic diseases as well as to previously known scourges such as tuberculosis or cholera.

What we have learned above all from SARS, is that there is no room for complacency and that a level of preparedness to deal with epidemic diseases, in the workplace and community at large, continues to be necessary, even in the twenty-first century.

Annex 1

Resolution of the World Health Assembly

Fifty-sixth World Health Assembly WHA56.29

Agenda item 14.16, 28 May 2003

Severe acute respiratory syndrome (SARS)

1. URGES Members States:

- (1) to commit fully to controlling SARS and other emerging and re-emerging infectious diseases, through political leadership, the provision of adequate resources, including through international cooperation, intensified multisectoral collaboration and public information;
- (2) to apply WHO recommended guidelines on surveillance, including case definitions, case management and international travel;¹
- (3) to report cases promptly and transparently and to provide requested information to WHO;
- (4) to enhance collaboration with WHO and other international and regional organizations in order to support epidemiological and laboratory surveillance systems, and to foster effective and rapid responses to contain the disease;
- (5) to strengthen, to the extent possible, capacity for SARS surveillance and control by developing or enhancing existing national programmes for communicable disease control;
- (6) to ensure that those with operational responsibilities can be contacted by telephone or through electronic communications at all times;
- (7) to continue to collaborate with and, when appropriate, provide assistance to WHO's Global Outbreak Alert and Response Network as the operational arm of the global response;
- (8) to request the support of WHO when appropriate, and particularly when control measures employed are ineffective in halting the spread of disease;
- (9) to use their experience with SARS preparedness and response to strengthen epidemiological and laboratory capacity as part of preparedness plans for responding to the next emerging infection, the next influenza pandemic, and the possible deliberate use of a biological agent to cause harm;
- (10) to exchange information and experience on epidemics and the prevention and control of emerging and re-emerging infectious diseases in a timely manner, including among countries sharing land borders;²
- (11) to mitigate the adverse impact of the SARS epidemic on the health of the population, health systems and socioeconomic development.

¹ Travel to and from areas affected by SARS, in-flight management of suspected SARS cases who develop symptoms while on board, including aircraft disinfection techniques.

² WHO regards any country with an international airport, or sharing a border with an area having recent local transmission of SARS, as being at risk of imported cases.

Annex 2

Internet links

ILO links:

To find ILOLEX the database of the full texts of ILO standards, such as Conventions and Recommendations:

<http://www.ilo.org/ilolex/english/index.htm>

To find NATLEX, the database of national labour, social security and related human rights legislation maintained by the ILO International Labour Standards Department:

http://www.ilo.org/dyn/natlex/natlex_browse.home?p_lang=en

To find SAFEWORK, the ILO InFocus Programme on Safety and Health at Work and the Environment:

<http://www.ilo.org/intranet/english/protection/safework/>

To find the ILO Sub-regional Office for East Asia:

<http://www.ilo.org/public/english/region/asro/bangkok/>

To find the ILO Social Security Policy and Development Branch:

<http://www.ilo.org/public/english/protection/socsec/pol/index.htm>

To find details of international social security schemes:

<http://www.ilo.org/public/english/support/lib/dblist.htm> - security

WHO links:

WHO homepage on SARS:

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

Management of Severe Acute Respiratory Syndrome (SARS)

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

WHO Regional Office for the Western Pacific (WPRO)

<http://www.wpro.who.int/sars/>

Hospital Infection Control Guidance for Severe Acute Respiratory Syndrome (SARS):

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

Epidemiology of SARS

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

WHO post-outbreak biosafety guidelines for handling of SARS-CoV specimens and cultures

http://www.who.int/csr/sars/biosafety2003_12_18/en/

Summary of SARS and air travel

<http://www.who.int/csr/sars/travel/airtravel/en/index.html>

National links:

Canada

Health Canada Homepage on SARS

<http://www.hc-sc.gc.ca/english/protection/warnings/sars/index.html>

Quarantine Act and Regulations - SARS Amendment

http://www.hc-sc.gc.ca/english/protection/warnings/sars/fact_sheet.html

It's Your Health - SARS (fact sheet):
<http://www.hc-sc.gc.ca/english/iyh/diseases/sars.html>

China

Taiwan, China

CDC Taiwan Homepage
<http://www.cdc.gov.tw/en/>

Hong Kong, China

Hong Kong Government Homepage on SARS
<http://www.info.gov.hk/info/sars/eindex.htm>

Checklist of Measures to Combat SARS (pdf format) (22.9.2003)
<http://www.info.gov.hk/info/sars/pdf/checklist-e.pdf>

Malaysia

Malaysian Ministry of Health Homepage on SARS
<http://webjka.dph.gov.my/sars/>

New Zealand

New Zealand Ministry of Health Homepage on SARS
<http://www.moh.govt.nz/sars>

SARS information for health professionals, Updated 23 June 2003
<http://www.moh.govt.nz/moh.nsf/238fd5fb4fd051844c256669006aed57/71dc898880f2ba2bcc256d02000e3038?OpenDocument> - PersonalprotectionagainstSARS

Singapore

Singapore Government Homepage on SARS
<http://www.sars.gov.sg/>

Thailand

Thailand Ministry of Public Health Homepage
<http://eng.moph.go.th/>

United States

Centres for Disease Control and Prevention, CDC

CDC homepage on SARS:
<http://www.cdc.gov/ncidod/sars/>

Clinical Guidance on the Identification and Evaluation of Possible SARS-CoV Disease among Persons Presenting with Community-Acquired Illness Version 2
<http://www.cdc.gov/ncidod/sars/clinicalguidance.htm>

Supplement I: Infection Control in Healthcare, Home, and Community Settings
<http://www.cdc.gov/ncidod/sars/guidance/I/index.htm>

Checklist for SARS Preparedness in Healthcare Facilities (Jan 8, 2004)
<http://www.cdc.gov/ncidod/sars/guidance/C/pdf/app2.pdf>

United Kingdom

The Health Protection Agency
<http://www.hpa.org.uk/>

U.K. Government Homepage on SARS
<http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/SevereAcuteRespiratorySyndrome/fs/en>

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