

***Northern Ireland  
Interim  
Contingency  
Plan for  
SARS***

***December 2003***

## **ACKNOWLEDGEMENT**

This Interim Contingency Plan is the culmination of 6 months of work by over 120 individuals from throughout the Health Service. The plan was compiled and produced on behalf of the DHSSPS by Dr Brian Smyth, Regional Epidemiologist, Communicable Disease Surveillance Centre (NI) and assisted by Dr Neil Irvine, Specialist Registrar, Public Health Medicine, EHSSB.

**The Department would wish to express its appreciation to Brian, Neil and to the others whose time and effort made this plan possible.**

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# Management of Severe Acute Respiratory Syndrome (SARS) in Northern Ireland

## 1. Introduction

1.1 This document provides guidance for the HPSS on how to respond to patients with SARS in Northern Ireland. While this document relates specifically to SARS, many of these actions could be applied to the management of outbreaks of other similarly transmitted communicable diseases which have the potential to cause significant mortality, morbidity and disruption to health and social care provision, in both hospital and the community.

1.2 This interim contingency plan has been developed by the Communicable Disease Surveillance Centre (NI) (CDSC (NI)) on behalf of the DHSSPS and builds upon an earlier plan issued in July 2003. The guidance remains interim and will be updated to reflect changes in the epidemiology of SARS and experience elsewhere.

1.3 A Regional SARS Taskforce was established by the Chief Medical Officer (CMO) in May 2003. The following subgroups were created to develop detailed operational policies:

- Primary and community care
- Acute services
- Clinical management
- Port health
- Human resources
- Training of health professionals
- Communications
- Laundry and changing facilities

The work of some of these subgroups is ongoing and will inform the next version of this plan.

1.4 This guidance does not describe the detailed investigation or clinical management of SARS. Nor does it contain the detailed control of infection measures which would be used in responding to an individual case. Information on these topics and other SARS issues can be found on the websites of the Health Protection Agency ([www.hpa.org.uk](http://www.hpa.org.uk)) and the World Health Organization (WHO) ([www.who.int/en/](http://www.who.int/en/)). Instead this guidance describes the actions which the various parts of the HPSS would undertake when responding to SARS in Northern Ireland.

1.5 Section 2 outlines the assumptions made and Section 3 the control principles used in developing this guidance. To ensure that the approach to SARS in Northern Ireland is consistent with that across the UK, this version of the plan has been revised in line with the new national classification of threat and response levels. This approach further emphasises the need to consider

the situation in Northern Ireland in terms of the UK/Ireland and global contexts.

**Level 0:** no active cases in the UK or Ireland. No known cases internationally or sporadic cases that are well controlled with little likelihood of international spread.

**Level 1:** Heightened threat. SARS cases in other countries and potential for transfer to UK/Ireland.

**Level 2:** sporadic imported cases(s) in UK/Republic of Ireland from affected areas outside UK/Ireland.

- Level 2A: sporadic imported case(s) (high suspect or probable definition) in hospital in Great Britain or the Republic of Ireland
- Level 2B: sporadic imported case(s) (high suspect or probable definition) in hospital or in home isolation in Northern Ireland

**Level 3:** one or more outbreaks of SARS within a hospital and/or limited community transmission within definable groups.

- A: outbreaks in GB/Ireland
- B: outbreaks in Northern Ireland

**Level 4:** Outbreaks of SARS with extensive community transmission.

- A: anywhere in GB/Ireland
- B: Northern Ireland

**Level 5:** post outbreak and de-escalation of outbreak response.

1.6 Clearly, however, when the work of the SARS Taskforce is complete there will remain an on-going need to maintain and further develop preparedness against SARS and other novel communicable diseases. The DHSSPS will advise how this will be undertaken in the future

## 2. Planning Assumptions

2.1 In July 2003 the WHO declared that while the last chain of human transmission had been broken, countries must maintain capacity to detect and respond to the re-emergence of SARS, should it occur. Based on experience of other novel and respiratory viruses, and the potential for animal and human reservoirs of disease, international experts consider the recurrence of SARS a distinct possibility.

2.2 These plans are based upon the best evidence currently available including epidemiological data, information from the WHO and the experience of countries affected by SARS.

2.3 A number of assumptions concerning SARS have been made:

- Incubation period is between two and 10 days
- The clinical features of SARS include fever, myalgia, headache, dry cough, shortness of breath and diarrhoea
- A lower respiratory phase of the illness starts within 3-7 days of the prodromal illness.
- Although progress is being made on diagnostic techniques, SARS is still essentially a clinical diagnosis.
- There is no proven specific treatment for SARS; supportive treatment including intensive care is the mainstay of clinical management.
- Most transmission occurs through close contact with a symptomatic person via large respiratory droplets. Transmission via contaminated fomites may also occur but is less common. Procedures where infected secretions are aerosolised, such as in nebulisation, are high risk procedures and represent a significant extra hazard.
- Healthcare workers are at special risk. Globally 21% of cases were healthcare workers with the highest healthcare worker infection rate seen in Canada (43%).
- Close contact may be considered to be having cared for, lived with, or had direct contact with respiratory secretions and/or body fluids of a person with possible, probable, or confirmed SARS, while the latter was symptomatic. Management of contacts will depend on whether the case is a possible, probable or confirmed case.
- Close contact with a probable case is considered to present a higher risk of transmission of infection compared to a history of travel to an affected area.

- Cases that have more severe illness are more infectious and infectiousness appears to increase in the second week of illness.
- Transmission of infection may occur when symptoms are mild during the prodromal illness.
- Transmission of infection from an asymptomatic person is very unlikely.
- Current recommended infection control methods, including the use of face masks and respirators are effective.
- People may remain infectious up to 10 days following the resolution of fever.
- SARS is less infectious but more virulent than most active respiratory infections e.g. influenza.
- The basic reproduction number (excluding super spreading events e.g. hospitals) is around 3.
- The case fatality rate is around 11% overall but is higher in older age groups (50% if aged over 65 years).

### 3. Control Principles

3.1 The following control principles have guided the writing of this document

1. It is not possible to prevent all individuals infected with the SARS virus from entering the UK
2. The rapid detection of cases and the early application of effective infection control measures are critical in preventing the spread of SARS
3. Containment of transmission requires the rigorous identification and monitoring of close contacts of cases of SARS including home quarantine if necessary
4. Rapid detection and isolation of cases of SARS requires a high level of awareness among the public (particularly those who have recently travelled to SARS affected areas) and health care professionals
5. The risk of transmission from severely ill patients in hospital is high and therefore infection control is pivotal in SARS control
6. The response to local transmission of SARS within the UK will require collaboration between all levels of the health protection infrastructure, HPSS and partner organisations

<b>Summary of key critical control points</b>
<ul style="list-style-type: none"><li>• Early case detection and swift isolation</li><li>• Thorough control of infection measures</li><li>• Vigorous identification and management of close contacts including, if necessary, home quarantine</li><li>• Public information</li><li>• Education of health care professionals</li><li>• Exit screening at ports</li></ul>

## 4. Initial preparedness issues

### 4.1 Command and Control

4.1.1 Recent experience from other countries (Toronto, Hong Kong and Singapore) has demonstrated that if there is transmission of infection in or between hospitals or in the community, decisive executive action is critical to contain the outbreak. If there are several hospitals affected and/or community transmission then the DHSSPS major incident plan will need to be activated. Key decisions will include designating certain facilities for SARS patients, postponing all non-essential leave, and redeployment of staff between Trusts. If extensive community transmission (level 4) occurs, there would be implications for other Government Departments and a Northern Ireland inter-departmental response would be required. The HPSS response, therefore, needs to interface with other Government contingency plans.

4.1.2 Emergency Planning Functions Directions detailing HPSS co-operation with DHSSPS and Boards in times of emergency have been prepared in draft form ready for signature should the need arise. At Level 2B DHSSPS will consider the need to establish a regional health command centre (RHCC) in Castle Buildings chaired by the Chief Medical Officer (CMO). This will definitely be established at Level 3. The RHCC will exchange information directly with other Health Departments, including the Department of Health (London) operations room and the Department of Health and Children in Dublin, and provide advice to NI Permanent Secretaries in the Crisis Management Group. The Emergency Planning Functions Directions gives authority for CMO and the RHCC to direct and redeploy all appropriate HPSS resources during the period of the emergency.

4.1.3 A SARS Regional Outbreak Control Committee (ROCC), chaired by the Regional Epidemiologist, will be established by DHSSPS in the event that SARS occurs in Northern Ireland (Plan Level 2A or beyond). ROCC will advise CMO on SARS-specific issues while the RHCC co-ordinates the HPSS response. This will include assessing the impact SARS has on general health and social care provision and taking appropriate action.

4.1.4 A more detailed review of the role, membership and activation mechanism for ROCC and RHCC is presented in **APPENDIX 1**.

4.1.5 DHSSPS will seek national and international expert advice as appropriate during the incident.

### 4.2 Public Health Legislation

4.2.1 Concern has been identified around the limitations of the Public Health Act (Northern Ireland) 1967. The existing relevant powers, such as ordering an individual to undergo a medical investigation, or barring a carrier of disease from an occupation which would put others at risk largely relate to named notifiable diseases in which SARS is not currently included.

4.2.2 The DHSSPS is reviewing the adequacy of existing powers regarding the enforcement of quarantine advice to close contacts of SARS patients, and the payment of compensation for loss of earnings to those placed in quarantine. A similar review is underway of the legislation necessary to commandeer a particular facility in which to care for patients or contacts, in the event there is no suitable community accommodation.

4.2.3 For each of these issues, arrangements are being made to ensure that the Northern Ireland legislative position is consistent with that of the rest of the UK.

### 4.3 Staff training

4.3.1 Staff working in clinical areas require the knowledge, skills and confidence to provide quality care to potential SARS patients without placing themselves, other patients, staff and family at risk. If such training is not provided staff may be unwilling to care for SARS patients. In hospital this includes not just clinical staff but non-clinical support services staff working in clinical areas. In Community Trusts it will include homehelps, district nurses and social workers who may have to care for and support SARS patients managed at home. General Medical and Dental Practitioners and their staff, community pharmacists, ambulance service personnel, bank and agency nurses, and nursing and residential home staff will require similar training.

4.3.2 A regional training package has been developed for use by Boards, Trusts and educational institutions. In addition to SARS specific control of infection measures, this also takes the opportunity to address some more basic tenets of infection control. The package will be made available to staff throughout the HPSS in video and CD-ROM formats. Key personnel will be trained at "*training the trainer*" sessions, who will then cascade training through their organisations. Trusts will therefore be required to identify SARS trainers.

4.3.3 Those units designated as SARS units by this Plan should have training in place for key staff at Level 0.

4.3.4 Other Trusts will be required to roll-out SARS training in an approach consistent with threat levels described in this Plan. Baseline training should be provided at Level 0, with initial emphasis on A&E and ICU staff, and those working in general medical and paediatric wards. At higher threat levels, this may mean SARS training being treated as a priority issue for all clinical staff, if necessary, displacing other training topics. This training will be mandatory and attendance at such training recorded for frontline clinical staff. Delivery of SARS information should be undertaken in conjunction with trades unions.

4.3.5 The package will also be delivered to appropriate students in both universities as part of their infection control modules.

4.3.6 The Registration and Inspection Unit of each Board should ensure staff in residential homes and nursing homes also have access to this material and receive appropriate training.

4.3.7 Nursing agencies are required to ensure that clinical staff registered with them meet the required standards. As a minimum there should be a written record that all staff have access to the written material and viewed the video/CD Rom.

#### 4.4 Surveillance

4.4.1 Accurate and timely reporting of cases meeting current SARS case definitions is crucial to SARS control. An up to date knowledge of the case definition and a clear understanding of the reporting mechanism are needed.

4.4.2 The current case definitions are available at [http://www.hpa.org.uk/infections/topics\\_az/SARS/casedef.htm](http://www.hpa.org.uk/infections/topics_az/SARS/casedef.htm) (**APPENDIX 2**).

4.4.3 Proforma to report cases within Northern Ireland can be obtained from DHSSPS NI ([www.dhsspsni.gov.uk/publications/2003/SARS\\_reporting\\_form.pdf](http://www.dhsspsni.gov.uk/publications/2003/SARS_reporting_form.pdf)) and CDSC (NI) ([www.cdscni.org.uk/forms/default.htm](http://www.cdscni.org.uk/forms/default.htm)) (**APPENDIX 3**). Online access to this material is essential as they are likely to change over the course of an outbreak.

4.4.4 A SARS case database has been developed and installed for use by Boards and CDSC (NI). In an outbreak Boards would daily forward electronically an encrypted secure file to CDSC (NI) who would update the regional SARS database. A similar database has been developed for use by Boards and Trusts to facilitate contact tracing.

4.4.5 The re-emergence of SARS may be heralded by the development of severe 'flu-like illness and/or pneumonia in health care workers. Trusts will therefore need to develop a surveillance system in order to quickly identify clusters of staff with such illnesses to inform appropriate clinical and epidemiological investigation and enable public health action (**APPENDIX 4**).

#### 4.5 Patient pathways

4.5.1 A series of clinical and patient flow pathways have been developed and are available as **APPENDICES 5-12**.

- SARS presentation to primary care (**5**).
- SARS presentation to port health (**6**).
- Patient flow pathway (**7**). This details the recommended management of SARS patients presenting in the community, in the A&E unit, or as an existing hospital in-patient.
- Pathway for activation of Central SARS Advisory Team (**8**).
- Clinical management protocol for SARS patients presenting in the hospital/A&E setting (**9**). This should be read in conjunction with BTS

guidelines for the management of a patient with Severe Acute Respiratory Syndrome (SARS) **(10)**.

- Paediatric management pathway **(11)**.

4.5.2 All are based on the following common principles:

- Patients with suspected SARS require to be assessed and managed initially by a consultant grade clinician.
- Community SARS presentations should be referred to A&E for assessment and management according to protocol.
- The designated centres for the inpatient management of suspect SARS cases are the Regional Infectious Disease Unit, Antrim and Mater Hospitals for adult patients, and RBHSC for children.
- Where SARS presents in an existing inpatient in a hospital other than a designated centre the approach will be to decontaminate the affected areas of the hospital, isolate staff and patient contacts as appropriate, and make the hospital operational again as quickly as possible.
- After assessment a suspected case should be discussed with the CCDC and referred to the Regional Epidemiologist rota.
- The Regional Epidemiologist will discuss the case with the central SARS Advisory Team.
- If still considered a potential SARS case, the SARS Advisory Team will advise on where the patient is to be hospitalised.
- DHSSPS, and the Board in whose area the hospital is located will be notified.

4.5.3 A pathway for hospital discharge of a SARS patient has also been developed (**APPENDIX 12**). This should be considered along with guidance in **APPENDIX 19** (Home Isolation and Quarantine).

#### 4.6 Designated Centres

4.6.1 The designated centres for the inpatient management of suspect SARS cases are -

- Antrim Area Hospital
- Mater Hospital

4.6.2 These hospitals best met the criteria for selecting a designated centre. The criteria included suitability of the physical estate, proximity to alternate acute hospitals and minimised impact on essential regional acute services.

4.6.3 In line with the pathway for patient flows (**APPENDIX 7**), up to six patients can be managed in the Regional Infectious Disease Unit. Beyond that, patients may be transferred to one of the designated centres. When the first suspect SARS case presents, the SARS Advisory Team would consider the circumstances of the first case and determine whether or not the patient(s) would be transferred to the Regional ID Unit or to one of the designated

centres. Depending on the situation, all designated centres may need to be alerted at this stage.

4.6.4 If the number of SARS cases exceeds the capacity of these three hospitals the use of step-down facilities will need to be considered. DHSSPS will work with Boards and Trusts to determine how these step-down facilities might be provided. Examples of facilities which might be used for this purpose included Musgrave Park and Lagan Valley Hospitals.

#### 4.7 Personal protective equipment (PPE)

4.7.1 PPE for use in community and hospital settings has been identified. Specifications have been developed for three community settings **(APPENDICES 13-15)**:

- Primary Care Team **(13)**
- Home Isolation **(14)**
- Home quarantine **(15)**

4.7.2 Additional protection may be required in hospital where complex, invasive procedures are being performed.

4.7.3 DHSSPS has made arrangements with Regional Supplies (RSS) to procure these supplies centrally. RSS are developing operational plans for the procurement, storage and distribution of these supplies.

4.7.4 Small quantities of PPE (to deal with about 10 patients) will be distributed to SARS leads in Acute Trusts when SARS re-emerges. The remainder will be stockpiled centrally.

4.7.5 Packs of PPE have been prepared for each GP, primary care team, port health team and environmental health department. These will be held centrally until SARS re-emerges anywhere in the world and then distributed to primary care and community settings.

#### 4.8 Decontamination procedures

4.8.1 Thorough decontamination of rooms and equipment used by potential SARS patients is another critical control point.

4.8.2 Guidance for primary and community care in this regard is now available **(APPENDIX 16)**.

4.8.3 Trusts should employ standard decontamination procedures. Further advice is given in the training materials developed, and on the HPA site ([http://www.hpa.org.uk/infections/topics\\_az/SARS/hospguide.htm](http://www.hpa.org.uk/infections/topics_az/SARS/hospguide.htm)).

## 4.9 Contact tracing

4.9.1 Identifying, tracing, advising and supporting close contacts of SARS cases in both hospital and community settings is one of the key control activities.

4.9.2 Close contacts are considered to be family, friends or health care workers who lived with, or who had direct contact with respiratory secretions, body fluids and/or excretions (eg faeces) of possible, probable or confirmed cases of SARS, while that case was symptomatic. The management of contacts will vary depending on whether the case is a possible, probable or confirmed SARS case – detailed guidance is available at ([http://www.hpa.org.uk/infections/topics\\_az/SARS/case\\_contacts.pdf](http://www.hpa.org.uk/infections/topics_az/SARS/case_contacts.pdf)). As definitions may change rapidly, regular inspection of the website is recommended. Close contacts remain at risk until ten days after their last contact with a symptomatic case.

4.9.3 Close liaison between Board and Trust contact tracing teams will be essential to ensure appropriate identification and follow up of all contacts, who potentially could be distributed throughout Northern Ireland and further afield **(APPENDIX 17)**.

## 4.10 Environmental Health Departments

4.10.1 Environmental Health Officers (EHOs) work closely with Consultants in Communicable Disease Control in investigating food and waterborne infection. In a SARS outbreak it is envisaged EHOs would assist CCDCs in contact tracing particularly if and when there was extensive community transmission. EHOs would also be required to support the CCDC in relation to port health duties (contact tracing, advice on disinfection, disposal of clinical waste and assistance with exit screening). EHOs may also be called upon to provide advice and information to workplaces should a member of that workplace be under investigation for SARS. Food businesses may need specific advice and reassurance (food has not been shown to be infective for the SARS virus).

4.10.2 Detailed guidance for environmental health departments is being prepared which will address the role of the EHO in responding to SARS, PPE and training.

## 4.11 Communications

4.11.1 A communications strategy reflecting the different scenario levels of the Plan has been developed.

4.11.2 The strategy defines the roles and responsibilities of DHSSPS, Boards and Trusts for communicating with the media, the general public and health and social care staff. Measures include written information, a public access

helpline, working with the written and broadcast media, and a SARS-dedicated website.

4.11.3 DHSSPS has responsibility for leading on and co-ordinating communications.

4.11.4 Boards and Trusts will need to have a mechanism for communicating rapidly with staff.

#### 4.12 Primary Care.

4.12.1 SARS has particular implications for primary care. Although some of these are described elsewhere they are grouped together here for ease of reference:

- Generally, GPs and their teams will be responsible for the initial assessment of patients and for their care and follow-up in the community where appropriate.
- Board public health medicine departments will be responsible for the community follow-up of contacts of cases.
- GPs should consider the patient pathway of a SARS patient presenting announced/unannounced at their surgery/Co-op. A practice-specific management algorithm should be developed. This must include the designation of an appropriate room in the practice to which a potential SARS patient should be directed for assessment. An algorithm for the assessment of a suspected SARS case in general practice is attached in **APPENDIX 5**.
- Appropriate staff training should be arranged.
- PPE should be available for use in the surgery/Co-op or when assessing a patient at home.
- GPs should review the infection control procedures for their practice seeking local advice as appropriate. This would include ensuring that portable nebulisers are decontaminated between patients according to the manufacturer's guidance and the availability of alcohol based hand rubs for staff. Nebulisers should NOT be used, where possible, on a patient with suspected SARS as they will generate an aerosol of the virus and constitute a major infection control hazard. GPs should ensure their staff are aware of the practice infection control policy.

4.12.2 Resources now available to facilitate primary care planning include:

- A primary care patient management algorithm (**APPENDIX 5**)
- A SARS-specific training package. This will be available in CD and video formats and will cover the following topics:
  - The epidemiology of SARS
  - Infection control measures, including the use of PPE
  - Waste and linen management
  - Decontamination
- Centrally procured and distributed PPE (**APPENDIX 13**)

#### 4.13 Port Health.

4.13.1 Initial cases of SARS will be imported into Northern Ireland most probably through air travel. During certain months of the year there are charter flights arriving in Belfast each week from Toronto – an area where there has been SARS transmission outside hospitals. Other passengers may arrive back to Northern Ireland from a SARS region via a GB or European airport hub.

4.13.2 A descriptive study has been undertaken to facilitate a SARS risk assessment of each main port. Port health arrangements are being updated to ensure that clinical, public health and environmental health staff are available and trained with appropriate PPE to respond to SARS port incidents. An algorithm for management of SARS presentation to port health has been developed (**APPENDIX 6**). Individual port health plans being developed should include arrangements for isolating passengers, clinical assessment, patient transfer to hospital, aircraft/ship disinfection, disposal of clinical waste, contact tracing and exit screening.

4.13.2 Health exit screening may be recommended by the WHO to be implemented at ports in the UK if SARS is being transmitted in the UK. It would apply to all travellers departing for international destinations, although, if there were a SARS outbreak on mainland UK but not in Northern Ireland, it may also apply to domestic routes between mainland UK and Northern Ireland. The decision to implement exit screening would be taken by Ministers in light of the WHO recommendations. Exit screening may involve a public information campaign to discourage those who are feverish or recent contact with a SARS case from travelling, some form of “self-disclosure” to identify such travellers and/or the need to undertake associated temperature monitoring. Port health authorities will therefore be required to develop arrangements which could be quickly instituted if exit screening was recommended.

#### 4.14 Laboratories

4.14.1 The Regional Virus Laboratory (RVL) will be the designated laboratory to receive SARS *diagnostic* specimens. A specimen form detailing the appropriate mechanisms for the collection and transport of specimens to the RVL has been developed (**APPENDIX 18**). This form will be available on the DHSSPS ([www.dhsspsni.gov.uk/publications/2003/SARS\\_reporting\\_form.pdf](http://www.dhsspsni.gov.uk/publications/2003/SARS_reporting_form.pdf)) and CDSC websites ([www.cdscni.org.uk/forms/default.asp](http://www.cdscni.org.uk/forms/default.asp)).

4.14.2 Hospital Trusts should confirm that programmes are in place to ensure that laboratory staff handling specimens containing Category III pathogens are trained in the safe handling of such specimens and, where appropriate, in the use of Category III facilities.

4.14.3 The RVL has made arrangements with the appropriate UK reference laboratories for the processing of specimens from Northern Ireland.

#### 4.15 Isolation and Quarantine

4.15.1 SARS cases, and close contacts in certain circumstances (depending on the latest advice – ([http://www.hpa.org.uk/infections/topics\\_az/SARS/homeiso.htm](http://www.hpa.org.uk/infections/topics_az/SARS/homeiso.htm)), will need to be isolated/quarantined at home with explicit guidance.

4.15.2 Social criteria for home isolation for SARS cases also need to be satisfied as determined by **APPENDIX 19**. This also contains guidance on the social support provision necessary to maintain someone in home isolation/quarantine.

4.15.3 Details of PPE packs developed for use in the home isolation and quarantine situations are provided in **APPENDICES 14,15** .

#### 4.16 Northern Ireland Ambulance Service

4.16.1 Ambulance Service staff should also have access to the training materials developed. PPE will be distributed to NIAS by Regional Supplies. Patient pathways addressing transfer arrangements and decontamination protocols have been developed. Funding has been secured for the acquisition of three separate-cab type vehicles.

#### 4.17 Community pharmacy

4.17.1 Community pharmacists are often contacted by the public for advice and will be useful sources of information at all response levels in this plan. Community pharmacists therefore need to be included in the professional education programme. Advice will be prepared on how to respond should a patient with suspected SARS present at a community pharmacy seeking medication/advice.

#### 4.18 Laundry arrangements for used and infected linen

4.18.1 Linen from SARS patients and from staff caring for SARS patients poses an infection control risk. A detailed set of guidance for laundry arrangements has been prepared (**APPENDIX 20-21**). Current guidance on the handling and laundering of linen; the importance of securing disinfection of used and infected linen; and the basic principles of infection control are contained in **HSG (95)18**; "Hospital Laundry Arrangements for Used and Infected Linen", NHS Executive, April 1995.

4.18.2 All Trusts should review their existing in-house and contracted laundry arrangements in terms of capacity and current standards. The monitoring and auditing of Trust procedures for handling infected linen should be undertaken on a daily basis

4.18.3 All linen, including staff scrub suits and patients personal clothing, must be treated as infected linen.

4.18.4 Staff handling infected linen during their working hours should not be employed on other dirty or clean laundry processes unless they have been through staff dirty/clean changing facilities.

4.18.5 A dedicated SARS laundry is being identified should a major outbreak occur.

#### 4.19 SARS Staff Changing Protocol

4.19.1 An algorithm for Staff Changing at A&E, Regional Infectious Diseases Unit and the Designated SARS Hospital has been developed (**APPENDIX 22**).

4.19.2 Staff uniforms are not considered as PPE. All staff will be provided with training in respect of PPE and requirements for scrub suit use. Suitable supplies of scrub suits and shoes for designated clinical areas to be reviewed as part of Trust contingency plans

#### 4.20 Human Resources

4.20.1 Work is ongoing within the Human Resources subgroup to develop strategies for communicating with staff and to respond to staff concerns in the event of a SARS outbreak.

4.20.2 The work of the group will be informed by that already developed by the training and communication subgroups.

## 5. Levels of Threat and Response

5.1 For the response to be proportionate a number of different, and escalating, levels of SARS activity have been defined. These levels form the basis of the rest of this document and should be viewed as indicative for planning purposes. Transition between levels is not necessarily sequential. The levels are in keeping with those in the HPA and Department of Health (London) SARS contingency plan. It should be noted that there will be occasions when the Great Britain/Republic of Ireland activity level may be different to that in Northern Ireland.

**Level 0:** no active cases in the UK or Ireland. No known cases internationally or sporadic cases that are well controlled with little likelihood of international spread.

**Level 1:** Heightened threat. SARS cases in other countries and potential for transfer to UK/Ireland.

**Level 2:** sporadic imported case(s) in UK/Republic of Ireland from affected areas outside UK/Ireland.

- Level 2A: sporadic imported case(s) (high suspect or probable definition) in hospital in Great Britain or the Republic of Ireland
- Level 2B: sporadic imported case(s) (high suspect or probable definition) in hospital or in home isolation in Northern Ireland

**Level 3:** one or more outbreaks of SARS within a hospital and/or limited community transmission within definable groups.

- A: outbreaks in GB/Ireland
- B: outbreaks in Northern Ireland

**Level 4:** Outbreaks of SARS with extensive community transmission

- A: anywhere in GB/Ireland
- B: Northern Ireland

**Level 5:** post outbreak and de-escalation of outbreak response

5.2 Under this classification there is the possibility of de-escalation to lower levels of response when no incident cases have occurred within 20 days (2 incubation periods) in any of the scenarios described in Levels 2,3 or 4.

**6. Level 0: initial preparedness** (no active cases in the UK or Ireland. No known cases internationally or sporadic cases that are well controlled with little likelihood of international spread.)

6.1 The DHSSPS communication plan will be finalised. This will include the preparation of draft communication materials (leaflets, posters, radio and television scripts), agreeing arrangements with HPSS press officers, arranging for the establishment of a public telephone helpline, updating the DHSSPS SARS website ([www.sarsni.gov.uk](http://www.sarsni.gov.uk)) and establishing liaison with travel agents organisations such as ABTA.

**Action: DHSSPS**

6.2 Promotion of influenza immunisation among at risk patient groups and essential workers (including health care workers) should continue. The WHO particularly recommends increasing uptake of influenza immunisation and hopes that by reducing the number of influenza infections and complications each winter, any infections of SARS that may re-occur will be recognised and diagnosed early.

**Action: DHSSPS, Boards and Trusts**

6.3 Infection control requirements should be an integral component of the design of refurbished and new build healthcare facilities. This will involve a significant role for Health Estates.

**Action: DHSSPS, Boards and Trusts**

6.4 Each minor injuries unit and A&E department should develop arrangements for safe initial assessment, treatment, consultation and transfer of suspect SARS cases, in keeping with the patient pathway in **APPENDIX 9**.

These arrangements should include a side room for segregation of patients suspected of having SARS. This room should meet the criteria specified in **APPENDIX 23**. An early triage system to identify and manage febrile patients before they enter the main A&E area is also required.

**Action: Trusts**

6.5 Designated centres (Antrim and Mater Hospitals) and the Regional Infectious Disease Unit will complete the necessary estates work to upgrade their isolation rooms to accommodate SARS patients. They will also make arrangements to provide suitable staff changing facilities in the event of a SARS outbreak.

**Action: Regional Infectious Disease Unit, Designated Centres**

6.6 The designated centres will identify areas suitable for cohorting suspect SARS patients when isolation rooms are not available.

**Action: Designated Centres**

6.7 Staff training in infection control is a priority and must be included in the induction programme of new staff. Such training should be tailored to meet staff needs. All staff, whether hospital, community or primary care, should

have annual updates in infection control. This would include appropriate use of PPE and isolation rooms.

**Action: Boards, Trusts**

6.8 The first indication of SARS in Northern Ireland may be the occurrence of severe flu-like illness and/or pneumonia among health care workers, patients or visitors. Acute Trusts should develop appropriate surveillance arrangements to detect such clusters in order to quickly initiate investigation and appropriate control measures both in hospital and in the community (**APPENDIX 4**).

**Action: Acute Trusts**

6.9 Trusts should clarify the potential role of the voluntary agencies in supporting the HPSS in the event of transmission occurring outside hospital.

**Action: Trusts**

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## **7. Level 1: Heightened threat. Uncontrolled SARS cases in other countries and potential for transfer to the UK/Ireland.**

7.1 The DHSSPS will alert and provide guidance to the HPSS on the increasing threat and requesting all sectors to be in a high state of readiness. Board and Trust Chief Executives will have lead responsibility for ensuring the timely dissemination of information to all staff, activating an information cascade where appropriate. Updated information will be on the DHSSPS website.

Professional guidance will include:

- Identification and investigation of possible cases
- Reinforcement of infection control and PPE arrangements
- Clinical management
- Clinical reporting arrangements to local HSSBs
- Identification and contact follow-up
- Arrangements for voluntary home isolation/quarantine

The DHSSPS will brief other government departments/Ministers.

**Action: DHSSPS**

7.2 On receipt of advice from WHO that SARS is spreading between countries the DHSSPS will make arrangements to:

- distribute an initial supply of PPE packs to primary care, port health teams and environmental health departments
- distribute PPE packs to designated centres and other Acute Trusts
- distribute public information leaflets and update its communication strategy to reflect the current situation. SARS leaflets and posters will be widely available, including from Health Centres, libraries, pharmacies and hospitals. Travel advice sheets will be issued to ports. Liaison arrangements will be agreed with news editors of local media and briefing material prepared. If necessary broadcasting time will be booked

**Action: DHSSPS**

7.3 Acute Trusts will ensure surveillance to detect clusters of severe flu-like illness and/or pneumonia among healthcare workers, patients and visitors is operational. Potential clusters are to be reported immediately to the Infection Control Doctor and CCDC for further assessment and investigation

**(APPENDIX 4).**

**Action: Acute Trusts**

7.4 Trusts will further encourage staff to receive influenza vaccine particularly staff from clinical areas where SARS patients could present for investigation or treatment.

**Action: Trusts**

7.5 Hospitals designated to receive SARS patients will ensure:

- All isolation rooms are operational
- Availability of PPE
- Staff are aware of Trust SARS operational policies. This will include laundry arrangements.
- Escalation of staff training policy, giving priority to staff with a direct clinical care role. Staff attendance should be documented.

**Action: Designated Centres**

## **8. Outbreak scenarios (Levels 2 – 5)**

8.1 The key areas which must be addressed in order to respond to each scenario are summarised as ***critical control points*** at the beginning of each section.

8.2 The recommendations are intended to be cumulative as the plan progresses through the worsening scenarios. However the scenarios are not necessarily sequential. Where possible, recommendations have been assigned to specific sectors within the HPSS. Where recommendations are for community service provision, it is for Boards to arrange the most appropriate system for delivery.

### **8.3 Level 2: sporadic imported cases(s) in hospital in UK/Republic of Ireland**

#### 8.3.1 Critical Control Points:

- Public communication strategy: (i) to raise awareness of SARS and deter non-essential travel to those areas where local transmission is occurring; and (ii) inform public of the action they should take should they develop symptoms of SARS before, during or after returning home from visiting an affected area
- Ensure appropriate public information is available at ports for people travelling to and from affected areas
- People returning from affected areas where local transmission is occurring, and who become unwell en-route with symptoms consistent with a clinical diagnosis of SARS, should be identified and managed accordingly
- Education for health care professionals should cover the importance of prompt identification and reporting of suspected cases so that appropriate infection control and public health measures can be put in place
- Suspected /probable cases of SARS will require hospital assessment by a consultant clinician. Further pathway decisions will be as determined by the Central SARS Advisory Team
- Adequate standards of infection control must be in place
- Close contacts of probable cases of SARS should be quarantined at home using voluntary 'self isolation'

#### **8.4 Level 2A: sporadic imported case(s) (high suspect or probable definition) in hospital in Great Britain or the Republic of Ireland**

8.4.1 DHSSPS will alert all sectors of the HPSS in Northern Ireland, and initiate its public communication strategy emphasising SARS awareness and travel advice. Each HPSS organisation will urgently review and accelerate their preparedness arrangements as detailed under Level 0/1 in this plan. Clinicians would be also advised of current case definitions and reminded of reporting arrangements, patient pathways and infection control arrangements. Port health staff alerted.

**Action DHSSPS/Boards/Trusts/Primary Care**

8.4.2 DHSSPS will, if necessary, convene the Regional Outbreak Control Committee (ROCC) to review the current national/international situation and advise on further preparedness arrangements.

**Action: DHSSPS**

8.4.3 DHSSPS will ensure that Regional Supplies distribute PPE packs.

**Action: DHSSPS**

8.4.4 Boards will ensure all GPs/ co-operatives are aware of patient referral pathways.

**Action: Boards**

8.4.5 Boards and Trusts will further increase infection control training and awareness among staff.

**Action: Boards, Trusts**

8.4.6 Regional Supplies and Trusts will review PPE supplies/stocks and their accessibility/availability

**Action: Regional Supplies, Trusts**

8.4.7 Boards will ensure all Port Health staff are briefed, appropriate public information is available at ports for passengers and port staff, that port health plans reflect the current situation and all necessary documentation for reporting of cases, and contact tracing is available.

**Action: Boards**

#### **8.5 Level 2B: sporadic imported case(s) (high suspect or probable definition) in hospital or in home isolation in Northern Ireland**

8.5.1 This is the most likely initial scenario to directly affect Northern Ireland. Experience to date elsewhere has shown that most SARS cases have arisen from transmission in hospitals, and so all possible steps to limit further transmission should be taken at this stage.

### 8.5.2 DHSSPS

- If the potential SARS case is classified as “probable” SARS (as advised by the SARS Advisory Team) DHSSPS should convene the Regional Outbreak Control Committee (ROCC), and should consider the need to convene the regional health command centre (RHCC).
- DHSSPS should issue a CMO “Urgent Communication” under existing cascade arrangements to heighten awareness of SARS among professionals.
- DHSSPS should initiate a public communication strategy emphasising SARS awareness and travel advice. It should consider the provision of a regional public-access helpline
- DHSSPS will consider the need to implement Emergency Planning Function Directions
- ROCC should keep all Designated Centres regularly informed should cases be admitted to one or other Centres. Those Centres with cases would be represented on ROCC. In view of the likely operational pressures, such representation may be by telephone/video conference.

### 8.5.3 CDSC (NI)

- On report of a SARS case, CDSC (NI) should inform HPA, Colindale and DHSSPS.
- CDSC (NI) will maintain a master database of all SARS cases reported in Northern Ireland, their classification and outcome.
- CDSC (NI) will provide regular epidemiological updates to DHSSPS, ROCC, Boards, Trusts, and CDSC (Colindale).

### 8.5.4 Board

Actions for Boards will depend to some extent on where the SARS case is initially assessed, subsequently managed, and on the Board area of residence. Potentially a case could be assessed in one Board’s area, be a hospital inpatient in a different area, and be resident in a third.

- The Board should convene an outbreak control team, in line with its current procedures. Members should include the Director of Public Health, CCDC, Consultant in Public Health Medicine with responsibility for acute service provision and Public Relations Officer. It should be supported by appropriate IT and administrative staff.
- Case details should urgently be passed by the consultant clinician to the CCDC and on to CDSC (NI), if not already done so by the Central SARS Advisory Team.
- A register of community contacts should be compiled in conjunction with the Hospital Trust. These may include contacts through a range of settings, including household, workplace, travel and healthcare settings.
- Details of contacts resident in other Boards should be passed to the appropriate Board, who should initiate their own response.
- Arrangements should be made for both the initial assessment and follow up of contacts at recommended specified intervals, and for the outcomes to be recorded. Contacts should be given written and verbal

health surveillance advice in line with HPA guidelines, on how to access further relevant information and provided with a local contact telephone number.

- The Board should advise on the need for quarantine of contacts as per current HPA guidance.
- The Board should co-ordinate the completion of report forms on contacts resident within their geographic area.
- Where appropriate, Boards should arrange support from community services for SARS patients being managed at home or after discharge. (Although patients are currently only discharged home once they have been asymptomatic and afebrile for 48 hours, they are advised to keep contact with others to a minimum for a further 7 days.)
- The Board should make arrangements with the patient's GP to obtain a convalescent serology sample currently recommended at 21 days after onset of illness.
- There should be preparation for the wider public health consequences in the event of transmission occurring. This should involve consideration of:
  - the wider implications for acute services
  - the arrangements necessary for contact tracing on a larger scale.
- Voluntary agencies should be briefed

#### 8.5.5 Hospital Trust with the SARS patient

- A potential SARS patient in A&E should be clinically assessed as per algorithm (**APPENDIX 9**). The patient should be seen by a consultant as part of the clinical assessment. If SARS cannot be excluded the consultant should discuss the case with the duty CCDC via the Board duty public health doctor. Potential cases are then referred on to the Central SARS Advisory Team, and ROCC if appropriate.
- The central SARS team will determine the next course of action. Initial cases requiring hospital care and not thought to be associated with extensive contacts will be transferred to the Regional Infectious Disease Unit, RVH. If there are extensive contacts the patient may require transfer to a designated SARS hospital (Antrim or the Mater).
- Prior to transfer the clinical team must inform NIAS and the clinical consultant at the receiving hospital .
  - The Trust should use its existing outbreak control plan as the basis for its response even for one case.
  - The Trust should convene an outbreak control team (OCT), comprising the Trust Chief Executive or deputy, relevant clinicians, infection control, microbiology/virology, estates, CCDC and public relations representation. It should be supported by appropriate IT and administrative staff. As there is potential for transmission to health care workers, an occupational health service representative is seen as crucial. The OCT should meet within 24 hours of the initial report.
  - All OCT meetings require complete documentation, including the rationale behind any decisions taken

- In addition to stepping up general infection control measures taken against other respiratory infections (as per the hospital infection control manual), the team should take steps to implement HPA-produced guidance on the prevention of spread of SARS in hospitals. This is provided on the HPA website [www.phls.org.uk/topics\\_az/SARS/hospital\\_guidance.htm](http://www.phls.org.uk/topics_az/SARS/hospital_guidance.htm). As it is regularly updated, this site should be accessed on a daily basis by a dedicated team member.
- The Trust's internal communications strategy should be activated to keep staff informed and avoid unnecessary anxiety. This should use existing mechanisms where possible and include:
  - Face to face briefings by management and staff representatives
  - Written notices
  - Electronic dissemination

#### 8.5.6 Current guidance emphasises the importance of:

- Nursing in a single room, preferably with negative pressure ventilation
  - Rigorous hand hygiene
  - Personal protective equipment appropriate for standard, contact and airborne precautions
  - Keeping a register of hospital-based healthcare workers in contact with the SARS case and also non staff visitors (eg clergy, family)
  - Advice to healthcare workers to report fever or respiratory symptoms to occupational health
  - Occupational health to have active surveillance- ward manager to be contacted on a daily basis to seek information on HCWs with fever and respiratory symptoms
  - Follow up and reporting of healthcare workers who fit the definition of a close contact. The process for doing this should be agreed between Boards and the Trusts. Non-healthcare worker contacts will be followed up by the Board team. However the process of identifying non-healthcare workers who may have been a contact of the index case while in hospital needs to be clarified between the Board and Trust.
  - Visiting should be severely restricted. Where permitted on compassionate grounds, visitors should be given instruction on PPE and use this and other relevant infection control measures. Visitors should be reported to the Board to be included in the Board's contact tracing list.
- Details of the case should be reported to the CCDC as soon as practically possible after admission, using the standard report form accessed at <http://www.dhsspsni.gov.uk/publichealth> and (<http://www.cdscni.org.uk/forms/default.asp>)
  - Follow-up report forms should be sent to the CCDC according to guidance (currently a follow-up form is sent 48 hours after admission).
  - The intended discharge of a SARS patient should be discussed with the CCDC and follow the discharge protocol as determined by

**APPENDIX 12.** Patients should **not** be discharged until the arrangements for follow up, including control of infection arrangements and how to obtain convalescent sera, have been made and agreed with the CCDC. These should be documented in the clinical notes and discharge letter.

- In the event of death due to suspected or probable SARS, appropriate guidance for post mortem examinations is found at [http://www.phls.org.uk/topics\\_az/SARS/hospital\\_guidance.htm](http://www.phls.org.uk/topics_az/SARS/hospital_guidance.htm).
- The Trust should begin to make preparations for the Level 3 scenario.

#### 8.6 Northern Ireland Ambulance Service

Staff contacts should be identified and followed up in the same manner as for hospital staff.

#### 8.7 Primary care

Potential SARS cases presenting in primary care or at a port will be managed as determined by **APPENDICES 5-6**. If transfer to an A&E unit is required for further assessment the GP will alert, prior to transfer, the NIAS and the hospital in order for appropriate control of infection arrangements to be instituted. This will activate NIAS and Trust protocols. A surgical mask should be used where possible for symptomatic patients whether at home, in hospital or in transit. Detailed guidance is available on [http://www.hpa.org.uk/infections/topics\\_az/SARS/primarycare.htm](http://www.hpa.org.uk/infections/topics_az/SARS/primarycare.htm).

## **9. Level 3: one or more outbreaks of SARS within a hospital and/or limited community transmission within definable groups.**

9.1 This scenario represents the next likely step in escalation of SARS activity. Here transmission occurs within the hospital setting, resulting in cases of SARS among patients and/or healthcare workers and/or visitors. This may affect only a single hospital, or there may be a small number of cases in different hospitals. A similar scale of response will be needed for small-scale community transmission occurring in association with or separately from the hospital scenario.

### **• A: outbreaks in GB/Ireland**

The HPSS remains at a heightened state of alert. DHSSPS will communicate relevant information (on international, national and local events/implications) through its professional and public communications strategy.

ROCC will monitor the developing situation and advise DHSSPS accordingly.

### **• B: outbreaks in Northern Ireland**

Managing a SARS outbreak has the potential to entail considerable pressure on staff resources, through a combination of fatigue, staff illness and staff being placed in quarantine. HPSS organisations should have systems in place to ensure that cohorts of fresh staff are available as needed. This assumes even greater importance on progressing to a Level 4 scenario.

9.2 Transmission within hospital or limited transmission within definable groups either in Northern Ireland or in GB may lead to the WHO recommending exit screening at sea and airports.

### **9.3 Critical Control Points**

- High standards of infection control must be in place
- Information campaigns for the public and education for health care workers should cover the importance of prompt identification and reporting of suspected cases so that appropriate infection control and public health measures can be put in place.
- If a patient fits the current case definition of possible SARS they will have a severe illness and require hospitalisation. If the patient's illness is mild/resolving/or they do not require hospitalisation they do not therefore fit the case definition and should be managed at home in the usual way for any respiratory illness.
- Issue appropriate travel advisory notices

### **9.4 DHSSPS/ROCT**

- DHSSPS should activate RHCC

- RHCC should consider designating the hospital where transmission is ongoing as a SARS facility. This hospital would be responsible for the assessment and treatment of all suspected and probable cases of SARS within a defined area. Depending on both clinical circumstances and the proximity of other acute hospitals, consideration should be given as to whether the SARS hospital should divert non-SARS cases.
- RHCC will consider the implications of the incident on wider service provision. Options available may include directives to:
  - Reduce/stop elective admissions
  - Reduce/stop or refer emergency surgical workload to other units
  - Change inpatient/outpatient service patterns
- RHCC will monitor staff capacity and make appropriate arrangements for staff redeployment where necessary
- An outbreak of SARS may increase the numbers of people attending A&E departments with respiratory symptoms. This increase would be especially great in the area around the outbreak. ROCC will develop a system of triage and protocols to manage this workload.
- DHSSPS will ensure, if it has not already done so, that all pre-designated SARS centres are in a high state of readiness.
- DHSSPS should consider the need for a SARS helpline to deal with the inevitable increase in professional enquiries
- DHSSPS should consider the need for SARS screening/assessment clinics to be set up
- DHSSPS should consider the need for SARS step-down/intermediate case facilities to be set up
- RHCC should seek regular updates from Regional Supplies re PPE/infection control supplies
- RHCC should consider the need to reallocate PPE supplies, based on the stock monitoring system developed as part of preparedness.
- The DHSSPS will establish a dedicated SARS information team within the DHSSPS information office to co-ordinate an expected large increase in information requests and media briefings. Boards and Trusts will be responsible for providing updates on the situation in their area but these updates should be copied to the DHSSPS information office.
- Public and professional information should now be extended both in scope and scale. This will include public information on radio and television. Information will need to be updated, translated and amended for those who do not read English, and for those who for various reasons have not been informed by the mainstream media.
- Daily situation reports will be released to the media by the DHSSPS. This will include number of cases, their classification, deaths and advice/information on SARS specific issues as well as any changes to local health and social care provision.
- The DHSSPS website guidance should be regularly updated during the outbreak. The website will be an essential vehicle for disseminating public and professional guidance in a very changing situation and thus it would be likely to receive a very large number of hits. Adequate website capacity/resilience will be essential.

- If not already instigated, DHSSPS will make arrangements to provide a regional public access helpline.
- ROCC should receive daily updates from Boards, Trusts and CDSC (NI). Where possible, liaison between ROCC and OCTs at Board and Trust level should be via telephone or video conference in order to minimise disruption to those with key operational roles. ROCC will brief CMO or if established the RHCC.
- The ROCC would act as a source of advice for Board and Trust OCTs.
- The DHSSPS/RHCC will liaise and brief other departments/Ministers.

#### 9.5 CDSC (NI)

- Liaise with Boards and co-ordinate the follow up and reporting arrangements for cases, and the epidemiological investigation of the outbreak.
- Provide updates to DHSSPS, Boards, Trusts and to CDSC (Colindale)
- Provide epidemiological support to Regional/Board/Trust OCTs.

#### 9.6 Board

- The Board should continue to act through its outbreak control team. Membership should be expanded to include Primary Care, representatives from relevant Acute and Community Trusts, District Councils, and the Northern Ireland Ambulance Service.
- Existing emergency plans should be activated.
- All relevant primary care staff, and GP Co-ops should be well informed of the outbreak management arrangements and the consequences for general medical services.
- Boards should work with Community Trusts and Primary Care to make the necessary arrangements for the employment/redeployment of extra staff where possible, early in the course of a community outbreak.
- There will be an increase in the numbers of people with respiratory symptoms consulting general practice and community pharmacists. Boards should work with primary care sectors to develop systems of triage and good protocols. Particular problems would be anticipated if an outbreak of SARS occurred in the winter months, when non-SARS respiratory infections are more prevalent.
- Arrangements for the management of cases in the community, and for the management of close contacts should continue as per current HPA guidance.
- The Board OCT may need to initiate previously agreed arrangements with voluntary groups to minimise the difficulties encountered by people in quarantine.
- Board plans must also provide for people in institutional care, for example in prisons or residential/nursing homes. Nursing homes often rely on agency nurses who work in several places, and have very vulnerable residents. While it is conceivable that an outbreak of SARS could affect a nursing home, or other residential institution, a more likely problem is an outbreak of respiratory illness such as influenza.

- Boards, acting under Emergency Planning Function Directions, may need to consider commandeering appropriate accommodation for discharged patients, or as a step-down facility
- Boards with port health responsibilities should start to scale up for Level 4 particularly if exit screening is a possibility.

### 9.7 Hospital Trust

- The outbreak control team will need immediate additional public health epidemiological support to help in the investigation of the route of transmission of the outbreak, and follow up and documentation of contacts. Further laboratory support may also be required. Staff may have to be seconded from other Boards/Trusts, under authority of RHCC.
- The OCT should be prepared to be active for at least 20 days. The equivalent to two maximum incubation periods, without new cases, should be the criterion for determining that an outbreak has ended.
- The Trust should make arrangements to create more isolation facilities. In an outbreak there is likely to be an increased demand for isolation beds within an ICU/HDU setting.
- If an outbreak of SARS is larger than the number of isolation beds available, cohort nursing will be one option. Cohorting requires patients with the suspected condition and those who might be incubating the condition (usually defined as those who were in contact with cases by being in the same ward), being managed together in one unit, with one set of nursing staff who do not attend other non-cohorted patients. Visits by medical and specialist (e.g. physiotherapy) staff to the cohort should be at the minimum compatible with good clinical practice. Medical students etc should not attend SARS patients.
- Physical access to the areas where SARS cases are being treated should be restricted.
- Active case finding among hospital staff and patients will be essential and there should be immediate isolation of those suspected of being infected.
- The consultant in charge should report the case to the hospital infection control team.
- All healthcare workers involved in caring for patients with SARS should be monitored daily. Under current guidance they are free to continue with usual activities unless they become unwell or have not followed normal infection control procedures.
- In certain circumstances where the route of transmission is unknown, however, consideration may have to be given to the quarantining of healthcare workers who have followed procedures.
- Arrangements will need to be in place for occupational health staff to provide clinical assessment of hospital workers, together with contact tracing and follow up.
- Infection control and decontamination procedures should be reviewed. This will include environmental decontamination. Procedures should be regularly audited to demonstrate that they are being rigorously applied.

- It is likely that elective surgery and routine hospital activity, including outpatient services, will be significantly affected by the measures taken to control infection. The need for ICU beds, in particular, may affect specific areas of elective surgery. Staff, including surgical staff, may need to be redeployed from other clinical areas to assist maintain rotas etc in the SARS wards and to cover for health care workers who may be in quarantine.
- All non-essential leave may need to be postponed.
- All hospital staff should be informed of the outbreak management arrangements including how to report illness and the consequences for general medical services. Staff MUST NOT work while unwell with fever etc, irrespective of their role, until they have been assessed by occupational health.
- Trusts should monitor supplies of personal protective equipment and re-order supplies in greater amounts when stocks fall to pre designated trigger levels.
- Paediatric and maternity services are sometimes overlooked when an outbreak occurs mainly in adults. Other specialist services may have extra difficulties if their patients become cases or contacts. Appropriate arrangements should therefore be made for contacts needing hospital treatment for conditions other than SARS.
- SARS patients should not be transferred between hospitals unless authorised by ROCC.
- The movement of all patients and staff from hospitals in an affected area should be restricted to the essential minimum.
- It may be necessary to utilise facilities other than current designated Intensive Care Units for the care of patients requiring ventilation.

## 9.8 Community Trusts

Community Trusts should:

- Activate their arrangements for cases being managed in the community, cases who have been discharged from hospital and for quarantined contacts.
- Maintain a list of staff contacts and arrange appropriate health surveillance
- Support Primary Care staff
- Maintain close liaison with hospital and Board OCTs
- Ensure staff are fully aware of relevant control of infection measures
- Liaise as appropriate with the voluntary sector

## **10. Level 4: extensive community transmission**

10.1 In this scenario, there is extensive transmission within the wider community. It is assumed that all recommendations made to date will be in place, by this stage.

- **A: extensive community transmission in GB/Ireland**

10.2 RHCC chaired by CMO will be operational and there will be extensive liaison between government departments in Northern Ireland and counterparts in London and Dublin. WHO may recommend exit screening and this will have implications for port/port health arrangements. The DHSSPS will provide relevant travel health advice to the public, port operators and port health staff.

10.3 If there is extensive community transmission in GB or Ireland the likelihood of asymptomatic individuals who had been in contact with SARS entering Northern Ireland is high. Port health and public communications will provide information on SARS symptoms and advise on how and where individuals developing such symptoms can be medically assessed. The regional telephone helpline number remains operational.

- **B: extensive community transmission in Northern Ireland**

### 10.4 Critical Control Points

- High standards of infection control must be in place
- Information campaigns for the public and education for health care workers should cover the importance of prompt identification and reporting of suspected cases so that appropriate infection control and public health measures can be put in place.
- Close contacts of confirmed cases of SARS should be quarantined at home using voluntary 'self quarantine'
- At this stage, hospitals may be under intense pressure. Suspected /probable cases of SARS should be admitted to acute hospitals only if this justified by the clinical severity of the illness, otherwise cases of SARS should be managed and isolated in the community whenever possible. RHCC will issue appropriate public and professional guidance.
- Issue appropriate travel advisory notices

### 10.5 Regional Health Command Centre (RHCC)

- RHCC will seek regular updates from all sectors of the HPSS. These updates will include SARS specific updates on numbers of cases etc, impact on provision of general medical services, staffing provision, adequacy of supplies and communication arrangements.
- RHCC will liaise with the Departments of Health in London/ Dublin as appropriate.

- RHCC will issue guidance to the HPSS to postpone all non-essential leave by HPSS personnel until further notice
- ROCC will monitor the evolving epidemiological situation on a daily basis, and advise the RHCC on the need for further actions and the adequacy of existing control measures.
- ROCC will be required to respond to a range of issues including whether to advise against holding events which create large assemblies. Schools are likely to request local guidance on whether to exclude certain children, and what activities to suspend.
- In the event there is no suitable community accommodation to ensure community case isolation, or contact quarantine the DHSSPS may have to seek vesting orders on appropriate hotel, nursing home or other accommodation. Tourists or visitors to Northern Ireland, whose movement is restricted because they are a case/contact, may require to be placed in appropriate accommodation for a temporary period.
- Given the potential for civil disorder with widespread public anxiety and population movement DHSSPS will liaise with other Departments as per the interdepartmental emergency plan. It may be necessary to establish Regional Command and Control structures as outlined in civil defence planning documents.
- The existing communication strategy should be reviewed and augmented as appropriate.
- Media briefings locally, regionally and nationally will be necessary.

#### 10.6 Boards

- Increased contact tracing and monitoring, together with the necessary data entry will be required. Public health and administrative staff may need to be redeployed to meet these functions.
- Establishing chains of transmission will be critical in control of the outbreak. This will be an important role of the OCT
- Boards should implement the arrangements for the employment/ redeployment of extra staff where possible, early in the course of a community outbreak.
- Involvement of district council environmental health staff in investigation and control operations may be necessary at this stage.
- The Board OCT should review port health arrangements, including the provision of public information. Port health should be considered in its widest sense, and may include locations not normally thought of in this way. Examples would include cross-border train and bus links. At this stage it is highly likely that WHO will have recommended some form of exit screening for sea and airports. The decision to implement exit screening would be taken at Ministerial level.

#### 10.7 Hospital Trusts

- Staff capacity should be increased using a combination of adjustments to shift patterns, working rotas, and holiday leave. Additional measures to protect key staff may need to be considered.

- Arrangements will need to be in place for occupational health staff to provide clinical assessment of hospital workers, together with contact tracing and follow up.
- Trusts should review mortuary provision
- Trusts should continue to review the implementation and adequacy of their infection control arrangements as described earlier

#### 10.8 Community Trusts

Community Trusts should:

- Provide support, when required, to those SARS patients at home and to their contacts
- Ensure appropriate liaison with voluntary organisations to enlist all possible support
- Engage interpreters as appropriate
- Support Primary Care staff
- Maintain close liaison with hospital and Board OCTs
- Ensure staff are fully aware of relevant control of infection measures

## 11. Level 5: post outbreak and de-escalation of outbreak response

11.1 De-escalation to a lower level of response may be considered when no incident cases have occurred within 20 days (2 incubation periods).

11.2 Experience in Canada has shown the importance of the response in this phase of the outbreak. An early relaxation of control measures could facilitate the transmission of infection. **Thus the decision to move to a lower level of response or to stand down any of the outbreak control structures described in this plan should be made only by RHCC on the advice of ROCC.**

11.3 This phase has the potential to last for weeks or months and will require the maintenance of much of the surveillance and infection control systems demanded by the earlier stages of this plan. High levels of vigilance will be required which may be difficult to sustain over many weeks with staff fatigued from responding to the acute phases of the incident.

### 11.4 Critical Control Points

- People with a clinical diagnosis of SARS (meeting surveillance case definition) should be promptly identified by local, regional, national, and international communicable disease surveillance systems
- Standards of infection control based upon post outbreak risk assessment should be in place in acute hospitals to reduce the risk of nosocomial transmission
- Issue appropriate travel advisory notices

### 11.5 DHSSPS/ ROCC

- The decision to declare the outbreak **over** or to have entered a **de-escalation phase** should be taken by the RHCC on advice from the ROCC using explicit criteria
- The transition to a different level/phase should be widely communicated within the HPSS, other Government Departments and to the public
- DHSSPS should continue to issue updates/guidance on national and international developments to public and HPSS staff as appropriate
- DHSSPS should co-ordinate multi-agency and multi-sectoral debriefing at the regional level
- DHSSPS should participate in national (UK-wide) multi-agency debrief
- The Regional SARS Contingency Plan should be reviewed, updated and tested as appropriate
- DHSSPS should assess the impact of the incident on health and social care provision (eg human, material, financial resources) in liaison with Boards and Trusts and reflect these implications in Departmental planning/strategic guidance.
- DHSSPS should prepare a report (interim or final depending on the situation), based on contributions from the ROCC, local OCTs and

CDSC (NI), covering all aspects of the incident (epidemiology, control arrangements, inter-agency liaison, inter-agency implications and cost).

#### 11.6 Boards

- Boards should work to normalise patterns of service provision, including elective activity noting that staff extensively involved in the incident may require leave
- Boards should contribute to multi-agency and multi-sectoral debriefing at local and regional levels
- SARS contingency arrangements should be reviewed, updated and tested as appropriate

#### 11.7 CDSC (NI)

- CDSC (NI) should maintain surveillance systems
- CDSC (NI) should contribute to multi-agency and multi-sectoral debriefing
- CDSC (NI) should prepare a report on the epidemiology of the outbreak for the ROCT

#### 11.8 Acute and Community Trusts

- Staff awareness and vigilance should be maintained through the appropriate communication channels
- Infection control procedures should be maintained to a level based on assessment of risk by the ROCC
- Staff debriefing should take place at appropriate intervals. Trusts should also contribute to multi-agency and multi-sectoral debriefing at local and regional levels. Debriefing at appropriate intervals is essential in order to learn from experiences and to refine plans accordingly
- SARS contingency arrangements should be reviewed, updated and tested as appropriate