



Sultanate of Oman

Ministry of Health

National Pandemic Influenza A(H1N1) Preparedness Plan

Ver.3, 3 June 2009

*Supplement to
the “National Pandemic Influenza Preparedness Plan”
Revised April 2008*

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Reader information

Policy	This is the official policy document of the Ministry of Health, Sultanate of Oman
Document Purpose	For information and action
Title	National Pandemic Influenza A (H1N1) Preparedness Plan
Publication Date	Original Plan Published in 2005. This Supplement published in May 2009
Revision Date	20 May 2008 (Version 2)
Author	Advisor Epidemiologist, Department of Communicable Disease Surveillance & Control, Directorate General of Health Affairs, Ministry of Health
Reviewers	Experts from the "National Task Force on Influenza Pandemic Preparedness". The plan was reviewed by the legal Department of Ministry of Health
Target Audience	All Director Generals, Directors, of the Regions, Governorates and Hospitals including the MOICs of the health centres, EHC's, polyclinics, CDC's, and other Ministry of Health institutions. Non-MH health organizations viz. SQU Hospitals, AF hospital, ROP hospital, PDO clinics, Palace health services, ISS health services, all private hospitals and clinics and including those who are directly or indirectly involved in the pandemic management.
Description	This document outlines the framework of how the Ministry of Health, Sultanate of Oman would respond to the current influenza pandemic due to novel Influenza A (H1N1) virus and is based on the recommendations of the World Health Organization
Cross References	Key Influenza A (H1N1) documents on the WHO and CDC websites
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Acronyms

AI	Avian Influenza
DCDSC	Department of Communicable Disease Surveillance & Control
FAO	Food and Agriculture Organization (UN)
HPAI	Highly pathogenic Avian Influenza
GF TADs	Global Framework for the control of Transboundary Animal Diseases (FAO/OIE)
GLEWS	Global Early Warning System (FAO/OIE/WHO)
ILI	Influenza like Illness
MoA&F	Ministry of Agriculture and Fisheries
MoH	Ministry of Health
NADSS	National Animal Disease Surveillance System
OIE	Organization Mondiale de la Santé Animale (World Organization for Animal Health)
PDO	Petroleum Development Organization
PPE	Personal Protective Equipment
RADISCON	Regional Animal Disease Surveillance and Control Network
ROP	Royal Oman Police
SNS	Strategic National Stockpile
SQUH	Sultan Qaboos University hospital
WHO (OMS)	World Health Organization (Organisation Mondiale de la Santé)

1. Background

Influenza is one of the most common causes of febrile and respiratory illness. The risk of severe illness and/or death is conventionally higher among adults ≥ 65 years old; among persons of any age with underlying chronic diseases including lung or heart disease, metabolic diseases, and immune-suppression; and among children < 2 years old.

Influenza viruses circulating in the population are continuously evolving (antigenic drift and antigenic shift). Pandemics occur when novel influenza A viruses most probably derived from animal or avian influenza viruses develop ability to spread effectively among people. By definition pandemics involve the circulation of strains for which almost all of the world's population lack pre-existing immunity.

Influenza pandemics resemble major natural disasters. It is impossible to anticipate when the next pandemic might occur or how severe its consequences might be. On an average, three pandemics per century have been documented since the 16th century, occurring at intervals of 10–50 years. The first pandemic of influenza of the 20th century, the “Spanish flu” began in 1918 and, by the time it ended the following year, by conservative estimates, it had resulted in more than 20 million deaths worldwide. Later pandemics in 1957 and 1968 caused far fewer deaths but still posed a substantial burden on the health care system and resulted in substantial economic costs and social disruption.

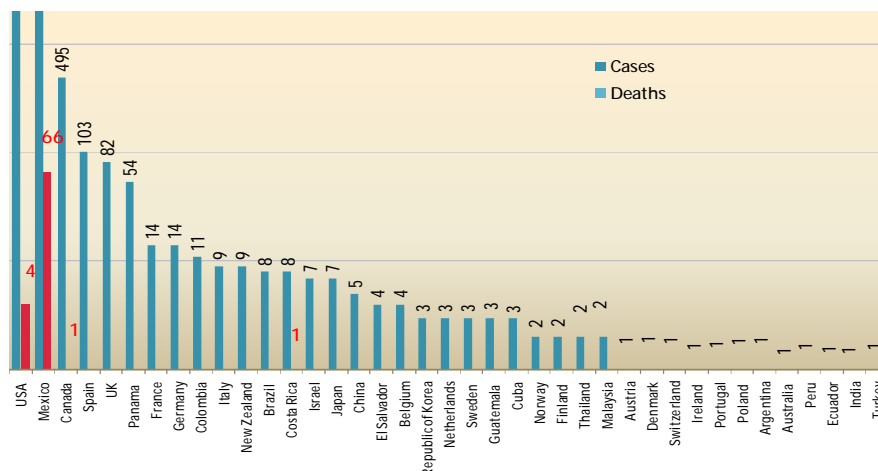
Following the events which happened in Mexico and USA, where in many individuals are affected by the novel A (H1N1) influenza virus, the concerns for pandemic influenza is growing as more information becomes available. This novel influenza virus H1N1 is a combination (reassortant) of Human, Avian (bird) and influenza viruses.

WHO has declared H1N1 influenza situation as an international public health emergency. On 29th of April 2009 the pandemic influenza alert was upgraded to phase 5 which means the global spread (pandemic) is likely as human-to-human transmission was established.

As of writing this plan (20th May 2009), globally 39 countries have officially reported 8480 cases of influenza A (H1N1) infection with 74 deaths. The United States Government alone reported 4710 laboratory confirmed human cases, including 4 deaths. Mexico reported 2829 confirmed human cases of infection, including 66 deaths. Canada and Portugal reported 495 and 8 cases respectively with 1 death each.

Other countries reported laboratory confirmed cases with no deaths as shown in the graph.

Global Situation Influenza A (H1N1) cases reported as on 17th May 2009 (update 31)



2. The National Preparedness Plan

2.1 Introduction

Planning and preparedness are essential to optimally achieve the goals and objectives of a pandemic response. The main aim of this document is to provide a national framework for an integrated countrywide response to H1N1 influenza pandemic with clear operational plans for the response at all levels.

The parent document "**National Pandemic Influenza Preparedness Plan**" was prepared by the Ministry of Health in 2005 and updated annually that provided guidance for the preparedness and response remains valid. Some modifications based on the current available information on the novel H1N1 virus have been incorporated in this plan supplement.

The essential objective of this plan for the influenza pandemic H1N1 is to serve as a reference document for all the concerned parties and stakeholders to reduce the impact of the pandemic on morbidity, mortality and social disruption. This will be achieved through:

- Enhancement of surveillance in the population and the points of entry (PoE) to detect cases of influenza due to the novel H1N1 strain in the community
- Development of laboratory capacity to identify the novel influenza H1N1 strain
- Coordination of all containment activities at the national, state and local levels
- Providing optimal medical care
- Maintaining essential community services
- Ensuring rational use of antiviral drug therapy to avoid emergence of resistance
- Communicating effectively with the health care providers, community leaders, public and the media

The national authorities will provide the overall direction, guidance and coordination. The provincial (Regions/Governorates) health affairs departments in the Directorate and the private clinics will be on the frontline to detect (first contact) the cases due to the novel strain.

The provincial health authorities will also be responsible for isolation and quarantine of cases and contacts and their management including administration of antivirals/vaccine.

It is envisaged that the information and guidance provided in this plan will serve as a platform for the development of regional plans.

2.2 Phases of an Influenza Pandemic

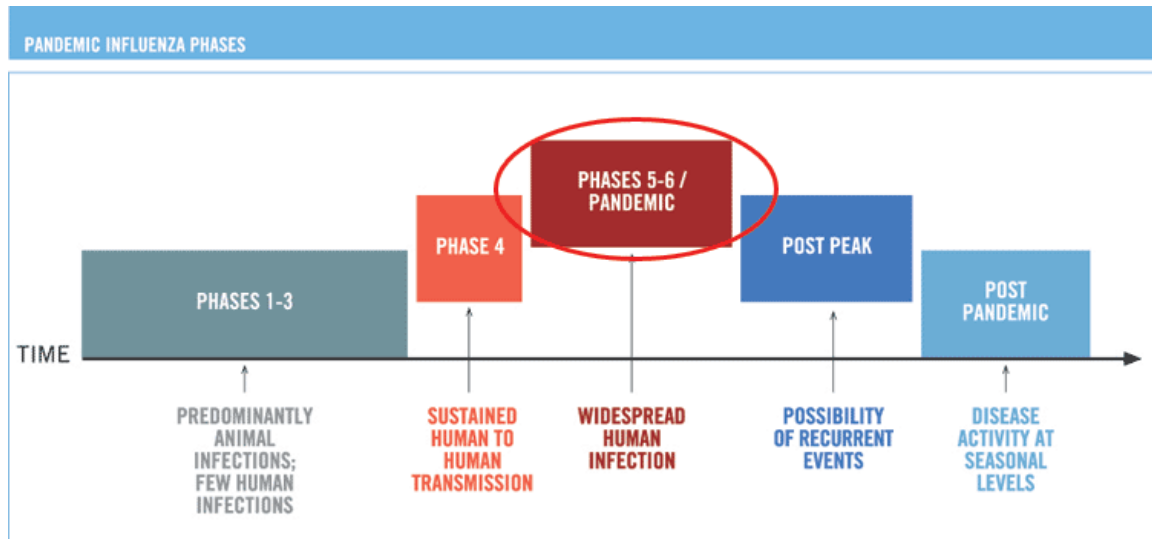
In the 2009 version of the phase descriptions, WHO has retained the use of a six-phased approach for easy incorporation of new recommendations and approaches into the existing national preparedness and response plans. The grouping and description of pandemic phases have been revised to make them easier to understand and based upon observable phenomena.

The phases 1–3 correlate with the preparedness, including capacity development and response planning activities, while phases 4–6 clearly signal the need for response and mitigation efforts. Furthermore, periods after the first pandemic wave are elaborated to facilitate post-pandemic recovery activities.

2.3 The pandemic phases

In nature the influenza viruses circulate continuously among animals, especially birds. In **Phase 1** no viruses circulating among animals have been reported to cause infections in humans even though such viruses might theoretically develop into pandemic viruses.

In **Phase 2** an animal influenza virus circulating among domesticated or wild animals is known to have caused infection in humans and is therefore considered a potential pandemic threat.



In **Phase 3** an animal or human-animal influenza *reassortant* virus has caused sporadic cases or small clusters of disease in people but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

Phase 4 is characterized by verified human-to-human transmission of an animal or human-animal influenza reassortant virus able to cause "community-level outbreaks." The ability to cause sustained disease outbreaks in a community marks a significant upward shift in the risk for a pandemic. Any country that suspects or has verified such an event should urgently consult with WHO so that the situation can be jointly assessed and a decision made by the affected country if implementation of a rapid pandemic containment operation is warranted. Phase 4 indicates a significant increase in risk of a pandemic but does not necessarily mean that a pandemic is eminent.

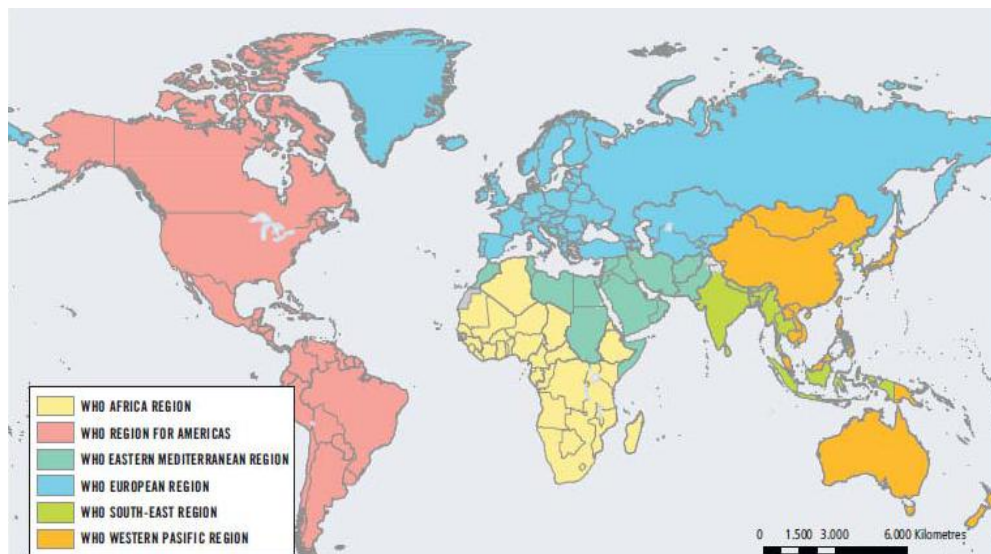
Phase 5 is characterized by human-to-human spread of the virus into at least *two countries in one WHO region*. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication and implementation of the prepared mitigation measures is short.

Phase 6, the pandemic phase, is characterized by *community level outbreaks* in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way.

During the **post-peak period**, pandemic disease levels in most countries with adequate surveillance will have dropped below peak observed levels. The post-peak period signifies that pandemic activity appears to be decreasing; however, it is uncertain if additional waves will occur and countries will need to be prepared for a second wave.

Previous pandemics have been characterized by waves of activity spread over months. Once the level of disease activity drops, a critical communications task will be to balance this information with the possibility of another wave. **Pandemic waves** can be separated by months and an immediate "at-ease" signal may be premature.

In the **post-pandemic period**, influenza disease activity will have returned to levels normally seen for seasonal influenza. It is expected that the pandemic virus will behave as a seasonal influenza A virus. At this stage, it is important to maintain surveillance and update pandemic preparedness and response plans accordingly. An intensive phase of recovery and evaluation may be required.



Phase changes

It is important to stress that the phases were not developed as an epidemiological prediction, but to provide guidance to countries on the implementation of activities. While later phases may loosely correlate with increasing levels of pandemic risk, this risk in the first three phases is simply unknown. It is therefore possible to have situations which pose an increased pandemic risk, but do not result in a pandemic.

Alternatively, although global influenza surveillance and monitoring systems are much improved, it is also possible that the first outbreaks of a pandemic will not be detected or recognized. For example, if symptoms are mild and not very specific, an influenza virus with pandemic potential may attain relatively widespread circulation before being detected; thus, the global phase may jump from Phase 3 to Phases 5 or 6. If the rapid containment operations are successful; Phase 4 may revert back to Phase 3.

When making a change to the global phase, WHO will carefully consider whether the criteria for a new phase have been met. This decision will be based upon all credible information from global surveillance and from other organizations.

2.4 Declaration of Pandemic

The WHO Director General declared H1N1 influenza situation as an international public health emergency. On 29th of April 2009 the pandemic influenza alert was upgraded to phase 5 which means the global spread (pandemic) is likely as human-to-human transmission was established.

3. The Components of Preparedness

One of the lessons learned from the SARS outbreaks of 2003 was the importance of strong international and national leadership and coordination and a clear national 'command and control' structure in the event of an influenza pandemic.

The appropriate people at all levels must have authority to make key decisions and act on them, and there must be a clear chain of accountability. The response to an influenza pandemic H1N1 should be on a national basis and therefore clear demarcation of roles is required between all the stakeholders.

3.1 Enhanced Influenza Surveillance

Monitoring influenza disease activity is important to facilitate resource planning, communication, intervention, and investigation. A high level of vigilance for clusters of cases of respiratory disease provides an early warning mechanism.

Timely surveillance information will be the key to early identification of an influenza pandemic, and to the development of evidence based interventions at all stages. Oman contributes to internationally coordinated laboratory based influenza virus surveillance, which is coordinated by the World Health Organization (WHO).

Specific objectives of this surveillance activity are to guide global prevention and control activities through the following actions:

1. Detect and confirm cases of H1N1 influenza A virus infection
2. Establish the extent of international spread of H1N1 influenza A virus infection
3. Assist in the early severity assessment of the disease

Influenza is a common condition and has symptoms similar to those of many other viral respiratory infections. Early detection of a new virus therefore requires clinicians as well as laboratory staff to be alert to the possibly unusual, for example respiratory illness in a patient, with a link to areas where a new virus has been already identified or to a person with a travel history to affected areas/countries.

Influenza-like-illness (ILI) surveillance: The existing surveillance of ILI under the Group 'C' of the notifiable communicable diseases under routine surveillance should be further strengthened as under.

The reporting of the influenza like illnesses (ILI) and acute lower respiratory tract infections (aLRTI) including pneumonia for all age groups should be monitored at all the Government and private health institutions on a weekly basis. ICD 10 codes for these conditions are J01, J02-03, J04, J10-11, J12-18, J20-21 and J40-42. These conditions should be reported for both males and females and for inpatient and outpatient by age groups (MH Monthly Statistical Booklets – for Health Institution and inpatient records).

These weekly surveillance reports should be sent by all health institutions including private to the office of the Director General or Director of Health Services of all the Governorates and Regions. The regional epidemiologist or the focal point for communicable diseases in the Directorate should analyse the data on weekly basis to establish the baseline influenza trend enabling him to detect any suspicious increase in the influenza activity in the areas under surveillance.

The compiled analytical reports should be sent to the Department of Communicable Disease Surveillance & Control on every Monday (international week) by e-mail/fax.

In order to detect cases the existent surveillance mechanisms should be further strengthened at all levels.

Sentinel SARI surveillance at Sohar, Ibra and Salalah Hospitals will continue so also the **Laboratory based influenza virus surveillance** at Barka PC, Amerat HC, Al Khod HC and Salalah PC.

3.2 Case detection

Surveillance case definitions for infections with novel influenza A(H1N1) virus infection

Suspect Case (Refer Algorithm #1)

Acute febrile respiratory illness (Fever > 38.0 C) with onset...

- ü Within 7 days of close contact with a confirmed case of H1N1 influenza A virus **OR**
- ü Within 7 days of travel to countries where one or more confirmed case of H1N1 influenza A virus were reported **OR**
- ü Resides in a community where there were one or more confirmed cases of H1N1 influenza A virus

Probable case

Suspect case with an influenza test that is positive for influenza A, but is unsubtypeable by reagents used to detect seasonal influenza virus infection **OR**

Suspect case who died of an unexplained acute respiratory illness and who is considered to be epidemiologically linked to another probable or confirmed case.

Confirmed case

Suspect or Probable case with laboratory confirmed H1N1 influenza A virus infection by one or more of the following tests.

- Real-time RT-PCR
- Viral culture
- Four-fold rise in H1N1 influenza A virus specific neutralizing antibodies

3.3 Case Investigation & Management

Health Institute anywhere in Oman that identifies unusual clusters of acute respiratory illnesses should immediately notify the Regional DGHS. Regional Epidemiologist should investigate using the WHO case summary form (*Annexure 4*) if the epidemiological compatibility is decided under the guidance of Department of Communicable Diseases Surveillance and Control.

Definition of cluster

A cluster is defined as two or more persons presenting with manifestations of unexplained acute respiratory illness with fever $>38^{\circ}\text{C}$ or who died of an unexplained respiratory illness and those are detected with onset of illness within a period of 14 days and in the same geographical area and/or are epidemiologically linked.

Triggers/signals for the investigation of possible cases of H1N1 influenza A virus are

- Clusters of cases of unexplained ILI or acute lower respiratory disease
- Severe, unexplained respiratory illness occurring in one or more health care worker(s) who provide care for patients with respiratory disease
- Changes in the epidemiology of mortality associated with the occurrence of ILI or lower respiratory tract illness, an increase in deaths observed from respiratory illness or an increase in the occurrence of severe respiratory disease in previously healthy adults or adolescents
- Persistent changes noted in the treatment response or outcome of severe lower respiratory illness.

Close contact: having cared for, lived with, or had direct contact with respiratory secretions or body fluids of a probable or confirmed case of H1N1 influenza A virus.

For contacts surveillance refer to *Algorithm #2*.

Epidemiological risk factors that should raise suspicion of H1N1 influenza A virus include:

- Close contact to a confirmed case of H1N1 influenza A virus infection while the case was ill
- Recent travel to an area where there are confirmed cases of H1N1 influenza A virus

All suspect cases from any health institution of the region should be transferred, admitted, investigated and managed at the designated isolation facility i.e. the Regional Referral Hospital ONLY (refer *Algorithm #1*). For receiving referred case at designated isolation facility please follow *Algorithm #3*. For advise on infection control advise refer to *Algorithm #6*.

3.4 Laboratory Surveillance

Laboratories are essential to confirm diagnosis, isolation and characterization of the virus and thus overall they contribute to surveillance. The Central Public Health Laboratory has been

recognized in 2008 as the National Influenza Centre (NIC) by the WHO. The Laboratory has received the diagnostic kits to identify the novel influenza A/H1N1 strain. A proportion of isolates including unusual untypable strains from Oman would be referred to the International Influenza Reference Laboratory.

Details of the sample collection, storage and transport are included in the *Algorithm #5* of this document.

3.5. Infection control

It is critical that health care workers use appropriate infection control precautions when caring for patients with influenza-like symptoms, particularly in areas affected by outbreaks of influenza A(H1N1), in order to minimize the possibility of transmission among themselves, to other health-care workers, patients and visitors. The WHO infection prevention and control guidance is attached in *Annexure #5*.

Ensure the availability of personal protective equipments (PPE) and laboratory supplies at the designated locations. All these should be accessible round the clock to the health care staff.

The relevant infection control advice and guidelines are given in *Algorithm #6* of this document.

3.6. Non-pharmaceutical public health interventions

The main aim of non-pharmaceutical intervention is to prevent the spread of infection. Each individual is expected to practice following general preventive measures for influenza:

- Avoid close contact with people who appear unwell and have fever and cough.
- Wash your hands with soap and water thoroughly and often.
- Practice good health habits including adequate sleep, eating nutritious food and keeping physically active.

The persons who are not well should be cared for at home unless the person is seriously ill which require hospital admission keeping following guidelines in mind

- Separate the ill person from others, at least 1 meter in distance from others.
- Cover your mouth and nose when caring for the ill person. Either commercial or homemade materials are fine, as long as they are disposed of or cleaned properly after use.
- Wash your hands with soap and water thoroughly after each contact with the ill person.
- Improve the air flow where the ill person stays. Use doors and windows to take advantage of breezes.
- Keep the environment clean with readily available household cleaning agents.

The person who is unwell having high fever, cough or sore throat is expected to follow following steps:

- Stay at home and keep away from work, school or crowds.
- Rest and take plenty of fluids.

- Cover your mouth and nose with disposable tissues when coughing and sneezing, and dispose of the used tissues properly.
- Wash your hands with soap and water often and thoroughly, especially after coughing or sneezing.
- Inform family and friends about your illness and try to avoid contact with people.

If a person thinks that he requires medical attention then follow the following instructions:

- Contact by telephone your primary health care physician or healthcare provider near your home before travelling to a health facility, and report your symptoms. Explain why you think you have influenza A (H1N1) (for example if you have recently travelled to a country where there is an outbreak in humans). Follow the advice given to you.
- If it is not possible to contact your healthcare provider in advance, communicate your suspicion of infection as soon as you arrive at the facility.
- Cover your nose and mouth during travel.

3.7 Pharmaceutical Interventions

VACCINE

Currently no vaccine is available for this novel H1N1 influenza virus. It is widely believed that it will require at least few months for vaccine to be developed and made available for general use. No evidence is available to support the use of conventional seasonal influenza vaccine to prevent novel H1N1 influenza virus responsible for causing pandemic.

ANTIVIRAL AGENTS

Antiviral agents active against influenza are the only major medical countermeasure available. However there are limitations to their use, their effectiveness in a pandemic situation has yet to be tested and antiviral resistance may become a problem.

Two drugs of the newer class of neuraminidase inhibitors (Zanamivir [Relenza] and **Oseltamivir [Tamiflu]**) are effective against the novel influenza H1N1 virus based on the WHO reports.

Oman has stockpiled the antiviral drugs Tamiflu for the influenza pandemic as part of the Strategic National Stockpile (SNS). The Ministry of Health plans to procure adequate quantities of the drugs sufficient to treat 20% of the population for either prophylactic or therapeutic purpose.

As with other resources, given the possible scale of a current pandemic, **the drugs will need to be given in the most effective way on operational, clinical and cost-effectiveness grounds** taking into account the priorities and the stocks available.

3.8 Information Dissemination

The overall communications strategy covers the gathering, collation and dissemination of information for a variety of audiences, which can be divided broadly into:

3.8.1 Strategic communications

Two way strategic communications will involve the MH, and all other governmental agencies and organisations involved in the response, including the private health establishments and the international agencies. The Government briefings and public information will be controlled and monitored by Director, Communicable diseases surveillance and Control under the supervision of higher officials of the ministry of health.

3.8.2 Professional information and guidance

Regular information bulletins to the health professionals will be issued by Director, Communicable diseases surveillance and Control as required and as urgency indicates through already established means and routes.

3.8.3 Communications with the public and the media

Media communications will be co-ordinated initially by the MH, PRO office. They will also co-ordinate cross government communication and depending on the scale will also co-ordinate the media and public communication for the other Government Departments involved.

At present only national authorities are designated as official spokes person of the government for this pandemic.

4. List of Annexure

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Annexure 1**National Task Force (Ministry of Health)****National Spokespersons for Ministry of Health**

§ HE Dr Ahmed Al Saidi, Under Secretary of Health Affairs
 § HE Dr. Ali Jaffer M. Suleiman, DGHA
 § Dr Salah Al Awaidy, Director, DCDSC

Provincial Spokesperson (Governorates & Regions)

§ Director/Director General of Health Services

Name	Designation	Office	Fax	Mobile
Ministry of Health HQ				
HE Dr Ali Jaffer Mohammed (Chairman)	Director General of Health Affairs	24600808	24696099	99335681
Ph Nusaiba Habib Mohd	Director General of Medical Supplies	24699973	24601593	99240990
Dr Salah Al Awaidy (Coordinator / IHR Focal Point)	Director, Communicable Disease Surveillance & Control	24601921	24601832	99315063
Dr Suleiman Al Busaidy	Director, Central Public Health Laboratory	24705943	24793699	99426288
Dr Idris Al Abaidani	Surveillance Section Head, DCDSC	24607524	24601832	95224261
Dr Hamed Al Balushi	Director, Hospital Affairs			99344299
Dr Said Al Lamki	Director, Primary Health Care			
Mr Majid Al Maqbali	Director, Nursing Affairs	24562609		99897189
WHO Country Office Oman				
Dr Jihan Tawilah	WHO Representative, Oman	24600989	24602637	
Royal Hospital /Al Nahda Hospital				
Dr Seif Al Abri	Infectious Diseases, Royal Hospital			99350255
Dr Mohammed Al Hosni	Head of Child Health, Royal Hospital	24599552	24599173	99474441
Dr Nasser Al Busaidi	Chest Specialist, Royal Hospital			92833396
Dr Mohammed Al Balushi	Executive Director, Al Nahda Hospital	24835746	24831578	92889932
Department of Communicable Disease Surveillance and Control, MoH HQ (Field Staff)				
Dr Shyam Bawikar	Advisor Epidemiologist			99368327
Dr Bassem El Zayed	Infection Control, DCDSC	24601921 24607524	24601832	99534234
Mr Salem Al Mahrooqi	National Surveillance Supervisor			99029195
Mr Bader Al Rawahi	National EPI Supervisor			99430689

Annexure 2**Inter-Ministerial Committee on Avian Influenza
Sultanate of Oman**

Name	Designation	Office	Fax	Mobile
Mr. Ali Amer Al Kiyumi	<i>Nature Conservation, Ministry of Regional Municipalities, Environment and Water Resources</i>	24602285	24602283	99444808
Mr. Said Darwesh Al Alawi	<i>DG of Health Affairs, Ministry of Regional Municipalities, Environment and Water Resources</i>	24692564	24692547	99389883
Mr. Ali Said Al Hammadi	<i>Director General of Planning, Ministry of Interior</i>	24707226	24790599	99420909
Mr. Mudriq Kathiem Al Moosawi	<i>Director General of Commerce & Industry</i>	24774100	24812030	99418909
Mr. Nasr Ali Al Wahaibi	<i>Director General of Animal Wealth</i>	2469391	24694465	99382717
Dr. Salah Thabit Al Awaidy	<i>Director, Communicable Disease Surveillance and Control</i>	24601921	24601832	99315063
Mr. Mubarak Khamis Al Araimi	<i>Asst. Director General of Information and Press Affairs</i>	24697677	24521034	24602928
Mr. Mussallam Salem Al Jenebi	<i>Asst. Director General of Customs, Royal Oman Police</i>	24521204	24521204	99319131
Dr. Sultan Eissa Al Ismaili	<i>Asst. Director General of Animal Wealth & Veterinary Services</i>	24698512	24694465	99380316
Dr. Ali Abdullah Al Sahmi	Head of Veterinary Services (Focal Point)	24696300 Ext. 1510	24694465	99371816

Annexure 3**Rapid Response Team**

In the event of suspected case notification of influenza A(H1N1) in Oman the rapid response team will initiate an epidemiological field case investigation to confirm the diagnosis and necessary interventions within 24-48 hours.

The National Rapid Response Team for Influenza A(H1N1)

Name	Designation	Office	Fax	Mobile
Dr Salah Al Awaidy TEAM LEADER	Director, Communicable Disease Surveillance & Control (DCDSC)	24601921	24601832	99315063
Dr Suleiman Al Busaidy	Director, CPHL	24705943	24793699	99426288
Dr Idris Al Abaidani	Section I/c, Surveillance, DCDSC			95224261
Dr Shyam Bawikar	Advisor Epidemiologist, DCDSC	24601921	24601832	99368327
Mr Basim Zayed	Coordinator, Infection control, DCDSC	24607524		99534234
Mr Salem Al Mahrooqi	Surveillance Supervisor, DCDSC			99029195
Support Team Members				
Dr Saif Al Abri	Head of Medicine, Royal Hospital			99350255
Dr Mohammed Al Hosni	Head of Paediatrics, Royal Hospital			99474441
Dr Nasser Al Busaidy	Chest specialist, Royal Hospital			99427669
Ph Anisa Rasool	Medical stores, MoH			99476978
Mr Mohammed Al Farsi	Logistics Support, DGHA			99360541

Regional/Provincial Rapid Response Team

Designation	Office	Fax	Mobile
Director/Superintendent of Health Affairs TEAM LEADER			
Regional Epidemiologist OR Communicable Disease Focal Point			
Director of Administration, DGHS (Logistic support)			
Section Head, Nursing Affairs, DGHS			
Section Head, Pharmaceutical Affairs, DGHS			
Support Team members			
Executive Director, Regional Hospital			
HoD, Regional Hospital Laboratory			
HoD, Medicine, Regional Hospital			
HoD, Paediatrics, Regional Hospital			
Infection control staff nurse, Regional Hospital			

Annexure 4

WHO Influenza A (H1N1) Case Summary Form

(for case-based data collection)

Version 2009-04-28 13:50

This form is to be used to obtain important information to determine severity and clinical characteristics of the cases infected with WHO Swine Influenza A H1N1. Please complete the form and send it by e-mail influenza@who.int or fax: +41 22 7914878.

Countries using this form for their own data collection should feel free to add any other questions needed to identify the patient and the person submitting the information for trace back and information linkage as needed.

1. Submitter Information

Name of submitter _____	Date of submission (yyyy/mm/dd) ____/____/____
Email/Tel. number _____	Country: _____

2. Case Information

Initials of Name _____	National ID Or equivalent _____
Date of birth (yyyy/mm/dd) _____	Age (years) _____
Where available ____/____/____	
Sex Male <input type="checkbox"/> Female <input type="checkbox"/>	

• **Geographic information**

Town/village _____	Region (2 nd administrative level)	
Country _____	Province (3 rd administrative level)	
Latitude (if available) _____	Longitude (if available) _____	

3. Current diagnosis classification**Please tick**

Confirmed <input type="checkbox"/>	Probable <input type="checkbox"/>	Suspected <input type="checkbox"/>
------------------------------------	-----------------------------------	------------------------------------

Laboratory test

- Date of first sample positive for swine influenza (yyyy/mm/dd) ____/____/____
- Name of laboratory sample was sent to _____

• **4.Symptoms**

• Date of onset of symptoms (directly related to disease) (yyyy/mm/dd) _____ / _____ / _____

• Symptoms at disease onset

	Yes	No	Unk	Comment
Fever $\geq 38^{\circ}\text{C}$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
History of fever (temp not measured)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sore throat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Runny nose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sneezing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dry cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Productive cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Conjunctivitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Diarrhoea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seizures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Altered consciousness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Muscle pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Joint pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Epistaxis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. History and Pre-existing conditions

• Did the patient have any of the following vaccines or treatments prior to illness onset?

	Yes	No	Unknown	Comment
Vaccination with seasonal influenza vaccine within the last year?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vaccination with swine influenza vaccine?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vaccination with pneumococcal vaccine?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Use of antivirals as prophylaxis in the 14 days before onset of illness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Amantadine <input type="checkbox"/> Rimantadine <input type="checkbox"/> Oseltamivir <input type="checkbox"/> Zanamivir <input type="checkbox"/> Other (specify)

• Did the patient have any pre-existing conditions? Check one field for each condition:

	Yes	No	Unknown
Cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HIV/other immune deficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heart disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seizure disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lung disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pregnancy	<input type="checkbox"/> _____ months	<input type="checkbox"/>	<input type="checkbox"/>
Malnutrition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____ (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Exposure/ Possible Exposure

- 6.1.Exposure (contact within touching/speaking distance) in the 7 days before onset of illness to confirmed or probable swine influenza A H1N1 case

Yes No Unknown if no go to 6.2

If yes,

	Yes	No	Unk	
Single exposure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Please enter date of likely exposure ____/____/____ and person exposed to (unique identifier) _____
Multiple exposures (exposure to multiple unlinked confirmed or probable cases)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Please enter dates of likely exposure ____/____/____ to ____/____/____ and person exposed to (unique identifier) _____ ____/____/____ to ____/____/____ and person exposed to (unique identifier) _____ ____/____/____ to ____/____/____ and person exposed to (unique identifier) _____
Continuous exposure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Please enter dates of likely first exposure ____/____/____ to ____/____/____ and person exposed to (unique identifier) _____

a.Exposure in a household with a confirmed or probable swine influenza A H1N1 case

Yes No Unknown

b.Patient provided care to swine influenza A H1N1 patient

Yes No Unknown

- 6.2 Patient has an occupation in health care setting

Please tick if yes

	Yes	No	Unknown
Health care worker dealing directly with patients (including doctors, nurses, health care students, health volunteers, allied health professionals, catering staff, cleaners, ambulance staff, and community health workers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worker in laboratory dealing with influenza viruses and/or other respiratory samples	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 6.3Travel outside of residential province in the 7 days prior to onset of symptoms?

Yes No Unknown if yes specify below



Country _____	Province/ State _____
Dates _____	

Country _____	Province/State _____
Dates _____	

Follow-up questionnaire

This form should be filled out after the patient has died or after at least 14 days after the onset of symptoms. Data may be obtained from case interviews and/or hospital charts.

Patient ID: _____
Date of follow up / / _____

- **7 Final classification**

Please tick

Confirmed	Probable	Suspected	Discarded	Lost to follow up
• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>	• <input type="checkbox"/>

- **8. Outcome**

Death	Recovered	Hospitalized	Convalescent	Lost to follow up
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- **9. Disease dates (yyyy/mm/dd)**

Date of first presentation to health care facility	____/____/____	Date of initial hospitalisation if relevant	____/____/____
Date of death	____/____/____	Date of discharge from hospital if relevant	____/____/____
Date of resolution of symptoms	____/____/____		

- **10. Follow-up Symptoms**

- Symptoms ever during the course of the disease

	Yes	No	Unk	Comment
Fever \geq 38°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Duration of fever (in days) _____				
History of fever (temp not measured)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sore throat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Runny nose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sneezing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dry cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Productive cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Conjunctivitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diarrhoea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seizures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Altered consciousness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Muscle pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• **11 Chest radiograph**

- Was a chest x-ray taken? Yes No Unknown
If no or unknown go to 12
- Did chest x-ray show signs of pneumonia? Yes No Unknown
- Date of first chest x-ray showing pneumonia dd/mm/yy ____/____/____

• **12. Treatments provided**

- Did the case receive antiviral treatment? Yes No Unknown
If yes, which drug

Treatment	Date started (dd/mm/yy)	Duration (days)
Oseltamivir	____/____/____	_____
Zanamivir	____/____/____	_____
Amantadine		
Rimantadine	____/____/____	_____

- Were antiviral adverse events noted Yes No
If yes,
moderate Severe Life threatening Specify type of adverse event
- Did the patient require mechanical ventilation Yes No Unknown
- Did the patient receive antibiotics Yes No Unknown
- Date started ____/____/____ Duration (days) _____

- 13. complications observed during the course of disease Yes No Unknown
If yes which

•
14. Other observations/comment

Patient ID: _____

This form should be filled as early as possible.

• **Laboratory diagnosis of swine influenza A H1N1 viruses**

- Specimen tested swine influenza A H1N1 positive at the national laboratory? Yes No

Name of National Lab: _____			
Result:			
Type of test PCR (2 different PCR targets) <input type="checkbox"/>	Culture (virus isolation) <input type="checkbox"/>	Serology (fourfold rise) <input type="checkbox"/>	Other <input type="checkbox"/> (specify): _____
Type of sample			
Respiratory <input type="checkbox"/>	Serum/plasma <input type="checkbox"/>	other <input type="checkbox"/> (specify): _____	

- Specimen sent to WHO Reference Laboratory? Yes No
- Specimen tested swine influenza A H1N1 positive in WHO Reference Laboratory?
Yes No

Name of WHO Reference Lab: _____			
Result:			
Type of test PCR (2 different PCR targets) <input type="checkbox"/>	Culture (virus isolation) <input type="checkbox"/>	Serology (fourfold rise) <input type="checkbox"/>	Other <input type="checkbox"/> (specify): _____
Type of sample			
Respiratory <input type="checkbox"/>	Serum/plasma <input type="checkbox"/>	other <input type="checkbox"/> (specify): _____	

ANNEX 1 Specimen collection form

Specimen collection form (human cases)					
Name of person taking the specimen (s)		Contact details for specimen collector (phone no, email address)			
Date of birth of patient (dd/mm/yy)	Given name(s) of patient	Family name of patient			
Sex of patient F	Nationality M	Occupation			
Patient's hospital/clinic number					
Patient's address (if available - or a suitable contact address):					
House Number or Name:.....		Street NameTown:			
District:		Postal code: Country:			
Place where specimens taken:					
Hospital Y	Other (specify) N	Clinic Y	Home N		
Address (if different from above):					
Unique identifying number	Type of specimen	Date of collection	Clinical diagnosis	Health of patient when specimen collected	Remarks

Annexure 5

Infection prevention and control in health care

Interim guidance provided by WHO
29 April 2009

Background

The current situation regarding the outbreaks of influenza A (H1N1) is evolving rapidly, and countries from different regions of the globe have been affected.

Based on epidemiological data, human-to-human transmission has been demonstrated along with the ability of the virus to cause community-level outbreaks which together suggest the possibility of sustained human-to-human transmission. Health-care facilities now face the challenge of providing care for patients infected with A(H1N1) influenza. It is critical that health-care workers use appropriate infection control precautions when caring for patients with influenza-like symptoms, particularly in areas affected by outbreaks of A(H1N1) influenza, in order to minimize the possibility of transmission among themselves, to other health-care workers, patients and visitors.

As at 29 April, human-to-human transmission of influenza A (H1N1) virus appears to be mainly through droplets. Therefore, the infection control precautions for patients with suspected or confirmed A(H1N1) influenza and those with influenza-like symptoms should prioritize the control of the spread of respiratory droplets. The precautions for influenza virus with sustained human-to-human transmission (e.g. pandemic-prone influenza) are described in detail in the document "**Infection prevention and control of epidemic- and pandemic-prone acute respiratory diseases in health care WHO Interim Guidelines**".

This guidance may change as new information becomes available.

Fundamentals of infection prevention strategies

1. Administrative controls are key components, including: implementation of Standard and Droplet Precautions; avoid crowding, promote distance between patients (≥ 1 m); patient triage for early detection, patient placement and reporting organization of services; policies on rational use of available supplies; policies on patient procedures; strengthening of infection control infrastructure.
2. Environmental/engineering controls, such as basic health-care facility infrastructure, adequate ventilation, proper patient placement, and adequate environmental cleaning can help reduce the spread of some respiratory pathogens during health care.
3. Rational use of available personal protective equipment (PPE) and appropriate hand hygiene.

Available at http://www.who.int/csr/resources/publications/WHO_CD_EPR_2007_6/en/index.html

CRITICAL MEASURES

- Avoid crowding patients together, promote distance between patients
- Protect mucosa of mouth and nose
- Perform hand hygiene

Summary Precautions

For staff providing care to patients with suspected or confirmed A(H1N1) influenza infection and for patients with influenza-like symptoms.

Standard and Droplet Precautions should be strengthened when working in direct contact with suspected or confirmed A(H1N1) influenza infected patients. Key elements:

- Use a medical or surgical mask
- Emphasize hand hygiene and provide hand hygiene facilities and supplies.

As per Standard Precautions, if there is a risk of splashes onto face:

- Use face protection! Use either a medical or surgical mask and eye-visor or goggles, or a face shield and,
- Use a gown and clean gloves.
- DO NOT FORGET HAND HYGIENE AFTER PPE REMOVAL!

Aerosol generating procedures (e.g. aspiration of respiratory tract, intubation, resuscitation, bronchoscopy, autopsy) are associated with increased risk of infection transmission, and the infection control precautions should include using:

- particulate respirator (e.g. EU FFP2, US NIOSH certified N95);
- eye protection (i.e. goggles);
- a clean, non-sterile, long-sleeved gown;
- gloves (some of these procedures require sterile gloves).

KEY ELEMENTS FOR HEALTH CARE

1. Basic infection control recommendations for all healthcare facilities

Standard and Droplet Precautions when caring for a patient with an acute, fragile respiratory illness.

2. Respiratory hygiene/cough etiquette

Health-care workers, patients and family members should cover mouth and nose with a tissue when coughing and perform hand hygiene afterwards.

3. Infection control precautions for suspected and confirmed A(H1N1) influenza infection

Place patient in adequately ventilated room. If single rooms are not available, cohort patients in wards keeping at least 1 meter distance between beds. Standard, and Droplet Precautions for all persons entering the isolation room.

4. Triage, early recognition and reporting of A(H1N1) influenza infection.

Consider A(H1N1) influenza infection in patients with acute, fragile respiratory illness who have been in an affected region within the one week prior to symptom onset and who have had exposure to an A(H1N1) influenza infected patient or animal.

Standard Precautions: basic precautions designed to minimize direct unprotected exposure to potentially infected blood, body fluids or secretions

(www.who.int/csr/resources/publications/standardprecautions/en/index.html)

Droplet Precautions: health-care workers to wear medical mask gowns and clean gloves when providing direct care. Placement of patients with same diagnosis in designated areas may facilitate the application of infection control precautions.

5. Additional measures to reduce nosocomial A(H1N1) influenza virus transmission

Limit numbers of health-care workers/family members/visitors exposed to the A(H1N1) influenza patient.

6. Specimen collection/transport/handling within health care facilities

Use standard, and droplet precautions for specimen collection. Use Standard Precautions for specimen transport to the laboratory. Health-care facility laboratories should follow good biosafety practices.

7. Family member/visitor recommendations

Family members/visitors should be limited to those essential for patient support and should use the same infection control precautions as health-care workers.

8. Patient transport within health-care facilities

Suspect or confirmed A(H1N1) influenza patients should wear a medical/surgical mask.

9. Pre-hospital care

Infection control precautions are similar to those practiced during hospital care for all involved in the care of suspected A(H1N1) influenza patients. (eg. transportation to hospital).

10. Occupational health

Monitor health of health-care workers exposed to A(H1N1) influenza patients. Antiviral prophylaxis should follow local policy. Health-care workers with symptoms should stay at home.

11. Waste disposal

Treat any waste that could be contaminated with A(H1N1) influenza virus as infectious clinical waste, eg. used masks.

12. Dishes/eating utensils

Wash using routine procedures with water and detergent. Use non-sterile rubber gloves.

13. Linen and laundry

Wash with routine procedures, water and detergent; avoid shaking linen/laundry during handling before washing. Use non-sterile rubber gloves.

14. Environmental cleaning and disinfection

Clean soiled and/or frequently touched surfaces regularly with a disinfectant. eg. door handles.

15. Patient care equipment

Dedicate separate equipment to A(H1N1) influenza patients. If not possible, decontaminate and disinfect before reuse in another patient.

16. Duration of A(H1N1) influenza infection control precautions

For the duration of symptoms.

17. Patient discharge

If the A(H1N1) influenza patient is discharged while still infectious (i.e. discharged within the period of infection control precautions: see 16 above), instruct family members on appropriate infection control precautions in the home.

18. Prioritization of PPE when supplies are limited

Medical/surgical mask for the care of all A(H1N1) influenza patients and hand hygiene are priorities.

19. Health-care facility engineering controls

If available, A(H1N1) influenza patients must be placed in adequately-ventilated single rooms. Aerosol-generating procedures should be performed in well-ventilated spaces.

20. Mortuary care

Mortuary staff and the burial team should apply Standard Precautions i.e. perform proper hand hygiene and use appropriate PPE (use of gown, gloves, facial protection if there is a risk of splashes from patient's body fluids/secretions onto staff member's body or face).

21. Health-care facility managerial activities

Education, training, and risk communication. Adequate staffing and supplies.

22. Health care in the community

Limit contact with the ill person as much as possible. If close contact is unavoidable, use the best available protection against respiratory droplets and perform hand hygiene.

Annexure 6

Cabin crew member actions

Persons on board who may be suffering from a communicable disease, especially if they have influenza-like signs and symptoms, should receive immediate attention.

Recommended procedures for cabin crew members

1. If medical support from the ground is available, contact ground support immediately and/or page for medical assistance on board (as per company policy).
2. If medical ground support and/or an on-board health professional is available, crew should follow their medical advice accordingly.
3. If no medical support is available:
 - a) Relocate the ill traveller to a more isolated area, if appropriate, and space is available. If the ill traveller is relocated, make sure that the cleaning crew at destination will be advised to clean both locations. (All surfaces potentially contaminated by the ill traveller should be cleaned and disinfected according to the WHO Guide to Hygiene and Sanitation in Aircraft).
 - b) Designate one cabin crew member to look after the ill traveller, preferably the cabin crew member who has already been dealing with this traveller. More than one cabin crew member may be necessary if more care is required.
 - c) When possible, designate a specific lavatory for the exclusive use of the ill traveller. If not possible, the commonly touched surfaces of the lavatories (faucet, door handles, waste-bin cover, counter top, etc.) must be cleaned and disinfected after each use by the ill traveller.
 - d) If the ill traveller is coughing, request him/her to follow respiratory etiquette
 - i. Provide tissues and the advice to use the tissues to cover the mouth and nose when speaking, sneezing or coughing.
 - ii. Advise the ill traveller to practice proper hand hygiene**. If the hands become visibly soiled, they must be washed with soap and water
 - iii. Provide an air-sick bag to be used for the safe disposal of tissues.
 - e) If available on aircraft and tolerated by the ill traveller, a medical (surgical or procedure) mask should be, and the ill traveller asked to wear it. If a mask is used, replace with a new mask as soon as it becomes damp/humid. After touching a used mask, (e.g., for disposal), proper hand hygiene* must be practiced immediately. Single masks should not be reused and must be disposed safely after use.
 - f) If there is a risk of direct contact with body fluids, the crew member should wear disposable gloves. Gloves are not intended to replace proper hand hygiene. Gloves should be carefully removed and safely disposed. After the removal of gloves, hands should preferably be washed with soap and water or, if the hands are not visibly soiled, cleansed with an alcohol-based hand rub.

g) If the ill traveller cannot tolerate a mask, the designated cabin crew member(s) or any other person in close contact (less than 1 metre) with the ill person should wear a medical (surgical or procedure) mask. The airline should ensure that the cabin crew member has adequate training in its use to ensure that risk is not increased (for example by more frequent hand-face contact or adjusting and removing the mask).

h) Store soiled items (used tissues, disposable masks, oxygen mask and tubing, linen, pillows, blankets, seat pocket items, etc.) in a biohazard bag if one is available. If not, use a sealed plastic bag and label it "biohazard".

i) Ask accompanying traveller(s) (spouse, children, friends, etc.) if they have any similar symptoms. The same procedure should be followed for all ill travellers.

j) Ensure that hand-carried cabin baggage is removed along with the ill traveller, and comply with any public health authority requests.

4. As soon as possible, advise the captain of the situation.

5. Unless stated otherwise by ground medical support or public health officials, ask all travellers seated in the same row, and two rows in front and two rows behind the ill traveller (i.e. a total of five rows) to complete a passenger locator card. If such cards are available on the aircraft. If not available on board, this action should be taken immediately upon the arrival of the aircraft at next airport. For

** Proper hand hygiene: A general term referring to any action of hand cleansing, performed by washing one's hands (either with soap and water or an antiseptic hand rub) for at least 15 seconds. Touching the face with hands should be avoided

Annexure 7**4. List of Algorithms**

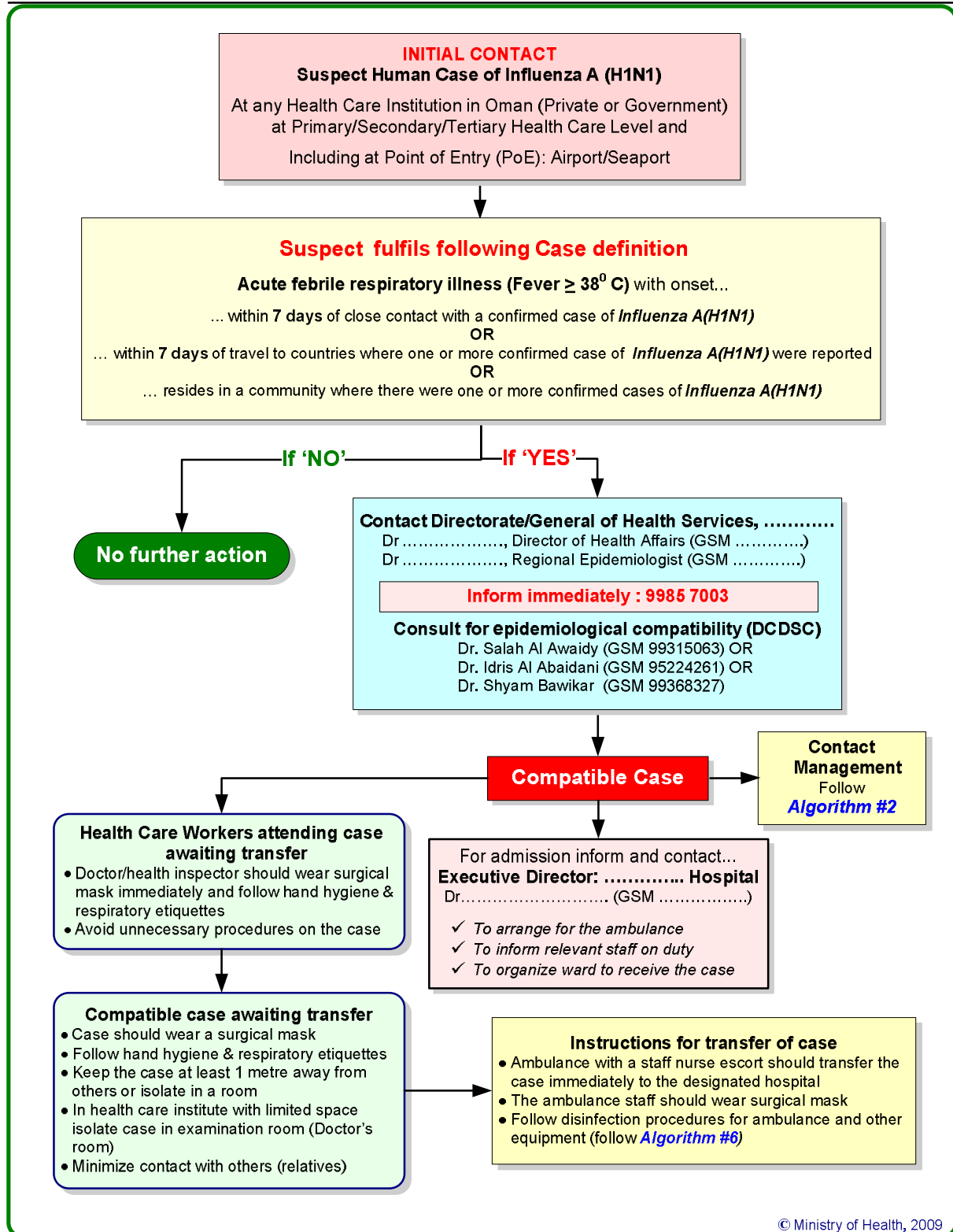
Algorithm # 1	Case Detection and Transfer	31
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Influenza A(H1N1) Algorithm #1: Case Detection and Transfer Region/Governorate

Ver-3/3rd June '09



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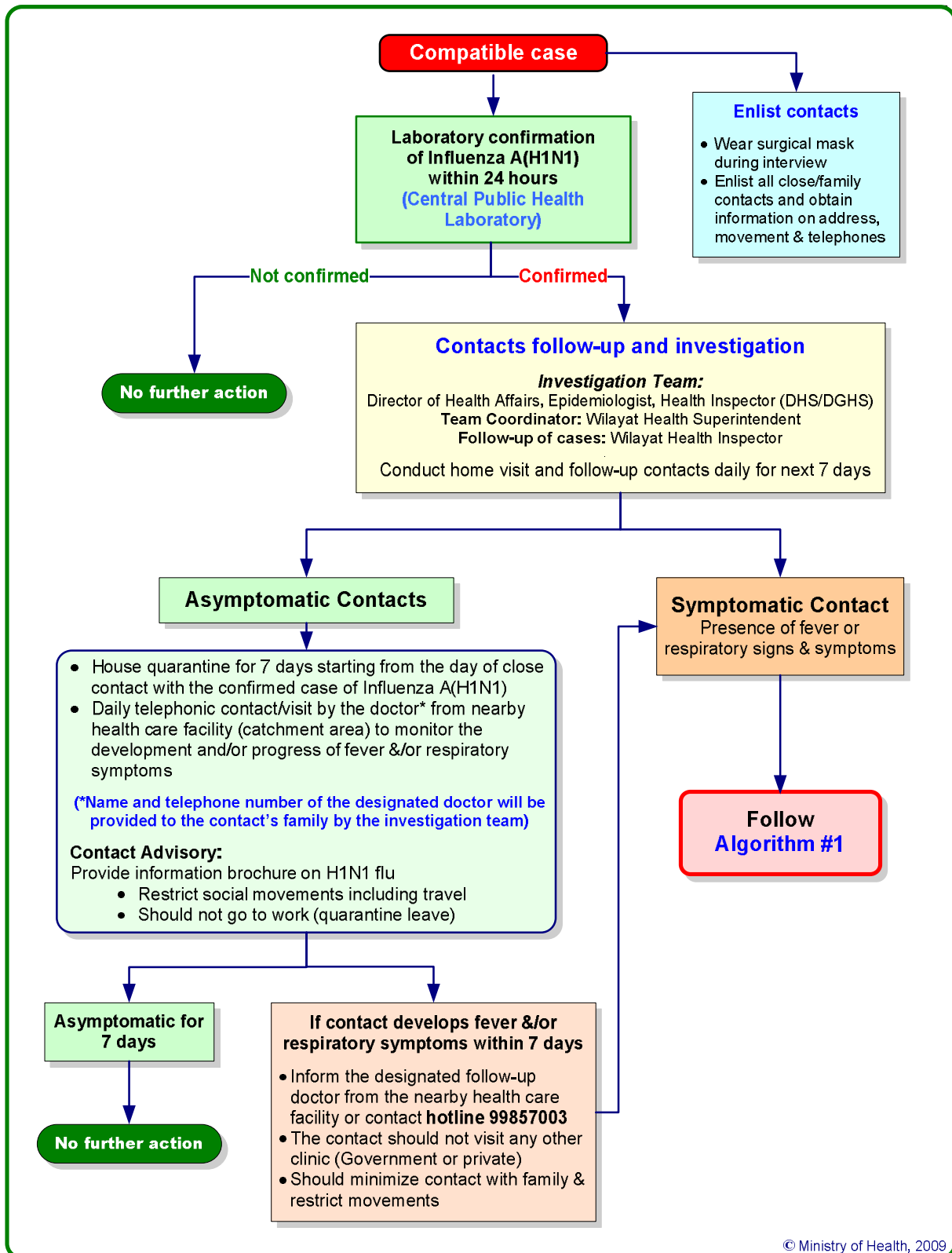


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Influenza A(H1N1) Algorithm #2: Contacts Surveillance

Ver-3/3rd June '09

.....Region/Governorate



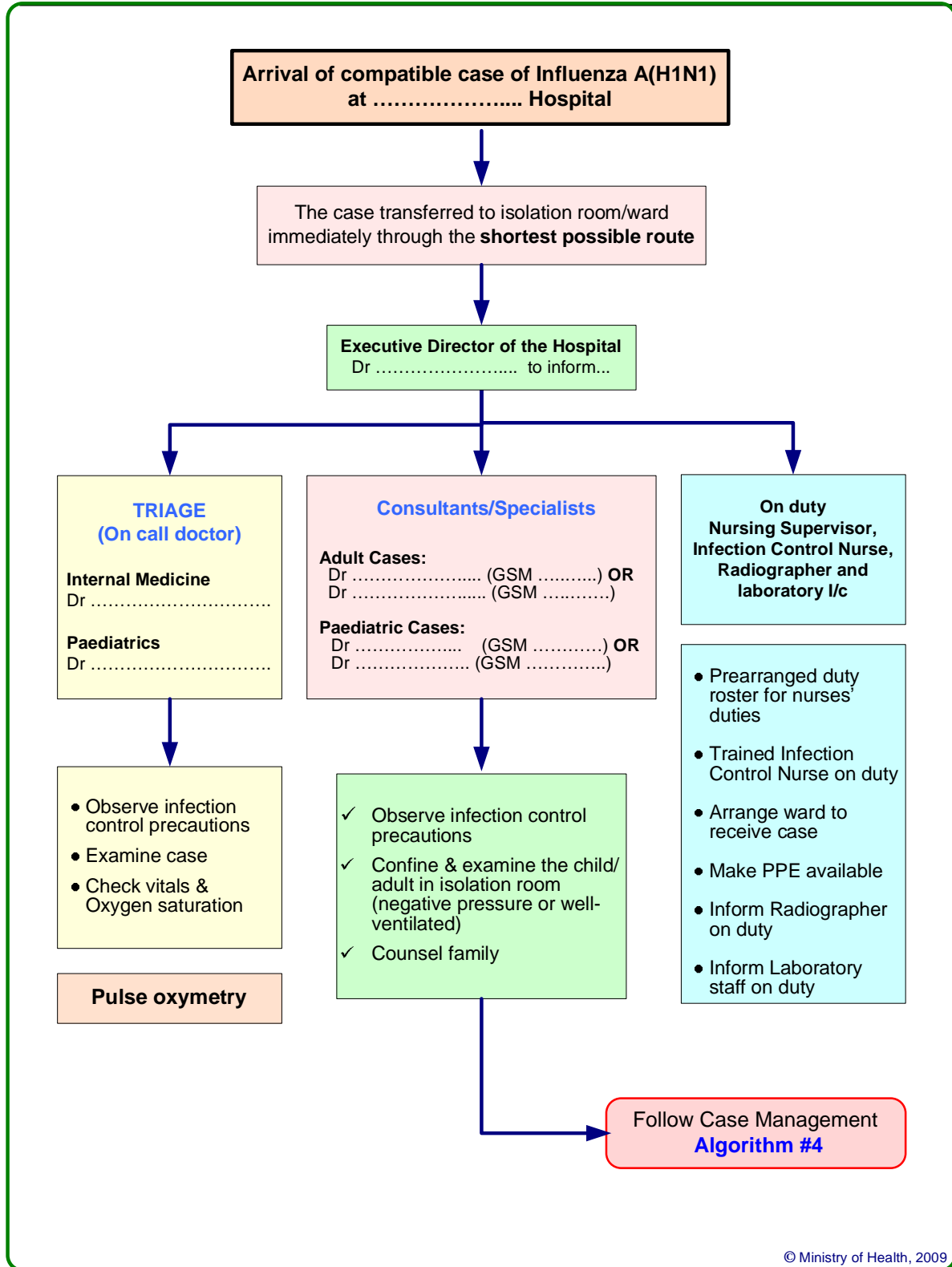
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Influenza A(H1N1) Algorithm #3: Case Arrival to Referral HospitalRegion/Governorate

Ver-3/3rd June '09



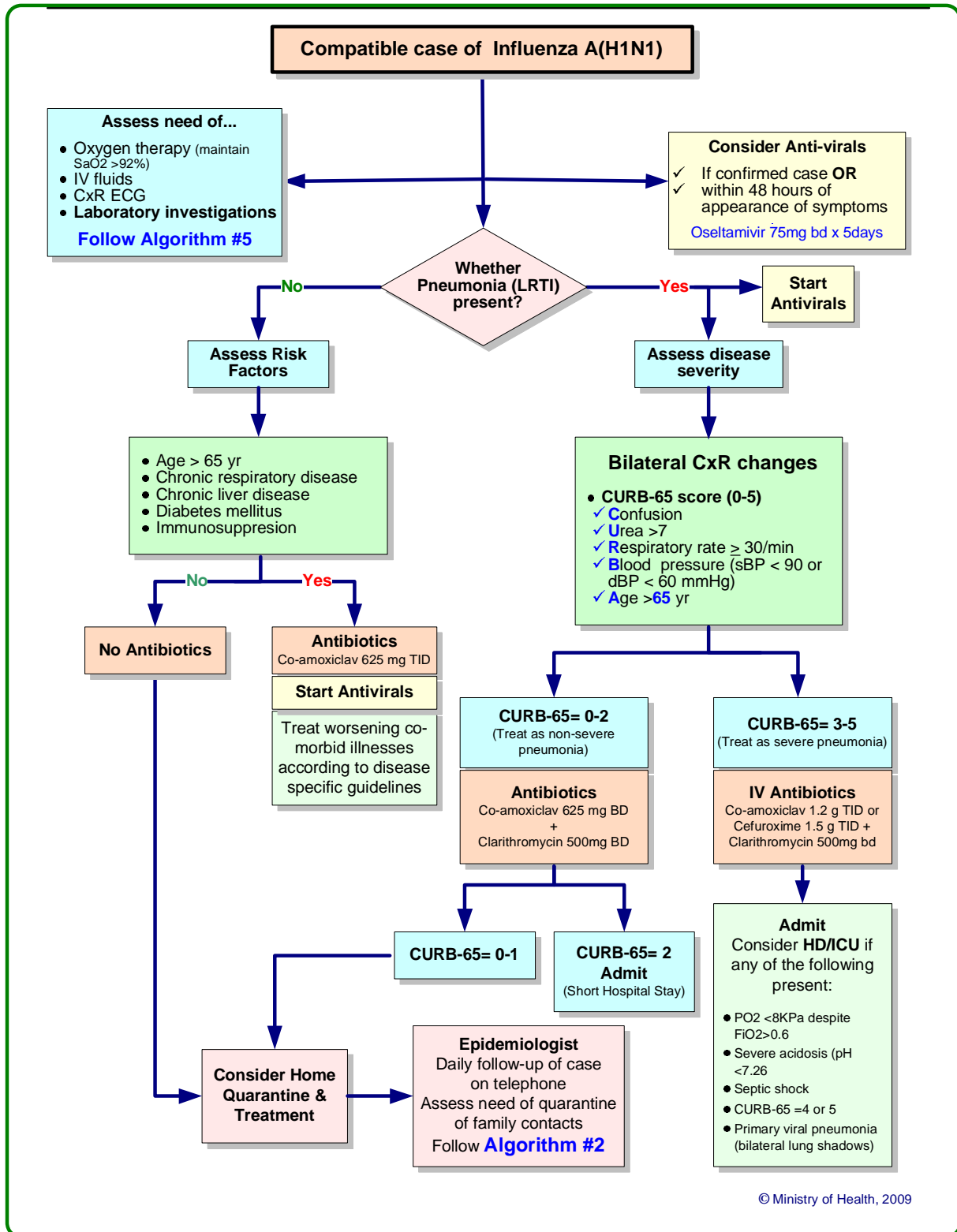


Department of Communicable Disease Surveillance & Control (DCDSC), Directorate General of Health Affairs, Ministry of Health, Oman

Influenza A(H1N1) Algorithm #4a: Adult Case Management

.....Region/Governorate

Ver-3/3rd June '09



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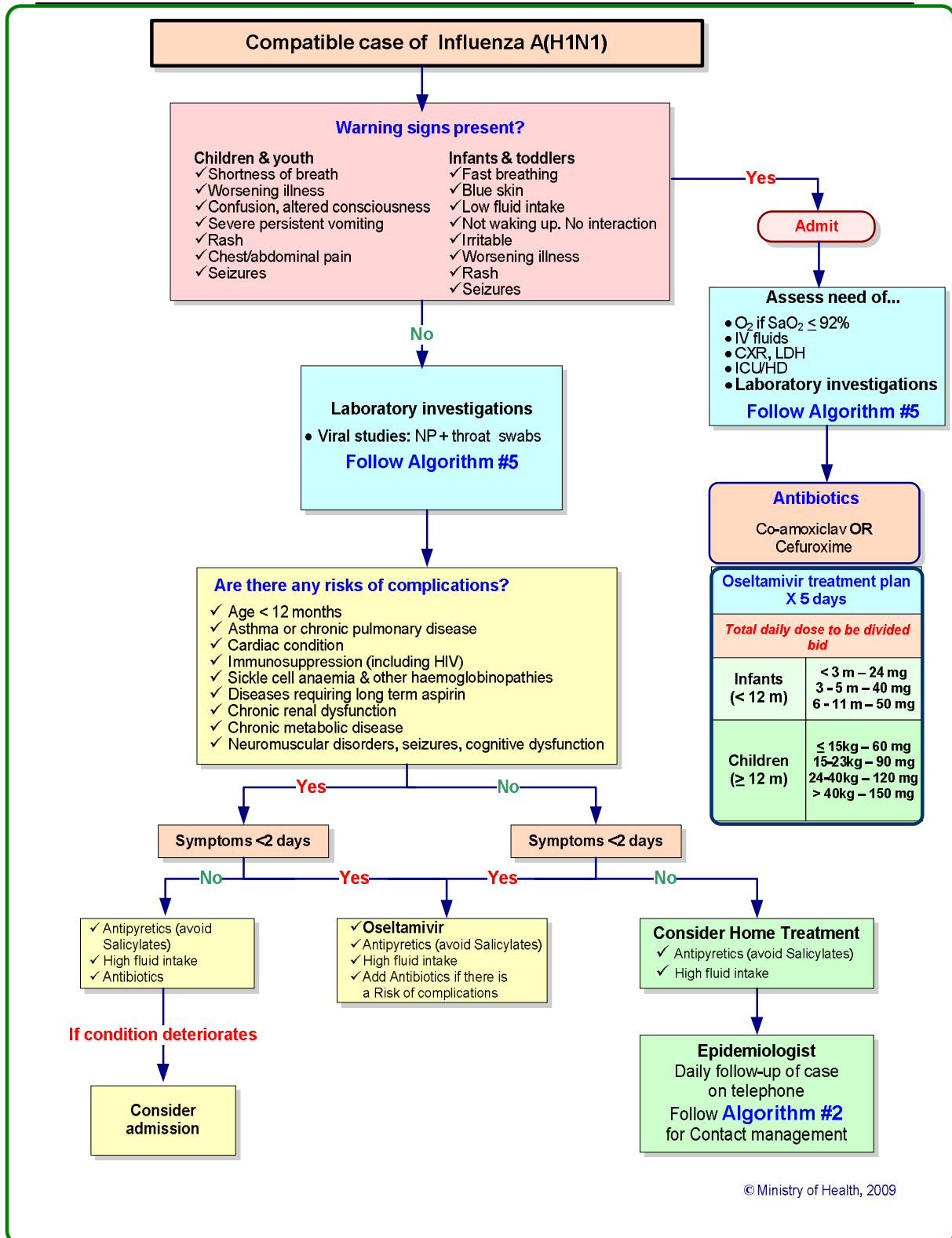


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Influenza A(H1N1) Algorithm #4b: Paediatric Case Management

.....Region/Governorate

Ver-3/3rd June '09



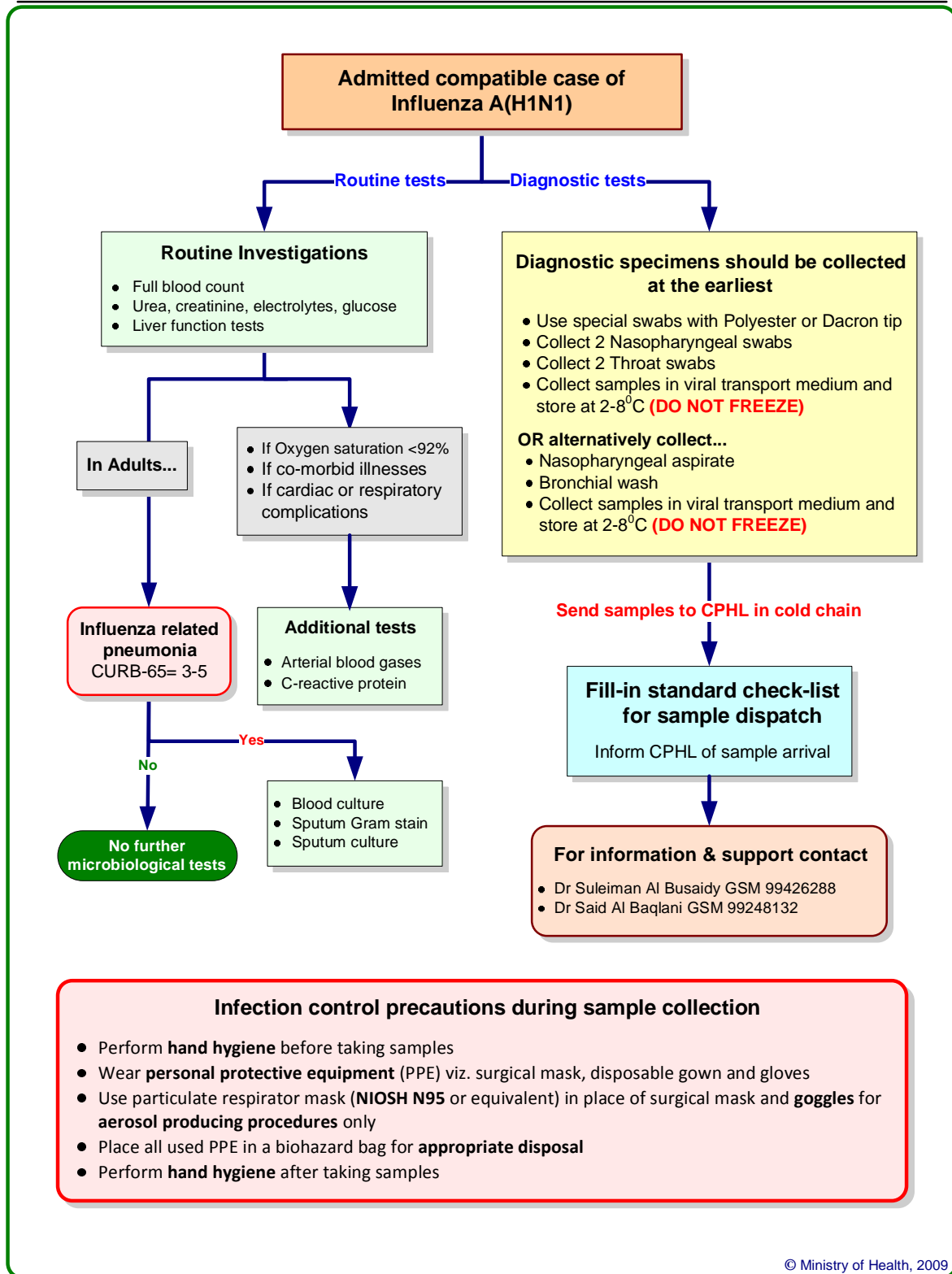


Department of Communicable Disease Surveillance & Control and Department of Laboratories, DGHA, Ministry of Health, Oman

Influenza A(H1N1) Algorithm #5: Laboratory Investigations

Ver-3/3rd June '09

.....Region/Governorate



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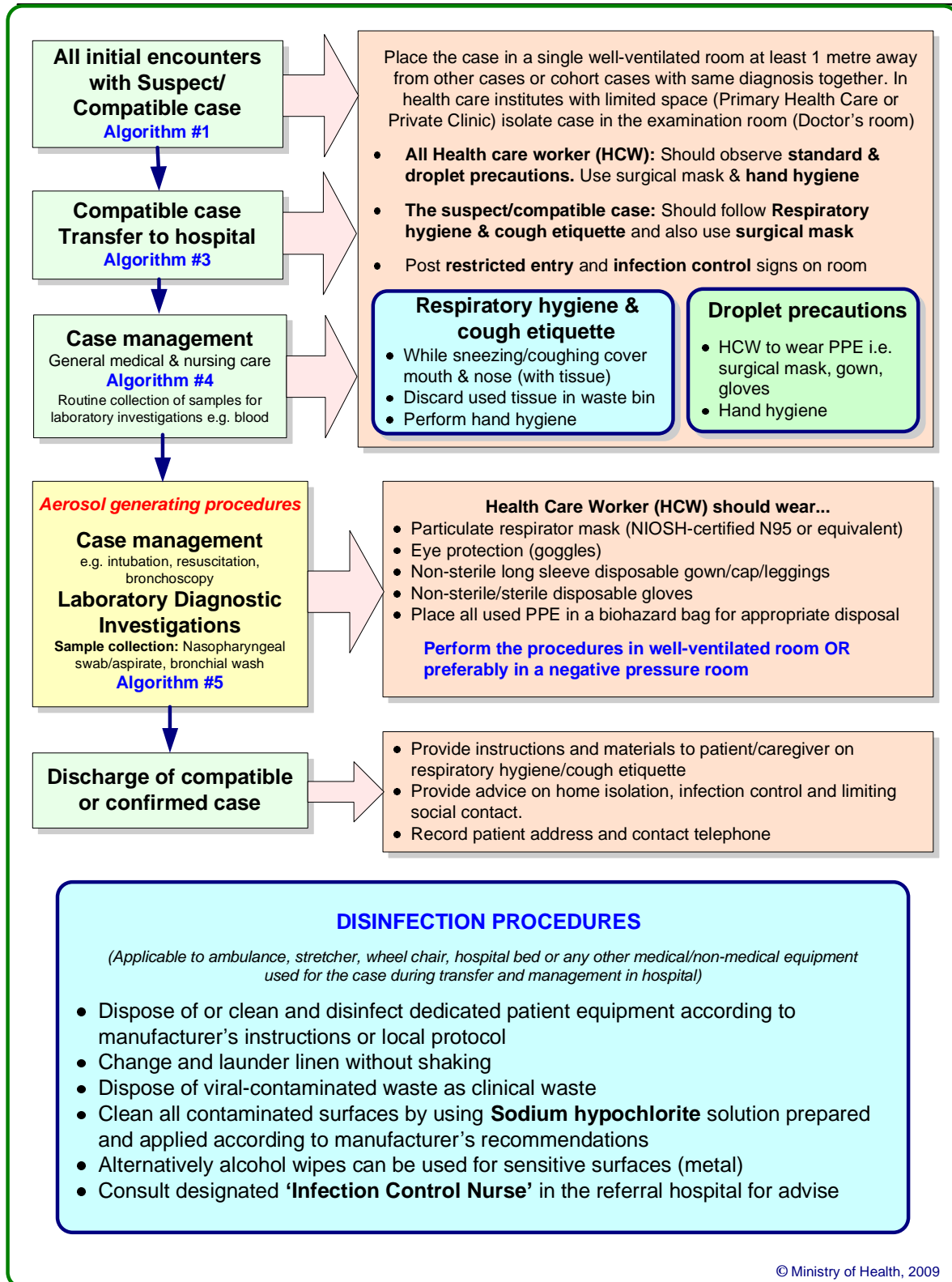


Department of Communicable Disease Surveillance & Control (DCDSC), Directorate General of Health Affairs, Ministry of Health, Oman

Influenza A(H1N1) Algorithm #6: Infection Control Measures

.....Region/Governorate

Ver-3/3rd June '09

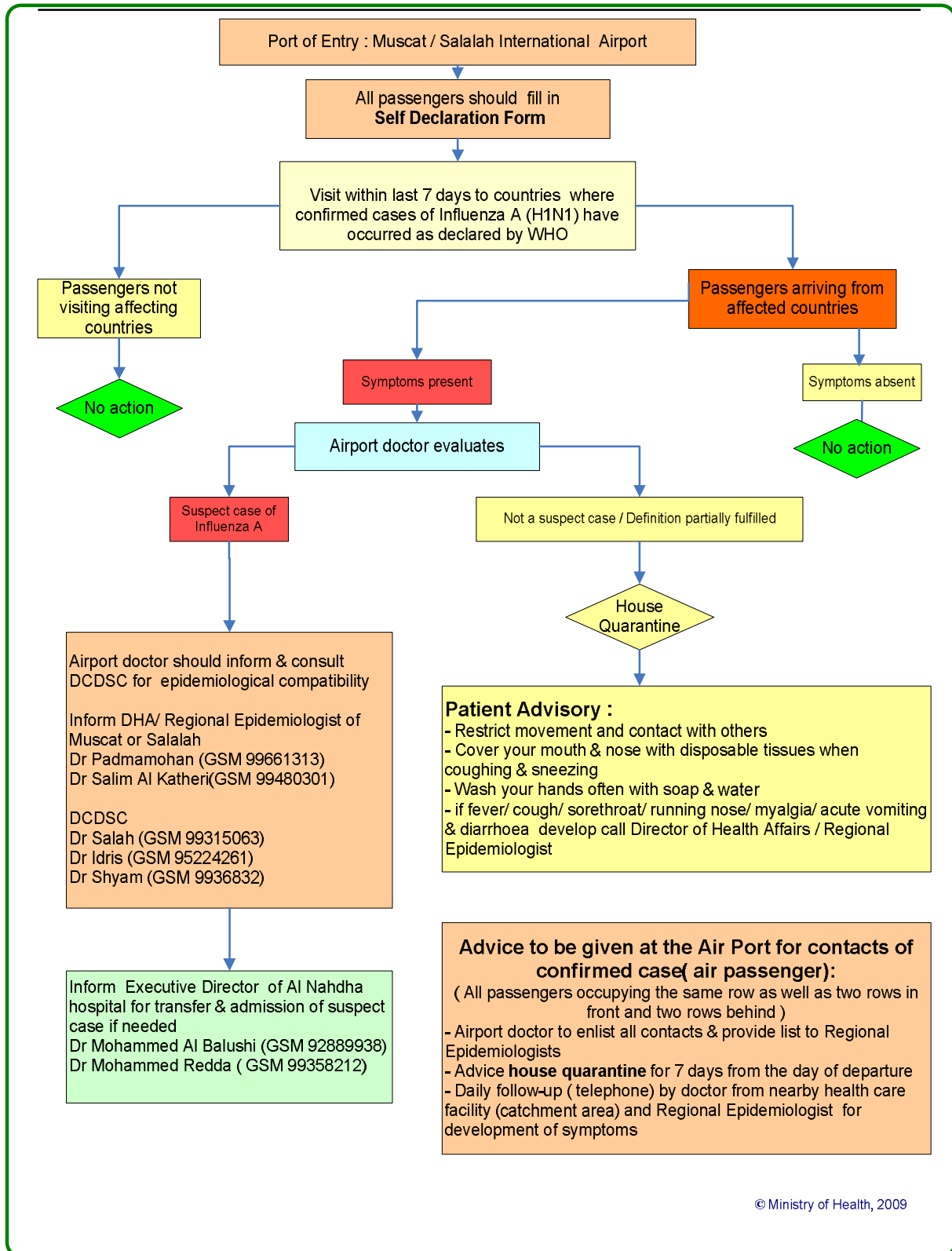




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Influenza A(H1N1) Algorithm #7: Surveillance at Airports

Ver-3/3rd June '09



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