National Health Emergency Plan: Infectious Diseases
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1. Setting the scene

Over the last few years it has become increasingly apparent that outbreaks, epidemics or pandemics of infectious diseases – once felt to be no longer a major issue in New Zealand – are again emerging as a potent threat to health service delivery, health care workers and the population at large.

The diseases concerned may be old ones, such as influenza, or emerging or re-emerging infectious diseases (EIDs), such as severe acute respiratory syndrome (SARS). They may be more or less uncontainable and liable to infect a large proportion of the population, or, like SARS, containable but still liable to have significant impacts on health service delivery.

This National Health Emergency Plan for infectious diseases is directed at diseases that are typically high-impact and rapidly progressive, and that have the potential to create a national health-related emergency. The Plan does not address infectious diseases exhibiting a slower rate of spread, such as meningococcal disease, antibiotic-resistant organisms in New Zealand hospitals or HIV/AIDS.

1.1 Origins of the Plan

The Ministry of Health is responsible for planning the national response to health service emergencies of all kinds. Planning how the health and disability sector will respond to and manage disease outbreaks, epidemics or pandemics that threaten to impact on health service delivery is part of this responsibility.

As part of the planning process the Ministry of Health held a large-scale exercise in 2002. ‘Exercise Virex’ postulated a virulent new strain of influenza originating overseas causing a worldwide pandemic which spread to New Zealand. The purpose of the exercise was to test and evaluate New Zealand’s response to this threat. Exercise Virex identified a number of areas of concern, and led to the development of the New Zealand Influenza Pandemic Action Plan (IPAP). The plan recognised that there was little chance of containing influenza during a pandemic and focused on managing responses to minimise the social and economic costs.

In 2002/03 SARS originated in China and spread around the world. Hong Kong, Taiwan, Canada, Singapore and Vietnam all experienced SARS outbreaks. Although relatively few people actually caught SARS (about 9000 recognised cases worldwide, with about 900 deaths to June 2004), internationally there were heavy impacts on health services and regional and national economies. The disruption caused by the (successful) attempts to contain the disease was often as significant as the direct impact of the condition itself.

The IPAP framework focused on uncontainable influenza. However, during the SARS crisis health services were faced with the need to contain and manage a novel disease that was potentially containable. Recognising this, in July 2003 the Ministry of Health initiated planning for a national response to a potentially containable EID such as SARS.

Work on the EID-related plan found that many of the system and clinical characteristics and actions required for a successful response to a potentially containable EID overlapped, or were complementary to, those required in response to less readily containable infections, like influenza. Rather than continue to develop two separate plans, the EID-related plan was merged with IPAP, resulting in the present document.
However, because pandemic influenza is the most likely threat, specific characteristics and other matters relating to pandemic influenza are outlined in Appendix III.

1.2 The consultation process

The health sector was widely consulted on the draft plan, with 38 submissions received from individuals and organisations. A sector advisory group was also established, with broad representation from the health sector. Meetings and teleconferences were held at the Ministry of Health in Wellington, and Ministry staff also held a series of meetings with DHB regional groups in Auckland and Whangarei (Northern region), Wellington (Central region) and Dunedin and Christchurch (Southern region). These groups included emergency planners, ambulance operators, nursing and medical clinicians, managers, and public health and primary care professionals.

The preparation of the plan was also informed and guided by:

- Ministry of Health and DHB experiences during the SARS crisis, and post-SARS evaluations
- published and anecdotal reporting from overseas regions affected by SARS
- advice from the internal Ministry of Health technical advisory group
- internal consultation within the Ministry, in particular with other project teams under the umbrella of the National Emergency Management Plan (see section 3.2)
- the previous New Zealand Influenza Pandemic Action Plan
- the Emerging Infectious Disease Forum, held in Wellington by the Ministry of Health on 7 May 2004, which included a report from the Western Pacific Regional Chief Nursing Officers Summit, where SARS was a major theme.

The membership of the sector advisory group that assisted with the development of the Plan is set out in Appendix I.

1.3 Guiding principles

The guiding principles of this Plan are to:

- provide the greatest possible protection for the population at large, all health service workers, and health and disability service consumers
- protect and maintain normal health service delivery at local, regional and national levels for as much of the health service as possible
- provide the best available clinical care.

1.4 Objectives of the Plan

The objectives of this Plan are to:

- describe the larger context within which the Ministry of Health and all New Zealand health services will function during any national health-related emergency, including New Zealand's responsibilities under international agreements and regulations
• clarify the roles and responsibilities of the Ministry of Health, District Health Boards (DHBs),
  public health services and other key organisations
• provide specific advice to assist DHBs, public health services and other agencies to prepare
  their own action plans
• describe the Ministry of Health emergency management system
• describe the expectations for DHB emergency management systems
• describe the mechanism through which this plan will be activated and stood down.

By ensuring that all parts of the health and disability sector understand the systems, processes
and roles described in the Plan, activation of the Plan will:
• ensure rapid, timely and co-ordinated action
• ensure current and authoritative information for health professionals, the public and media at
  all stages of the response
• reduce morbidity and mortality to the greatest extent possible
• ensure that health service ‘business as normal’ is protected to the greatest possible degree
• minimise the social disruption and economic losses that may be associated with disease
  outbreaks or epidemics.

1.5 Target audience

This Plan should be read and used by all agencies and individuals in the health and disability
sector as a high-level guide to preparing and responding in the event of national or regional
health emergency. It is particularly recommended to:
• DHB chief executive officers and chief operating officers
• emergency planners
• public health unit managers
• infectious disease physicians
• senior health service managers
• chief medical advisors and directors of nursing
• medical officers of health
• primary health organisation and independent practitioners association managers, and primary
  care clinicians
• infection control practitioners.

1.6 Currency of the Plan

This Plan remains in force until it is replaced by a later version. The latest version will always be
2. Key Strategic Responsibilities

This section outlines the strategic responsibilities of key organisations and bodies that are likely to be involved in a health-related emergency. Specific roles and responsibilities associated with system and clinical preparedness are outlined in later sections.

2.1 Department of the Prime Minister and Cabinet

It is likely that any health-related emergency will require co-ordinated actions from a number of government agencies to minimise social disruption and economic impacts. Whole-of-government co-ordination will be organised by the Department of the Prime Minister and Cabinet (DPMC). It is probable that the Officials’ Committee for Domestic and External Security Co-ordination (ODESC), chaired by the chief executive officer of the DPMC, will be given the task of providing the necessary co-ordination.

Appendix IV sets out the intersectoral actions likely to be required in the response to a national health emergency from an infectious disease. It provides a generic guide to the issues and responsibilities that will need to be addressed, and the parties that will need to be involved.

2.2 Ministry of Health

2.2.1 National responsibilities

The Ministry of Health acts as the Government’s and the Minister’s agent in dealing with the health and disability sector. The Ministry’s responsibilities include policy development and national planning, including national planning for a health-related emergency. The Ministry will be responsible for initiating and co-ordinating any national health sector emergency response, and is also responsible for supporting DHBs in the event of a contained, local outbreak of an EID.

The Ministry is also responsible for monitoring various health and disability sector functions, including emergency planning and response capabilities. Monitoring will be done through various mechanisms, including the district annual planning process and certification audits carried out by Designated Audit Agencies.

The Ministry of Health has memoranda of understanding with various government agencies, which include requirements for interventions in a national health-related emergency. These requirements will be updated from time to time, as necessary.

2.2.2 International responsibilities

The Ministry is charged with ensuring that New Zealand meets its international obligations and complies with World Health Organization (WHO) international health regulations. By 2006 specific obligations will include:

- surveillance and response to public health events and emergencies within the country
- surveillance and assessment capacities that operate nationally (informed by the above), as well as the ability to rapidly determine (using criteria specified in the International Health Regulations) whether WHO should be consulted or notified
• in the case of a WHO-declared public health emergency of international concern, contingency planning and other capacities to swiftly and lawfully implement WHO-recommended response measures (potentially both at the border and in-country).

### 2.3 District Health Boards

Under section B.4 of the 2002/03 Crown Funding Agreement, DHBs are required to develop and maintain major incident and emergency plans. These plans need to outline appropriate actions and responses from all devolved health services, embracing all provider arm services, primary health organisations (PHOs) and primary sector services, devolved Disability Support Services and, in some cases, ambulance services.

This plan requires DHBs to develop and maintain regional incident co-ordination plans, which set out the proposed regional response of DHBs in the event of a regional incident, irrespective of origin.
3. System Preparedness

This section describes aspects of system preparedness that are required for an effective response in the event of a national health-related emergency.

3.1 Co-ordinated Incident Management System

The health and disability sector's response during a national health-related emergency will be based on the Co-ordinated Incident Management System (CIMS). CIMS is the model adopted in New Zealand for the command, control and co-ordination of emergency response. This Plan features a modified CIMS structure, which will work most effectively for the health and disability sector. It is intended to provide a structure allowing the multiple agencies or units involved in an emergency to work together as a team. A map of the national CIMS structure is shown in Figure 1.

Figure 1: Health and disability sector CIMS structure

The CIMS structure does not affect the vertical operation of command within agencies. Normal clinical, managerial and other relationships are maintained within units and agencies involved in a response. Adopting the CIMS structure at the national, regional and local level will help to meet
the leadership challenges posed by a national health-related emergency, and to ensure consistency of responses across the health and disability sector by providing for:

- effective and timely crisis communications between the centre and the periphery, and between (and within) organisations and agencies
- effective deployment of resources
- co-ordination of skills and knowledge
- consistent guidelines and directives
- effective clinical management
- staff and patient safety.

Health and disability sector responses will be co-ordinated by and through a national co-ordinator, based in the Ministry of Health in Wellington and supported by a national co-ordination team. The national co-ordinator will be in contact with regional co-ordinators and/or individual DHB incident controllers. Regional co-ordinators and DHB incident controllers will manage responses in their own region or DHB through their own CIMS structures.

### 3.2 Ministry of Health responsibilities

#### 3.2.1 Development and maintenance of the National Health Emergency Plan (NHEP)

The Ministry is responsible for developing and maintaining the National Health Emergency Plan (NHEP), which is the umbrella plan incorporating this and other specific health emergency action plans.

#### 3.2.2 Single point of contact

All DHBs and medical officers of health will be able to contact senior officials at the Ministry of Health on a 24-hour, seven-day basis via an 0800 number, for the purpose of notification of a potential or actual health-related emergency. In the event that notification leads to a national emergency response, DHBs will be advised of additional national emergency control contact number(s).

The single point of contact as described above is specifically for the purpose of DHBs and other organisations and/or individuals notifying the Ministry of the need, or perceived need, for a national or regional emergency response. It remains in place at all times. This communication function is in addition to the Ministry’s normal channels of referral.

#### 3.2.3 National co-ordination team

In the event of a national health-related emergency, the Ministry of Health will establish a national co-ordination team under a CIMS structure, comprising members of the Public Health, Clinical Services, DHB Funding and Performance, Risk and Assurance, Mental Health, Corporate and Information directorates, and others as necessary. The national co-ordination team will lead the national response in a health-related emergency. The leader of the team is the national co-ordinator.
The national co-ordination team will be responsible for:

- initiation, activation, escalation and stand-down of a national emergency response
- national intelligence and planning, including liaison with WHO and the other international bodies responsible for high-level advice/recommendations to national authorities
- convening the technical advisory group and other advisory group(s), and national dissemination of clinical and public health advice
- information and advice to Ministers
- national liaison with other government agencies, including the Department of the Prime Minister and Cabinet, the Ministry of Foreign Affairs and Trade, the New Zealand Immigration Service and the NZ Customs Service
- collating information for use and dissemination in New Zealand with the support of the best expert advice available
- national oversight of clinical response, including the clinical escalation pathway
- provision of public information, including 0800 advice lines and website information, and providing access to travel advisories produced by border control agencies
- instigation and stand-down of universal or targeted public health assessments at the border.

The CIMS structure of the Ministry National Co-ordination Team is shown below.

**Figure 2: Ministry of Health CIMS structure**

Specific roles and responsibilities in the Ministry CIMS structure are fully described in Appendix II.
3.2.4 Prioritisation of business

During a national health emergency, significant Ministry of Health resources will be dedicated to managing the response. As a result, some aspects of Ministry business are likely to be affected. DHBs will be informed as soon as possible of any re-prioritisation of Ministry work programmes and the likely impacts on DHBs.

3.2.5 Media and public communications

The national co-ordination team will be responsible for communicating with the media on national issues during a national health-related emergency, and will retain oversight of all communications with the health and disability sector. The Ministry will also be responsible for providing information directly to the general public. All suitable media will be used, including an 0800 advice line, the Ministry of Health website at http://www.moh.govt.nz and the Healthline advice line, as necessary. Comment on DHB media and public communications is provided in section 3.3.10.

3.2.6 Communications with the health and disability sector

The national co-ordination team will be responsible for ensuring that Ministry of Health case definitions, clinical advice and treatment guidelines for health professionals are based on the latest available, authoritative, evidence-based or consensus information. Clinical advice and guidelines released by the national co-ordinator will always relate specifically to the New Zealand situation, and may at times differ from information or advice posted on WHO or other overseas websites.

3.2.7 Surveillance

The various methods of surveillance that operate in New Zealand should provide early warning of developing trends in disease spread or development. It is likely that any new infectious disease will first be detected through well-informed local practitioners detecting and reporting unusual illnesses, and/or via good intelligence gathering from overseas through WHO and other international agencies.

The national influenza surveillance systems that operate in New Zealand are discussed in Appendix III.

3.2.8 Border control

Universal or targeted public health assessments at national borders may be effective in preventing some infectious diseases from spreading. In New Zealand’s case, the potential for effective border screening is enhanced because the majority of international travellers entering or leaving New Zealand pass through relatively few ports or airports. Acting on the advice of WHO and other national and international experts, the national co-ordination team will be responsible for the instigation and stand-down of health assessments at the border. Outline protocols and procedures have been developed for assessing passengers arriving in and exiting from New Zealand. These will be modified to suit the specific situation, and can be rapidly implemented when necessary. The relevant public health service will provide actual public health measures at ports and airports.
The Ministry of Health will also liaise with WHO and other countries’ national authorities to establish the nature and level of clinical screening of travellers bound for New Zealand.

### 3.2.9 Vaccines and other medications

For a novel infectious disease the development time for an effective vaccine is unknown. Potentially it could take six months or longer before the first supplies of vaccine become available.

Initial supplies will almost certainly be limited, requiring prioritisation so that the greatest benefit can be achieved. The Ministry of Health, taking advice from its technical advisory group, will establish priority groups for any available vaccines. Once vaccines become available, the Ministry will be responsible for promoting immunisation and awareness to the public and health care professionals.

Clinical advice regarding other medications (such as anti-virals) will be developed using expert advice from relevant agencies and committees, and communicated through the national co-ordination team.

### 3.2.10 National procurement

The Ministry of Health may consider the national procurement and/or central stockpiling of equipment and supplies. This could be effective in situations where there are critical supply difficulties, or where new or specialised equipment and/or supplies are required (e.g., vaccines, pharmaceuticals).

### 3.2.11 Post stand-down

After stand-down from any emergency response, the Ministry will initiate a review of actions taken during the emergency and the outcomes of the response. The purpose of the review will be to constructively criticise Ministry and sector actions and responses and identify areas for improvement. The resulting review will be a public document. This Plan will be revised, taking the review findings into account.

### 3.3 DHB responsibilities

#### 3.3.1 DHB major incident and emergency plans

Each DHB is responsible for the preparation of a major incident and emergency plan. This plan identifies how essential health services will continue to be delivered in the event of a national health-related emergency, taking into account the DHB’s role as both a provider and contractor/funder of health services. These plans must take national and regional perspectives into account.
DHB major incident and emergency plans will be expected to cover communication with all health service providers and other relevant organisations/agencies in a DHB’s district. Detailed communication trees at DHB level will be a matter for each DHB’s individual circumstances.

Major incident and emergency plans must meet the relevant legislative requirements set out in the Civil Defence Emergency Management Act 2002.

### 3.3.2 Single point of contact

DHBs must maintain a communications function that ensures the effective two-way distribution of information through a single point of contact on a 24-hour, seven-day basis. This will ensure that the Ministry of Health can communicate directly with DHBs at all times.

### 3.3.3 Regional incident co-ordination plans

Each DHB, in consultation with other DHBs in their region, is responsible for the preparation of a regional incident co-ordination plan. These set out the proposed regional response of DHBs in the event of a regional incident. Regional incident co-ordination plan will set out a generic process for managing regional incidents (irrespective of origin) with task assignments, assignments of roles and responsibilities, standard forms and other relevant guidance. These plans are intended to provide a consistent approach to co-ordination, co-operation and communication within each region. As such, they will support decision-making by the regional co-ordination teams in the event of national health-related emergency.

### 3.3.4 Regional groupings

This Plan divides the country into four regions, as shown in Table 1. The division reflects considerations of manageable population size and geographic spread.

#### Table 1: DHB regional groups

<table>
<thead>
<tr>
<th>Region</th>
<th>District Health Boards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>Northland, Waitemata, Auckland, Counties Manukau</td>
</tr>
<tr>
<td>Midland</td>
<td>Waikato, Bay of Plenty, Lakes, Tairawhiti, Taranaki</td>
</tr>
<tr>
<td>Central</td>
<td>Whanganui, MidCentral, Hawke’s Bay, Wairarapa, Hutt Valley, Capital and Coast</td>
</tr>
<tr>
<td>Southern</td>
<td>Nelson Marlborough, West Coast, Canterbury, South Canterbury, Otago, Southland</td>
</tr>
</tbody>
</table>

### 3.3.5 Regional co-ordination teams

To organise the regional response of DHBs during a health emergency, the DHBs in each of the four designated regions will form a regional co-ordination team. DHB Regional co-ordinators will be responsible for managing the response in each region. Figure 3 shows the CIMS structure at regional level.
During a national health emergency, the regional co-ordinators will act as the single points of contact between the Ministry and the DHBs in their respective regions. Membership of the regional co-ordination teams is decided by the DHBs concerned, but should include representation from:

- DHB emergency management
- relevant clinicians (eg, infectious disease, paediatric, respiratory)
- infection control practitioners
- public health services
- senior management
- primary health care
- ambulance services.

Regional co-ordination teams can be activated either:

- regionally, by the affected regional DHBs in discussion with the Ministry of Health, when an EID-related emergency affects or may impact on several DHBs within a given region
- nationally, by the Ministry of Health when the Ministry directs a national activation.
In a regional activation, a regional co-ordination team may be based in any DHB, as agreed between the affected regional DHBs and with the Ministry of Health. During a national activation, the regional co-ordination team will most likely be based in the principal regional tertiary DHB. Regional co-ordination teams will be resourced by the regional DHBs and structured according to the CIMS model.

### 3.3.6 Role of the regional co-ordination team

The regional co-ordination teams’ principal task will be to co-ordinate the most effective use of regional DHB resources of all kinds during a national or regional health-related emergency. This will include the use of regional resources as part of any overall national response co-ordinated by the Ministry of Health.

Specific roles and responsibilities of the regional co-ordination teams include:
- advising relevant personnel of regional emergency control contact number(s)
- regional liaison with the national co-ordination team
- implementation of the regional clinical escalation pathway
- reconfiguration of regional services, where necessary
- co-ordination of regional community, primary, secondary and tertiary clinical responses
- co-ordination of regional patient referrals and transfers
- regional transport arrangements
- monitoring the use of resources of all kinds
- co-ordination of resource distribution
- cross-DHB boundary staffing resource support
- regional planning for and, if necessary, implementation of quarantine, isolation and maintenance of regional EID patient contacts
- oversight of all communications with the national co-ordinator and DHB incident controllers.

### 3.3.7 DHB emergency management teams

Individual DHBs will base their response on the CIMS structure. To organise the response at DHB level, each DHB will convene their emergency management team. An incident controller will be responsible for managing the response in each district. Membership of the DHB emergency management team may include representation from:
- public health and medical officers of health
- DHB emergency management
- emergency departments
- infection control
- intensive care
- medical, infectious disease, respiratory and paediatric specialities
- nursing
- mental health
- pathology, laboratory and microbiology services
• occupational safety and health
• general practice
• ambulance
• hospital management
• DHB funding
• communications.

DHB emergency management teams must also be able to communicate with, seek advice from, and include in meetings as necessary:
• other hospital specialities and ancillary services
• private hospitals and other private health service providers (eg, community laboratories, radiological services)
• other primary care providers (eg, pharmacists, dentists, well child providers, lead maternity carers)
• education providers
• local government
• civil defence
• other agencies, as appropriate.

3.3.8 Responsibilities of DHB emergency management teams

The DHB emergency management team’s principal task will be to co-ordinate the most effective use of DHB resources of all kinds during a national or regional health-related emergency. This will include the use of local resources as part of any overall regional or national response co-ordinated by the regional co-ordination team or the Ministry of Health.

Specific responsibilities of the DHB emergency management teams include:
• close liaison with the medical officers of health in their region
• implementation of their DHB major incident and emergency plan, and contributing to implementation of the regional incident co-ordination plan for their region
• implementation of any advice and guidelines issued by the Ministry of Health via the regional co-ordination team
• maintenance of core clinical capacities in a health-related emergency
• communication with and support of primary health care providers within the DHB region
• liaising with other agencies at a local level, as appropriate (including local government, local civil defence/emergency management, local education providers and national health groups with local representation)
• contributing to the regional co-ordination team and local implementation of decisions reached at a regional level.
DHB incident controllers will retain oversight of all communications at DHB level. The incident controller will be responsible for receiving information and distributing it to the relevant services and individuals, including:

- services – emergency planning, emergency department, intensive care, infection control, radiology, laboratories, medical/paediatric/infectious disease specialities, general practitioner liaison, mental health
- individuals: DHB chief executive officer, chief operations officer, chief medical advisors, director of nursing.

The incident controller must be able to communicate with hospital-based services, and be able to develop strategies in conjunction with those services.

### 3.3.9 Service prioritisation

System capacity issues and/or infection control precautions may mean that some services are reduced in volume or temporarily suspended during a health-related emergency, or that some facilities temporarily stop admissions or discharges.

DHB plans should cover the possible need for service reductions or suspensions and provide for flexible prioritisation of such reductions or suspensions, taking into account the relevant national and regional perspectives. Planners should develop scenarios for alternative basic service provision should it become necessary to temporarily close a facility.

### 3.3.10 Media and public communications

DHBs will have some responsibility for communicating with the local media and public (eg, statements by medical officers of health). DHBs should co-ordinate significant information releases with the Ministry, and copies of all official DHB media releases should be forwarded to the national co-ordinator.

DHBs, their services or employees, or other service providers approached by the media, should respond in accordance with their organisational protocols.

### 3.3.11 Contact tracing, isolation and quarantine

Public health activities will be of great importance in halting the spread of infection during a health-related emergency. Activities may include the tracing of contacts of suspected or probable cases, and isolation/quarantine of people at home or in other settings.

DHBs, in conjunction with public health services and medical officers of health, will be responsible for planning, implementing and resourcing these actions. Contact tracing of individuals who may have been infected will be co-ordinated by medical officers of health. In extreme circumstances, where workloads are overwhelming and if the medical officers of health request it, the Ministry of Health will assist in this role. The medical officers of health will liaise with border control agencies and airlines to ensure that adequate address information is collected to ensure contacts can be traced.
3.3.12 Care in the community

Some major epidemics may simultaneously affect a very large proportion of the population, including health professionals. In this situation, all except the most seriously ill will need to be cared for at home or in the community by relatives or other unaffected members of the public, with advice and support from health professionals and organisations.

DHB planning for major epidemics should review the potential for the use of community groups and/or volunteers who could provide assistance to health professionals and organisations in severe situations.

3.3.13 Care of dependants

A major epidemic may result in numbers of dependants (either young or old) being effectively orphaned by the hospitalisation or death of their principal caregiver(s). DHB emergency planners should consider their individual circumstances and decide how they would manage dependants in a severe epidemic. In particular, their arrangements with government agencies at a regional level may need to be reviewed to ensure procedures are in place to cater for the dependants of those presenting themselves at hospitals and local medical centres.

3.3.14 Care of the deceased

Modelling has shown that there will generally be sufficient capacity to deal with the deceased, even during a severe epidemic. However, DHB plans must ensure that local capacity is sufficient to manage a significant surge in mortality over a short period.

3.3.15 Post stand-down

After stand-down from any emergency response, DHBs will be expected to participate in the Ministry-led review of the response. DHBs should also review and revise their internal emergency plans using experience gained during the response.
4. Clinical Preparedness

This section details key issues relating to clinical preparedness, and outlines DHB and health service provider roles and responsibilities.

Clinical preparedness will be critical to enabling DHBs and service providers to provide an effective clinical response while protecting the ability to maintain other services to the greatest possible degree.

In the course of a health-related emergency, it may be decided that some DHBs’ hospital services will be bypassed or passed on to other health providers. However, because the course of an EID-related emergency is extremely unpredictable, all DHBs will need to plan for the eventuality that their services will provide at least initial care for suspected or probable EID patients.

Primary care and community services will need to be able to respond to potentially large numbers of patients requiring assessment, triage, referral and/or care in the community. All DHB provider arms need to be able to deliver at least assessment, triage, and initial clinical care for actual, probable or suspected EID patients.

4.1 Workforce issues

4.1.1 Occupational safety and health

The safety and health of health care workers will be pivotal to a successful response by primary and secondary/tertiary services in the event of a national health-related emergency.

Individual health services should develop a comprehensive package of services that addresses both prevention and care, and provides support for the physical and psychological health of staff. There should be close liaison between the occupational health and infection control teams. In the case of an infectious disease, appropriate safety policies not only maintain staff capacity and confidence, but also reduce the risk of further disease spread through staff-to-staff, staff-to-patient and/or staff-to-family contact.

The demand for large numbers of skilled staff during the very early stages of a potential or actual emergency means there will be little time for education and training in basic competencies. Health service providers will be responsible for ensuring the ongoing competency of staff with respect to infection prevention and control, to avoid the need for significant extra training in an emergency situation.

In preparation for an infectious disease outbreak, all health service providers should ensure that:

- all staff are trained and skilled in infection prevention and control, and maintain ongoing competency
- infection prevention and control training programmes are regularly updated
- a safe working environment is provided for all staff

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1 The recently enacted Health Practitioners Competence Assurance Act 2003 (effective from September 2004) includes mechanisms to ensure that health practitioners maintain ongoing competency during their working lives.
• all staff have access to the required personal protective equipment (PPE)
• if vaccine is available, policies are in place to institute vaccination of staff.

During an EID-related emergency, all health service providers are expected to ensure that:
• a safe working environment is provided for all staff
• staff are aware of any additional infection prevention and control requirements related to the specific organism and its mode of transmission
• health care workers are monitored for symptoms prior to entering the workplace, and any recent travel history is recorded
• there are clear processes to identify staff who will care for suspected or probable EID patients, and defined procedures for the exemption of pregnant or immuno-compromised staff
• rules for staff are clearly defined (eg, the required stand-down period following travel, and the steps to be followed after caring for an EID patient)
• information regarding suitable accommodation is available to staff, if quarantine from a staff member's family is necessary
• all staff working with suspected or probable EID patients are appropriately trained and skilled and have access to the required PPE
• there is a process for the daily assessment and comparison of staff absences from work due to illness, to provide early warning of possible staff transmission.

The Ministry of Health has modelled the potential nursing workforce requirements during a national EID-related emergency, specifically as a result of SARS. This work shows the potential impact on our hospitals, and illustrates some of the considerations that need to be taken into account when planning for an emergency. (The report on this modelling work can be viewed at www.moh.govt.nz/nhep.)

4.1.2 Social and mental health impact

Ensuring there is adequate support for staff in the event of a health-related emergency is important, as research undertaken overseas subsequent to the SARS outbreak suggests there can be a significant psychosocial impact on health care workers from such an emergency (Fones et al 2004, Hughes et al 2004, Maunder et al 2003, Nickell et al 2004, Shamian 2004).

Adverse effects from such an emergency may include emotional distress (eg, dealing with the death of colleagues), increased levels of concern for personal or family health, uncertainty, and feelings of social isolation or alienation. In some cases during the SARS crisis, spouses of health care workers had their employment threatened, and in others health care workers experienced difficulties with landlords. Organisations in the health and disability sector should plan ahead for these potential effects and provide support for health care workers during such an outbreak.

Appropriate occupational health and safety policies are likely to help with the psychosocial impact of an EID outbreak. However, specific measures that can be taken include:
• establishing clear lines of communication with staff, with sensitivity to individual responses to stress
• providing relevant support (eg, a confidential telephone support line), which can be backed up by fostering informal networks of mutual telephone contact and support
• providing a drop-in centre for affected staff to take ‘time out’ and relax
• adopting less restrictive PPE as soon as practicable, once the mode of transmission of the EID has been established and allows the adoption of such PPE.

Measures to address the psychosocial impact on health care workers in the event of an EID-related emergency should take account of:
• basic physiological needs – rest, food and salaries/allowances
• safety needs – accommodation, PPE, family, medical
• needs for ‘belongingness’ – camaraderie, morale and mutual support
• needs for recognition and support, both hospital (eg, appropriate HR policies in respect of leave) and community dimensions.

4.1.3 Ethical considerations

The response by health service providers in a health emergency will require balancing individual rights and collective interests. For example, in an EID-related emergency it may be necessary to limit some individual rights to protect the community's health and safety. Health care workers in New Zealand operate in a legislative environment where individual rights are emphasised, and where they have both an ethical and legal duty to provide emergency care (a ‘duty to treat’). The Human Rights Act 1993 specifically prohibits discrimination on the basis of the presence of disease in the body. Against this, the willingness of health care workers to treat patients in an emergency will, to some extent, be based on an assessment of risk (Paterson 2004). Health service providers should accordingly provide information and specify risk as clearly as possible, based on the available knowledge.

Ethical considerations in the event of an EID-related emergency will cover a number of dimensions, including (but not confined to):
• public health versus civil liberties
• duty of care
• disclosure versus confidentiality
• human rights – individual and group
• requirements for informed consent
• visiting rights – ‘loss of contact’
• family-centred care for children and young people
• isolation/quarantine of large numbers of people
• the ‘right to support’, both for health care workers and patients
• loss of income
• economic loss against the need to contain the spread of a deadly disease.

DHBs need to engage their ethics committees during the emergency response planning process wherever this involves ethical considerations.
4.2 Infection prevention and control

Infection prevention and control training and the application of infection prevention and control procedures are critical for the ability of all health service providers to respond in an EID-related emergency. All primary and secondary/tertiary services must be capable of implementing infection control practices to an acceptable standard.

Because the greatest risk of disease transmission is from unrecognised and undetected cases, it is imperative that health care workers practise good infection control in their everyday work, particularly the application of standard precautions.

The role of the infection control practitioner is crucial in the implementation of effective infection control. Infection control practitioners are responsible for tracking and managing health care associated infections, educating other health care workers, providing advice, and developing policies related to infection prevention and control, as well as reinforcing appropriate precautions. Recent recommendations suggest that the number of infection control practitioners in a hospital setting should be one FTE per 175 active care beds (National Advisory Committee on SARS and Public Health 2003), while others suggest ratios of 0.8–1.0 per 100 (O’Boyle et al 2002) and 1.5 per 200 active care beds (Hoffman 1997).

The Auditor-General has reported on infection control in New Zealand hospitals (Office of the Auditor-General 2003) and noted that ‘some hospitals might not have applied the appropriate level of resources to infection control’.

The following are key requirements of primary and secondary/tertiary services with regard to infection control.

- All DHBs must include infection control services in their response team in the event of an EID-related emergency. DHBs are expected to provide access to the necessary infection control training and education to the primary care practices in their area.
- DHBs should maintain staffing levels within their infection control services that allow for the redirection of personnel at short notice to undertake EID-related activities, such as widespread specific staff education.
- All services must ensure they have standard precautions policies and that these can be carried out at all times.
- Infection control practitioners must provide routine education/training on the basic principles of infection control to all hospital-based staff, including medical and allied health and support staff (e.g., orderlies, cleaners, laundry staff).
- Provision should be made for additional specific infection prevention and control education programmes/sessions to be undertaken as necessary during an EID-related emergency.

4.3 Clinical care pathway

DHB planning must describe a primary, secondary and tertiary sector clinical care pathway for suspected or probable EID patients. The clinical care pathway must provide the maximum possible protection for health care workers, other patients and the general public. The clinical care pathway should define:

- processes for safe triage of potentially infectious patients, wherever they present for assessment
- processes for the safe assessment of suspected EID patients, away from other patients and visitors
• transport or transfer and clinical hand-over processes for suspected or probable EID patients
• temporary or definitive care area(s), where suspected or probable EID cases, child and/or adult, can receive the necessary ongoing care
• processes for safe access to laboratory, radiological and other diagnostic tests
• processes for the safe provision of cleaning, laundry, translation and other ancillary services.

As a general principle, the clinical management of cases remains the responsibility of the treating clinical care team. However, DHB clinical planning must take account of regional or national imperatives, and the likelihood that normal referral patterns may not always be available for EID patients.

4.4 Primary health care

DHBs have overall accountability for the emergency preparedness of primary care services. In the event of an EID-related emergency, they will be responsible for the provision of appropriate medication and other supplies to primary health care practices and for infection control review of primary care facilities. While DHBs have overall accountability, all primary health care services are expected to:

• access updated clinical information and advice about disease characteristics and case management for affected adult and/or child patients, and to make this available to staff in the service as appropriate
• display appropriate visible signage, with content based on national-level advice, advising patients and others of any restrictions or required actions (this signage may need to be in other languages in some localities)
• consider making use of answerphone systems, with appropriate and regularly updated recorded messages giving instructions to callers
• provide appropriate PPE for clinical and non-clinical staff (see also ‘Equipment and supplies’ section 4.8).

All primary health care, ambulance and community-based services should be able to provide evidence that standard precautions are routinely practised and that appropriate procedures are in place to manage patients who require separation from others.

All primary health care, ambulance and community-based providers must have access to infection control training.

Where possible, public health services will support general practitioners and other primary care providers in the management of cases in the community.

4.5 Community-based assessment centres

A health-related-related emergency is likely to put significant pressure on primary and community services. DHBs, in consultation with primary and community providers, should plan the most effective way of responding to large volumes of EID-related demand while protecting the ability to maintain other services to the greatest degree possible.

DHB planning, in conjunction with local primary care services, should consider the establishment of community-based assessment centres. The purpose of a centre will be to separate, as much as possible, patients who may have symptoms suggestive of an EID from those without such
symptoms but who still require primary care services. These centres would be established and widely publicised as being specifically for people requiring EID-related assessment or services.

Community-based assessment centres could be established in any facility where the required clinical services can be provided, ranging from a specified medical centre to a hospital outpatient facility, a community hall or a marae, depending on local circumstances and resources. Arrangements may need to be made with local government or civil defence. Staffing could be drawn from local primary care practices, public health units or DHB provider arms (where available).

The final decisions on the nature, location and activation of a community-based assessment centre will be made locally. The national and/or regional co-ordinator should be advised of any decision to activate a centre.

### 4.6 Secondary/tertiary health care

All DHBs must have an emergency/business continuation plan for hospital and other provider arm services, including:

- clear and agreed internal communication processes to inform operational personnel of an EID-related emergency situation and the required actions
- an agreed process for prioritising services during an EID-related emergency situation and a staged approach to reducing services, such as elective surgery and/or outpatient clinics
- agreements with private hospitals and other private providers to provide assistance if necessary
- arrangements to provide some hospital-based services in the home or in other outreach settings.

All DHB provider arms should have the capacity to safely assess, isolate and provide at least short-term, hospital-level care to suspected or probable EID patients (child or adult) while maintaining the ability to treat others. Provider arm plans should make provision for:

- appropriate visible signage advising patients and visitors of any restrictions or required actions
- assessment of suspected EID patients, to be undertaken in an area of the emergency department, or other area, separated from other patients and visitors
- a defined clinical pathway for child and adult patients requiring long-term hospital care, including possible long-term ventilation (including an agreed referral pathway where it is not possible to provide this locally)
- a defined internal clinical escalation pathway, moving from use of negative pressure rooms to isolation rooms to cohort situations
- protocols for the support and management of discharged patients recuperating and/or in need of monitoring at home. Protocols should cover arrangements for liaison with primary care providers.

### 4.7 Transport

Resource constraints preclude much large-scale movement of patients outside the main cities, or between provincial hospitals and the major centres. Additional constraints result from the need to protect drivers, aircrew and caregivers, as such protection can sometimes prove problematic. There are specific clinical issues around the air transport of mechanically ventilated patients.
Patient transports and requests for transports will need to be prioritised and closely co-ordinated by the regional co-ordination team in discussion with the transport provider and the referring and receiving hospitals.

This Plan recommends that clinical decisions about the transport of patients with, or likely to develop, respiratory complications should be made as early as possible. Preferably transports will be made within reasonable road ambulance range. If air transport is considered, it should be carried out before mechanical ventilation is required.

### 4.8 Equipment and supplies

Equipment and supplies issues may include:

- unpredictability of the type and quantity of equipment and supplies required in an EID-related emergency, and the perishable nature of some supplies
- lack of real-time information on equipment and supplies inventories at national, regional and local level
- extended re-supply times for PPE
- ‘hoarding’ of equipment and supplies
- difficulties with the prioritisation and distribution of equipment procured at national, regional and local levels.

Many of these issues can be addressed by improved co-ordination. Accordingly, during a national health-related emergency, regional co-ordination teams will be responsible for the oversight, allocation and distribution of equipment and supplies.

To ensure that supplies and equipment are available during a health-related emergency, DHBs must ensure the:

- maintenance of updated detailed inventory records, which can be supplied to the regional co-ordination team
- extension of basic stockholding of PPE
- co-ordination of purchasing through collaborative engagement with suppliers.

In planning inventory levels, DHBs must consider the need to provide supplementary or additional equipment and supplies (eg, PPE and emergency medicines) directly to primary care services.

The regional co-ordination teams will be responsible for prioritising equipment supplies and allocating them to hospital and primary care services, in line with national advice and guidelines.
5. National Plan – from activation to stand-down

This section describes how the national plan will be activated and stood down when the Ministry of Health decides that a national health-related emergency requires a co-ordinated national response from the health and disability sector.

5.1 National activation

The initial phase of Plan activation begins when the Ministry of Health learns, or is advised of, a potential national health-related emergency. The Ministry, on the basis of overseas and domestic information, intelligence and technical advice, will instigate subsequent phases of activation and/or stand-down.

5.2 Communication with DHBs

The Ministry will advise DHBs of Plan activation using the standard code structure outlined in Table 2 below:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Example situation</th>
<th>Alert code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>Confirmation of EID-related emergency outside New Zealand</td>
<td>White</td>
</tr>
<tr>
<td>Standby</td>
<td>Possible EID-related emergency in New Zealand – imported cases without local transmission</td>
<td>Yellow</td>
</tr>
<tr>
<td>Activation</td>
<td>EID-related emergency in New Zealand – many imported cases and/or local transmission, outbreak or epidemic</td>
<td>Red</td>
</tr>
<tr>
<td>Stand-down</td>
<td>End of outbreak, epidemic or emergency – services returning to normal</td>
<td>Green</td>
</tr>
</tbody>
</table>

It is possible that activation may proceed from Code White to Code Red within hours. National communications from the Ministry of Health will be numbered under the appropriate alert code; eg, White – Information 1, White – Information 2, Yellow – Standby 1, Yellow – Standby 2, and so on.

5.3 Ministry of Health and DHB actions

Ministry of Health and DHB actions during the various phases are outlined in the table on the following page.
<table>
<thead>
<tr>
<th>Phase/ alert code</th>
<th>Ministry actions</th>
<th>DHB actions</th>
</tr>
</thead>
</table>
| **Information** (White) | • Advise the CEOs of all DHBs, single points of contact at all DHBs and all public health units (Manager or Medical Officer of Health on call) of the emerging situation and potential developments.  
  • Provide media and public information and advice.  
  • Provide case definitions and other clinical and public health advice on control, where possible. | • Advise all relevant staff, services and service providers.  
  • Notify clinical and public health staff of case definitions, clinical advice, and control measures.  
  • Review clinical emergency plans. |
| **Standby** (Yellow) | • Activate the Ministry CIMS structure.  
  • Identify the national co-ordinator and national co-ordination team members.  
  • Identify and activate the national technical advisory group.  
  • Contact all DHBs, via DHB single points of contact, and advise them of the situation and national emergency control contact number(s).  
  • Manage liaison and communications with other government agencies. | • Prepare to activate DHB CIMS structure.  
  • Prepare to activate regional co-ordination teams.  
  • Advise and prepare all staff, services and service providers.  
  • Manage own DHB clinical response and public health response if affected by the emergency. |
| **Activation** (Red) | • Inform all DHBs, via single points of contact.  
  • Direct activation of the four regional co-ordination teams.  
  • Co-ordinate response at national level through the four regional co-ordination teams. | • Activate DHB CIMS structure.  
  • Activate regional co-ordination teams.  
  • Advise of regional emergency control contact number(s).  
  • Manage own DHB response, as required under regional co-ordination arrangements. |
| **Stand-down** (Green) | • Moving from red to green – inform all regional co-ordinators.  
  • Moving from yellow to green – inform all DHB single points of contact.  
  • Advise media and public.  
  • Deactivate Ministry CIMS structure.  
  • Resume normal functions.  
  Post stand-down: design and implement evaluation and review of emergency response. | • Deactivate regional co-ordination teams (where activated).  
  • Deactivate DHB CIMS structure.  
  • Resume normal functions.  
  Post stand-down: participate in the Ministry-led review of emergency response. |
5.4 **Single regional co-ordination team activation**

In some circumstances a single regional co-ordination team may be activated without the national plan moving to the red phase. This may occur:

- during the Code Yellow phase of national plan activation
- when a health-related emergency is localised and likely to remain so
- when the Ministry of Health considers national plan activation is not currently required.

When the above criteria are met, activation of the affected region’s regional co-ordination team will be subject to discussion between the affected regional DHBs and the Ministry of Health.
6. Funding

The Ministry of Health will be closely involved in Crown decisions on whether to provide DHBs with additional funding to cover the cost of extra or additional services required during an emergency response. This section covers the application of the Operational Policy Framework (OPF) in relation to payment for extra or additional services that may be required from DHBs in the event of a national health-related emergency, and identifies the funding arrangements for non-DHB services.

6.1 General approach

In almost all cases, extra or additional services required during a health emergency response will be funded through existing pathways or agreements. All existing contracts contain provisions for variation or additional funding, should this become necessary in exceptional circumstances, such as a disease outbreak, epidemic or pandemic.

6.2 DHB funding – Operational Policy Framework

Section 1.11.B ‘Good Financial Management – explanatory notes’, paragraph 3 of the OPF, effective 1 July 2003, states that each DHB is to:

... cover the cost of services purchased in relation to a major incident up to 0.1 percent of the DHB’s total budget. Above this 0.1 percent boundary, the Crown, in consultation with the DHB, will decide on a case-by-case basis whether to provide the DHB with additional funding, having regard to the DHB’s ability to fund the additional services purchased and any impact this will have on the purchase of additional services.

An emergency response related to an epidemic or pandemic will be regarded as a ‘major incident’ so will be covered by section 1.11.B(3) of the OPF. All DHB planning should be undertaken with this section of the OPF in mind. To establish the context, in dollar terms the 0.1 percent of total DHB budget figure varies from around $65,000 to over $8 million, depending on the size of the DHB.

Clearly, the identification of the 0.1 percent figure and the tracking of direct emergency response-related expenses in relation to it will require comprehensive financial involvement from the start of any emergency.

Detailed, realistic, and fully supported accounts will be necessary to support any discussions with the Crown. Normal practice during an emergency response will be for a finance representative to be included in CIMS structures at national and local levels. The finance representative will have the job of tracking extraordinary costs incurred during the emergency response. It is strongly recommended that this involvement commence at the beginning of any emergency response.
6.3 Services covered by section 1.11.B(3)

Paragraph 1.11.B(3) covers all devolved (ie, DHB-funded) services, including provider arm services (personal and mental health), primary care services, laboratories, pharmacies and other referred services, and much of Disability Support Services.

As part of the primary or provider arm services identified above, an emergency response might require DHBs to establish community-based assessment centres, and isolation and/or quarantine facilities for people who have been exposed to an EID but are not actually displaying symptoms. Although these services are not provided by DHBs under normal circumstances, they are an integral part of a DHB health service emergency response, and as such are covered by section 1.11.B(3).

The potential range and scope of DHB activities during an emergency response underscores the need for close financial monitoring at DHB levels.

6.4 Inter-district flows

Clinically driven referrals and transfers between hospitals in different DHBs are part of normal day-to-day business, enabled by the inter-district flow (IDF) business rules contained in Appendix B of the OPF. The standard IDF business rules provide for financial adjustments between DHBs if there are abnormal numbers of IDF referrals or transfers for any reason (eg, as a result of a disease epidemic or pandemic).

6.5 Eligibility for publicly funded health and disability services

The groups of people eligible for publicly funded (free or subsidised) personal health and disability services in New Zealand are described in the 2003 Direction of the Minister of Health Relating to Eligibility for Publicly Funded Health and Disability Services in New Zealand (the Eligibility Direction). The Eligibility Direction can be found on the Ministry of Health website at http://www.moh.govt.nz/eligibility. Later Eligibility Directions may supersede this document from time to time.

Individual DHBs should apply their normal cost-recovery rules where treatment has been provided to people not eligible for publicly funded health and disability services in New Zealand, according to the Eligibility Direction in force at the time.

6.6 Public health services

Funding for public health services has not been devolved to DHBs. The Public Health Directorate of the Ministry of Health directly contracts for public health services with various DHB and non-DHB providers. Any extra or additional public health services required during an emergency response would be provided by agreed variations of existing contracts, or by establishing specifically targeted new contracts.
6.7 Ambulance services

The Ministry of Health directly contracts emergency ambulance services, except in Taranaki, Wairarapa and Nelson Marlborough, where emergency ambulance services are DHB-funded and so come under section 1.11.B(3). Ambulance contracts contain provisions for variation in the established agreements, should this be necessary (clause B29.4).
Appendix I: Sector Advisory Group

Nick Baker, Paediatrician, Nelson Marlborough DHB
Simon Bidwell, Analyst, Ministry of Health
Tim Blackmore, Infectious diseases physician, Capital and Coast DHB
Gillian Bohm, Principal Advisor, Ministry of Health
Megan Boivin, Operations Manager, Otago DHB
Pauline Cook, Advisor, Ministry of Health
Brian Cornere, Quality Manager, Auckland DHB
Martin Davis, Contracts Manager, Ministry of Health
Peter Dunn, Business Analyst, Ministry of Health
Ross Freebairn, Intensivist, Department of Anaesthesia and Intensive Care Services, Hawke’s Bay Hospital
Mandy Grainger, Manager, Otago DHB
Beverley Herbert, College of Nurses (Aotearoa)
Wendy Hoskin, Funding Manager, Auckland DHB
Frances Hughes, Chief Advisor Nursing, Ministry of Health
Ailsa Jacobson, Project Co-ordinator, Ministry of Health
Ed Kiddle, Medical Officer of Health, Nelson Marlborough DHB
Graeme McColl, Ambulance Service Advisor, St John Ambulance
Bruce Parkes, Risk Management Co-ordinator, St Johns Ambulance (Northern Region)
Gary Pember, CCP Co-ordinator, Emergency Management Service, Auckland DHB
Ann Rose, Clinical Advisor, Ministry of Health and Hutt Valley DHB
Antony M Shannon, Infection Control Advisor, Tairawhiti DHB
Victoria Smith, Infection Control Advisory Service
Greg Stevens, Emergency Physician, Middlemore Hospital
Sally Talbot, General Practitioner, Wellington
Pat Tuohy, Chief Advisor, Child and Family, Ministry of Health
Gerard P Wood, Director of Nursing, New Zealand Defence Force
Appendix II: Ministry CIMS Roles and Responsibilities

National co-ordination

National co-ordinator

Reports to: Director-General via the Deputy Director-General.

Responsibilities:

• overall direction of the response
• assesses overall situation
• establishes command and control
• creates an incident action plan in conjunction with other co-ordinators
• prioritises and delegates work as necessary
• agrees and/or confirms membership of the technical advisory group
• does not get involved in specifics
• maintains oversight of progress and problems
• assesses political issues and resource constraints
• ensures sufficient personnel
• ensures the national co-ordination team is functioning correctly and that information is passing to all sectors
• anticipates future demands on the team, and plans accordingly
• records decisions
• actions and other activities
• must have CIMS training.

Planning / intelligence

Functions: gathers, evaluates and disseminates information about the incident; monitors WHO and the international situation, where necessary; understands the strategic direction of the response; writes protocols and procedures for use in the sector/Ministry; provides intelligence for the sector and information for external communications; liaises with technical experts and/or co-ordinates sector and technical advisory groups.
Planning / intelligence co-ordinator

Reports to: national co-ordinator

Responsibilities:
- oversees all issues relating to strategic planning and intelligence of the incident
- co-ordinates and assigns tasks to Ministry teams
- reports the situation and progress to the national co-ordinator
- represents planning/intelligence at any meetings
- should have CIMS training.

Operations

Functions: receives, evaluates and disseminates information on the operational aspects of the sector response. Utilises strategic information and advice to develop operational directives. Reviews national resource requirements. Liaises with regional co-ordinators on the operational situation and progress.

Operations co-ordinator

Reports to: national co-ordinator

Responsibilities:
- oversees all issues relating to the strategic operations of the response
- co-ordinates and assigns tasks to Ministry and DHB regional co-ordination teams
- reports the situation and progress to the national co-ordinator
- represents operations at any meetings
- maintains communication with regional co-ordinators
- must have CIMS training.

Logistics

Functions: provides and maintains materials, resources and services to support the Ministry response team (the areas of health and safety, human resources, information technology, physical resources, finance, legal and administrative support should be covered on at least a part-time basis).

Logistics co-ordinator

Reports to: national co-ordinator

Responsibilities:
- co-ordinates all areas of logistics
- identifies possible resources and facilitates requests for additional supplies
• estimates future service and support requirements (with the advice of the national co-ordinator)
• records decisions, actions and other activities
• reports progress/problems to the national co-ordinator, and represents the logistics section at any meetings
• ideally will have had CIMS training.

Human resources

Human resources co-ordinator

Reports to: logistics co-ordinator

Responsibilities:
• establishes communications with personnel
• ensures the response team personnel are complying with OSH (eg, having sufficient breaks and working reasonable hours)
• organises cover when personnel are sick
• organises backfill of response personnel's permanent positions and/or ensures the existing workload is reallocated
• monitors safety conditions
• ensures personnel understand the human resources co-ordinator role
• records decisions, actions and other activities
• notifies the logistics co-ordinator of any potential issues.

Information and communications

Functions:
• co-ordinates the release of all information to the public and media (spokespeople, press releases, publications, flyers, 0800 numbers, etc)
• oversees internal communications and communications with the sector.

Information and communications co-ordinator

Reports to: national co-ordinator

Responsibilities:
• co-ordinates all issues relating to external and internal communications – establishes a point of contact and media centre
• arranges spokespeople
• gathers, clarifies and confirms information for external release
• oversees the quality control of all information going out to the public/media, including publications and educational material
• records decisions, actions and other activities
• advises the response co-ordinator of media strategies
• requests additional personnel, as necessary
• reports progress/problems to the national co-ordinator, and represents the information and communications section at any meetings.

Liaison

Functions: contact for any other agencies or organisations (non-DHB) involved in the incident, including government and non-government bodies (this may include a large component focused on border control, if necessary).

Liaison co-ordinator

Reports to: national co-ordinator

Responsibilities:
• co-ordinates all issues relating to liaison with external agencies
• identifies counterparts in any other necessary agencies, establishes communication, ensures they have contact details and that they stay well informed
• provides a point of contact for agencies not directly involved
• identifies any existing or potential interagency problems
• records decisions, actions and other activities, reports progress/problems to the national co-ordinator and represents the liaison section at any meetings
• should have had CIMS training if at all possible.

Technical advice

Technical advisory group

Reports to: national co-ordinator

Responsibilities:
• provides expert technical advice to the national co-ordinator on health emergency-specific matters. The national co-ordinator may delegate operational interactions with the technical advisory group to the planning and intelligence co-ordinator and/or the operational co-ordinator.
Appendix III:
Pandemic Influenza

Introduction
Influenza pandemic is the most likely event to cause a large-scale health emergency. Pandemics occurred four to five times in the 20th century, with the major ones reaching New Zealand (in 1918, 1957 and 1968). Recent estimates put mortality from the 1918 pandemic at between 50 and 100 million worldwide. In this country, the 1918 pandemic is estimated to have infected a third to half of the entire population, causing approximately 8000 deaths. This appendix considers some of the key considerations specific to a new pandemic influenza threat.

Characteristics
Influenza is a highly contagious viral disease of the respiratory tract. It continues to be a major threat to public health worldwide because of its ability to spread rapidly through populations. Relatively minor epidemics of influenza typically occur in New Zealand during winter months, often affecting all age groups and causing many complications, including viral or bacterial pneumonia.

Influenza is a significant and under-recognised cause of mortality in the New Zealand population. There are approximately 100 deaths per year directly attributable to influenza, but this does not include many cases where influenza contributes to an elderly or chronically ill person’s death.

Influenza is characterised by rapid onset of respiratory and generalised signs and symptoms, including fever, chills, sore throat, headache, dry cough, fatigue and aching. Influenza is easily spread through droplets from an infected person (suspended in the air through coughing or sneezing) being inhaled by another person, or through contact with contaminated objects. The incubation period can range from one to seven days, but is commonly one to three days. Adults are contagious for one to two days before most symptoms start until about day five of the illness. Children may remain infectious for up to seven days.

Pandemic influenza
Pandemics are characterised by the spread of a novel type of influenza virus to all parts of the world, causing unusually high morbidity and mortality for two to three years. Most people are immunologically naive to the novel virus and therefore more susceptible to influenza infection. A pandemic can overwhelm the resources of a society due to the exceptional number of those affected.

A pandemic may occur as a result of the emergence of a new viral subtype with the capacity to spread efficiently from person to person, and with sufficient virulence to cause disease.

Scale of the pandemic
To prepare for a pandemic, the Ministry of Health has undertaken modelling work, which utilised the FluAid software model developed in the US by scientists at the Centers for Disease Control and Prevention. It provides estimates for the impact of pandemic influenza on the health of the population.
The FluAid model is a relatively simple deterministic model that produces a range of estimates of impact from a single pandemic wave in terms of deaths, hospitalisations and illness requiring medical consultations. The model assumes no large-scale public health interventions to control disease spread (such as the use of an appropriate vaccine or widespread use of anti-viral drugs). This is a realistic scenario for the New Zealand context.

The model generated a series of outcomes determined by incidence rate of infection. For the New Zealand situation, incidence rates between 15 and 35 percent were modelled, with planning undertaken on the basis of the 35 percent incidence rate. Such a scenario produces a pandemic with mortality rates of a greater magnitude than those of the 1957 and 1968 pandemics, but not as severe as for the 1918 pandemic. The duration of the first wave of such a pandemic is likely to be around eight weeks. The peak is modelled to occur after four weeks. On this basis, New Zealand would expect to suffer 3700 deaths, incur 16,200 hospitalisations and require 760,000 medical consultations (at the 35 percent incidence rate). The effect of the pandemic would probably be felt nationwide, with only a small lag likely in peaks from one locality to another.

Stages of pandemic influenza

The World Health Organization (WHO) has a set of definitions that classify the stages of a pandemic. They will announce the onset of Phase 1 and progression to subsequent phases based on evidence collected by its Pandemic Taskforce and international consultation. These definitions are given in the following table, along with the macro characteristics that are used to define escalation steps to each stage (or sub-stage).

Table A1: Pandemic phase definitions

<table>
<thead>
<tr>
<th>WHO pandemic phases and levels of preparedness</th>
<th>Characteristics / escalation step</th>
<th>Phase/ alert co</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 0: Inter-pandemic period</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparedness Level 1</td>
<td>No reports of new virus type</td>
<td>Information(White)</td>
</tr>
<tr>
<td>Preparedness Level 2</td>
<td>Appearance of a new influenza strain in a human case</td>
<td>(White)</td>
</tr>
<tr>
<td>Preparedness Level 3</td>
<td>Human infection in 2+ cases confirmed</td>
<td>(White)</td>
</tr>
<tr>
<td>Preparedness Level 3</td>
<td>Human transmission confirmed</td>
<td>Standby(Yellow)</td>
</tr>
<tr>
<td><strong>Phase 1: Confirmation of onset of pandemic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outbreaks involving the novel influenza virus strain in at least one country with spread to other countries</td>
<td>Activation(Red)</td>
<td></td>
</tr>
<tr>
<td><strong>Phase 2: Regional and multi-regional epidemics</strong></td>
<td>Outbreaks and epidemics occurring in multiple countries and spreading in regions across the world</td>
<td>(Red)</td>
</tr>
<tr>
<td><strong>Phase 3: End of first pandemic wave</strong></td>
<td>No increase in countries affected initially but outbreaks occurring elsewhere in the world</td>
<td>(Red)</td>
</tr>
<tr>
<td><strong>Phase 4: Second or later waves of pandemic</strong></td>
<td>Second wave of outbreaks occurring in many countries</td>
<td>(Red)</td>
</tr>
<tr>
<td><strong>Phase 5: End of pandemic / post-pandemic phase</strong></td>
<td>Influenza activity returned to normal; inter-pandemic levels and immunity to new virus is widespread</td>
<td>Stand-down (Green)</td>
</tr>
</tbody>
</table>
The time periods between confirmation and widespread outbreak are unlikely to be predictable and will quite likely be compressed. If the pandemic has a particularly rapid onset, some of the phases may progress very rapidly or be missed altogether. Again, this points to the need to prepare emergency responses in the inter-pandemic period.

**Inter-pandemic period**

The National Pandemic Planning Committee (NPPC), an advisory committee to the Ministry of Health, provides advice on the appropriate strategies to progress inter-pandemic measures to strengthen New Zealand's response capacity. During a pandemic the Ministry will require a technical advisory group. This will likely be drawn from the membership of the NPPC. The purpose of this group will be to provide specialist technical input into decisions that inform the Ministry's strategic response.

The National Influenza Immunisation Strategy Group (NIISG) co-ordinates the promotion of influenza vaccination and awareness, thereby providing the first line of defence against infection in the workforce and general population. While routine influenza vaccination is unlikely to protect against a new pandemic strain, the immunisation programme has the virtue of raising general awareness of influenza.

DHB major incident and emergency plans and regional incident co-ordination plans need to provide for situations such as influenza pandemics. Among other things, these plans need to make allowance for the delivery of services and the maintenance of infrastructure in the face of both increasing absenteeism (caused by the pandemic) and demand. In the pandemic situation, it is particularly important to ensure that any emergency plan meets the needs and requirements posed by the primary care sector, because this is where demand will most likely manifest itself.

An effective national surveillance system during the inter-pandemic period is an essential component of preparedness. There are currently two national influenza surveillance systems in New Zealand.

- The general practice (GP) sentinel disease and virological surveillance system, involving more than 90 practices, operates annually during the winter months (May to September), recording the daily number of consultations that fit the case definition of an influenza-like illness. Collated national data is available on the ESR website (www.esr.cri.nz).
- Ongoing virological surveillance is carried out by designated virology diagnostic laboratories, and by the ESR virology laboratory. Specimens are collected from hospitalised patients with an influenza-like illness throughout the year for analysis. Data collected from these laboratories is reported nationally in the *Virology Weekly Report*.

An important inter-pandemic priority is to enhance and improve influenza surveillance. With the assistance of NIISG and the NPPC, the Ministry of Health will collect and analyse data to allow early determination of national trends, using its networks to facilitate prompt public health action. The Ministry of Health will promote influenza immunisation and awareness to the public and health care professionals.
## Pandemic period

The following table amalgamates the WHO pandemic definitions with the activation phases comprising the Ministry's CIMS emergency response framework:

<table>
<thead>
<tr>
<th>WHO pandemic level</th>
<th>Phase/ alert code</th>
<th>Escalation pathway</th>
<th>Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 0:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-pandemic</td>
<td>Information phase</td>
<td>Appearance of a new influenza strain in a human case</td>
<td>The Ministry advises CEOs of all DHBs, DHB single points of contact, and public health units (Manager or Medical Officer of Health on call) of the emerging situation and potential developments.</td>
</tr>
<tr>
<td>Period</td>
<td>(Code White)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparedness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phase 0:</strong></td>
<td>Standby phase</td>
<td>Human transmission of influenza-like illness – emergency confirmed overseas.</td>
<td>CIMS structure activated in the Ministry. The Ministry contacts all DHBs via DHB single points of contact and advises of situation. DHBs prepare to activate regional co-ordination teams.</td>
</tr>
<tr>
<td>Inter-pandemic</td>
<td>(Code Yellow)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparedness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Phases 1– 4</strong></td>
<td>Activation phase</td>
<td>Several outbreaks involving the novel influenza virus strain in at least one country with spread to other countries or confirmation of an influenza-like illness emergency in New Zealand (eg, local transmission and/or significant numbers of imported cases).</td>
<td>The Ministry informs all DHBs via single points of contact and directs the activation of regional co-ordination teams. Co-ordination of response at national level is now through the four regional co-ordination teams.</td>
</tr>
<tr>
<td>Confirmation of</td>
<td>(Code Red)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>onset of pandemic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phase 5:</strong></td>
<td>Stand-down phase</td>
<td>Influenza activity returned to normal inter-pandemic levels and immunity to new virus is widespread</td>
<td>The Ministry informs regional co-ordinators and DHBs via single points of contact of the stand-down phase. Ministry and DHB CIMS structures deactivated and normal functions resumed.</td>
</tr>
<tr>
<td>End of pandemic</td>
<td>(Code Green)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ post-pandemic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>phase</td>
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</tr>
</tbody>
</table>
With the Ministry of Health acting as lead agency in such an emergency, government and public expectations of the health sector increase markedly.

Ministry of Health response

The Ministry of Health strategic response will utilise the framework detailed in the body of this Plan. As an emergency escalates, greater Ministry resources will need to be dedicated to the response. As a result, there should be an understanding and expectation that, as the emergency escalates, Ministry business will be affected. Ministry business is also likely to be affected by high levels of illness among staff.

Communications with the public and media

A key role in a pandemic is to provide clear and accurate information to the public. This will facilitate home care and also help to alleviate some of the pressure on health sector services. This material can be prepared in the inter-pandemic period, but it is important that it is either generic or easily modified to reflect specific circumstances.

Channels of communication that will be considered for use during a pandemic include:

- fact sheets and FAQs that include general information on influenza vaccines, home nursing, medication and treatment guidelines – these can be produced physically or displayed electronically on the Ministry of Health website (www.moh.govt.nz)
- video presentations for broadcast via electronic media
- establishment of a pandemic national free phone line to provide information to the public – the Ministry of Health has a phone line available for emergencies that can be put into action within a few hours
- national advertisements to increase awareness of the national response to the pandemic
- regular media briefings to ensure accurate and up-to-date reports on the status of the pandemic.

Vaccination

New Zealand does not have the capacity to manufacture vaccines. The first supplies of vaccine against a novel strain of influenza are unlikely to be available for at least six months. By this stage it is likely that New Zealand will have suffered the first pandemic wave.

Global demand for a vaccine will be high, so supplies will be limited. Priority groups for immunisation must be identified early, so that when vaccines become available those people can be immunised rapidly and efficiently. The Ministry of Health will provide the Government with recommendations on these priority groups, on advice from its technical advisory group and WHO.

Drug treatment and anti-virals

Many complications from influenza are due to secondary infection with bacterial pathogens. Antibiotics are the preferred treatment for secondary infections, although ineffective in the treatment of uncomplicated influenza.

The anti-viral drugs amantadine, zanamavir and oseltamivir (all currently licensed in New Zealand) can shorten the course of infection if given early in the disease, and can provide short-
term protection against influenza. Only oseltamivir is licensed for both treatment and prophylaxis. None of these medicines are publicly funded. Like vaccines, these anti-virals will be in short supply. During a pandemic, ongoing flexible recommendations for anti-viral treatment and prophylaxis will be made by the NPPC, with expert advice from relevant agencies and committees (eg, the NIISG, Pharmac and Medsafe). WHO is developing guidelines for the use of anti-viral agents during pandemics, and these will assist in future contingency planning.

DHBs need to consider their own supplies of anti-viral drugs in such an emergency. While the Ministry of Health may have a national supply of anti-viral drugs, it cannot necessarily be assumed that the priorities for these medicines will coincide with the priorities of each individual DHB.

**Steps to reduce the rate of spread**

While it is unlikely that the spread of influenza can be halted, there are options to slow transmission that should be considered to slow its advance. These will help reduce pressure on health services over a longer time period and increase the opportunity to protect people, should a vaccine become available. Such measures include:

- recommending that sick people stay at home
- advising the public against unnecessary travel
- utilising the powers of medical officers of health to cancel public events
- closing childcare facilities, schools and tertiary education institutions.

**Impact on society**

A pandemic will likely be characterised by a high level of absenteeism in the workforce as people fall ill or stay at home to care for sick relatives. Essential services such as police, fire, transportation, communications and emergency management services need to be maintained during a pandemic. Other services and supplies – including food, water, gas, electricity supplies, educational facilities, postal services and sanitation – are also likely to be affected. It is right to assume that normal business activities, regardless of their nature, will suffer during a pandemic.

The Officials’ Committee for Domestic and External Security Co-ordination (ODESC) is chaired by the chief executive officer of the DPMC and is likely to be given the task of providing the necessary whole-of-government co-ordination. The key objective of ODESC is to minimise social disruption and the economic impact of a pandemic. Services need to be assessed regularly and support measures implemented promptly in response to most urgent need. The Ministry of Health will work with ODESC and the DPMC to minimise social and economic disruption to the greatest extent possible, but all government agencies should factor an incident such as a pandemic into their emergency planning. DHBs can liaise with local councils and voluntary groups to assist in providing care in the community.

**Care in the community**

Due to the high rates of infection expected during pandemic influenza, all except the seriously ill will need to be cared for at home. Public and private hospitals will need to prioritise admissions, rationalise services and review staff rosters. DHBs will need to consider additional supplies of medication and equipment (eg, ventilators, oxygen supplies and syringes). It may be necessary to utilise other facilities (eg, community centres or hotels) if extra space is required, particularly for outpatients or patients post discharge. In general, emphasis should be given to out-of-
hospital care and saving hospital beds for only the most severe cases. DHBs will need to liaise with local councils/voluntary groups so that they can assist in providing community care.

Health professionals, such as nurses, general practitioners, paramedics, locums, health clinic staff and social service personnel, will require DHB support and co-ordination. Pharmacists will experience a rise in workload, with increased demand for medication, dispensing prescriptions and over-the-counter products. They will be closely involved in the provision of frontline advice to members of the community and in the management of adverse reactions to the usual prescribed medications.

**Care of dependants**

During a pandemic there are likely to be substantive numbers of dependants ‘orphaned’ by the death or hospitalisation of their prime caregiver(s). Modelling work undertaken by the Ministry and overlaid with population data provides scenario analysis for a pandemic event. Two situations were considered:

- children orphaned due to the death of their caregiver(s)
- children left without their prime caregiver(s) due to that person or persons being hospitalised.

Both cases will result in children requiring care being present at a hospital or primary health centre. It would not require very many of these ‘orphans’ to reduce the capacity of the institution to function to its full capacity.

In the first instance, modelling (using the 35 percent infection rate) indicates that approximately 200 children nationwide would be left without their caregiver(s), or with temporary care from an alternative relative. These numbers are unlikely to stretch the capacity of the local social services, particularly when regional distribution is taken into account. Of greater concern is the second instance, which would result nationwide in over 800 ‘orphans’ in 400+ family groupings. In the Auckland region alone this could mean up to 400 dependants located at hospitals after caregivers were hospitalised.

To prepare for this, the Ministry of Health will be alerting the relevant government departments to ensure that they are aware of the need for their intervention in such circumstances. The Ministry of Health has memorandums of understanding with various government agencies that include requirements for interventions in a health-related emergency. These requirements will be updated from time to time, as necessary.

It is equally important that DHBs consider their individual circumstances in such an eventuality and determine how they will address the problem. As part of their preparedness, it is recommended that they set up protocols with the regional offices of the relevant government agencies to ensure that arrangements to deal with such a problem can be implemented quickly.

**Care of the deceased**

During any widespread pandemic there is likely to be a higher-than-normal mortality rate. The Ministry has modelled the characteristics of an influenza pandemic and determined that the peak mortality will manifest itself four weeks after onset. The modelling suggests that the current resources available (effectively, the morgue capacity of hospitals, undertakers and funeral directors) is sufficient to handle the mortality eventuating from an infection rate of 35 percent.

DHBs should ensure that they incorporate a consideration of the number of potential mortalities into their emergency plans and satisfy themselves that their regional capacity is sufficient.
Appendix IV: Intersectoral Actions

This appendix sets out the actions likely to be required of the health and disability sector and other government agencies in New Zealand in response to a national health emergency from an infectious disease. It is a generic guide to the issues and responsibilities that will need to be addressed and the parties that will need to be involved. It will require customisation to take account of the unique characteristics of different types of infectious diseases and hence the approach to their management.

<table>
<thead>
<tr>
<th>Risk level</th>
<th>Health sector responses (Ministry of Health and DHBs)</th>
<th>Roles for non-health agencies (often in co-operation with the Ministry of Health)</th>
<th>Communications</th>
</tr>
</thead>
</table>
| PREPAREDNESS PHASE  | 1. Routine surveillance system operations, and routine review of disease control systems.  
2. Routine interventions to reduce infectious disease risks at a population level (eg, hygiene education, guidelines and practices in health care settings).  
Ministry of Foreign Affairs and Trade (MFAT) : routine interaction with other governments on lines of communication and preventive measures.  
NZAID : possibly provide support for improvements in disease surveillance and control efforts by WHO and developing countries in the South Pacific region. |  - Routine public health messages.  
- Promotion of immunisation.  
- Use reactive opportunities for key messages.  
- Use general Ministry of Health website and routine communication channels.  
- Identify and train relevant media spokespeople.  
- Other agencies utilise their normal channels for updating their sectors.  |
<table>
<thead>
<tr>
<th>Risk level</th>
<th>Health sector responses by Ministry of Health and DHBs (in addition to those at the preceding level)</th>
<th>Roles for non-health agencies (In addition to those at the preceding level)</th>
<th>Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFORMATION PHASE</td>
<td>As per the National Health Emergency Plan: Infectious Diseases</td>
<td><strong>ODESC through the DPMC:</strong> bring together affected government agencies to activate a whole-of-government approach, and ensure co-ordination.</td>
<td>• Ministry of Health leads but involves other government agencies.</td>
</tr>
</tbody>
</table>
| Alert Code: White | Ministry of Health:  
- Advise all DHB CEOs, the DHB single points of contact and public health units (Manager or Medical Officer of Health on call) of the emerging situation and potential developments.  
- Provide media and the public with information and advice.  
- Provide case definitions and other clinical and public health advice on control to DHBs and the health and disability sector. | **All government agencies:** develop and distribute appropriate information and advice to their own staff and sectors they serve or regulate, based on technical guidance from the Ministry of Health and ODESC decisions on priorities. | • Communications plan developed and agreed at ODESC, including communications plans during further escalation phases. |
| | DHBs:  
- Advise all relevant staff, services and service providers.  
- Notify clinical and public health staff of case definitions, clinical advice, and control measures.  
- Review clinical emergency plans | **MFAT:**  
- publicise appropriate travel advisories  
- liaise with foreign governments  
- gather intelligence and updates from MFAT posts  
- disseminate information about New Zealand management procedures to and through overseas posts. | • Ministry prepares foundation documents for tailoring. |
<p>| Potential infectious disease threat for New Zealand (eg, disease spread in other countries) | <strong>Treasury:</strong> evaluate the potential economic aspects of border restrictions at this phase and at Yellow and Red phases (with Transport and Tourism inputs). | <strong>Ministry of Tourism:</strong> input into travel advice and liaison with tourist industry. | • Ministry of Health, MFAT, DPMC travel advisories – involve/inform ITOC, TAANZ, BARNZ, Customs, Ministry of Tourism etc. |
| | <strong>Customs, NZIS, Transport:</strong> implement agreed border control strategies, including liaison with appropriate stakeholders within New Zealand and at affected overseas points of departure. | <strong>MFAT:</strong> advice for staff and New Zealanders in affected areas. | • MFAT: advice for staff and New Zealanders in affected areas. |
| | <strong>Other govt agencies:</strong> co-ordinated information release through their networks to their sectors, including simple questions and answers. | <strong>Other govt agencies:</strong> co-ordinated information release through their networks to their sectors, including simple questions and answers. | • Other govt agencies: co-ordinated information release through their networks to their sectors, including simple questions and answers. |
| | <strong>Promote border measures (if adopted) – translate into other languages and disseminate widely.</strong> | <strong>Promote border measures (if adopted) – translate into other languages and disseminate widely.</strong> | • Promote border measures (if adopted) – translate into other languages and disseminate widely. |
| | <strong>Provide border and travel agencies with information for staff and contacts.</strong> | <strong>Provide border and travel agencies with information for staff and contacts.</strong> | • Provide border and travel agencies with information for staff and contacts. |
| | <strong>Identify different health audiences and their requirements and ensure information is supplied.</strong> | <strong>Identify different health audiences and their requirements and ensure information is supplied.</strong> | • Identify different health audiences and their requirements and ensure information is supplied. |
| | <strong>Editorial/media background briefings.</strong> | <strong>Editorial/media background briefings.</strong> | • Editorial/media background briefings. |
| | <strong>0800 set up for 24-hour (recorded and call centre).</strong> | <strong>0800 set up for 24-hour (recorded and call centre).</strong> | • 0800 set up for 24-hour (recorded and call centre). |
| | <strong>Create web page with links on Ministry of Health website.</strong> | <strong>Create web page with links on Ministry of Health website.</strong> | • Create web page with links on Ministry of Health website. |</p>
<table>
<thead>
<tr>
<th>Risk level</th>
<th>Health sector responses by Ministry of Health and DHBs</th>
<th>Roles for non-health agencies (In addition to those at the preceding level)</th>
<th>Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDBY PHASE Alert Code: Yellow</td>
<td>Possible infectious disease-related emergency in New Zealand – imported cases without local transmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>As per the National Health Emergency Plan: Infectious Diseases</td>
<td>ODESC: activated for whole-of-government perspective:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ministry of Health:</td>
<td>· determine the risk and cost-benefit analysis of intensive travel warnings and possible visa restrictions (with NZIS) – this may include further studies of potential economic impacts (eg, by Treasury) and issues concerning international relations (MFAT).</td>
<td>- Communications output intensified.</td>
</tr>
<tr>
<td></td>
<td>· Activate Ministry CIMS structure.</td>
<td>· review communications plan against whole-of-government objectives, and initiate action.</td>
<td>- 0800 constant review of calls/responses.</td>
</tr>
<tr>
<td></td>
<td>· Identify national co-ordinator and national co-ordination team members.</td>
<td>All government agencies: develop and distribute appropriate information and advice to staff and sectors they serve or regulate, based on technical guidance from the Ministry of Health and ODESC decisions on priorities</td>
<td>- Update website.</td>
</tr>
<tr>
<td></td>
<td>· Identify and activate national technical advisory group.</td>
<td>Customs, NZIS, MFAT: implant agreed strengthened border controls</td>
<td>- Review key messages.</td>
</tr>
<tr>
<td></td>
<td>· Contact all DHBs and advise of situation and national emergency control contact number(s).</td>
<td>Police: distribute standing orders to assist medical officers of health with containment (non-compliant cases), contact recording, assistance with contact tracing – if required.</td>
<td>- Instigate daily update of status of cases and new measures for media and on website.</td>
</tr>
<tr>
<td></td>
<td>· Manage liaison and communications with other government agencies.</td>
<td>Corrections, and other agencies managing institutions: implement enhanced infection control plans.</td>
<td>- Update travel advice.</td>
</tr>
<tr>
<td></td>
<td>DHBs:</td>
<td>Other agencies: develop and distribute appropriate advice to their sectors.</td>
<td>- Regular and frequent communication with health audiences – advertise/columns/features in trade press.</td>
</tr>
<tr>
<td></td>
<td>· Prepare to activate DHB CIMS structure.</td>
<td></td>
<td>- Enhance clear media protocols with most involved government agencies.</td>
</tr>
<tr>
<td></td>
<td>· Prepare to activate regional co-ordination teams.</td>
<td></td>
<td>- Review and update all foundation documents, and other communications to date.</td>
</tr>
<tr>
<td></td>
<td>· Advise and prepare all staff, services and service providers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk level</td>
<td>Health sector responses by Ministry of Health and DHBs</td>
<td>Roles for non-health agencies</td>
<td>Communications</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------</td>
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</tr>
<tr>
<td><strong>ACTIVATION PHASE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Alert Code: Red</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Infectious disease-related emergency in New Zealand – many imported cases and/or local transmission, outbreak or epidemic | As per the *National Health Emergency Plan: Infectious diseases* | **ODESC:**
- Confirm implementation of agreed decisions on travel restrictions, other mitigation measures and revised communications plan.
- Consider the need for consultation with other political parties.
- May require activation of National Crisis Management Sector.

**MFAT:** intensified travel advisory publicity.

**All agencies:** implement enhanced action agreed at ODESC or required under emergency powers, including mitigation and control measures in their sector. This may include closure of schools and workplaces with several cases and/or public venues/events, and control of movement to and from badly affected areas.

**Customs, NZIS and MAF:** implement agreed border control measures.

**Police:** compliance and public order issues.

**Treasury:** appropriate economic instruments are considered to maintain economic viability.

**MCDEM (Civil Defence):**
- the Civil Defence Emergency Management Act 2002 could potentially be invoked in some situations
- oversee organisation of volunteers to assist the health sector and the Police in various ways.

**Defence:** surge-capacity assistance for Health, Police and border control agencies

**Ministry of Social Development:** emergency assistance provisions, as required.

- Review key messages for the New Zealand public.
- Newspaper/radio advertising, and prepare for multi-media (including TV) mass advertising.
- More regular media conferences.
- Increased use of key spokesperson, and spreading load.
- Media monitoring stepped up – supplied independent of communications team.
- Specific audience information revised, especially for people dealing with the public (eg, transport operators, and in respect of restaurants, cinemas and public gatherings/events).
- Work closely with MCDEM to contact regional CDEM groups and local authorities. Also consider preparation for active roles in advisory/compliance capacities.
- Promote documentary-style news to provide more background.
- Review and update all foundation documents, and other communications to date.
- Hold regular meetings on communications between the Ministry of Health and relevant compliance authorities (eg, Police, Customs).
- Public good over individual rights message.
<table>
<thead>
<tr>
<th>Risk level</th>
<th>Health sector responses by Ministry of Health and DHBs</th>
<th>Roles for non-health agencies</th>
<th>Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STAND-DOWN PHASE</strong></td>
<td>As per the National Health Emergency Plan: Infectious diseases</td>
<td><strong>ODESC</strong>: phased stand-down implemented, including an agreed response evaluation</td>
<td>• Communicate to public the return to normal function.</td>
</tr>
<tr>
<td><strong>Alert Code: Green</strong></td>
<td><strong>Ministry of Health:</strong></td>
<td><strong>All agencies:</strong></td>
<td>• Evaluate emergency performance by the Ministry of Health, health and disability sector and government agencies.</td>
</tr>
<tr>
<td></td>
<td>• Moving from Red to Green – inform all regional co-ordinators.</td>
<td>• after the outbreak is over, all relevant agencies will contribute to recovery plan development and implementation.</td>
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<td>• Moving from Yellow to Green – inform all DHB single points of contact.</td>
<td>• evaluate own response and contribute to intersectoral review.</td>
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<td>• Advise media and public. Deactivate Ministry CIMS structure.</td>
<td>• revise own relevant contingency plans.</td>
<td>• Renewed focus on preparedness measures.</td>
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<td>• Resume normal functions.</td>
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<td>• Design and implement review and evaluation of emergency response.</td>
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<td><strong>DHBs:</strong></td>
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<td></td>
<td>• Deactivate regional co-ordination teams.</td>
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<td>• Deactivate DHB CIMS structure.</td>
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<td>• Resume normal functions.</td>
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<td><strong>Post stand-down</strong>: participate in Ministry-led review of emergency response.</td>
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Glossary

For the purposes of this Plan, the following interpretations shall apply.

**CIMS**
Co-ordinated Incident Management System, the model adopted in New Zealand for the command, control and co-ordination of emergency response. It is intended to provide a structure allowing the multiple agencies or units involved in an emergency to work together to systematically manage emergency incidents. This Plan features a modified CIMS structure for use in the health and disability sector in the event of a national health crisis.

A detailed description of the CIMS structure is provided in *The New Zealand Co-ordinated Incident Management System (CIMS): Teamwork in emergency management* (New Zealand Fire Service Commission 1998).

**Community-based assessment centre**
A health-related-related emergency is likely to put significant pressure on primary and community services. A community-based assessment centre will be a facility specifically for people requiring emerging or re-emerging infectious disease (EID)-related assessment or services, where patients who may have symptoms suggestive of an EID can be separated, as far as possible, from those without such symptoms but who still require primary care services. Appropriate facilities may range from a specified medical centre to a hospital outpatient facility, a community hall or marae, depending on local circumstances and resources.

**DHB**
District Health Board. The 21 DHBs are funders and providers of publicly funded services for the population of specific geographical areas in New Zealand. For the purposes of regional response co-ordination under this plan, the DHBs are grouped into four separate regions: **Northern** (Northland, Auckland, Waitemata and Counties Manukau); **Midland** (Waikato, Bay of Plenty, Lakes, Tairawhiti and Taranaki); **Central** (Whanganui, Hawke's Bay, MidCentral, Wairarapa, Hutt Valley, Capital & Coast); and **Southern** (Nelson Marlborough, West Coast, Canterbury, South Canterbury, Otago, Southland).

**DHB incident controller**
A member of a DHB emergency management team, with overall responsibility for co-ordinating emergency response at the individual DHB level. There is one incident controller for each DHB (21 positions in all).

**DHB emergency management team**
A body to manage the local emergency response in the event of a health-related emergency. Each of the DHBs convenes a team. DHB emergency management teams contribute to their relevant regional co-ordination team.
EID
Emerging or re-emerging infectious disease – infectious diseases that are newly identified, or that have existed previously but are increasing in incidence or geographic spread. Severe acute respiratory syndrome (SARS) is only the most recent example. Others include Ebola virus (1977), Legionnaire’s disease (1977), HIV/AIDS (1983), Hepatitis C (1989), variant Creutzfeldt-Jakob disease (1996) and HPAI – Highly Pathogenic Avian Influenza (1997).

Epidemic
A disease affecting or tending to affect an atypically large number of individuals within a population, community or region at the same time.

ESR
Institute of Environmental Science and Research Limited. ESR provides laboratory-based surveillance of infectious disease, and specialist and reference microbiological laboratory services to all clinical laboratories. ESR collects and collates disease burden data and, if required, provides cultures or isolates to World Health Organization (WHO) reference laboratories.

Major incident and emergency plan
A plan that each DHB is required to maintain in accordance with their Crown funding agreement.

National co-ordination team
A body to co-ordinate the national emergency response in the event of a health-related emergency. Based in the Ministry, it comprises members of the Public Health, Clinical Services, Mental Health, DHB Funding and Performance, Risk and Assurance, and Corporate and Information directorates, and others as necessary.

National co-ordinator
This single position leads the Ministry of Health national co-ordination team, with overall responsibility for co-ordinating emergency response at the national level.

NHEP
National Health Emergency Plan – a Ministry of Health umbrella plan incorporating this and other health emergency-specific action plans (eg, the National Burns Plan).

NGO
Non-governmental organisation.

NIISG
National Influenza Immunisation Strategy Group – co-ordinates inter-pandemic measures to strengthen New Zealand’s capacity to respond in the event of a pandemic. In particular, the group co-ordinates the promotion of annual influenza vaccination and awareness during inter-pandemic periods.

National Health Emergency Plan: Infectious diseases
This publication provides guidance for the New Zealand health sector response to an epidemic or pandemic. It provides specific guidance for the response by primary and secondary/tertiary care.
NPPC
National Pandemic Planning Committee – advises the Ministry of Health on the appropriate policies and strategies for New Zealand to respond to a pandemic.

Pandemic
An epidemic (a sudden outbreak) that becomes very widespread and affects a whole region, a continent or the world.

PHO
Primary health organisation – a grouping of primary health care providers; local structures through which DHBs implement the Primary Health Care Strategy.

PPE
Personal protective equipment – equipment that is used by all clinical and non-clinical staff, including gloves, fluid-repelling masks, eye protection and gowns.

Primary care
Care/services provided by general practitioners, nurses, pharmacists, dentists, ambulance services, midwives and others in the community setting.

Provider arm services
Services provided by DHB public health service providers, such as hospitals and district nursing services.

Public health services
These provide health services to populations rather than individuals. There are 12 public health services providing environmental health, communicable disease control, and health promotion programmes. Each public health service is administered by a public health unit, staffed by medical officers of health, public health nurses, health protection officers and others.

Regional co-ordination team
A body to co-ordinate the regional emergency response of DHBs in the event of a health-related emergency. In a national emergency, four such bodies are activated under this plan, with a broad membership decided on by the DHBs concerned. In a regional activation, the regional co-ordination team may be based in any DHB as agreed between the affected regional DHBs and with the Ministry of Health. In a national activation, it is likely to be based in the principal regional tertiary DHB in each region.

In a national emergency, regional co-ordination teams are activated by the national co-ordinator, who also makes the decision to stand down. In some circumstances, a single regional co-ordination team may be activated, subject to discussion between the affected regional DHBs and the Ministry of Health.

Regional co-ordinator
An agreed appointee of the DHBs in a given region, who is a member of a regional co-ordination team. The regional co-ordinator has overall responsibility for co-ordinating emergency response at the regional level (four positions).
**Regional incident co-ordination plan**
A document that sets out the proposed response of DHBs in a given region to a regional incident, and sets out a generic process for the management of regional incidents, irrespective of origin. It contains task assignments, assignments of roles and responsibilities, standard forms and other relevant guidance.

**Secondary/tertiary health care**
The levels of care provided in a hospital.

**Specialling**
The care of one patient by one nurse or other health care worker within a hospital setting.

**TAG**
Technical advisory group – national advisory group convened to provide co-ordinated expert technical advice to the Ministry of Health, as required.

**Triage**
The sorting or classification of casualties according to the nature or degree of illness or injury.
References


Additional Information

Literature


**Useful websites**

World Health Organization: http://www.who.int/en/

US Centers for Disease Control and Prevention: http://www.cdc.gov/