



## FOREWORD

Development of pandemic response plans for each of Vancouver Coastal Health's Health Service Delivery Areas (HSDA's) has involved input from, literally, hundreds of individuals throughout the VCH Region. In a series of facilitated workshops, health care workers were asked to identify issues and to propose solutions, based on their firsthand knowledge.

We have tried to incorporate some of that information in the draft plans. Each of these documents can only be a framework for continuing planning efforts. A workable, local plan must be a local product. Those who will implement the plan need to be familiar with its contents. So, where we had local information we have included it in the current iteration of the plan. Where such information was lacking, we have indicated who should be responsible for making sure that it is included in future iterations.

Emergency Co-ordinators in each HSDA have responsibility to develop and implement pandemic response planning, as part of the "all-hazards" approach to emergency response. Unlike most emergencies, an influenza pandemic will require a sustained and calibrated response. There will be little or no access to outside help. VCH's Emergency Co-ordinators have been important contributors to the development of these draft plans. It will be up to them to ensure that these plans become "working" documents, supportive of that sustained and calibrated response.

The plans will be exercised annually in a collaborative process; at that time, much of the information in the plans will need to be reviewed and updated to ensure that the plans remains current. Maintenance of the plans is the responsibility of the Emergency Co-ordinators. It is important that they forward updated and new information to VCH Communicable Disease Control, so that such information may be incorporated in the regional plan. Communicable Disease Control staff will communicate national, provincial and regional policies that affect the contents of local plans to the Emergency Co-ordinators to ensure that local plans remain up-to-date and consistent across the region.

INTRODUCTION

Pandemic response planning at the local level takes place within a context of regional, provincial, federal and international planning.

The World Health Organization (WHO) has devised a template for assessing and addressing the risk of an influenza pandemic. This template of **pandemic phases** serves as the basis for pandemic response planning and for activation of response.

World Health Organization  
Pandemic Phases

INTERPANDEMIC PHASE New virus in animals, No human cases	Low risk of human cases	1
	HIGHER RISK OF HUMAN CASES	2
PANDEMIC ALERT New virus causes human cases	NO OR VERY LIMITED HUMAN-TO-HUMAN TRANSMISSION	3
	EVIDENCE OF INCREASED HUMAN-TO-HUMAN TRANSMISSION	4
	Evidence of significant human-to-human transmission	5
PANDEMIC	Efficient and sustained human-to-human transmission	6

Because Influenza A H5N1, novel avian influenza virus sub-type, is causing illness in humans but, is not readily transmissible between people, we are, at the time of writing, deemed to be in a **pandemic alert, phase 3**. This level of alert has triggered a massive, international response, including efforts to detect and treat human cases and to eradicate the virus in domestic poultry flocks. As well, programs are in place to educate farmers in developing countries in enhanced animal husbandry practices and domestic hygiene.

If this or another novel influenza sub-type were to demonstrate increased human-to-human transmissibility, WHO would raise the **pandemic alert to level 4**, thus triggering efforts to contain the virus or delay its spread in order to afford us time to implement preparedness measures, including vaccine development.

Once significant human-to-human transmission is established, WHO will raise the **pandemic alert level to phase 5**, triggering a maximal public health effort to contain the spread of the virus, possibly prevent a pandemic and provide time to implement pandemic response measures.

When efficient and sustained transmission of a novel influenza virus, causing serious human illness, is established, WHO and national and provincial authorities will declare a **"pandemic", phase 6**. All health system efforts will be directed to minimizing the impact of the pandemic.

The purpose of the **Vancouver Acute Pandemic Response Plan** is to provide staff with a ready reference for pandemic response. It has been developed with input from staff in the Health Service Delivery Area and is a dynamic document. It is intended that the plan be **exercised and updated annually**.

The **Vancouver Coastal Health Regional Pandemic Influenza Response Plan** is cited as a reference throughout this document. Regional co-ordination of pandemic response will be based on the regional plan and it is within the context of regional planning that this HSDA-level plan has been developed. The VCH Regional Pandemic Influenza Response Plan can be found at [www.vch.ca/pandemic](http://www.vch.ca/pandemic). The most recent iteration of the regional plan will be that found on the VCH website. The Regional Pandemic Influenza Response Plan will serve as the ultimate source for pandemic response planning information throughout the region.

## ETHICAL FRAMEWORK FOR DECISION MAKING & PLANNING<sup>1</sup>

We have to think about difficult issues and make difficult decisions, as we prepare our health system to respond to a pandemic. We will face ethical dilemmas when our ethical values are in tension with one another.

We can help resolve these dilemmas if we have a shared ethical language and ethical decision making processes.

### Ethical Processes

- **Open & transparent**; our decisions should be publicly defensible
- **Reasonable**; our decisions should be based on relevant evidence, principles and values
- **Inclusive**; we must engage our communities & our clients in the conversation
- **Responsive**; we must be able to respond to our stakeholders' concerns
- **Accountable**; we must maintain ethical processes throughout a pandemic and be accountable for our decisions

Ten ethical values support ethical decision-making processes and planning. These values provide a shared ethical language.

### Ten Ethical Values for Pandemic Response

**Individual liberty** is enshrined in our laws and our health care practice. We may have to infringe individual liberty, when we take steps to **protect the public from harm**. We must ensure that the measures we take to protect the public from harm are **proportional to the risk** of public harm and do not exceed the minimum required to address the risk.

We all have a **right to privacy** and the privacy of our health information. If, when protecting the public from harm, we have to make use of private health information, we will abide by the laws regulating the collection, use and disclosure of that information.

During a pandemic, we will ask our health care workers to fulfill their ethical **duty to provide care**, when they may be concerned about their own well-being or the health of a sick child or friend. We owe them **reciprocity**. We must try to make sure that they have the tools and supports they need to manage at work and at home.

**Trust** will be an essential element in our relationships during a pandemic. We must build trust now through ethical decision-making processes. We will need to be able to rely on our **solidarity** with one another as friends and neighbours and as citizens. We must demonstrate excellent **stewardship** of our resources and develop and allocate them as best we can.

All patients have an equal call on health services; we must preserve as much **equity** as possible between meeting the needs of influenza patients and meeting the needs of patients who require urgent treatment for other diseases or conditions.

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<sup>1</sup> Based on *Ethical Framework for Decision Making in a Pandemic*, Dr. Jennifer Gibson *et al.* Joint Centre for Bioethics, University of Toronto.

## Vancouver Acute: HSDA Pandemic Response Plan

### HEALTH IMPACT ESTIMATES

#### Population Estimates & High Risk Groups

It is impossible to predict in advance how virulent the next pandemic influenza strain will be. The last pandemics of 1957 and 1968 were relatively mild, while the “Spanish Flu” of 1918 had devastating effects worldwide. The actual pandemic impact may be milder or more severe than the projections made in this chapter. As more information emerges on the pandemic virus itself and additional modeling studies are completed, the estimates will also be further refined.

Population projections provided by the British Columbia Statistics Agency and the templates found in the BC Pandemic Influenza Plan - which in turn are based on freely available public health software - were used to compute the expected rate of illness and mortality for Vancouver, by Local Health Area.

These estimates were produced for the general population as well as for groups considered to be at high-risk for contracting influenza and suffering from complications based on known susceptibility to annual influenza infections.

It is important to note that individuals at high-risk for regular influenza strains may not be those that will be most severely affected in a pandemic. Mortality was highest among young adults in the “Spanish Flu” of 1918. The most vulnerable group in the next pandemic will not be known in the interpandemic period. Therefore, the estimates should be considered as the best available, according to current knowledge.

Information on reference resources and how these calculations were made is contained in Chapter 2 - Health Impact Estimates, *VCH Pandemic Influenza Response Plan*:  
[http://www.vch.ca/pandemic/docs/ch02\\_health\\_impact.pdf](http://www.vch.ca/pandemic/docs/ch02_health_impact.pdf).

## Vancouver Acute: HSDA Pandemic Response Plan

### HEALTH IMPACT ESTIMATES

#### Population Estimates & High Risk Groups

**Table 1**

Estimates of the total population size and the number of high-risk individuals in the **0 to 19 year** age group in Vancouver, by Local Health Area, based on 2004 population statistics (numbers are based on an estimate of **6 to 11 % of high risk individuals** within this age group)

LHA #	Local Health Area	Age Group ≤ 1 to 19 Years				
		Total Population Within Age Group	High Risk		Standard Risk	
			Low Estimate (6%)	High Estimate (11%)	Low Estimate (89%)	High Estimate (94%)
161	Vancouver City Centre	9,705	582	1,068	8,637	9,123
162	Vancouver - Downtown Eastside	8,118	487	893	7,225	7,631
163	Vancouver - North East	22,376	1,343	2,461	19,915	21,033
164	Vancouver - Westside	22,924	1,375	2,522	20,402	21,549
165	Vancouver - Midtown	18,814	1,129	2,070	16,744	17,685
166	Vancouver - South	26,217	1,573	2,844	23,333	24,644
<b>Total Vancouver</b>		<b>108,154</b>	<b>6,489</b>	<b>11,858</b>	<b>96,256</b>	<b>103,665</b>

**Table 2**

Estimates of the total population size and the number of high-risk individuals in the **20 to 64 year** age group in Vancouver, by Local Health Area, based on 2004 population statistics (numbers are based on an estimate of **14 to 25 % of high risk individuals** within this age group)

LHA #	Local Health Area	Age Group 20 to 64 Years				
		Total Population Within Age Group	High Risk		Standard Risk	
			Low Estimate (14%)	High Estimate (25%)	Low Estimate (75%)	High Estimate (86%)
161	Vancouver City Centre	84,616	11,846	21,154	63,462	72,770
162	Vancouver - Downtown Eastside	37,508	5,251	9,377	28,131	32,257
163	Vancouver - North East	63,876	8,943	15,969	47,907	54,933
164	Vancouver - Westside	86,157	12,062	21,539	64,618	74,059
165	Vancouver - Midtown	59,828	8,376	14,957	44,871	51,452
166	Vancouver - South	83,971	11,756	20,993	62,978	72,216
<b>Total Vancouver</b>		<b>329,799</b>	<b>47,234</b>	<b>90,529</b>	<b>311,967</b>	<b>357,687</b>

## Vancouver Acute: HSDA Pandemic Response Plan

### HEALTH IMPACT ESTIMATES

#### Population Estimates & High Risk Groups

**Table 3**

Estimates of the total population size and the number of high-risk individuals in the **65 and older** age group in Vancouver, by Local Health Area, based on 2004 population statistics (numbers are based on an estimate of **40 to 55 % of high risk individuals** within this age group)

LHA #	Local Health Area	Age Group 65 Years & Older				
		Total Population Within Age Group	High Risk		Standard Risk	
			Low Estimate (40%)	High Estimate (55%)	Low Estimate (45%)	High Estimate (60%)
161	Vancouver City Centre	10,126	4,050	5,569	4,557	6,076
162	Vancouver - Downtown Eastside	7,086	2,834	3,897	3,189	4,252
163	Vancouver - North East	13,515	5,406	7,433	6,082	8,109
164	Vancouver - Westside	15,378	6,151	8,458	6,920	9,227
165	Vancouver - Midtown	9,733	3,893	5,353	4,380	5,840
166	Vancouver - South	17,734	7,094	9,754	7,980	10,640
<b>Total Vancouver</b>		<b>73,572</b>	<b>29,428</b>	<b>35,646</b>	<b>29,208</b>	<b>43,964</b>

**Table 4**

Estimated numbers of **outpatient visits, hospitalizations and deaths** for all age and risk groups, **Vancouver**

LHA #	Local Health Area	Outpatient Visits		Hospitalizations		Deaths	
		Estimate		Estimate		Estimate	
		Low	High	Low	High	Low	High
161	Vancouver City Centre	5,486	13,309	48	438	16	171
162	Vancouver - Downtown Eastside	3,193	7,075	28	232	10	88
163	Vancouver - North East	6,917	14,455	54	439	19	163
164	Vancouver - Westside	7,990	17,262	64	540	22	204
165	Vancouver - Midtown	5,945	12,623	43	377	14	141
166	Vancouver - South	8,566	18,152	70	565	25	212
<b>Total Vancouver</b>		<b>38,097</b>	<b>82,867</b>	<b>307</b>	<b>2,591</b>	<b>106</b>	<b>979</b>

**References:** [http://www.vch.ca/pandemic/docs/ch02\\_health\\_impact.pdf](http://www.vch.ca/pandemic/docs/ch02_health_impact.pdf)

HEALTH CARE FACILITIES

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- Patient Admission
- Patient Activity restrictions
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- Management of Patients in the Community

## HEALTH CARE FACILITIES

### Acute Care Facilities: Development of a Pandemic Plan

#### Process

#### Management of Acute Care Facilities should:

- ❑ Develop pandemic response plans for their facilities.
- ❑ Incorporate regionally developed guidelines and protocols, as appropriate.
- ❑ Work with the VCH **Emergency Co-ordinator** to assess capacity to increase bed capacity to create alternate care sites.

#### The Emergency Co-ordinator should:

- ❑ Work with acute care facilities to ensure that each facility has a pandemic plan.
- ❑ Work with acute care facilities to identify areas in the facility where additional, temporary beds may be located to create surge capacity.
- ❑ Update acute care bed capacity information annually, as the plan is exercised.

#### References & Resources

For information on the **management of patients in acute care facilities** during a pandemic see: VCH Pandemic Influenza Plan, Chapter 7, Clinical Management & Health Care Facilities, section 2. [http://www.vch.ca/pandemic/docs/ch07\\_medical\\_management.pdf](http://www.vch.ca/pandemic/docs/ch07_medical_management.pdf)

A useful tool for the **development of plans for acute care facilities** is Pandemic Influenza Planning Guidelines, developed by the Toronto Academic Health Sciences Network, available online at: [http://www.baycrest.org/Family\\_Information/Pandemic\\_Information/TAHSNGuidelines.pdf](http://www.baycrest.org/Family_Information/Pandemic_Information/TAHSNGuidelines.pdf)

## HEALTH CARE FACILITIES

### Acute Care Facilities: Bed Capacity/Ventilator Capacity

Accurate counts of beds and ventilators are a necessary element of pandemic planning in the acute care sector.

#### Process

The Emergency Co-ordinator should:

- Work with acute care management to develop accurate bed capacity and ventilator capacity counts for all acute care facilities in the HSDA.

#### Tools

For the following tools see: VCH Pandemic Influenza Plan, Chapter 7, Clinical Management & Health Care Facilities, section 8.

[http://www.vch.ca/pandemic/docs/ch07\\_medical\\_management.pdf](http://www.vch.ca/pandemic/docs/ch07_medical_management.pdf)

Emergency Ventilator Capacity Considerations Worksheet  
Inventory of Ventilators Worksheet

#### References & Resources

For information on the assessment of bed and ventilator capacity in acute care facilities see: VCH Pandemic Influenza Plan, Chapter 7, Clinical Management & Health Care Facilities, section 4. [http://www.vch.ca/pandemic/docs/ch07\\_medical\\_management.pdf](http://www.vch.ca/pandemic/docs/ch07_medical_management.pdf)

#### Note

For information on the clinical management of influenza see: VCH Pandemic Response Plan, Chapter 7, section 1. [http://www.vch.ca/pandemic/docs/ch07\\_medical\\_management.pdf](http://www.vch.ca/pandemic/docs/ch07_medical_management.pdf)

## HEALTH CARE FACILITIES

### Acute Care Facilities: Infection & Environmental Control - Physical Setting

#### Note

Acute care settings group patients together, who have a high risk of developing serious, sometimes fatal complications related to influenza. In addition, morbidity and mortality related to nosocomial; i.e., hospital-acquired, infections is much greater in acute care populations than in other populations.

#### Process

When a pandemic is declared, **Acute Care Facilities** should:

- Open triage settings in acute care hospitals.
- Open cohort areas or units in hospital.
- Post signs at all entrances informing patients, residents, clients, visitors, volunteers and staff of appropriate actions to be taken before or upon entering the facility.
- Provide education to all staff.

## HEALTH CARE FACILITIES

### Acute Care Facilities: Infection & Environmental Control

#### Routine Practices

##### Process

During a pandemic, **Acute Care Facilities** should:

- ❑ Adhere to previously established policies and procedures for routine infection control practices.

#### Additional Precautions

##### Note

Although droplet and contact precautions are recommended in preventing the transmission of influenza during an inter-pandemic period, these precautions may not be achievable or practical as the pandemic spreads and resources become scarce. Infection control resources may need to be prioritized to the acute care settings where the complexity of patient care is greatest.

##### Process

During a pandemic, **Acute Care Facilities** should:

- ❑ Adhere to the previously established policies and procedures for using additional infection control precautions, when routine practices are not sufficient to prevent transmission.

#### Hand Hygiene

Waterless alcohol-based hand sanitizers can be used as a substitute for hand washing. They are especially useful when access to sinks or warm, running water is limited.

##### Process

**Managers of acute care facilities** should:

- ❑ Remind staff, patients and visitors that hand washing/hand hygiene is the most important procedure in preventing and controlling the spread of infection. Meticulous hand hygiene will inactivate the virus.

**Health Care Workers** should:

- ❑ Perform hand hygiene after direct contact with individuals with suspected or confirmed influenza and after contact with their personal articles or their immediate environment.

## HEALTH CARE FACILITIES

### Acute Care Facilities: Infection & Environmental Control

#### Basic Hygiene Measures

##### Note

Strategically placed alcohol-based hand sanitizers and boxes of tissues may enhance personal hygiene practices.

##### Process

##### Acute Care Facilities should:

- ❑ Remind patients, staff and visitors to minimize potential influenza transmission through hygienic measures; e.g., use disposable, single-use tissues for wiping noses; covering nose and mouth when sneezing and coughing; hand washing/hand hygiene after coughing, sneezing or using tissues.
- ❑ Emphasize the importance of keeping hands away from the mucous membranes of the eyes and nose.

#### Personal Protective Equipment

##### Masks/Eye Protection

##### Note

Masks (surgical/procedure) to minimize transmission of influenza may be helpful when having face-to-face contact with individuals suspected of having influenza during the early pandemic period, especially when immunization and chemoprophylaxis is not available. The use of masks may not be practical or helpful when transmission is widespread in a facility or a community.

##### Process

##### Health Care Workers should:

- ❑ Wear masks, eye protection or face shields to prevent exposure to sprays of blood, body secretions or excretions, during procedures and patient care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions.
- ❑ Wear a fitted particulate respirator (N95 mask) during:
  - Contact with patients who have an undiagnosed cough that may be caused by an organism that is spread by the airborne route e.g. TB, chickenpox, and measles.
  - Aerosolizing procedures with a patient suspected or known to have an organism spread by droplet transmission.
- ❑ Avoid touching their eyes with their hands to prevent self-contamination with pathogens.

## HEALTH CARE FACILITIES

### Acute Care Facilities: Infection & Environmental Control

#### Personal Protective Equipment (cont'd.)

##### Gloves

##### Note

Gloves are not required for the routine care of patients suspected or confirmed to have influenza. Gloves should be used as an additional measure. They are not a substitute for hand washing. Single-use gloves should not be re-used or washed.

##### Process

##### Health Care Workers should:

- Wear clean, non-sterile gloves for:
  - Contact with blood, body fluids, secretions, excretions, mucous membranes and non-intact skin
  - Handling items visibly soiled with blood, body fluids, secretions or excretions.

##### Gowns

Gowns are not required for the routine care of patients suspected or confirmed to have influenza.

##### Process

##### Health Care Workers should:

- Wear gowns to protect uncovered skin and prevent soiling of clothing, during procedures and patient care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions.
- Ensure any open skin areas or lesions on forearms or exposed skin are covered as appropriate.
- Wash intact skin that has been contaminated with blood, body fluids, secretions or excretions as soon as possible.

## HEALTH CARE FACILITIES

### Acute Care Facilities: Infection & Environmental Control

#### Cleaning, Disinfection and Sterilization of Patient Care Equipment

##### Process

When a pandemic is declared, **Acute Care Facilities** should:

- ❑ Adhere to previously established policies and procedures for the cleaning, disinfection and sterilization of patient care equipment.

#### Environmental Control (housekeeping, laundry, waste)

##### Note

Special handling of linen or waste contaminated with secretions from patients suspected or confirmed to have influenza is not required.

##### Process

When a pandemic is declared, **Acute Care Facilities** should:

- ❑ Adhere to previously established policies and procedures for housekeeping, laundry and waste disposal, including regular garbage and biomedical waste.
- ❑ Enhance cleaning and disinfection of common touch surfaces (handrails, door knobs, sink/toilet), as resources permit.

#### Patient Accommodation or Placement

##### Process

When a pandemic is declared, **Acute Care Facilities** should:

- ❑ Limit single rooms in acute care settings to patients suspected or confirmed to have airborne infections; e.g., tuberculosis, measles, varicella and disseminated zoster, or for patients who visibly soil the environment or for whom appropriate hygiene cannot be maintained.
- ❑ Minimize crowding; i.e., maintain at least a one meter spatial separation between patients, visitors and staff, whenever possible.

## Vancouver Acute: HSDA Pandemic Response Plan

### HEALTH CARE FACILITIES

#### Acute Care Facilities: Infection & Environmental Control

##### Patient Triage or Cohorting

###### Process

When a pandemic is declared, **Acute Care Facilities** should:

- ❑ Open the following cohort areas:
  - Influenza-Like-Illness (ILI) Assessment Area;
  - Non ILI Assessment Area;
  - Suspected/Exposed to ILI inpatient units;
  - Not Exposed/Immune to Influenza, inpatient Units;
  - Not exposed to ILI but at very high risk of complications, inpatient units.

##### Patient Admission

###### Process

When a pandemic has been declared, **Acute Care Facilities** should:

- ❑ Prioritize medical and surgical acute care hospital admissions, according to pre-established guidelines.
- ❑ Move patients who have recovered from influenza into the “Non Influenza” cohort areas, after the period of communicability of the pandemic strain has passed.
- ❑ As the pandemic progresses, merge the “Suspect/Exposed” cohort and the “Confirmed Influenza” cohort, as necessary to accommodate surge in demand.
- ❑ Maintain cohort principles, until the pandemic wave has been declared over.

## HEALTH CARE FACILITIES

### Acute Care Facilities: Infection & Environmental Control

#### Patient Activity Restrictions

##### Process

When a pandemic has been declared, **Acute Care Facilities** should:

- ❑ Enhance triage and admission processes.
- ❑ Limit patient movement and activities, including transfers within the hospital, unless the patient has recovered from pandemic influenza.
- ❑ Allow patients with ILI, who are coughing, to leave their rooms only for urgent, necessary procedures.
- ❑ Consider the need for and scheduling of procedures so that patients who do not have influenza are not exposed to those with influenza.
- ❑ Cancel group activities. One-on-one activities, such as physiotherapy, are desirable if the patient feels well enough.
- ❑ Put a surgical or procedure mask on patients with ILI who are coughing whenever they need to be out of their room until the period of communicability of the pandemic strain has passed.

##### References & Resources

For information on the **management of patients in acute care facilities** during a pandemic see: VCH Pandemic Influenza Plan, Chapter 7, Clinical Management & Health Care Facilities, section 2. [http://www.vch.ca/pandemic/docs/ch07\\_medical\\_management.pdf](http://www.vch.ca/pandemic/docs/ch07_medical_management.pdf)

#### Visitor Restrictions

There are no restrictions for asymptomatic visitors who have recovered from pandemic influenza or who have been immunized against the pandemic strain of influenza, at least two weeks previously.

##### Process

During a pandemic **Acute Care Facilities** should:

- ❑ Discourage visitors with ILI until they are asymptomatic. Close relatives of terminally ill residents may be exempted, but should put a mask on upon entry into the facility and their visit should be restricted to that patient only.
- ❑ Inform visitors when the acute care facility has influenza activity. Wearing a mask upon entry to the facility is only useful if there is no influenza in the community.
- ❑ Discourage visits by those who have not yet had the pandemic strain of influenza or who have not been immunized against the pandemic strain. Close relatives of terminally ill residents may be exempted, but they should restrict their visit to that individual only and they should wash their hands on exit from the patient's room.

## HEALTH CARE FACILITIES

### Management of Patients in the Community

#### Note

For case definitions, common clinical presentations and instructions for the assessment, triage, care and discharge of influenza patients, refer to the VCH Pandemic Response Plan, Chapter 7, section 1, Clinical Management of Influenza: [http://www.vch.ca/pandemic/docs/ch07\\_medical\\_management.pdf](http://www.vch.ca/pandemic/docs/ch07_medical_management.pdf)

#### Discharge and Follow-up

During a pandemic, a shortage of hospital beds is anticipated; therefore identification of patients who can be discharged to an alternate care facility or to care at home must be timely.

Patients who are deemed clinically stable may be considered for transfer out of acute care to an alternate care facility or to care at home. The use of an alternative centre of care should be considered, if more prolonged observation is necessary for patients with pneumonia, co-morbidities or for those who are not functionally independent.

Clinically stable patients, receiving care in acute care facilities for conditions other than influenza, may also be considered for early discharge, in order to free up bed capacity.

#### Process

In the interpandemic period, the Emergency Co-ordinator should:

- ❑ Work with the Transition Services Team to identify and document local capacity to provide at-home care.
- ❑ Update the capacity assessment annually when the pandemic plan is exercised.

HEALTH CARE FACILITIES

Acute Care Facilities: Optimizing Hospital Capacity

Developing Surge Capacity<sup>1</sup>

To be able to meet pandemic demands, hospitals must develop a phased approach to surge capacity, including deferral of non-influenza care and dynamic use of influenza triage and admission/discharge criteria constantly adjusted to hospital capacity. Recent reviews of emergency response arrangements in the US suggest that 20% surge capacity is the maximum upper limit to a hospital “surge in place” response during major emergencies. This will vary according to local hospital resources.

Table 1 outlines approaches to optimizing hospital capacity and capability that, pending further advice from clinical experts and the Ministry of Health, are suggested for use in VCH planning for pandemic response.

Table 1: Approaches to Optimizing Hospital capacity in VCH

Capacity	Activity
Physical Capacity	Defer any services for conditions that are not life-threatening, where no adverse health consequences are expected from the delay.
	Discharge Alternate Level of Care patients to Long-Term Care facilities immediately beds are available
	Discharge acute patients to home support when care can be provided safely in that environment
	Discharge acute patients to family and self-care when care can be provided safely in that environment
	Create “flex beds” from reserved beds or recently closed beds.
	Use ventilator capacity anywhere in the hospital where sufficient oxygen capacity exists; e.g., ER, post-anaesthetic care units, cohort infectious patients and non-infectious patients
	Deploy freed-up beds for influenza patients
Hospital Staffing	Redeploy clinical staff from deferred services
	Defer staff holidays and leaves of absence until pandemic ends
	For staff willing to work extra hours, establish 12-hour shifts up to the maximum recommended number of days per staff member
	Train non-clinical staff to provide support services such as meals, personal care patient movement for treatment, site cleaning and support for health care workers and their families (child care, pet care) so health care workers can do their jobs
	Recruit clinical agency staff in co-ordination with other hospitals in the Region
	Encourage members of the public to take home health care courses before the pandemic so they know how to prevent infection and provide supportive care for family members who are ill; train family members of hospital patients to provide home health care
	Cross-train clinical staff for influenza care and other essential services during a pandemic and other large-scale emergencies
Clinical Practices	Adopt clinical practices to optimize hospital capacity, pending further development of clinical guidelines

<sup>1</sup> Adapted from Ontario Health Pandemic Influenza Plan, 2005

HEALTH CARE FACILITIES

Acute Care Facilities: Optimizing Hospital Capacity

Table 2 outlines strategies that hospitals and their community partners can use to respond to the need for surge capacity.

Table 2: Strategies to Enhance Surge Capacity

Surge Levels During an Influenza Pandemic	Surge Strategies		Response Level	ICS Command Function
Pre-Surge	Basic	<ul style="list-style-type: none"> <li>▪ Staffed and operational beds open</li> </ul>	Intra-facility	Hospital
Minor Surge 5% - 10%	Enhanced	<ul style="list-style-type: none"> <li>▪ Open approved ICU and ventilator-supported beds as staff redeployment/recruitment permits</li> <li>▪ Defer elective surgery up to 72 hours as per routine surge protocols</li> <li>▪ Cohort/isolate influenza patients in ER, acute units and ICU/ventilator units</li> </ul>	Intra-facility	Hospital
Moderate Surge 11% - 15%	Augmented	<ul style="list-style-type: none"> <li>▪ Establish early discharges; home support transfers; ALC transfers to LTC facilities</li> <li>▪ Open more ICU/ventilator beds where oxygen available; e.g., operating rooms or post-anaesthetic care units</li> <li>▪ Defer some treatment for non-life threatening conditions if no severe adverse health consequence anticipated from the delay</li> </ul>	Intra-facility	Hospital
Major Surge 16%-20%	Optimum	<ul style="list-style-type: none"> <li>▪ Defer all treatment for non-life threatening conditions where no severe adverse health consequences are anticipated from the delay</li> </ul>	Inter-facility	Region
Large Scale Emergency >20%	Over capacity	<ul style="list-style-type: none"> <li>▪ No more beds available</li> <li>▪ Maintain services for life-threatening conditions</li> <li>▪ Triage for all treatment</li> <li>▪ Mass emergency care</li> </ul>	Inter-facility	Region/Province

Mass Emergency Care

After hospital surge capacity and other health system resources have been exhausted, mass emergency care will be declared in order to ensure the fair and equitable allocation of scarce resources and maximize the benefit to the population at large. This approach is consistent with federal and provincial goals of pandemic influenza planning: to minimize serious illness and overall deaths.

Since there are substantial political, legal, regulatory and logistical implications to declaring the shift to mass emergency care, further advice will be sought from clinical experts and the Ministry of Health about the criteria for mass emergency care and guidelines for implementing that care once hospital surge capacity is exhausted.

## HEALTH CARE FACILITIES

### Acute Care Facilities: Optimizing Hospital Capacity

#### Deferral of Non-Influenza Services

When a pandemic is declared, hospitals will begin a phased deferral or scale-back of certain non-influenza services; e.g., elective surgeries, outpatient procedures, in order to ensure that essential services are there for both influenza and other care. By using a phased approach hospitals will avoid unnecessary deferral of services before the full impact of the pandemic is known, but will be able to act quickly to defer services as the pandemic impact increases.

#### Process

When making decisions to defer services, **Managers in Acute Care** should:

- ❑ Establish a senior, multidisciplinary team to make decisions and seek support from ethical and legal experts
- ❑ Apply an ethical framework for decision making
- ❑ Use consistent criteria that are flexible enough to allow local responses based on local demands and resources
- ❑ Ensure their decisions are transparent.

#### Note

All hospital service deferrals should be based on a careful and compassionate clinical assessment of each patient's health condition, prognosis, risk of infection during acute hospital care.

HEALTH CARE FACILITIES

Acute Care Facilities: Optimizing Hospital Capacity

Table 3 lists criteria and indicator conditions for hospitals to use to identify services that can be deferred and those that are essential and must be maintained. These criteria will be refined based on advice from clinical experts and the Ministry of Health.

Table 3: Criteria and Indicator Conditions for Deferring Hospital Services

Site of Care	Level 1 Defer services for non-life threatening conditions immediately if no severe adverse health consequences anticipated by the delay	Level 2 Maintain services for non-life threatening conditions as long as resources are available, if severe adverse consequences are anticipated from delay	Level 3 Maintain services for life-threatening conditions throughout the influenza pandemic
Hospital inpatient Surgery or Procedure	<ul style="list-style-type: none"> <li>▪ Elective abdominal aortic surgery</li> <li>▪ Cholecystectomy</li> <li>▪ Hip/knee replacement</li> <li>▪ Prostate transurethral resection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Carotid endarterectomy</li> <li>▪ Colectomy</li> <li>▪ Thoracotomy</li> <li>▪ Total prostatectomy</li> <li>▪ Lumpectomy/mastectomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Initiation of mechanical ventilation</li> </ul>
Hospital Outpatient Surgery or Procedures	<ul style="list-style-type: none"> <li>▪ Vasectomy</li> <li>▪ Myringotomy</li> <li>▪ Carpal tunnel syndrome</li> <li>▪ Cataract surgery</li> </ul>	<ul style="list-style-type: none"> <li>▪ Breast biopsy</li> <li>▪ Chemotherapy</li> <li>▪ Percutaneous coronary intervention (PCI)</li> <li>▪ Cardiac catheterization</li> </ul>	
Hospital Emergency Department Care	<ul style="list-style-type: none"> <li>▪ Superficial injuries</li> <li>▪ Back or neck pain</li> <li>▪ Extremity strain</li> </ul>	<ul style="list-style-type: none"> <li>▪ Severe cuts</li> <li>▪ Upper/lower respiratory infection</li> <li>▪ Otitis media</li> </ul>	<ul style="list-style-type: none"> <li>▪ Initiation of mechanical ventilation</li> </ul>

Notes to Table 3:

1. These criteria are based in the three health care urgency categories developed by the Institute for Clinical Evaluative Sciences (ICES) to assess the impact of SARS on health services utilization.
2. If the spread of influenza is gradual, a scale-back may be time-sensitive, with some services deferred earlier than others according to the assessed impact from the delay.
3. These recommendations mirror the Alberta Clinical Subcommittee report (2003, page 21) which states that the exact details of rationing health care resources cannot be anticipated in advance by algorithm or list of trade-offs.
4. The report recommends a step-wise process, starting with decisions about elective surgery by the Chiefs of Surgery, Neurosurgery and Medicine, followed with shared decision-making among attending physicians, health care workers, senior physicians, the head of nursing, an ethicist and the Chief Executive Officer, for all other treatment.

HUMAN RESOURCES

CONTENTS

Health Care Worker Education	2
Planning for A Supplementary Work Force	3

## Vancouver Acute: HSDA Pandemic Response Plan

### HUMAN RESOURCES

#### Health Care Worker Education

Education and training should prepare health care workers to respond to a pandemic event in the workplace, at home and in their communities. Programs will include materials to address:

- epidemiology of influenza and its modes of transmission
- avian influenza
- pandemic influenza
- infection control and hygiene practices
- staying healthy during a pandemic
- self care during a pandemic, including when to seek further care
- review of psycho-social supports
- personal protective equipment
- cross-training to create surge capacity
- ethical framework for decision making

#### Process

The Emergency Co-ordinator should:

- ❑ Work with the MHO, colleagues in the HSDA and Communicable Disease Control staff at the regional level to co-ordinate opportunities to provide health care worker education about pandemic influenza in the HSDA.
- ❑ Co-ordinate annual exercise of the HSDA plan. Annual exercise of the HSDA pandemic response plan is an important educational opportunity for staff.

VCH Communicable Disease Control staff should:

- ❑ Co-ordinate development of educational resources for health care worker education.
- ❑ Ensure consistency of message across the region.

Regional resources may include:

- ❑ regional webcasts
- ❑ web-based resources
- ❑ in-service training
- ❑ information in pay stubs
- ❑ print resources

#### References & Resources

[http://www.vch.ca/pandemic/docs/ch08\\_human\\_resources.pdf](http://www.vch.ca/pandemic/docs/ch08_human_resources.pdf)  
[http://www.vch.ca/pandemic/docs/ch04\\_infection\\_control.pdf](http://www.vch.ca/pandemic/docs/ch04_infection_control.pdf)  
[http://www.vch.ca/pandemic/docs/ch05\\_self\\_care.pdf](http://www.vch.ca/pandemic/docs/ch05_self_care.pdf)

#### Tools

To be developed.

Vancouver Coastal Health's pandemic self-care guide, "Look after yourself" is available at:  
[http://www.vch.ca/pandemic/docs/Look\\_after\\_yourself.pdf](http://www.vch.ca/pandemic/docs/Look_after_yourself.pdf).

## HUMAN RESOURCES

### Planning for a Supplementary Work Force

During a pandemic, shortages of personnel can be expected to limit the ability of institutions to respond to a significant increase in patient volume. Increased pressure for adequate staffing will arise from the fact that a significant proportion of personnel will be taken out of the work force due to illness or family needs.

In order adequately to respond to the surge in demand for health care services, VCH will look to alternate sources of workers to supplement staff in our facilities and community. Alternate sources of health care workers may include but, are not limited to:

- retired physicians or nurses
- physicians or nurses currently not working in clinical health care (i.e., working in education, administration, research, private industry)
- students & trainees (e.g., medical, nursing and therapy students)
- registered nursing assistants
- patient care assistants
- emergency medical technicians
- veterinarians
- pharmacists
- therapists (respiratory, occupational and physiotherapists)
- technicians (laboratory, radiography)
- health care aides

### Note

Provincial and regional working groups will address the identification of supplementary workers.

A regional Human Resources Committee will identify and address training needs for supplementary workers.

### References & Resources

[http://www.vch.ca/pandemic/docs/ch08\\_human\\_resources.pdf](http://www.vch.ca/pandemic/docs/ch08_human_resources.pdf)

## Vancouver Acute: HSDA Pandemic Response Plan

### COMMUNICATIONS

#### CONTENTS

Communication During a Pandemic

Contacting Employees

Information for Employees

For External Audiences

## Vancouver Acute: HSDA Pandemic Response Plan

### COMMUNICATIONS

#### Communication During a Pandemic

Communication during a pandemic will be phase-specific and will include information on the prevention and mitigation of a pandemic. The VCH Pandemic Influenza Response Plan details the key messages, stakeholders and means of communication to be used. Additional information will be developed specific to the pandemic strain.

#### Communication Lead

The Vice President, Communications & Community Engagement, as primary communication lead, is responsible for communications, in conjunction with the Chief Medical Health Officer, and for liaison with and updating the Board and Senior Executive Team.

#### Communication with the Media

The Director, Media and Issues Management will deal with all media queries.

##### Process

The Director, Media and Issues Management will:

- ❑ Coordinate all information released to the media.
- ❑ Ensure key messaging is consistent with the Chief Medical Health Officer or designate.
- ❑ Recommend appropriate response strategies.
- ❑ Approve all written, electronic, or photographic information for media use.
- ❑ Act as official spokesperson, as needed.

#### Key Spokespersons

The official spokesperson during a pandemic is the Chief Executive Officer or designate. The Chief Medical Health Officer will be the primary designate for speaking to and answering media queries.

**Chief Medical Health Officer (Dr. Patricia Daly or designate)**

**Regional Director, Public Affairs (Laurie Dawkins)**

Office: 604-708-5312

All media queries forwarded to Director

**Medical Health Officer On-Call (available 24/7)**

604-527-4893

**Media Relations Officer (Viviana Zanocco or designate)**

604-708-5282

**After-hours Media Pager** For media inquiries after regular office hours and on weekends, call the media pager at 604-686-9983

## Vancouver Acute: HSDA Pandemic Response Plan

### COMMUNICATIONS

#### Contacting Employees

During a pandemic, consistent and timely communication with health care workers will be critical to managing response and appropriately deploying resources. We will maintain accurate and current contact information for all employees and develop and maintain the mechanisms necessary to contact them.

#### Process

The Emergency Co-ordinator should:

- ❑ Work with **Employee Engagement** in the HSDA and with **line managers** to maintain accurate and current contact information for all employees
- ❑ Ensure that telephone "fan-out" list are developed for use in a pandemic emergency
- ❑ Ensure that telephone "fan out" lists are updated annually when the pandemic plan is exercised

## Vancouver Acute: HSDA Pandemic Response Plan

### COMMUNICATIONS

#### Information for Employees

During a pandemic, employees will need access to accurate and timely information about the disease outbreak and to information about the response within the HSDA and throughout the region.

#### Process

VCH Communications, in collaboration with VCH Communicable Disease Control will:

- ❑ Develop internet- and intranet-based resources to respond to employee information needs throughout the region.
- ❑ Develop plans for the dissemination of information by alternate means, including a toll-free hotline for employees.

During a pandemic, VCH Staff should:

- ❑ Visit the VCH Intranet site at [www.vcha.ca](http://www.vcha.ca) for access to staff bulletins, policies and procedures and question and answer documents.
- ❑ Call the VCH toll-free **hotline for employees** at **1(877) 822-4646** for pre-recorded information (regularly updated) for those calling from home or without access to e-mail.

## Vancouver Acute: HSDA Pandemic Response Plan

### COMMUNICATIONS

#### For External Audiences

##### VCH Website

Information on influenza and the VCH Pandemic Influenza Plan are posted on the VCH website at [www.vch.ca/pandemic](http://www.vch.ca/pandemic).

When a pandemic is declared, an information portal will be available on the VCH home page at [www.vch.ca](http://www.vch.ca) and will include:

- Up-to-date pandemic information.
- Information on the availability of vaccine and eligible groups for vaccination.
- Information for travellers returning from or travelling to pandemic areas (co-ordinated with Health Canada).
- Information on seeking medical care during the pandemic.
- Information on prevention and self-care.
- Links to other sites.

##### Toll-free Hotline

A toll-free hotline for the public has pre-recorded messages that can be updated, as needed. During a pandemic, it will be staffed by trained personnel to answer questions from the public.

The toll-free hotline for public enquiries is 1 (888) 875-4334.

##### References & Resources

For additional information on communications plans for a pandemic see VCH Pandemic Influenza Plan, Chapter 11, [http://www.vch.ca/pandemic/docs/ch11\\_communication.pdf](http://www.vch.ca/pandemic/docs/ch11_communication.pdf).

Vancouver Acute: HSDA Pandemic Response Plan

HANDLING & DISPOSAL OF THE DECEASED

CONTENTS

Natural Death Surge

Role of the Coroner

Waiving of Requirements

Role of the Local Authority (Municipality or Regional District)

Pronouncement of Death

Registration of Death

Medical Certificate of Death

**Applying for the Death Certificate/Permit of Burial or Cremation**

## Vancouver Acute: HSDA Pandemic Response Plan

### HANDLING & DISPOSAL OF THE DECEASED

#### Natural Death Surge

Deaths resulting from influenza will constitute a natural death surge; i.e., “an increased number of deaths from natural causes that can occur over a period of weeks or months,” as opposed to a single mass or multiple fatality event where several people die, as the result of a single incident, and where the number of deaths exceeds the capabilities of local resources to respond.

#### Role of the Coroner

Deaths resulting from a declared influenza pandemic would be natural deaths but would not be “sudden and unexpected”. The Chief Coroner would not automatically have jurisdiction or become involved in all pandemic deaths.

#### Waiving of Requirements

In an influenza pandemic, the Chief Coroner in collaboration with the Provincial Health Officer might act to waive current processing requirements to facilitate rapid processing and burial.

Under a provincial emergency declaration the Chief Coroner may:

- Direct changes to the documentation and processing requirements to facilitate a rapid burial where there is reasonable presumptive cause of death and no identification issues
- Authorize the use of mass graves
- Introduce special measures for the processing of unidentified bodies
- Direct the establishment of temporary morgues
- Direct the burial of bodies without embalming, using body bags only
- Direct the burial of unclaimed bodies
- Waive autopsies
- Direct the taking of body fluid samples (this is not considered an autopsy and does not need permission of the next of kin).

#### Role of the Local Authority (Municipality or Regional District)

In a situation where local resources are overwhelmed, the local authority may be called upon to assist in the collection, storage, transport, processing and burial of the dead.

#### References & Resources

*Coroners Act* [RSBC 1996] CHAPTER 72 is available at:  
[http://www.qp.gov.bc.ca/statreg/stat/C/96072\\_01.htm](http://www.qp.gov.bc.ca/statreg/stat/C/96072_01.htm)

*Managing Pandemic influenza for Local Governments, Annotated Annex* is available at:  
<http://www.health.gov.bc.ca/pandemic/local.html>

## HANDLING & DISPOSAL OF THE DECEASED

### Pronouncement of Death

The pronouncement of death is not a reserved medical act or a delegated medical function. There are no laws governing the event when death is expected nor are there laws defining who is qualified to pronounce death in such circumstances. An unexpected death must be reported to the coroner, pursuant to s.9(1) of the *Coroners Act*.

Pronouncement of death is undertaken in practice and by custom to formalize the occurrence of death, and is done to reassure relatives and the public that a patient is, indeed, deceased before being treated as such. The actual pronouncement can be reassuring to the family and can contribute to the dignity of the end of a person's life. The skills to pronounce death are not exclusive to physicians. Other regulated health professionals have the requisite skills.

Physicians are advised to ensure that long-term care facilities, palliative care units and hospices with which they are associated develop policy and procedures with respect to pronouncement of death when death has been expected.

### Registration of Death

Section 17 (1) *Vital Statistics Act* [RSBC 1996] CHAPTER 479 requires that:

The death of a person who dies in British Columbia must be registered as provided in this Act.

Section 17 (2) requires that:

The personal particulars of the deceased person must, on the request of the funeral director, be set out in a statement in the form (*referred to here as the Registration of Death form*) required by the chief executive officer (under the Act) and delivered to the funeral director by one of the following as applicable:

- a) by the nearest relative of the deceased present at the death or in attendance at the last illness of the deceased;
- b) if no such relative is available, by any relative of the deceased;
- c) if no relative is available, by any adult person present at the death;
- d) by any other adult person having knowledge of the facts;
- e) by the occupier of the premises in which the death occurred;
- f) by the coroner who has been notified of the death and has made an inquiry or held an inquest regarding the death.

The **Registration of Death** form will include the following information:

- Full name
- Date of Birth
- Birthplace
- Personal Health Number
- Occupation (if retired, kind of work done most of working life)
- Spouse's name (If wife list maiden name)
- Full name of father and father's birthplace
- Full name of mother (maiden name) and mother's birthplace.
- Method of Disposition (burial or cremation)

## Vancouver Acute: HSDA Pandemic Response Plan

### HANDLING & DISPOSAL OF THE DECEASED

#### Medical Certificate of Death

Section 18 (1) specifies that:

A medical certificate must be prepared in accordance with subsection (2) in any of the following circumstances:

- (a) if a medical practitioner
  - (i) attended the deceased during the deceased's last illness,
  - (ii) is able to certify the medical cause of death with reasonable accuracy, and
  - (iii) has no reason to believe that the deceased died under circumstances which require an inquiry or inquest under the *Coroners Act*;
- (b) if the death was natural and a medical practitioner
  - (i) is able to certify the medical cause of death with reasonable accuracy, and
  - (ii) has received the consent of a coroner to complete and sign the medical certificate;
- (c) if a coroner conducts an inquiry or inquest into the death under the *Coroners Act*.

Section 18 (2) requires that:

Within 48 hours after the death, the **medical practitioner or the coroner**, as applicable, must

- (a) complete and sign a medical certificate in the form required by the chief executive officer (under the Act) stating in it the cause of death according to the international classification, and
- (b) make the certificate available to the funeral director.

Section 19 requires that:

On receipt of the statement referred to in section 17 (2) (*Registration of Death form*) and of the medical certificate or the interim medical certificate, the **funeral director** must promptly deliver the statement and certificate to a vital statistics registrar.

#### **Applying for the Death Certificate/Permit of Burial or Cremation**

In order to apply for a death certificate(s), the Medical Certification of Death form must be submitted with the Registration of Death form. The funeral director will complete all this documentation. Once the death has been registered, a permit of burial/cremation is issued along with the requested number of original death certificates. The Vital Statistics Agency currently charges \$27.00 per original death certificate.

#### References & Resources

*Vital Statistic Act* [RSBC 1996] CHAPTER 479 is available at:  
[http://www.qp.gov.bc.ca/statreg/stat/V/96479\\_01.htm](http://www.qp.gov.bc.ca/statreg/stat/V/96479_01.htm)

VCH Regional Pandemic Response Plan, Chapter 12, Handling & Disposal of the Deceased is available at:  
[http://www.vch.ca/pandemic/docs/ch12\\_handling\\_deceased.pdf](http://www.vch.ca/pandemic/docs/ch12_handling_deceased.pdf)

**VACCINES & ANTIVIRALS**

**CONTENTS**

**Identification of Priority Groups for Pandemic Vaccine**

**Mass Vaccination Clinics**

- Establishing Clinics
- Numbers of Mass vaccination Clinics Required
- Staff Required for a Mass Vaccination Clinic
- Selection of Clinic Sites
- Mass Vaccination Clinic Supplies
- Reporting Adverse Vaccine Reaction

**Antiviral Program**

- Priority Groups for Antiviral Administration
- Definition of People at High Risk
- Adverse Drug Reaction Reporting

## Vancouver Acute: HSDA Pandemic Response Plan

### VACCINES & ANTIVIRALS

#### Identification of Priority Groups for Pandemic Vaccine

Pandemic influenza vaccine, once available, will be administered first to priority groups, consistent with nationally agreed policies.

Health care workers are considered members of **priority group 1** for receipt of pandemic influenza vaccine.

**Total Vancouver Acute Staff: 9,268**

**Total doses of vaccine required for a 1-dose vaccine, Vancouver Acute: 9,268**

**Total doses of vaccine required for a 2-dose vaccine, Vancouver Acute: 18,536**

#### Process

- ❑ Consistent with current practice for the distribution and administration of vaccines, pandemic influenza vaccine will be distributed to Vancouver Acute pharmacy.

#### Occupation Health Services should:

- ❑ Administer the vaccine to Vancouver Acute staff at internally established clinics.

#### The Emergency Co-ordinator should:

- ❑ Maintain ready access to inventories of members of priority group 1
- ❑ Update counts of priority groups in the plan annually when plan is exercised

## VACCINES & ANTIVIRALS

### Mass Vaccination Clinics: Reporting of Adverse Vaccine Reaction

#### Note

Vaccine side effects are usually mild and may include a slight fever or soreness or redness at the injection site. With any vaccine or drug there is the possibility to a shock-like reaction (anaphylaxis). This can include hives, swelling around the throat, wheezy breathing or swelling of some part of the body. Serious adverse reactions to the vaccine should be reported to the public health nurse or doctor.

#### Process

Clinic Reception Staff should:

- Provide patients with information about the vaccine and possible vaccine side effects.
- Advise patients to report serious side effects to their doctor or to the public health nurse.

The **Doctor** or **Public Health Nurse** receiving information about an adverse vaccine reaction should:

- Complete and submit the **Vaccine Adverse Reaction Report** form (To be developed).

#### References & Resources

[http://www.vch.ca/pandemic/docs/ch10\\_vaccine\\_antivirals.pdf](http://www.vch.ca/pandemic/docs/ch10_vaccine_antivirals.pdf)

[http://www.vch.ca/pandemic/docs/ch02\\_health\\_impact.pdf](http://www.vch.ca/pandemic/docs/ch02_health_impact.pdf)

## VACCINES & ANTIVIRALS

### Antiviral Program

As it is highly likely that pandemic influenza will reach the region before a vaccine becomes available, antivirals are expected to be the only initial virus-specific intervention available. Antiviral medication will be administered on a prioritized basis.

The effectiveness of antiviral drugs in a pandemic, particularly their effectiveness in reducing mortality in cases of severe disease (including viral pneumonia) is not known. If treatment with antiviral drugs is as effective in a pandemic as during seasonal influenza, early treatment (within 48 hours of onset of illness) should shorten illness by around one day, may ameliorate symptoms and should reduce hospitalizations.

The potential uses of antivirals in a pandemic include:

#### Interpandemic and pandemic alert periods (Phases 1, 2, and 3)

Antivirals may be used in occupational groups exposed to animal hosts for a novel virus for personal protection and to prevent the establishment and evolution of novel influenza viruses in people.

#### Pandemic alert period (Phases 4 and 5)

At the onset of the pandemic when isolated cases and small confined outbreaks are occurring, antiviral drugs may have a role in trying to contain the infection or delay or slow its spread. If this strategy is employed, it is likely to be a short-term strategy.

#### Pandemic period (Phase 6)

Antiviral medications may be used, depending on availability, according to the priority groups as described below.

The Antivirals Working Group of the Canadian Pandemic Influenza Committee determined priority groups for antiviral administration. **Priority groups are tentative and will be updated, as more information about the pandemic virus becomes available.** National stockpiles of antiviral drugs will be increased throughout 2007-2008 to provide sufficient quantities to treat every person who may become ill with influenza in a pandemic.

#### Priority Groups For Antiviral Administration

1. Treatment of people hospitalized for influenza
2. Treatment of ill health care and emergency services workers
3. Treatment of ill high-risk people in the community
4. Prophylaxis of health care workers
5. Control of outbreaks in high-risk residents of institutions (nursing homes and other chronic care facilities)
6. Prophylaxis of essential care workers (police, fire, correctional services, armed forces, key emergency response decision makers, funeral service, utilities, telecommunications, public transport and transportation of essential goods)
7. Prophylaxis of high-risk people hospitalized for illnesses other than influenza
8. Prophylaxis of high-risk people in the community

## VACCINES & ANTIVIRALS

### Antiviral Program

#### Definition of People at High Risk

The definition of people at high-risk may change, based on the epidemiology of the pandemic strain. Those currently considered to be at high risk for the complications of influenza include:

- Adults and children with chronic cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis, and asthma) severe enough to require regular medical follow-up or hospital care
- People of any age who are residents of nursing homes and other chronic care facilities.
- People  $\geq$  65 years of age
- Children aged 6-23 months of age (note that Oseltamivir Phosphate is not licensed for children under 1 year of age)
- Adults and children with chronic conditions, such as diabetes mellitus and other metabolic diseases, cancer, immunodeficiency, immunosuppression (due to underlying disease and/or therapy), renal disease, anemia, and hemoglobinopathy.
- Children and adolescents (aged 6 months to 18 years) with conditions treated for long periods with acetylsalicylic acid.

#### References & Resources

**For Information for health care providers about antiviral medications for influenza** see: see VCH Pandemic Influenza Plan, Chapter 10 Vaccines & Antivirals, section 2.

**For information for the general public about antiviral medication that may be prescribed to them** see: VCH Pandemic Influenza Plan, Chapter 10 Vaccines & Antivirals, section 2.

[http://www.vch.ca/pandemic/docs/ch10\\_vaccine\\_antivirals.pdf](http://www.vch.ca/pandemic/docs/ch10_vaccine_antivirals.pdf)

## VACCINES & ANTIVIRALS

### Antiviral Program

#### Adverse Drug Reaction Reporting

Suspected adverse reactions to antiviral medication should be reported through the Canadian Adverse Drug Reaction Monitoring Program. These reports should be made by the provider of the antiviral medication, when an adverse reaction occurs after the administration of a drug.

In a pandemic, antiviral medications may be used for longer periods than indicated for prophylaxis during seasonal influenza epidemics. Therefore, monitoring of adverse drug reactions will become particularly important.

Since the provider may not know if the reaction is a result of the medication, these reactions are referred to as suspected adverse drug reactions. Suspected adverse drug reactions should be reported by the medication provider if the adverse reaction is:

- **unexpected**, regardless of its severity (not consistent with product information or labeling);
- **serious** \*, whether expected or not;
- in an individual for whom the medication was recently licensed (in the last five years)

\*A serious adverse reaction is one which requires inpatient hospitalization or prolongation of existing hospitalization, causes congenital malformation, results in persistent or significant disability or incapacity, is life-threatening or results in death. Adverse reactions that require significant medical intervention to prevent one of these outcomes are also considered to be serious.

The adverse drug reaction reporting form can be found on the Health Canada website at:

<http://www.phac-aspc.gc.ca/dird-dimr/pdf/hc4229e.pdf>