

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

CONTENTS

Identification of Priority Groups for Pandemic Vaccine	2
Mass Vaccination Clinics	8
Establishing Clinics	8
Numbers of Mass Vaccination Clinics Required	9
Staff Required for a Mass Vaccination Clinic	10
Selection of Clinic Sites	12
Mass Vaccination Clinic Supplies	13
Reporting Adverse Vaccine Reaction	15
Antiviral Program	16
Priority Groups for Antiviral Administration	16
Definition of People at High Risk	17
Adverse Drug Reaction Reporting	18

Coastal Health Services: 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.

Priority Group 1: Health Care Workers - Coastal Urban	
Coastal Urban Acute Care Staff	
Coastal Urban LTC Staff	
Coastal Urban Community Staff	
Ambulance and Paramedic Staff	
Physicians' Offices	
Laboratory Staff	
Pharmacy Staff	
Total Health Care Workers (Coastal Urban)	

Priority Group 1: Health Care Workers - Coastal Rural	
Coastal Rural Acute Care Staff	
Coastal Rural LTC Staff	
Coastal Rural Community Staff	
Ambulance and Paramedic Staff	
Physicians' Offices	
Laboratory Staff	
Pharmacy Staff	
Total Health Care Workers (Coastal Rural)	

Priority Group 1: Health Care Workers - Central Coast	
Central Coast Acute Care Staff	
Central Coast LTC Staff	
Central Coast Community Staff	
Ambulance and Paramedic Staff	
Physicians' Offices	
Laboratory Staff	
Pharmacy Staff	
Total Health Care Workers (Central Coast)	

Total Priority Group 1: Health Care Workers (Coastal Health Services):

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

Identification of Priority Groups for Pandemic Vaccine

Priority Group 2: Essential Service Providers - Coastal Urban	
Police	
Fire	
Key Emergency Response Decision Makers	
Utility Workers	
Funeral Service/Mortuary Personnel	
Transit Workers	
Food Distribution Workers	
Total Essential Service Providers (Coastal Urban)	

Priority Group 2: Essential Service Providers - Coastal Rural	
Police	
Fire	
Key Emergency Response Decision Makers	
Utility Workers	
Funeral Service/Mortuary Personnel	32
Transit Workers	
Food Distribution Workers	
Total Essential Service Providers (Coastal Rural)	

Priority Group 2: Essential Service Providers - Central Coast	
Police	
Fire	
Key Emergency Response Decision Makers	
Utility Workers	
Funeral Service/Mortuary Personnel	
Transit Workers	
Food Distribution Workers	
Total Essential Service Providers (Central Coast)	

Total Priority Group 2: Essential Services Workers (Coastal Health Services):

VACCINES & ANTIVIRALS

Identification of Priority Groups for Pandemic Vaccine

Priority group 3 - people at high risk of severe or fatal outcomes following influenza infection - includes:

- 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 ≥ 65 years of age
- Children aged 6-23 months of age (current vaccines are not recommended for children under 6 months 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 haemoglobinopathy
- Children and adolescents (aged 6 months to 18 years) with conditions treated for long periods with acetylsalicylic acid

Estimates of the numbers of people in the Coastal HSDA who meet the criteria for inclusion in priority group 3 follow.

Priority Group 3: People at High Risk (est.) - Coastal Urban	Low	High
Age Group ≤ 1 to 19 years	2,359	4,325
Age Group 20 to 64 years	16,834	30,060
Age Group ≥ 65 Years	11,024	15,159
Total People at High Risk (Coastal Urban)	30,217	49,544

Priority Group 3: People at High Risk (est.) - Coastal Rural	Low	High
Age Group ≤ 1 to 19 years	1,101	2,019
Age Group 20 to 64 years	7,217	12,888
Age Group ≥ 65 Years	4,393	6,040
Total People at High Risk (Coastal Rural)	13,711	30,947

Priority Group 3: People at High Risk (est.) - Central Coast	Low	High
Age Group ≤ 1 to 19 years	95	174
Age Group 20 to 64 years	427	762
Age Group ≥ 65 Years	183	252
Total People at High Risk (Central Coast)	705	1,188

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

Identification of Priority Groups for Pandemic Vaccine

Total Priority Group 3: High Risk Individuals (Coastal Health Services):

Low Estimate: 44,673

High Estimate: 81,679

Priority Group 4 includes healthy adults; priority group 5 includes children aged 24 months to 18 years of age.

Total doses of vaccine (one dose series) required for priority groups 1 - 3:

Total courses of vaccine (one dose series) required for priority groups 4 - 5:

Total doses of vaccine (two dose series) required for priority groups 1 - 3:

Total courses of vaccine (two dose series) required for priority groups 4 - 5:

Process

The Medical Health Officer should:

- Determine numbers of people in the HSDA in the Health Care Worker priority group for receipt of vaccines.
- Determine the groups to receive vaccine first.
- Maintain ready access to inventories of members of priority groups 1 and 2.
- Identify contacts and maintain current contact information for internal and external groups.
- Provide updated counts of priority groups for receipt of vaccines annually to Emergency Co-ordinator

The Emergency Co-ordinator should:

- Insert updated counts of priority groups for receipt of vaccines into the plan annually.

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

Identification of Priority Groups for Pandemic Vaccine

Tools

Contact List for Inventory of Priority Groups for Vaccine Distribution

Organization	
Police Department	Contact: Position: Phone: Fax: e-mail: Cell:
Fire Department	Contact: Position: Phone: Fax: e-mail: Cell:
BC Hydro	
Terasen Gas	
TransLink	
BC Ferries Corporation	
Etc.	

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

Identification of Priority Groups for Pandemic Vaccine

References & Resources

http://www.vch.ca/pandemic/docs/ch10_vaccine_antivirals.pdf

http://www.vch.ca/pandemic/docs/ch02_health_impact.pdf

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

Mass Vaccination Clinics: Establishing Clinics

Pandemic influenza vaccine, once available, will be distributed to the general population, through mass vaccination clinics to be held in designated sites.

Establishing Mass Vaccination Clinics

The Director, Community, and Family Health in collaboration with the Director, Communicable Disease Control, should:

- Establish/adapt plans for clinic operations
- Determine personnel and resource needs for clinic operations
- Establish processes for monitoring vaccine coverage and ordering of product
- Identify clinic directors
- Identify medical screeners (physicians/nurses)
- Identify vaccine administrators
- Provide current population statistics annually to Emergency Co-ordinator.

The Medical Health Officer should:

- Establish a strategy to conduct follow-up of adverse events
- Determine procedures to report vaccine use and adverse events to BCCDC
- Identify locations for mass vaccination clinics
- Collaborate with local authority for use of facility
- Draft memorandum of understanding with local authority for use of sites
- Review memorandum of understanding with VCH Legal Affairs and Risk Management

The Emergency Co-ordinator should:

- Insert current population statistics into the plan annually.

Employee Engagement personnel should:

- Establish a list of alternate vaccinators (e.g., retired health care providers)

HSDA Educators, in collaboration with Communicable Disease Educators, should:

- Plan training and educational materials for traditional and non-traditional providers
- Identify, designate and train traditional and non-traditional personnel within the HSDA to administer vaccine and epinephrine

Facilities Management should:

- Identify strategies and personnel for crowd control at vaccine clinics

Logistics should:

- Determine vaccine transport within the HSDA
- Establish a protocol for biomedical waste management and disposal

VACCINES & ANTIVIRALS

Mass Vaccination Clinics: Numbers of Clinics

Numbers of Mass Vaccination Clinics Required

- Assuming no shortage of vaccine, staff in Coastal HSDA (Urban) can establish clinics to immunize 2,500 people in an 8-hour shift and 3,750 people in a 12-hour shift.
- Assuming no shortage of vaccine, staff in Coastal HSDA(Rural) can establish clinics to immunize 1,000 people in an 8-hour shift and 1,500 people in a 12-hour shift.
- A course of vaccine may be one dose or two doses per person.
- The mass immunization is target 100% of the population in a 4-month (17-week) period.
- Total population of the Coastal HSDA is 272,107 people. Population Coastal HSDA (Urban) is 187,280; population Coastal HSDA (Rural) is 84,827.

The numbers of clinics required to achieve this target in the Coastal HSDA (Urban) are as follows:

Doses/Person	Total Doses	Hours/Day	Clinics/Week	Clinics/Day*	Total Clinics
2	374,560	8	9	>1	150
1	187,280	8	4	<1	75
2	374,560	12	6	1	100
1	187,280	12	3	<1	50

*These values may be imprecise; number clinics/week should be used for planning purposes.

The numbers of clinics required to achieve this target in the Coastal HSDA (Rural) are as follows:

Doses/Person	Total Doses	Hours/Day	Clinics/Week	Clinics/Day*	Total Clinics
2	169,654	8	10	>1	170
1	84,827	8	5	<1	85
2	169,654	12	7	1	113
1	84,827	12	3	<1	57

*These values may be imprecise; number clinics/week should be used for planning purposes.

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

Mass Vaccination Clinics: Staffing

Tools

Staff Required for a Mass Vaccination Clinic (Subdivided by Functional Area)

Functional Area	Number
Clinical Staff	
Registration	1
Pre-intervention Patient Holding/Waiting	2
Intervention	16
Medical Care & Holding	1
Subtotal	20
Volunteer Staff	
Registration	4
Patient Flow	1
Intervention	2
Post-intervention Holding	1
Subtotal	8
Logistics Staff	
General Administration/Finance	1
Medical/General Supply Receiving	1
Transport	1
Cleaner	1
Subtotal	4
Security Staff	
Parking & Traffic Control	1
Crowd Control	1
Facility security	2
Subtotal	4
Total	36

VACCINES & ANTIVIRALS

Mass Vaccination Clinics: Selection of Clinic Sites

Note

Sites selected for holding mass clinics must meet specific space requirements and must have adequate capacity to handle the expected traffic flow. For most sites, the target for immunizations is 2500 people/day for 17 weeks. This target assumes that a day consists of an 8 hour shift. Capacity can be increased by running clinics for 12 hour shifts. The facility should be set up as a mass clinic with designated areas assigned to specific activities as follows:

- ❑ **Reception Area:** The reception area is in the designated “lobby” area to “meet and greet” clients. The reception area is supervised by VCH security at all times.
- ❑
- ❑ **Orientation and Registration Area:** probably the largest room where clients are provided with information about the vaccine, fill out any required documents, see medical staff as needed and wait for immunization.
- ❑
- ❑ **Immunization Area:** smaller area where immunizations are administered.
- ❑
- ❑ **Post-immunization Area:** room where patients can wait for 15 minutes to be monitored by health staff for emergencies, ideally with an exit door monitored by security staff.
- ❑
- ❑ **Washrooms and Kitchen:** washrooms should be available for both public and staff use.
- ❑
- ❑ **Administration Space:** a room for filing, ordering of supplies and for meetings for supervisory staff, equipped with telephones and computers.
- ❑
- ❑ **Storage Space:** a room that can be locked and that can accommodate bulk supplies and 1 or 2 large refrigerators (provided by VCH) for storing vaccines, ideally located in such a way as to facilitate daily deliveries.

Coastal Health Services: HSDA Pandemic Response Plan

VACCINES & ANTIVIRALS

Mass Vaccination Clinics: Identified Sites

Tools

Sites Identified for Mass Vaccination Clinics

The following sites have been identified as potential sites for mass vaccination clinics:

Harry Jerome Centre	Address:	Contact: Position: Phone: Fax: E-mail:
West Vancouver Senior's Centre	Address:	Contact: Position: Phone: Fax: E-mail:
	Address:	Contact: Position: Phone: Fax: E-mail:
	Address:	Contact: Position: Phone: Fax: E-mail:
	Address:	Contact: Position: Phone: Fax: E-mail:
	Address:	Contact: Position: Phone: Fax: E-mail:
	Address:	Contact: Position: Phone: Fax: E-mail:

VACCINES & ANTIVIRALS

Mass Vaccination Clinics: Clinic Supplies

Following are lists of medical and general supplies needed for mass vaccination clinics. The total requirement for each item depends on whether or not the item will be re-used at each clinic shift, the numbers of clinics held and the numbers to be vaccinated at each clinic. Requirements for clinics to be held in Coastal Rural will differ from those for clinics held in Coastal Urban settings.

Process

The Director, Community and Family Health should:

- Ensure lists of medical and general supplies required for mass immunization clinics are developed annually.
- Provide updated lists of medical and general supplies required for mass immunization clinics to Emergency Co-ordinator annually.

The Emergency Co-ordinator should:

- Insert updated lists of medical and general supplies required for mass immunization clinics into the plan annually.

Clinic Supplies

Items	Number of Items / Clinic Session	Reusable or Disposable
Ampules of epinephrine 1:1000 SQ (1 / nurse)	20	reusable
Ampules of diphenhydramine 50 mg IM (1 / nurse)	20	reusable
Tuberculin syringes with 5/8" needles (for epinephrine)	100	reusable
Adult airways	2	reusable
Pediatric airways	2	reusable
Portable O ₂ with masks and tubing	1	reusable
Tourniquet	20	reusable
BP cuff and stethoscope	2	reusable
Flashlight	4	reusable
Cots/Mats	10	reusable
Blankets	10	reusable
Pillows	10	reusable
Hard-sided coolers	10	reusable
Refrigerator	1	reusable
Vaccine	3,000	disposable
3 cc syringes 1", 25 gauge needles	3,000	disposable
Alcohol wipes	6,000	disposable
Vaccine information sheets	3,000	disposable
Sharps containers (300 syringe capacity)	20	disposable
Latex-free gloves (1 small, 2 medium 1 large)	4	disposable
Antibacterial handwashing solutions (bottles)	20	disposable

Coastal Health Services: HSDA Pandemic Response Plan

Q-tips	4,000	disposable
Rectangle Band-aids	2,000	disposable
Adhesive tape (rolls)	10	disposable
Emesis bags	20	disposable
Spray bottle of bleach solution	1	disposable

VACCINES & ANTIVIRALS

Mass Vaccination Clinics: General Supplies

General Supplies

Items	Number of Items / Clinic	Total Number of Items for All Clinics
Signage		reusable
Tables	16	reusable
Chairs	500	reusable
Portable partitions		reusable
Stapler/staples	4	reusable
Scissors	4	reusable
Clipboards	20	reusable
File boxes	5	reusable
Telephone (fixed and mobile)	10	reusable
ID badges for staff (Colour coded T-shirts)	33	reusable
Water and cups	2,500	disposable
Pads of paper	5	disposable
Pens, pencils	100	disposable
Rubber bands		disposable
Tape	20	disposable
Post-it notes		disposable
Paper towels (rolls)	10	disposable
Kleenex tissue (boxes)	20	disposable
Table pads and clean paper to cover table for work site	20	disposable
Garbage containers and trash bags	25	disposable
Canteen supplies (i.e. juice, cookies)		disposable

Public Announcement Systems and Bullhorns

Items	Number of Items / Clinic Session	Total Number of Items for All Clinics
Computers		reusable
Printers		reusable
Photocopier Paper (perhaps already in facility)		reusable
Video Camera (for orientation & training as necessary)	1	reusable
VCR/TV (for orientation & training as necessary)	1	reusable
Two-way hand-held radios or messaging devices	2	reusable

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

Guidelines for Operating Influenza Pandemic Mass Vaccination Clinics: see VCH Pandemic Influenza Plan, Chapter 10 Vaccines & Antivirals, section 4.

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/pandemic_influenza_inservice.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 (Tentative)

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: 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

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>