West Coast District Health Board

Te Poari Hauora a Rohe o Tai Poutini

Infection Control Resource Manual

SWINE FLU

Influenza A H1N1

(GP, Rural Nurse Specialists, Buller & Reefton Hospital)

Version 10

West Coast District Health Board
Greymouth
West Coast
New Zealand

PLEASE NOTE: THE INFORMATION CONTAINED WITHIN THIS GUIDEBOOK IS SUBJECT TO CHANGE AND UPDATING AS FURTHER INFORMATION AND DIRECTION COMES FROM THE MINISTRY OF HEALTH (MOH), WORLD HEALTH ORGANISATION (WHO) AND CENTRE FOR DISEASE CONTROL (CDC)

REVISION HISTORY			
Ver.	**Description of Change**	**Author**	**Date**
1	Initial release	Infection Control	06/05/03
2	Changes to Sections 1.5 & 1.7	Infection Control	08/05/03
3	Addition of Appendices	Infection Control	13/05/03
4	Alteration To Section 1.8	Infection Control	14/05/03
5	Annual Review	Quality & Risk	April 04
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7	Annual Review	Quality & Risk	April 06
8	Annual Review	Quality & Risk	April 07
9	Annual Review	Quality & Risk	April 08
10	Changed to reflect Swine Flu Outbreak	Quality & Risk	April 09

TABLE OF CONTENTS

1.00 INTRODUCTION

SWINE FLU (Influenza A H1N1) is a new type of influenza. Our knowledge about preventing and managing it is constantly evolving. This Guidebook contains information for staff regarding the management of SWINE FLU patients, and WCDHB facilities associated with their care.

1.01 SYMPTOMS OF SWINE FLU

People with SWINE FLU develop a high fever (> than 38 C) and respiratory symptoms such as cough, shortness of breath and difficulty breathing. Other less common symptoms include headache, muscular stiffness, and loss of appetite, unexplained tiredness, confusion rash and diarrhoea.

Another important factor is that the individual must also have signs and symptoms and **had contact with a confirmed OR SUSPECTED SWINE FLU patient.**

1.02 CAUSE OF SWINE FLU

The World Health Organisation has confirmed that the SWINE FLU virus is a newly formed Influenza virus. Because the virus is newly recognised much about its behaviour is currently not well understood.

1.03 TRANSMISSION OF SWINE FLU

At present there are two known routes of transmission. The first is via respiratory droplets when someone coughs or sneezes. Current evidence suggests that SWINE FLU is not an airborne infection To get SWINE FLU a person needs to be within coughing or sneezing distance – approximately 6 feet. (2 meters)

The second route is via contact. This can be by Direct Contact (contact with patient or their bodily fluids) or Indirect Contact (contact with objects contaminated with patient's bodily fluids or substances).

1.04 CASE DEFINITIONS

The case definition has been altered as incubation time is now considered to be one week or less.

Diagnosis will be based largely on history and clinical presentation. In most people, it will not be possible to distinguish Novel Influenza A (H1N1) 09 infection from seasonal influenza. However, management will be similar in most cases, in particular for people with mild to moderate disease.

Confirmed Case
A confirmed case of novel influenza A H1N1 09 virus infection is defined as a person with laboratory confirmed novel influenza A H1N1 09 virus infection by one or more of the following tests:

- real-time RT-PCR
- viral culture
- four-fold rise in novel influenza A H1N1 09 virus specific neutralising antibodies

Probable case
A probable case of novel influenza A H1N1 09 virus infection is defined as a person who meets the suspected case definition

AND

Tests positive for influenza A

Suspected case
A suspected case of novel influenza A H1N1 09 virus infection is defined as a person with an influenza like illness (fever >38 °C plus cough or sore throat) who has developed symptoms within 4 days of returning from overseas travel.

OR

A suspected case of novel influenza A H1N1 09 virus infection is defined as a person with an influenza like illness (fever >38 °C plus cough or sore throat) who is considered to be a close contact of a probable or confirmed case.

Close contact
Close contact is defined as having cared for, lived with, or had direct contact with respiratory secretions or bodily fluids of a probable or confirmed case.

NB ONLY people who meet the case definition and who are admitted to a WCDHB facility is to have a nasal - pharyngeal swab taken

REPORTING PROCEDURES

All probable SWINE FLU cases should be managed in the same way for the purposes of infection control and outbreak containment

At this time, all reporting is to be directly to the Medical Officer of Health, Community and Public Health and to the DHB's Quality and Risk Manager

1.05 TESTING

Routine collection of nasopharyngeal samples in primary care is not recommended. Health workers should prioritise taking nasopharyngeal samples according to this guidance and any further guidance from local Public Health Units, in light of local laboratory capacity. Nasopharyngeal viral samples should only be taken from people with symptoms. If the health worker is not confident in their ability to take a pernasal nasopharyngeal sample, then a nasal sample can be substituted.

Testing should now be limited to the following three indications:

- General practices who are part of the national influenza **sentinel surveillance** programme, which is currently being enhanced, should continue collecting samples as per the usual protocol. This will be an important part of overall surveillance for Novel Influenza A (H1N1) 09.
- Where **clinically indicated** for individuals
- Where indicated for **public health or infection control** reasons.

Nasopharyngeal samples for Novel Influenza A (H1N1) 09 testing are to be taken within the first 48 hours of symptom onset for people presenting with influenza-like illness [defined as (i) history of fever, chills and sweating **or** clinically documented fever ≥38°C, **plus** (ii) cough **or** sore throat].

When To Take Samples

Testing should generally be done where a result is important for the management of an individual.

The Ministry of Health recommends the following may be clinical indications for testing, if required to inform clinical management decisions:

Patients with severe clinical influenza-like illness, regardless of whether they are admitted to hospital

1. **Hospitalized patients with upper or lower respiratory tract symptoms**

2. **People with influenza-like illness at high risk of influenza-related complications.**

The Ministry of Health recommends testing if there is a public health or infection control rationale in the following situations:

3. **For people who live or work in high risk institutions (see below)**

4. **For the purpose of cluster identification and control, or infection control.**

It is likely to be sufficient to test a small sample of close contacts in the identification of clusters. The extent of testing is at the discretion of the local Public Health Unit. Nasopharyngeal samples are appropriate to diagnose Novel Influenza (H1N1) 09 and inform outbreak control among people who work in health care settings and essential services.

Samples From People On Antiviral Medication

Antiviral medication reduces the yield from viral samples. If an adult case has commenced a twice-daily treatment course of antiviral medication, do not take a sample. Children excrete a higher viral load. If a child case has been on a twice-daily treatment course of antiviral medication for >48 hours do not take samples. For contacts on once-daily prophylaxis with antiviral medication who develop symptoms, a sample, if indicated, should be taken within 48 hours of commencing antiviral medication.

1.06 TREATMENT

The Ministry of Health does **not** currently recommend the routine use of antivirals for pre- or post-exposure prophylaxis.

The Ministry of Health recommends the prudent use of antivirals for treatment.

Treatment should begin within 48 hours of symptom onset for people presenting with influenza-like illness [defined as (i) history of fever, chills and sweating **or** clinically documented fever ≥38°C, **plus** (ii) cough **or** sore throat].

Treatment should start immediately where indicated, rather than waiting for the results of testing if this has been done.

Only consider initiating antiviral treatment after 48 hours of the onset of symptoms for people with severe clinical illness, where possible in discussion with an infectious disease physician.

Antiviral use should be confined to the following groups:

1. **All patients with severe clinical influenza-like illness, regardless of whether they are admitted to hospital**

   Symptomatic patients should be treated as with seasonal flu. People with moderately-severe and severe illness should be referred to hospital.

   A sepsis assessment tool, such as the SIRS (see below), may be useful in deciding who to treat with Tamiflu and/or refer to hospital. This should not replace clinical judgment but rather support and/or confirm it. Note that the CRB-65 was provided in version 1 of this advice but has been removed, as it is less suitable in this role.

2. **Hospitalised patients with upper or lower respiratory tract symptoms**

   This includes:

   - people who are hospitalised for any reason, but who are symptomatic with respiratory symptoms that could be due to influenza
   - hospitalised patients who are close contacts of a confirmed case.

3. **Symptomatic people at high risk of influenza-related complications**

   - People who are immune compromised or suppressed due for example to transplantation, haematological and solid organ malignancy on chemotherapy/radiotherapy, HIV, autoimmune disorders, the anti-psychotic drug clozapine (because of white cell suppression), etc.

Pregnant women: Pregnant women appear to have higher rates of hospitalisation with influenza for variety of reasons and fever in the first trimester is associated with twice the rate of neural tube defects in the fetus. Therefore both antipyretics and antivirals may be useful. Influenza close to the time of delivery poses extra challenges for maternal and newborn health, as well as challenges to infection prevention in the delivery suite. The Ministry's Pandemic Influenza Technical Advisory Group recommends early administration with either oseltamavir (Tamiflu) or Zanamavir (Relenza) when indicated, and oseltamavir may be more easily accessed. Neither medicine is contraindicated during pregnancy, however there is limited information related to their use.

Whereas preclinical studies suggest that the risks are low, their potential to cause fetal toxicity or malformations in humans is currently unknown; therefore it is recommended that they should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. A local obstetric or infectious diseases specialist should be consulted where there are concerns.

- Anyone over six months of age with chronic medical conditions, such as:
  - Severe or poorly controlled congestive heart failure
  - Severe chronic respiratory disease
  - More severe asthmatics (e.g. people on oral steroids, high dose steroid inhalers, or steroids and long-acting beta-agonists)
  - Renal replacement therapy.

4. Symptomatic people who live or work in high risk institutions, where appropriate

These groups of people may warrant antiviral treatment if symptomatic. Antivirals should not be used prophylactically in these groups.

- Health care and other care providers in facilities and community settings who, through their activities, are capable of transmitting influenza to those at high risk of influenza complications.
- People who provide services within closed or relatively closed settings to persons at high risk (e.g. prisons, early child care centres).
- People of any age who are residents of a nursing home and other chronic care facilities.

5. As part of cluster and/or infection control, where appropriate

The Ministry of Health does **not** currently recommend the routine use of antivirals for pre- or post-exposure prophylaxis. However, there may be situations where post-exposure prophylaxis is indicated e.g. for essential workers and hospital staff where there have been significant breaches of PPE, on a case by case basis. If considering the post-exposure prophylactic use of antiviral medication (Tamiflu or Relenza), this should be discussed with your local Public Health Unit.

SIRS (systemic inflammatory response syndrome) criteria

These signs may indicate significant physiologic disruption, including sepsis. White cell count is the fourth criterion, but is not included for this purpose. SIRS can be diagnosed when two or more of the following criteria are fulfilled:

- Temperature ≥38 degrees Celsius
- Heart Rate >90
- Respiratory Rate >20.

1.07 SWINE FLU PATIENTS IN GENERAL PRACTICE & RURAL NURSE CLINICS, BULLER AND REEFTON HOSPITALS

Introduction

GP Practices, Rural Nurse Clinics and Buller and Reefton Hospitals are to identify a member of staff who is to take responsibility for keeping the practice up-to-date with current SWINE FLU information. Practices, Clinics and Hospitals are also advised to put together a SWINE FLU pack that includes:

- N95 mask (8 hrs)
- surgical mask (20 minutes)
- gown
- goggles
- gloves
- thermometer (disposable)
- alcohol hand rub (microshield gel)
- sphygmomanometer (portable)
- stethoscope

Place a sign on outside doors advising people suspected to have SWINE FLU to take a mask from the supply inside the door, and ensure that there are masks within easy reach inside the entrance to the practice.

1.00 Preparing the Practice/Clinic

1.01 Place a sign on the practice door advising people suspected to have SWINE FLU to take a mask from the supply inside the door and approach the receptionist and inform the receptionist.

1.02 Identify a specific consulting room which is to be designated an ISOLATION ROOM. This room should preferably have an external window that can be kept open.

1.03 Remove all non-essential items from the room to avoid unnecessary contamination.

1.04 As far as possible keep all pens, papers etc outside the Isolation Room.

1.05 DO NOT USE air conditioning or heaters in the room.

1.06 Keep masks, gowns, goggles and gloves OUTSIDE the Isolation Room.

1.07 Place a double yellow rubbish bag inside the Isolation Room.

1.08 Place an INFECTION CONTROL PRECAUTIONS REQUIRED sign on the door into the Isolation Room.

2.00 When a Patient Telephones For an Appointment

2.01 The receptionist is to ask callers if the have returned from one of the relevant overseas Location in the last 10 days or have had contact with someone with suspected SWINE FLU.

2.02 If the patient answer is YES they are passed on to a Nurse who is to make necessary Arrangements for triaging of patient.

2.03 If possible, arrange to visit patient in their own home when they indicate they may be a SWINE FLU patient.

2.04 If patient is advised to attend your practice/clinic/hospital arrange for the patient to be provided a surgical mask on their arrival. Take them immediately into a separate consulting room. DO NOT LEAVE THEM SITTING IN THE WAITING AREA.

3.00 Patient Contact

3.01 Before entering the Isolation Room ensure staff wear personal protective equipment (PPE).

3.0 Routine investigations for suspected SWINE FLU patients are to be performed in general practice/clinic/hospital. .

3.03 When taking the patient's temperature do not stand directly in front of the patient.

3.04 Leave window open and door shut.

3.05 Avoid touching your face with your hands if adjusting your mask

3.06 If using the phone during the consultation, take your gloves off and wash hands first. After the phone call has been completed, re-glove.

3.07 At all times TAKE EXTREME CARE TO AVOID CONTAMINATION.

4.00 Determining SWINE FLU Status

4.01 Ask patient the following questions:
- i) Signs and symptoms patient is experiencing
- ii) Have you been in close contact with anyone who has SWINE FLU?

4.02 Examine the patient to determine if they:
- i) have a fever (>38^{o}C);
- ii) display influenza-like symptoms

4.03 If the patient meets the above criteria, then they are to be treated as a suspected SWINE FLU case.

5.00 Swabbing the Patient

5.01 Put on PPE in this order:

i) Gown (Disposable with cuffed sleeves)
ii) N95Face Mask
iii) Goggles (Ordinary spectacles are not sufficient)
iv) Gloves (Ensuring glove wrist goes over cuff of sleeve)

5.02 Nasopharyngeal swabs are to be used – plain wire swab (no culture medium)

5.03 Stand **BEHIND or to the side of the patient** when taking the sample

5.04 Double bag the sample

5.05 Clearly label "Suspected swine influenza" on the requisition form along with patient details

5.06 Send sample to Grey Base Hospital Laboratory

5.07 Samples will be tested by Canterbury health laboratories for PCR

5.08 **Contact C&PH** to inform then of the suspected case.

6.00 Cleaning the Isolation Room

6.01 Wear PPE when cleaning the room. The staff member who saw the suspected patient should keep their PPE on and clean the Isolation Room. Where this is not possible then cleaning staff are to wear PPE.

6.02 All surfaces and non-disposable equipment are to be washed using disposable cloths, hot water, detergent and precept. Dispose of into yellow clinical waste rubbish bag double bagged at point of exit

6.03 Door handles should be cleaned once the patient leaves.

6.04 Keep all rubbish and used linen in the Isolation Room and place into appropriate containers for transport. Place Linen into white impervious bag with yellow stripe double bag at point of exit into same colour bag. Notify Laundry.

6.05 Clinical waste is to be placed into double yellow rubbish bags and incinerated.

6.06 Follow routine sharps procedures.

6.07 Disinfect or destroy magazines and toys if there is any possibility that they may have been contaminated.

6.09 If the suspected SWINE FLU patient has used the toilet, ensure all toilet surfaces have been disinfected.

1.8 ACCESSING TAMIFLU

1.00 Currently, the District Health Board holds two different stocks of Tamiflu:
1. Normal use
2. Pandemic use (part of the Ministry of Health stockpile)

1.01 Stocks are held in the Grey Base Hospital Pharmacy, as well as at Buller and Reefton Hospitals, and the Rural Health Clinic at Whataroa.

1.02 A proportion of the Ministry of Health stockpile has been distributed to:
a) Westland Pharmacy (Hokitika)
b) Masons Pharmacy (Greymouth)

1.03 A prescription will need to be written, using a standard prescription form/pad.

1.04 Any prescription for national stockpile antivirals must be marked "endorsed by Community and Public Health". This is the responsibility of the prescribing doctor. Prescriptions that do not carry this endorsement cannot be used for national stockpile antivirals.

1.06 Antivirals will be supplied free of charge via the community pharmacies listed above.

1.07 Complete the **notification form** below and fax it to Community and Public Health on: **03 768 1169. (***NOTE: The Ministry of Health requires clear documentation of the person's illness and that you confirm they meet the eligibility criteria. The form sent to CPH meets this requirement).*

1.08 For Greymouth and Westland, ask the patient if someone can collect their prescription for them and either fax the script to the community pharmacy or, if this is not possible, ask that a family/whanau member or friend take the script to an authorised pharmacy for the patient. If the patient has to go to one of the community pharmacies please provide them with a plain surgical mask to wear to the pharmacy while they collect their prescription. Please inform them to phone the pharmacy first before going to collect the antiviral.

1.09 For Buller and Reefton, arrange for the antivirals to be dispensed from the stockpile held at each Hospital. (*NOTE: the notification form still needs to be sent through to CP&H*).

REQUEST FOR ANTI-VIRAL MEDICATION

This Form is for notifying Community and Public Health where the patient clearly meets the criteria for anti-viral medication. Once you have notified CPH you are automatically authorised to prescribed anti-viral medical from the national stockpile.

Notifier Identification					
Reporting Source:	☐GP ☐Hospital Based Practitioner ☐ Lab ☐Other				
Name:		**Phone:**			
Organisation:		**Date:**			
Case Identification					
First Name:		**Surname:**			
NHI Number:		**DOB:**	/ /	Sex:	M / F
Address:					
Home Phone:		**Mobile:**			
Email:					
GP Name:		**GP phone:**			
Practice					

Basis of Referral	
CLINICAL CRITERIA	
Symptoms:	
Fever >38°	☐Yes
Cough	☐Yes
Sore throat	☐Yes
Other please specify:	

ELIGIBILITY CRITERIA (Refer to CPH advisory)	
1. Severe clinical influenza-like illness (ILI)	☐Yes
2. Symptomatic with high risk of influenza complications	☐Yes
3. Lives/Works in high-risk institutions e.g. prison, healthcare	☐Yes
4. Other please specify:	

Comments:

Patient has been informed that Community and Public Health will be notified	☐Yes
I confirm that the patient has ILI and meets eligibility criteria for anti-viral medication.	☐Yes

1.09 ADVISE FOR PAEDIATRIC PATIENTS

Influenza presents in infancy and childhood as a wide variety of clinical syndromes.

The diagnosis needs to be considered and if any suspicion of influenza exists, appropriate precautions taken to prevent spread.

Presentations may include:-

1. Fever and misery
2. Bronchiolitis
3. Asthma exacerbation
4. Acute otitis media
5. Lower respiratory infection
6. Convulsion with fever
7. Dehydration
8. Fever, lethargy, irritability meningitis not excluded
9. Toxic bacteraemic type illness
10. Aponea
11. Diabetic instability

The focus of care needs to relate to the presenting clinical syndrome and be managed appropriately.

Wherever possible infants and children with uncomplicated influenza should not be seen in hospital or admitted.

Thresholds for admission may be lowered where underlying conditions exist:-

- infants under 6 months
- infants with a history of prematurity especially if any ongoing lung disease
- immunosuppression
- children with cerebral palsy or weakness that may impair coughing
- underlying heart disease
- lung disease

Four Life Threatening Clinical Scenarios that Need Special Attention

Within the high levels of workload generated related with influenza cases these clinical scenarios need to be looked for identified early and managed/treated.

1. **Vulnerable Infant Developing Bronchiolitis Picture** Some infants will develop a bronchiolitis picture with the steady increase in respiratory compromise over 3-5 days. The development of hypoxia is usually marked by slowing feeds, marked pallor and lethargy. Systems need to be in place to identify these risks and manage them.

2. **Early rapidly progressive respiratory distress** This is likely to be an uncommon symptom and seen in young people and older children. It results as a dramatic inflammatory response – "cytokine-storm", follows very quickly (hours) after first epithelial colonization in the respiratory tract. Massive out-pouring of fluid occurs very early in the flu like illness. Supportive care should be offered, possibly including steroids, as well as seeking urgent specialist advice.

3. **Late onset deterioration in respiratory status** Influenza leaves the respiratory tree very vulnerable to secondary bacterial infection because of the epithelial debris, increased secretions and immune compromise. Secondary bacterial invaders are typically streptococcal or staphylococcal. Symptoms may include increasing fever, toxicity, tachycardia, grunting and increasing oxygen requirement typically 3 – 10 days after influenza illness starts. Early treatment with antibiotics can be life saving. The best antibiotic is cefuroxime although in some cases ceftriaxone may be an alternative especially if out of hospital care planned. Amoxicillin clavulanate (Augmentin) is an alternative oral antibiotic.

4. **Influenza Encephalitis** Influenza is often associated with irritability, distress and at times simple febrile convulsions. Where seizures, atypical, prolonged, frequent or difficult to treat or other signs of CNS dysfunction occur. Consideration should be given to the diagnosis of Influenza Ecephalitis a rare complication that will require specialist advice about management

Antiviral Medication usage in Infants and Children

Antiviral medications have value in reducing:-

1. Duration of illness
2. Severity of illness
3. Duration of viral shedding

Best results occur if treatment begins within 48 hours of symptoms but some benefit may occur out to 72 hours after symptoms start.

Indications for Treatment

a) Infants and children with complications that lead to admission to hospital should be treated with antiviral medications.

b) Infants and children with medical fragility such that they are at higher risk of influenza complications.

Although safety data for infants under one is limited, CDC supports **use with caution**: http://www.cdc.gov/h1n1flu/recommendations.htm#table2 This use should be restricted to those admitted to hospital, or who are otherwise under the supervision of a pediatrician.

Dosing

Table 1. Dosing recommendations for antiviral treatment of children younger than 1 year using oseltamivir.	
Age	**Recommended treatment dose for 5 days**
<3 months	12 mg twice **daily. Not recommended unless situation judged critical due to limited data on use in this age group**
3-5 months	20 mg twice daily
6-11 months	25 mg twice daily

Note: Capsule contents can be mixed with something sweet, e.g. chocolate sauce, honey, or yogurt.

Table 2. Antiviral medication dosing recommendations for treatment or chemoprophylaxis of novel influenza A (H1N1) infection. (Table extracted from IDSA guidelines for seasonal influenza.)			
Agent, group		**Treatment**	**Chemoprophylaxis**
Oseltamivir			
Children ≥ 12 months	15 kg or less	60 mg per day divided into 2 doses	30 mg once per day
	16-23 kg	90 mg per day divided into 2 doses	45 mg once per day
	24-40 kg	120 mg per day divided into 2 doses	60 mg once per day
	>40 kg	150 mg per day divided into 2 doses	75 mg once per day

Parents/Caregivers of Inpatient Children with Influenza

Consideration should be given to treating parents/caregivers of inpatient children with influenza with antiviral agents if they develop of have had influenza-like symptoms for less than 48 hours.

The aim is to reduce nursing workload by increasing ability of adults to care for the child and reducing infectious potential.

Cases should be assessed on an individual basis. Adults and siblings not directly involved in care should generally not be spending time in the ward. Careful hand hygiene remains the primary focus for reducing infection.

1.10 ADVISE FOR PREGNANT STAFF MEMBERS

Internationally it has been noted that infection with pandemic H1N1 Influenza Virus (swine flu) poses a specific risk for pregnant women. Therefore we advise that staff who are pregnant should not undertake direct hands on care for patients with suspected or confirmed H1N1Influenza A.

This is a precaution noting the additional risk in pregnancy, but all staff hould note that proper use of PPE (Personal Protective Equipment) will provide them a very high level of protection against infection with the pandemic virus and other forms of winter viral infections.

Pregnant staff should note that Osletamivir (Tamiflu) is safe in pregnancy and if they feel that they have been significantly exposed to H1N1 influenza

1.11 MANAGEMENT OF PREGNANT WOMEN WITH SWINE FLU

Pregnant women have a higher risk of severe disease than other women following infection with influenza, whether seasonal or pandemic influenza A H1N1 09. These guidelines provide recommendations for managing pregnant women presenting with an influenza-like illness (ILI).

To avoid influenza, it is recommended that pregnant women are advised to take sensible precautions including:

- Avoid close contact with people who have symptoms, if possible
- Wash hands with soap and running water or use an alcohol based hand rub after contact with symptomatic people or their secretions e.g. on used tissues
- Get immunised against influenza if they will be in their 2nd or 3rd trimesters during winter
- Encourage symptomatic people in the household to keep at least 1 metre away and follow cough etiquette and good hand hygiene
- Avoid large, crowded gatherings during the influenza season.

Antiviral prophylaxis is not generally recommended for pregnant women, except in specific circumstances. For example, it may be considered in a pregnant woman who has had close contact with a patient with laboratory proven pandemic influenza A H1N1 09, especially in the second or third trimester and in the presence of other co-morbidities.

Treatment

Treatment of patients with ILI should not be delayed while awaiting test results. Treatment with anti viral medicine (either Oseltamivir [Tamiflu] or Zanamivir [Relenza]) may be offered to pregnant woman at any stage of pregnancy. Although both drugs are classified as B1 (limited data indicating safety in pregnancy), use in pregnant women to date (mostly in second and third trimester) has not been associated with adverse fetal outcomes. Experience of antiviral medication use in the first trimester of pregnancy remains very limited, so a careful discussion of the potential risks and benefits is essential before prescribing such agents.

Considerations In The Management Of Influenza In Each Trimester

First trimester

- In the first trimester, the concern is largely about the effect the mother's fever may have on the developing fetus, including miscarriage
- Symptomatic treatment with Paracetamol is recommended to reduce fever
- Treatment with antiviral medicine should be discussed with the mother, taking into account other conditions that may increase her risk of severe disease.

Second and third trimester

- In the second and third trimesters, the concern is largely for severity of illness in the mother, as well as the potential effects of the mother's fever on the developing fetus
- Symptomatic treatment with Paracetamol is recommended to reduce fever

- Assessment of maternal and fetal wellbeing is recommended at every presentation
- Treatment with antiviral medicine is strongly recommended to reduce the severity of disease in the mother.

Time Of Birth

- Around the time of birth, the concern is about both the severity of illness in the mother and the risk of transmission to the baby
- Symptomatic treatment with Paracetamol is recommended to reduce fever
- Treatment with antiviral medicine of the mother is strongly recommended to reduce the severity of disease
- While the baby is <3 months old, treatment of the mother is also recommended to reduce the risk of transmission to the baby
- The mother should not be asked to wear a mask during labour and birth, but others in the room should follow infection control guidelines
- There is usually no advantage in expediting the birth of the baby.

Minimising The Risk Of Infection From Mother To Baby

- The spectrum of disease of pandemic influenza A H1N1 09 in newborns is unclear
- Breast feeding should be strongly encouraged
- Sensible efforts should be made to reduce the likelihood the baby will be infected, while minimising the effect on the mother-baby relationship. These include:
- treating the mother to reduce the risk of transmission (the mother is considered noninfectious after 72 hours of treatment with antiviral medicine)
- the mother and baby should sleep at least 1 metre apart, in the same room (at least while in hospital), in separate beds
- when breast feeding, bathing, caring for, cuddling, or otherwise being within 1 metre of the baby, the mother should:
    - wear a surgical mask
    - wash her hands thoroughly with soap and water before interacting with the baby
- the mother should avoid coughing and practice cough etiquette near the baby.

Although these measures can be ceased when the mother is no longer infectious, continued good hygiene should be encouraged at all times these measures should apply to any carer or family member with influenza.

- Mothers requiring hospital care should not be prematurely discharged because they have influenza
- If discharged while still infectious, mothers should be provided with a sufficient supply of surgical masks to take home
- Prophylaxis is not recommended for the baby. Should the baby develop symptoms, the baby should be isolated from other babies, assessed urgently by a Pediatrician, and if influenza is diagnosed, considered for treatment with antiviral medicine.

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists have also issued a statement that outlines prevention of infection and treatment strategies with antiviral medication. This is available at:

http://www.ranzcog.edu.au/connexion/pdfs/17_July_2009_Swine_Flu_and_Pregnancy_Statement.pdf

1.12 ACCESSING ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT (PPE)

Currently the District Health Board holds additional supplies of the following personal protective equipment:

- N95 masks
- Surgical masks
- Gowns – water resistant
- Gloves
- Goggles
- Disposable thermometers
- Waterless hand wash gel

These are available as individual items or made up into packs (containing all these items)

All District Health Board GP Clinics, RNS Clinics Buller and Reefton Hospitals should have a supply of PPE in stock.

Additional supplies of these PPE items can be obtained from the Stores Department, Grey Base Hospital.

NOTE: When ordering these items, please inform the Stores Department that they are for Pandemic influenza purposes.

1.10 COMMUNITY & PUBLIC HEALTH CONTACT DETAILS

C&PH

Office Hours - 03 7681160

After Hours - 03 7680499 and ask for the On Call Health Protection Officer.