To view any policy document as published on the Policy Distribution System click the link on the policy number in the table below.

CHAPTER 11 – INFECTIOUS DISEASES, IMMUNISATION AND RELATED MATTERS

TABLE OF CONTENTS

PRINCIPLES FOR THE MANAGEMENT OF TUBERCULOSIS IN NSW
(PD2022_007)

PD2022_007 rescinds PD2014_050

POLICY STATEMENT

All services related to diagnosis and treatment of presumptive or confirmed tuberculosis (TB) (active or latent) and complications arising from the TB disease process must be provided at no charge to patients within the NSW public health system. This includes the provision of services for TB related investigations, care and treatment, and management of any disease- or treatment-related complications.

SUMMARY OF POLICY REQUIREMENTS

TB is a notifiable condition under the NSW *Public Health Act 2010*, with doctors required to notify all persons they reasonably suspect to have TB to their local public health unit, and laboratories required to notify all positive results of TB tests.

District and network chief executives are responsible for ensuring appropriately skilled medical and nursing staff are available to manage patients with active or latent TB and provide TB prevention activities to minimise the public health impact of TB. Districts and networks must appoint a TB coordinator to oversee for the provision of TB services within the district or network.

All cases of possible and confirmed TB are to be managed in conjunction with a TB service. All isolates of *M. tuberculosis* complex identified must be referred to the Mycobacterium Reference Laboratory for confirmation and drug susceptibility testing. Treating authorised prescribers must always treat TB disease with multiple antituberculosis agents following the most recent evidence-based practice.

All patients diagnosed with TB in NSW are to be tested for human immunodeficiency virus (HIV). All rifampicin resistant and multidrug resistant TB cases in NSW are to be reviewed by an expert panel.

Patient management must be individualised and seek active input from patients to allow for the least restrictive management that enables them to achieve treatment success. Wherever possible, clinical care is to be delivered in a manner that allows patients to maintain normal employment and/or education activities once non-infectious.

Districts and networks must provide mechanisms to monitor adherence with treatment in a manner that is minimally restrictive to patients, while ensuring treatment success. A mechanism must be available to supervise all prescribed doses for patients identified as being at significant increased risk of treatment non-adherence if required.

All healthcare workers are required to comply with the NSW Health infection control guidance to minimise the risk of TB transmission in healthcare settings.

District and network TB services must quickly identify patients that are putting other people at risk, or are at-risk of such behaviours, and encourage, facilitate, and if required enforce compliance to TB treatment.

TB services are required to undertake contact investigation and screening of contacts.

Districts and networks are required to provide testing for latent TB infection to individuals at risk of acquiring TB infection or those vulnerable to disease progression, including review and follow-up health care workers and students that test positive for latent TB infection.

TB services are to triage, investigate, and provide follow-up care to people referred from the Department of Home Affairs that live within the district or network boundaries, and to provide the required feedback. Districts and networks are required to provide a BCG vaccination service to residents living within the district or network boundaries.

The full Principles for Management of Tuberculosis in NSW Policy is available at https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2022_007

TUBERCULOSIS – MINIMISING THE RISK OF TUBERCULOSIS IN PATIENTS STARTING ANTI TNF INHIBITORS (GL2008_007)

This Guideline is to be read in conjunction with the following Policy Directive:
PD2009_005 *Tuberculin Skin Testing*

Introduction
Tumor necrosis factor (TNF) is a proinflammatory cytokine which has a pivotal role in the pathogenesis of several autoimmune diseases, including rheumatoid arthritis and other inflammatory joint disease, psoriasis, and inflammatory bowel disease.

Three anti-TNF α agents are now available in Australia (infliximab, etanercept, and adalimumab) to treat selected autoimmune diseases. However, TNF α is a significant component of the human immune response to infection1, and treatment with anti-TNF α agents is associated with an increased risk of infection. The development of active Tuberculosis (TB) disease has occurred in some patients who have received anti-TNF α therapy in countries with high TB prevalence2.

The following guidelines have been developed to reduce the risk of active TB developing in patients receiving anti-TNF α therapy.

Before starting ANTI-TNF α inhibitors all patients should have:

1. A careful review of their history of exposure to TB, and an assessment to exclude active TB.
2. A baseline Tuberculin Skin Test for evidence of TB infection.[a]
3. A Chest X ray to exclude active TB and assess evidence of past or current TB.

Latent Tuberculosis
Patients with evidence of latent tuberculosis infection (LTBI) who have not previously received effective treatment for TB and in whom active TB is excluded should be treated with isoniazid (5mg/kg to maximum of 300 mg/day) and pyridoxine (25mg/day) for a period of 9 months3. The first month of isoniazid treatment should be completed prior to starting an anti-TNF α inhibitor. Evidence of LTBI may include:

1. TST ≥ 5 mm
2. Radiological evidence of past TB

Patients with chest x-ray abnormalities, cough or other clinical features suggestive of active TB should have sputum examined for AFBs before commencing treatment with isoniazid.

Physicians should include the risk of potential adverse effects of isoniazid therapy in their assessment of the overall risk of commencing treatment with an anti-TNF α inhibitor.

Monitoring of isoniazid therapy, patients on isoniazid preventive therapy should have monthly assessment of:
- their hepatic function
- their compliance with the prescribed medication, and
- the development of TB.

1. Atkinson YH et al (1988) Recombinant human tumour necrosis factor-alpha. Regulation of N-formylmethionyl-leucylphenylalanine receptor affinity and function in human neutrophils. *J Clin Invest,* 81; 759 – 765

2. Gomez-Reino JJ et al (2003)Treatment of rheumatoid arthritis with tumour necrosis factors inhibitors may predispose to significant increase in tuberculosis risk. *Arthritis & Rheumatism*, 48; 2122 – 2127
a Footnote: While a positive IGRA is good evidence for Latent TB infection a negative IGRA may not exclude TB. Careful consideration must always be used when interpreting TB screening results.

3. Carmona L et al (2005) Effectiveness of recommendations to prevent reactivation of latent tuberculosis infection in patients treated with tumour necrosis factors antagonists. *Arthritis & Rheumatism*, 52; 1766 - 1772

Treatment of TB

Where active TB is diagnosed in a person receiving anti-TNF α therapy:

- cease anti-TNF α inhibitor
- reduce other immunosuppressants to lowest possible effective dose.

Patients with active TB should be referred to a NSW Chest Clinic for management and treatment of TB. Treatment should be in accordance with NSW Health TB treatment guidelines.

REFERENCES

1. Atkinson YH et al (1988) Recombinant human tumour necrosis factor-alpha. Regulation of N-formylmethionyl-leucylphenylalanine receptor affinity and function in human neutrophils. *J Clin Invest,* 81; 759 – 765

2. Gomez-Reino JJ et al (2003)Treatment of rheumatoid arthritis with tumour necrosis factors inhibitors may predispose to significant increase in tuberculosis risk. *Arthritis & Rheumatism*, 48; 2122 – 2127

3. Carmona L et al (2005) Effectiveness of recommendations to prevent reactivation of latent tuberculosis infection in patients treated with tumour necrosis factors antagonists. *Arthritis & Rheumatism*, 52; 1766 - 1772

TUBERCULOSIS – SPUTUM INDUCTION GUIDELINES (GL2009_006)

Guideline to reduce the risk of occupational exposure to TB during sputum induction procedures. Sputum induction is a procedure used for patients who have trouble producing sputum spontaneously. The patient inhales nebulised hypertonic saline solution, which liquefies airway secretions, promotes coughing and allows expectoration of respiratory secretions. Sputum induction is simple and non-invasive, and if successful, often precludes the need for bronchoscopy.

The procedure produced coughing so it is likely that infectious droplets, if present, will be expelled into the room air. Strict airborne respiratory precautions should be observed whenever sputum induction is performed.

The full guidelines can be downloaded at
http://www.health.nsw.gov.au/policies/gl/2009/GL2009_006.html

TUBERCULOSIS IN CHILDREN AND ADOLESCENTS (GL2005_060)

GL2005_060 rescinds PD2005_069.

Introduction

Tuberculosis (TB) in children and adolescents differs markedly from that in adults.

Many children acquire tuberculosis infection, which is characterised by delayed hypersensitivity and few organisms, but relatively few develop the disease. However, the risk of doing so remains life long. While the initial infection in most children occurs in the lungs, TB in children and adolescents should be considered, at least potentially, to be a systemic disease. The primary complex, comprising the site of infection and the involved regional lymph nodes, may heal or complications may develop from enlargement of these lymph nodes or their rupture and the spread of bacilli into the bloodstream, giving rise to disseminated disease. The risk of dissemination is greatest within the first 12-24 months after infection and in the first 3 years of life.

The following are important aspects of the disease in children and adolescents:

Risk of disease following primary infection

Data derived from studies in the United Kingdom in the 1950's and 60's, for children followed for up to two years after being infected, indicated that the risk of development of radiological changes in the chest consistent with TB infection were greatest in the first year of life and decreased progressively thereafter.[1]

These studies demonstrated the span of risk for children progressing to active disease over a two year period as follows: children aged less than 1 year - 23 to 43%, children aged 1 to 5 years - 11 to 24%, children aged 6 to 10 years - 8 to 25% and for children aged 11 to 15 years – 16% with females having a higher rate of disease than males.

For children with a normal chest x-ray at the time of their first positive tuberculin skin test the lifetime risk of developing TB is between 2 and 10%. These risks are related to general health, nutrition and other disease states. Although one might expect, with better nutrition and living standards, that currently, the lifetime risk may be lower, there is some Australian data from adult research that indicate that this may not be the case.[2]

Infectivity

TB in children is primary TB, a disease which is predominantly one of delayed hypersensitivity with few organisms and variable immune response. Childhood TB is rarely contagious because:

- children usually have a small bacterial load;
- children very rarely have cavitating disease; and
- children usually swallow their sputum, and have a far less effective cough than adults.

Rarely children, and occasionally adolescents, may be infectious and have adult type disease.

Diagnosis

Diagnosis of TB infection is based on tuberculin skin testing (TST).

Table 1: Recommended stratification of TST induration size to identify those requiring assessment for preventive therapy. *

The selection of an appropriate cut off for referral is influenced by the probability that the TST represents recent infection and the risk of progression to active disease if there is infection with TB.

1 Miller FJW, Seale RME, Taylor MD. TB in Children. Boston; Little Brown & Co. 1963, page 231 - 232.

2 Marks G, Bai J, Simpson SE, et al. Incidence of Tuberculosis among a cohort of tuberculin positive refugees in Australia. Reappraising the estimates of risk. American Journal of Respiratory Care Medicine 2000; 162: 1851 - 1854.

≥ 5 mm	≥ 10 mm#	≥ 15 mm#
Recent high risk contacts of persons with infectious TB	Born or resident in countries with high prevalence of TB (>50 cases/100,000pp)	Children ≥ 4 years of age without any risk factors
HIV infection or other immune suppressed (including steroids)	Locally identified high risk populations	
TST conversion in the last 2 years	Children < 4 years of age	
Chest X-Ray evidence of past untreated TB	Travel or stay in high prevalence countries	
	Persons with certain medical conditions (eg diabetes; prolonged corticosteroid or immunosuppressive therapy; haematological malignancies (eg Hodgkins, lymphoma); chronic renal failure; low body weight & malnutrition	

* All children < four years of age who have had close contact with a case of infectious TB should receive preventive therapy irrespective of TST response, until the second TST (3 months later) proves negative.

BCG vaccination is unlikely to affect TST interpretation in children vaccinated ≥ 5 years previous. However, where BCG is recent (within 5 years) or where there have been 2 or more BCG vaccinations, the above stratification may need to be modified and the TST results should be interpreted individually by physicians experienced in TB medicine.

Diagnosis of TB disease is based on clinical symptoms and signs, chest x-ray or other investigations and smear and culture of infected body material (if available).

Preventive therapy

Preventive therapy in children with TB infection and no evidence of the disease is used to:
- reduce the lifelong risk of developing TB disease;
- reduce the risk of developing TB disease in the years immediately after acquiring the infection, particularly disseminated disease in children under the age of four years.

Six months isoniazid preventive therapy should be considered for otherwise healthy children and adolescents who have evidence of TB infection and no evidence of TB disease.

The incidence of liver toxicity from isoniazid in children is extremely low and routine monitoring of liver function is not recommended. Prophylactic pyridoxine is not normally recommended with isoniazid in children. Pyridoxine is recommended for children and adolescents on meat and milk deficient diets, those with nutritional deficiencies including all symptomatic HIV infected children, exclusively breast feed infants older than 6 months of age and pregnant adolescents.1

Child contacts of patients with drug resistant TB and especially multi-drug resistant TB should be individually assessed by an expert in TB care and treatment.

Children who have evidence of TB infection and show changes consistent with TB disease on a chest x-ray (including mediastinal lymphadenopathy) should be regarded as having the disease and given full treatment.

1 American Academy of Pediatrics. Tuberculosis. In: Pickering LK, ed.2000 Red Book: Report of the Committee on Infectious Diseases.25th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2000: page 604

Treatment

Children with TB disease should be treated according to the guidelines published in the Journal of Paediatrics and Child Health.1

Directly observed therapy (DOT) should be regarded as the method of choice for TB treatment in NSW. DOT may be undertaken by well-motivated parents. When this occurs, regular contact (at least weekly) with the treating team is essential. Decisions relating to the supervision of TB medication need to be made by the treating team on a case-by-case basis.

References:

i Miller FJW, Seale RME, Taylor MD. TB in Children. Boston; Little Brown & Co. 1963, page 231 - 232.
ii Marks G, Bai J, Simpson SE, et al. Incidence of Tuberculosis among a cohort of tuberculin positive refugees in Australia. Reappraising the estimates of risk. American Journal of Respiratory Care Medicine 2000; 162: 1851 - 1854.
iii American Academy of Pediatrics. Tuberculosis. In: Pickering LK, ed.2000 Red Book: Report of the Committee on Infectious Diseases.25th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2000: page 604
iv VOSS LM, et al. Position Paper Management of tuberculosis in children. Journal of Pediatrics and Child Health (2000) 36, 530 – 536.

TUBERCULIN SKIN TESTING (PD2009_005)

This Policy Directive is to be read in conjunction with NSW Health Department Policy Directives:

PD2013_032 BCG (Bacille Calmette Guerin) Vaccination
PD2005_406 Patient Information and Consent to Medical Treatment
PD2007_036 Infection Control Policy
PD2013_043 Medication Handling in NSW Public Health Facilities
PD2008_017 Tuberculosis Contact Tracing
PD2015_011 Immunisation Services - Authority for Registered Nurses and Midwives
GL2005_060 Tuberculosis in Children and Adolescents

1. Introduction

The procedures incorporated in this document are required to be complied with.

1.1 Definitions

The tuberculin skin test (TST) is used primarily to identify people infected with *Mycobacterium tuberculosis (MTB)*. It is used to identify such people because they have a 5-10% lifetime risk of developing TB disease[1]. TST should therefore be targeted to those individuals at risk either of acquiring TB infection or of progressing to TB disease, once infected.

Preventive treatment of people infected with MTB reduces their risk of developing TB disease by up to 90%[2].

1.2 Composition and Safety

The form of tuberculin used in Australia is purified protein derivative (PPD). PPD consists of bacteria-derived protein without viable organisms and is safe for use in immune compromised persons and in pregnancy.

1.3 Methods of TST Administration

In Australia, tuberculin skin testing is administered by the Mantoux method which involves the intradermal injection of 5 Tuberculin Units (TU) of PPD. Multiple puncture tests are also available to test the cell-mediated response to a variety of antigens including PPD. However, these are not recommended as an alternative to the TST as the dose is less precise and operator variability may be greater.

1 VOSS LM, et al. Position Paper Management of tuberculosis in children. Journal of Pediatrics and Child Health (2000) 36, 530 – 536.

2. Indications/Contra-indications regarding TST

2.1 General Indications for TST

TST is routinely recommended for the following persons:

- people identified as close contacts of persons with infectious TB (as defined in Policy Directive PD2008_017 Tuberculosis Contact Tracing);
- health care and other workers in whom surveillance is proposed because of ongoing increased risk of acquiring infection;
- people with medical risk factors that increase the likelihood of latent infection progressing to disease;
- prior to BCG vaccination in those over 6 months old; and
- in certain clinical situations, to assist in diagnosing or excluding TB disease.

2.2 Contra-indications to TST

TST is best avoided in:

- persons who report any severe adverse reaction following previous TST;
- persons previously treated for active TB disease;
- persons with documented/known prior positive TST reactions;
- persons with a high fever or recent significant infection, eg measles and chicken pox;
- following recent immunisation with MMR, varicella and yellow fever within the last month as the risk of a false negative TST result is increased. Oral typhoid and oral polio (OPV) vaccines do not necessitate a delay in testing (OPV is no longer used in Australia but have been received overseas);
- the 9th edition of the Australian Immunisation Handbook does not mention oral rotavirus vaccination in the context of TST tests, but as with other live oral vaccines, there should be no need to modify timing of TST based on administration of this vaccine.[3]

An undocumented history of a prior positive TST is not an absolute contra-indication to TST because patient recall is often inaccurate.

3. Methods

3.1 Who may administer TST?

- Medical Practitioners;
- Registered Nurses employed in an Area Health Service who have the requisite Authority as defined in the NSW Health Department PD2015_011 Immunisation Services – Authority for Registered Nurses and Midwives. These nurses may undertake TST following NSW Health Department Policies without the written order of a medical practitioner; and
- Registered Nurses who work under the written order of a medical practitioner, as PPD is a schedule 4 drug.

All health professionals performing TST should be appropriately trained to administer and interpret the test results.

3.2 Procedure for the administration of a TST

3.2.1 Confirm the identity of the patient to be tested

3.2.2 Obtain consent

- Informed consent is required. Verbal consent is sufficient, signed consent forms are not required for minor procedures such as TST administration;
- the procedure must be explained to the patient and documented in the patient's medical record - see PD2005_406 Patient Information and Consent to Medical Treatment.

3.2.3 For consent to be valid

- The person must have the capacity to give consent, that is the person must be able to understand the implications of having the treatment or procedure;
- the consent must be freely given;
- the consent must be specifically for the procedure that is being undertaken; and
- the patient must be informed in broad terms of the procedure that is intended.

A person is incapable of giving consent if he/she cannot understand the general nature and effects of the proposed treatment, including implications and possible side effects or:

- is a child is under the age of 14 years, (consent of the parent or legal guardian is necessary); and
- is a school student, without written parental/guardian consent prior to an on-site school screening activity, regardless of age.

Note: while children between the ages of 14 and 16 may give consent, it is prudent to obtain consent of the parent or guardian.

3.2.4 What to do when a person is incapable of giving consent:

The provisions of the *Guardianship Act* apply to a person who is 16 years or older who is incapable of giving consent to the carrying out of medical or dental treatment.

TST is considered "medical treatment" within the meaning of the *Guardianship Act* (section 33(1)). TST falls within the meaning of "minor treatment" under the *Guardianship Act*.

Section 36 of the *Guardianship Act* provides that for minor medical treatment consent may be given by the "person responsible" for the patient or by the Guardianship Tribunal. The person responsible for the patient is defined under section 33A of the Act.

Consent to undertake TST should be obtained in writing from the person responsible.

Minor treatment may be carried out without any consent if there is no person responsible for the patient, or there is such a person, but that person cannot be contacted or is unable or unwilling to make a decision concerning a request for that person's consent for the treatment providing the medical practitioner supervising the carrying out of the TST certifies in writing in the clinical record that:

- the treatment is necessary and undertaking the TST will promote the patient's health and well being; and
- the patient does not object to the carrying out of the TST.

Section 33(3) of the Act provides guidance on the definition of what constitutes a patient objecting to treatment.

Where it is necessary to obtain consent of the Tribunal legislation requires that applications for consent are made in respect of each patient concerned. Prior to granting consent the Tribunal considers the views of the patient, the person proposing the treatment, any person responsible for the patient, and any guardian appointed with respect to the patient's treatment.

4. Pre TST Assessment

Obtain a history or documentation of the following:
- prior TB;
- any potential TB exposure;
- any previous TST and the result;
- BCG vaccination;
- medical conditions or treatment that may effect the TST result as outlined in section 10; and
- review the contraindications for TST as outlined in section 2.2.

5. Administration of the TST

5.1 Position

Seat the patient with the left arm resting on a table. Young children should be seated on their attendant's lap with other arm held securely under the attendant's arm. The child's body is held firmly and at the same time the attendant holds the arm on which the test is to be carried out, slightly flexed.

5.2 Site

The anterior aspect of the left forearm at the junction of the upper and middle thirds, using an area away from blood vessels or skin lesions.

5.3 Dose of PPD for adults and children

Five (5) Tuberculin Units (TU) per 0.1ml is the standard dose for the TST.

5.4 Technique

Use either a single-use insulin syringe with a 29-gauge needle or a 1 mL single-use syringe with 26 or 27 gauge needle. Administer the PPD intradermally with the bevel of the needle uppermost. Inject slowly to produce a pale discrete "bleb" (lump) 5 to 10 mm in diameter. If leakage occurs, repeat the injection at another site at least 5 cm away or in the other forearm.

Repeated TSTs at exactly the same site may result in increased reaction. For this reason the requirement to vary the test site is particularly important in serial or repeated TSTs especially with the 2-step protocol[4].

5.5 Advice to the patient

The patient should be given clear instructions and an information sheet advising of the following:
- not to cover the site with dressings;

- not to apply any lotions to the area;
- to avoid scratching the site if it becomes itchy;
- possibility of skin blistering and/or ulceration following the TST;
- when to return for reading of the TST; and
- to contact the clinic if concerned in the interim.

5.6 Infection control

All procedures should follow the current NSW Health Department PD2007_036 Infection Control Policy.

6. Storage of PPD

- PPD should be stored away from light at 2-8 degrees Centigrade. Discard product if exposed to freezing.
- PPD should be administered as soon as possible after drawing up into the syringe and following administration, as the solution can be adversely affected by exposure to light. PPD remaining in a vial may be kept in the refrigerator and used for up to 30 days before discarding, providing care is taken to avoid contamination of the vial[5]. It is essential that the date the vial is opened be recorded to ensure disposal occurs within the recommended timeframe.

7. Adverse reactions

Adverse reactions to TSTs are rare. They include:

- vaso-vagal reactions;
- immediate flare with a local rash;
- blistering and/or ulceration at the site of the injection;
- lymphangitis; and
- serious or life-threatening hypersensitivity reactions. These are extremely rare (0.08 reactions per million doses of PPD)[6]

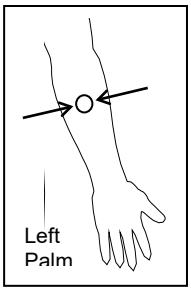
Although the risk of anaphylaxis is very low, adrenaline (and information re its dosage and administration) must be available when TST is being undertaken[7].

8. Pregnancy

There is no evidence that TST poses any risk in pregnancy and/or when breastfeeding an infant[8] or that tuberculin reactions are influenced by pregnancy[9].

9. Reading

The tuberculin skin test should be read 48 to 72 hours after the injection, by measuring the diameter of **induration** across the transverse axis of the forearm.



Only the induration should be measured, not the erythema (redness).

Record the TST results in millimetres (mm) of induration, not as **positive** or **negative**. A tuberculin skin test with no induration should be recorded as **0 mm**.

The tuberculin skin test is to be read by the "pen technique".

Slowly draw a line with a ballpoint from a point 2 to 3 cms away from the margin of the skin test reaction, towards its centre. Maintain skin tension by exerting slight traction in the opposite direction to the pen movement.

When the ballpoint reaches the margin of the indurated area you will feel definite resistance, lift the pen. Repeat the procedure from the opposite side of the reaction. Measure the distance between opposing lines with a ruler.

9.1 Documentation

Document in the patient's medical record:
- the date the TST was administered;
- the dose of PPD administered;
- the batch number and expiry date of the PPD;
- BCG vaccination history, including age or ages at vaccination;
- the presence or absence of BCG scars;
- date the TST was measured;
- size in mm of the transverse diameter of induration;
- presence of vesiculation; and
- signature of the person administering the TST and reading the result.

10. Interpretation of TST results

The TST result should be interpreted in light of factors that increase the probability that the patient has been infected with TB. These include:
- recent high risk (close) contact with persons with infectious TB;
- residence in countries with high prevalence of TB (>50 cases/100,000 persons);
- persons with chest x-ray evidence of past, untreated TB;
- prior or current residence in high-risk congregate settings (eg. prisons, homeless shelters, alcohol rehabilitation and drug treatment centres);
- prior vaccination with BCG;
- intravenous drug use;
- health care workers; and
- exposure to mycobacteria other than TB (MOTT).

The TST result may be decreased by:
- immuno suppressive therapy, malignancy and HIV/AIDS[10];
- acute viral or bacterial infections, including 5-17% of persons with active TB[11];
- infancy, advanced age[12], renal failure[13] or significant malnutrition[14], and
- recent (within 4 weeks) live virus vaccinations[15].

Note that technical factors also influence the TST induration size. Such factors include:
- variation in the storage, handling and dosage of PPD used; and
- errors in administration or reading.

10.1 Prior vaccination with BCG

Most people vaccinated with BCG will develop, within 2 months, a TST reaction which will then wane variably over time. TST following BCG vaccination is not recommended to assess the effectiveness of BCG.

BCG vaccination given in infancy is unlikely to affect TST interpretation in adults[16]. Where BCG has been given in the last 5 years or more than one BCG has been administered the interpretation of TST results needs to be undertaken by a physician with experience in TB medicine[17].

TST reactions > 20mm are rarely due to BCG alone[18].

10.2 Evidence of TST conversion

Where serial tests are done a TST conversion is defined as an increase in the diameter of TST induration of ≥ 10mm, between consecutive readings[19]. This increase usually occurs in 4 – 8 weeks following exposure to TB.[20]

TST conversion indicates recent TB infection. Occasionally false positive conversions may occur due to the TST booster phenomenon. The 2-step TST may assist in distinguishing true conversions from the booster phenomenon (see section 11 – Two-step TST and the Booster Phenomenon).

10.3 The size of the TST induration

The interpretation of TST reactions to identify those requiring assessment for preventive therapy is based on: (a) the probability that the TST represents recent infection and (b) the risk of progression to active disease if there is infection with MTB.

Note that all children < 4 years of age who have had close contact with a case of infectious TB should receive preventive therapy irrespective of TST response, until the second TST (3 months later) proves negative (See GL2005_060 - TB in Children and Adolescents).

Table 1. TST induration diameter which should be considered indicative of infection with MTB in various clinical settings

≥5mm	≥10mm#	≥15mm#
Recent high risk (close) contacts of persons with infectious TB	Persons born or resident (for greater than 3 months) in countries with high prevalence of TB (>100 cases/100,000)	People > 4 years of age without any identified risk factors
Persons with HIV infection	Children < 4 years of age without any identified risk factors	Health Care Workers with BCG vaccination in the past 10 years
Persons with organ transplants or immune suppressive therapy equivalent to prednisone >15mg/day for >1 month	Persons who live or spend time in high risk congregate settings (eg prisons, homeless shelters, alcohol rehabilitation and drug treatment centres	
Persons with CXR evidence of past untreated TB	Health care workers without prior BCG vaccination in the past 10 years	
	Intravenous drug users	
	Persons on prednisone equivalent to ≥15mg/day or for ≥1 month or those with certain medical conditions eg diabetes; silicosis; some malignancies (head, neck, lung and haematological); chronic renal failure; gastrectomy or jejunal bypass; malnutrition or low body weight (>10% below ideal body weight)[21]	

BCG vaccination is unlikely to affect TST interpretation in adults, if given in infancy. However, where BCG is recent (within 5 years) or where there have been 2 or more BCG vaccinations, the above stratification may need to be modified and TST results should be interpreted individually by physicians experienced in TB medicine.

10.4 TST positive persons

The recommended management for persons identified as TST positive is either preventive therapy or chest x-ray follow up.

If preventive therapy is not given, the person is to be counselled about the future risk of TB and to seek medical care if symptoms develop. Chest x-ray follow up is required in three to four months and then annually for two years. The risk of developing tuberculosis is highest within the first two years.

11. Two-step TST and the Booster Phenomenon

In some people previously exposed to *Mycobacteria* the ability to mount an immunological response to mycobacterial antigens wanes over time. These individuals may not initially react to a TST, but the TST may boost immunological memory for the mycobacterial antigens. If this does occur, a repeat TST shortly after the initial one will produce a much larger TST response (a boosted response). The initial TST result is therefore falsely negative and the second result should be considered the true result. However, this boosting phenomenon may be misinterpreted as a TST conversion.

The TST boosted response is maximal 1-5 weeks after the first TST, but can persist for 1-2 years[22]. A 2-step TST is designed to avoid false negative baseline TSTs, so a subsequent positive TST is not misinterpreted as a TST conversion. The second TST of the 2-step procedure should be done 1-5 weeks after the initial negative TST. The results of the second TST should be taken as the baseline for future assessment of TST conversion.

The 2-step TST is ideally suited to the situation of health worker screening where it is expected that there will be repeat testing at future regular intervals, and it is desirable to identify booster phenomena so as not to confuse the results with genuine TST conversion in health care workers. The 2-step TST is not routinely recommended in contact tracing.

12. Alternative/in vitro tests

Interferon-y-release-assays such as the QuantiFERON tests (Cellestis Limited, Carnegie, Melbourne), are assays that detect cell mediated immune (CMI) responses to TB specific proteins that are secreted by the *M.tuberculosis* organism. These CMI responses are demonstrated to be both specific for *M.tuberculosis* infection and have less cross-reactivity with BCG and most non-tuberculosis mycobacteria.

The QuantiFERON - TB Gold® assay has been evaluated for use with immune competent healthy adults. A result of greater than 0.35IU/ml of interferon to the specific antigens indicates TB infection.

The assay has not been evaluated for use within children aged < 12 years, infants, pregnant women, immunocompromised individuals (HIV positive individuals), or people with certain clinical conditions predisposing immunosuppression (i.e. diabetes, silicosis, cancers, organ transplants), or those taking immunosuppressive medication. Studies are currently underway to assess the performance of QuantiFERON - TB Gold® within these groups.

The US Center for Disease Control and Prevention state in the Morbidity and Mortality Weekly Report of 16 December 2005/54/No.RR-15, that the QuantiFERON - TB Gold® assay may be used in certain circumstances to diagnose LTBI. However, the National Tuberculosis Advisory Committee is currently evaluating the results of international studies to determine the recommendations for use of QuantiFERON - TB Gold® in Australia. The TST continues to be the recommended methodology for diagnosing LTBI and QuantiFERON TB Gold® is not recommended for assessment of LTBI[23].

Persons referred to NSW TB Prevention and Control Services for evaluation of LTBI following screening with QuantiFERON - TB Gold® must have their results assessed in conjunction with other clinical and laboratory information to determine the risk of TB infection and/or active TB. It is not considered necessary to undertake a TST in this group of people.

References

1. World Health Organisation TB Fact Sheet.
2. Ferebee, SH, 1970. Controlled chemoprophylaxis trials in tuberculosis: a general review. Adv.Tuberc.Res, 17:28-106.
3. The Australian Immunisation Handbook 9th Edition. NHMRC 2008; 301-302.
4. Duboczy, BO. Repeated tuberculin tests at the same site in tuberculin positive patients. American Review Respiratory Diseases, 1964:90:77-86.
5. TUBERSOL Purified Protein Derivative Product Monograph, 2005.
6. Froeschie, JE et al. Immediate hypersensitivity reactions after the use of tuberculin testing. Clinical Infectious Diseases, 2002:34:e12-e13.
7. The Australian Immunisation Handbook 8th edition, NHMRC 2003; 25-35.
8. Snider, DE. The tuberculin skin test. American Review Respiratory Diseases, 1982; 125:108-112.
9. Present, PA et al. Tuberculin sensitivity in pregnancy. American Review Respiratory Diseases, 1975; 112:413-416.
10. Markowitz, N et al. Tuberculin and anergy testing in HIV seropositive and HIV seronegative patients. Annals of Internal Medicine, 1993: 119:185-193.
11. Holden, M et al. Frequency of negative intermediate-strength tuberculin sensitivity in patients with active tuberculosis. New England Journal of Medicine 1971; 285:1506-1509.
12. Stead, WW et al. The significance of the tuberculin skin test in elderly persons. Annals of Internal Medicine, 1987: 107:837-842.
13. Selroos, O et al. Skin test sensitivity and antigen induced lymphocyte transformation in Uremis. Clinical Exp Immunol, 1977; 14:365-370
14. Kardjino,T et al. The Mantoux test in tuberculosis: correlations between the diameters of the dermal responses and the serum protein levels. Tubercle, 1981; 62:31-35.
15. The Australian Immunisation Handbook 8th edition, NHMRC 2008; 272-273.
16. Menzies, R et al. Effect of Bacille Calmette Guerin vaccinatiom on tuberculin reactivity. American Review Respiratory Diseases, 1992; 145:621-625.
17. American Academy of Pediatrics.Tuberculosis.In:Pickering LK, ed. 2000 Red Book: Report of the Committee on Infectious Diseases. 25th Edition. Elk Grove Village, IL: American Academy of Pediatrics; 2000.
18. McKay, A et al. Determinants of tuberculin reactivity among health care workers: interpretation following BCG vaccination. Canadian Journal of Infectious Diseases, 1999; 10:134-139.
19. CDC: Targetted tuberculin testing and treatment of latent tuberculosis infection. MMWR 9th June 2000; 49:RR-6.
20. Wallgren,A. The timetable of tuberculosis. *Tubercle,* 1948; 29:245-251.
21. CDC Screening for tuberculosis and tuberculosis infection in high risk populations. Recommendations of the Advisory Council for the Elimination of TB. MMWR 8 September 1995; 44: RR-11:18-34.
22. Bass, JB et al. The use of repeated skin tests to eliminate the booster phenomenon in serial tuberculin testing. American Review Respiratory Diseases, 1981; 123:394-396.
23. Position Statement on QuantiFERON Gold Assay, National Tuberculosis Advisory Committee, 18 January 2007.

BACILLE CALMETTE-GUERIN (BCG) VACCINATION (GL2023_003)

GL2023_003 replaced PD2013_032

GUIDELINE SUMMARY

This Guideline sets out the recommendations for use of the bacille Calmette-Guérin (BCG) vaccination in NSW.

BCG vaccination has an important role in prevention of travel-acquired tuberculosis (TB) in young children from diverse backgrounds born in NSW and has a more limited role in overall prevention of TB in a low TB incidence setting such as Australia.

KEY PRINCIPLES

Bacille Calmette-Guérin (BCG) vaccination is to be used in accordance with the National Health and Medical Research Council (NHMRC) Australian Immunisation Handbook and as per the recommendations in these guidelines.

A pre-vaccination risk assessment is required to determine whether BCG vaccination should occur, and whether a pre-vaccination tuberculin skin test (TST) is required.

Comprehensive education must be provided to the vaccine recipient, or their parents/ care givers and consent sought. BCG vaccinators must be appropriately credentialled and experienced in intradermal administration.

Mechanisms must be in place to report vaccinations to the Australian Immunisation Register, and to manage and report adverse events following immunisation including accelerated reactions. Local Health Districts and Specialty Health Networks are responsible for assessing, maintaining, and reassessing their capability level to deliver BCG vaccination to their community, as per the NSW Health Policy Directive *Principles for the Management of Tuberculosis in New South Wales* (PD2022_007).

The Bacille Calmette-Guérin (BCG) Vaccination guideline is available at:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2023_003

345(13/02/23)

TUBERCULOSIS CONTACT INVESTIGATIONS (GL2019_003)

GL2019_003 rescinds PD2008_017

PURPOSE

Contact investigation is an essential component of tuberculosis (TB) prevention. The rationale for contact investigation is that people who were recently exposed to patients with TB may have become infected and will have an increased risk of developing TB disease, particularly within the first two years after acquisition of the infection.

Decisions about the extent of contact investigation need to be guided by sound clinical and epidemiological indications. The aims of contact investigation are to:

- Identify and treat cases of TB disease among those in contact with the index case including identification of a possible source case;
- Identify persons who have latent TB infection (LTBI) and offer treatment for LTBI or monitoring by chest radiography (CXR);
- Provide timely treatment, education and support for persons identified with evidence of disease or infection, and;
- Provide education and support for all persons identified as having exposure risk.

KEY PRINCIPLES

Individuals have a right to be informed about significant risks to their health and recommended courses of action to manage these risks.

The priorities for TB contact investigation are determined by:

- The likely infectiousness of the index case;
- The risk of exposure of contacts to the index case, and;
- The vulnerability of contacts to disease progression.

Contacts should be prioritised according to their risk of exposure to an infectious TB case and their level of risk for disease progression; screening should be conducted in a stepwise fashion using the concentric circles model until no evidence of transmission is found.

Typically, household contacts are highest priority but consideration must be given to close non-household contacts and vulnerable contacts, regardless of their level of exposure.

Treating clinicians are responsible for individual case management with NSW TB services to support adherence to the prescribed treatment therapy or chest radiograph surveillance.

USE OF THE GUIDELINE

TB contact investigations are an important public health activity that should be carried out by the LHD TB Service as part of routine management of a patient diagnosed with TB.

LHD TB Services should:

- Undertake contact investigations for all TB cases
- Notify the NSW TB Program and their local PHU Director of contact investigations where:
    - Screening involves a healthcare facility or educational institution;
    - Screening that may attract media interest or may cause large scale public concern;
    - Large screenings (where more than 25 contacts at high risk of exposure are identified); and
    - Situations where a high or medium infectiousness index case spent greater than eight hours on an aircraft, and
    - Contact investigations that cross state and/or international jurisdictional borders.
- Communicate with representatives of all relevant jurisdictions (including interstate TB services where relevant) where contact investigations cross jurisdictional boundaries
- Provide sufficient information to ensure appropriate screening of contacts, and ongoing management for those identified as having LTBI or TB disease

- Complete summary contact investigation data on the Notifiable Conditions Information Management System (NCIMS)
- Undertake a routine review process of the quality and completeness of contact investigations.

LHD Public Health Units should:

- Provide assistance including surge capacity, data management, public communication support and assistance with decision making around the investigation where requested by the LHD TB Service
- Facilitate public health inquiries under section 106 of the *Public Health Act.*

The NSW TB Program should:

- Provide advice on large and/or complex contact investigations as requested
- Convene an expert panel where required to support the contact investigation for large and/or complex situations
- Report on contact investigation indicators.

The complete Guideline is available at:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2019_003

316(27/03/19)

NSW ABORIGINAL BLOOD BORNE VIRUSES AND SEXUALLY TRANSMISSIBLE INFECTIONS FRAMEWORK 2016-2021 (IB2016_020)

IB2016_020 replaces GL2007_002

PURPOSE

This Information Bulletin advises that the Information Bulletin IB2016_015 *NSW Aboriginal Blood-Borne Viruses and Sexually Transmissible Infections Framework 2016-2020* has been rescinded, and superseded by the *NSW Aboriginal Blood Borne Viruses and Sexually Transmissible Infections Framework 2016-2021*.

KEY INFORMATION

The Aboriginal BBV and STI Framework 2016-2021 outlines the priorities for BBV and STI prevention, testing, treatment and management for Aboriginal people in priority settings including Aboriginal Community Controlled Health Services (ACCHSs) and other primary health settings, Local Health Districts (LHDs) and Non-Government Organisations (NGOs).

Implementation of this Framework in conjunction with the NSW HIV Strategy 2016-2020, NSW STI Strategy 2016-2020, NSW Hepatitis B Strategy 2014-2020 and NSW Hepatitis C Strategy 2014-2020, will support the achievement of health equity for Aboriginal people in NSW.

The Framework is aligned to support achievement of the goals and targets of the *National Aboriginal and Torres Strait Islander Blood-Borne Viruses and Sexually Transmissible Infections Strategy 2014-2017*.

To view the NSW Aboriginal Blood Borne Viruses and Sexually Transmissible Infections Framework 2016-2021 please go to
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=IB2016_020#

301(06/05/16)

NEONATAL AND INFANT HEPATITIS B PREVENTION AND VACCINATION PROGRAM (PD2023_032)

PD2023_032 replaced PD2017_036

POLICY STATEMENT

NSW Health is committed to reducing the risk of hepatitis B transmission to neonates born in NSW. This Policy Directive focuses on the screening of all pregnant women for hepatitis B disease, appropriate referral to a specialist hepatology service/ specialist hepatologist as required, and the follow-up and management of all infants born to hepatitis B surface antigen (HBsAg) positive women.

SUMMARY OF POLICY REQUIREMENTS

This Policy Directive must be read in conjunction with the current edition of The Australian Immunisation Handbook.

The Policy Directive aims to ensure consistent implementation of the NSW Neonatal and Infant Hepatitis B Prevention and Vaccination Program in all local health districts; and applies to NSW ante- and post-natal services, maternity hospitals, and public health units within the local health district.

All maternity facilities must offer hepatitis B surface antigen (HBsAg) screening and referral where appropriate to all pregnant women. HBsAg positive pregnant women with a high viral load (>200,000 or 5.3 log10 IU/mL) are recommended to be referred to a hepatology service/ specialist hepatologist.for management and follow up. HBsAg positive pregnant women with a low viral load (≤200,000 or 5.3 log10 IU/mL) can be managed by either their general practitioner or hepatology service.

All maternity facilities are required to offer Hepatitis B immunoglobulin (HBIG) to all neonates born to HBsAg positive mothers within 12-hours of birth. In addition, all neonates regardless of mothers HBsAg status must be offered the hepatitis B vaccine within 7-days of birth.

For reporting requirements, all maternity facilities are required to enter hepatitis B data onto eMaternity or Cerner as appropriate and report regularly to their Local Health District

The Neonatal Hepatitis B Hospital Coordinator must forward a copy of the Neonatal and Infant Hepatitis B Follow Up Letter to the LHD Neonatal and Infant Hepatitis B Lead and the mother's nominated doctor, if known to assist with following up babies born to a HBsAg positive mother.

In addition, the Neonatal Hepatitis B Hospital Coordinator must complete the Maternity Unit Record Form for every infant born to a HBsAg positive mother. The completed form must be sent to the LHD Neonatal and Infant Hepatitis B Lead to ensure all reporting and monitoring responsibilities are met.

The LHD Neonatal and Infant Hepatitis B Lead is required to send a copy of the *Neonatal and Infant Hepatitis B Follow Up Letter to General Practitioners* and the *Maternity Unit Record Form* to the local PHU Immunisation Coordinator for monitoring and follow up of vaccination course completion.

All neonates born to HBsAg positive mothers outside of NSW Health facilities should be notified to the local public health unit to assist with monitoring the completion of their primary hepatitis B vaccination course.

Following collection of the data, the local health district is responsible for reporting program performance and follow-up all neonates born to HBsAg positive mothers who are overdue for vaccination.

The full Neonatal and Infant Hepatitis B Prevention and Vaccination Program policy is available at https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2023_032

AUTHORISED NURSE IMMUNISERS AND AUTHORISED MIDWIFE IMMUNISERS (PD2023_027)

PD2023_027 replaced PD2022_016

POLICY STATEMENT

NSW Health is committed to improving immunisation coverage rates and achieving national goals and targets. The immunisation status of community members is seen to be greatly improved if registered nurses and midwives, who have specialised training, are able to provide vaccination services that are complementary to those performed by medical practitioners and nurse practitioners.

This Policy Directive applies to Authorised Nurse Immunisers and Authorised Midwife Immunisers only. It is not applicable to registered nurses and midwives who have not completed the specified training but who may administer vaccines under the direction and authorisation of a medical officer or nurse practitioner.

SUMMARY OF POLICY REQUIREMENTS

NSW Health organisations must have processes in place to ensure Authorised Nurse Immunisers and Authorised Midwife Immunisers employed by their organisation are currently registered with the Australian Health Practitioner Regulation Agency (AHPRA) and legally able to practice within the scope of their registration in NSW.

To become an Authorised Nurse Immuniser or Authorised Midwife Immuniser, a registered nurse/ midwife must have successfully completed the recognised training stated in this Policy Directive.

Further training is required for Authorised Nurse Immunisers and Authorised Midwife Immunisers:

- supplying or administering a SARS-COV-2 (COVID-19) vaccine; OR
- working in, or in conjunction with, NSW TB Services, to supply and administer Tuberculin and the Tuberculosis vaccine (BCG).

Authorised Nurse Immunisers and Authorised Midwife Immunisers must administer vaccines as recommended by the National Health and Medical Research Council, and in accordance with the Australian Immunisation Handbook.

All vaccinations and restricted substances are stored in accordance with the National Vaccine Storage Guidelines 'Strive for 5'.

Authorised Nurse Immunisers and Authorised Midwife Immunisers are to have a complete anaphylaxis kit with in-date adrenaline for use in the treatment of anaphylaxis and ensure that procedures for the administration of adrenaline comply with the Australian Immunisation Handbook

The Authorised Nurse Immuniser or Authorised Midwife Immuniser must report each adverse event following immunisation to the local Public Health Unit and ensure that a designated medical officer is contactable for medical advice.

All vaccinations administered must be recorded on the Australian Immunisation Register (AIR) and the Authorised Nurse Immuniser or Authorised Midwife Immuniser must maintain authority to immunise.

The full Authorised Nurse Immunisers and Authorised Midwife Immunisers policy is available at: https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2023_027

STATEWIDE STANDING ORDERS FOR THE SUPPLY OR ADMINISTRATION OF MEDICATION FOR PUBLIC HEALTH RESPONSE (PD2016_035)

PD2016_035 rescinds PD2013_035.

PURPOSE

The public health response for people exposed to an infectious or otherwise hazardous agent may include the urgent provision of prophylactic medication. In addition, in some circumstances, the public health response includes urgent provision of a medication to treat a person who already has the infection.

The Policy Directive - *Statewide Standing Orders for the Supply or Administration of Medication for Public Health Response* authorises an appropriately educated registered nurse to administer and / or supply specified medications and sets out procedures for dispensing, supplying and administering medications for the purpose of treatment or prophylaxis against certain notifiable conditions or to those who fit an agreed case definition. This Policy Directive when activated for public health response, applies where provision of medication is required as a result of exposure to certain notifiable conditions. Settings may include health facilities where availability of an authorised prescriber would delay a timely response, residential care facilities, airports, schools, or workplaces.

MANDATORY REQUIREMENTS

This Policy Directive does not require further authorisation by Institutional / Local Health District Drug and Therapeutics Committees and overrides any inconsistent local policy.

This standing order will be submitted to the NSW Therapeutic Advisory Group for review annually by Health Protection NSW.

IMPLEMENTATION

Roles and Responsibilities

NSW Ministry of Health:

- Ensure the mandatory requirement for annual review by the NSW Therapeutic Advisory Group.

Chief Executives, Health Service Executives, Managers:

- Ensure services and personnel are aware of their roles and responsibilities under the policy.

Public Health Unit Director:

- Ensure that local protocols and procedures are in place to support implementation of the policy
- The Standing Order activation section is completed prior to each occasion of use
- In order to fulfil the standing order, dispensing of medications will need to be arranged with a public hospital pharmacy department, on behalf of the public health organisation, and at the request of the Public Health Officer (if a medical officer) or an authorised prescriber designated by the district's public health unit director / Public Health Officer.

Medical Public Health Officer:

- The Medical Public Health Officer must check the medication record (Section 8.2 or 8.3) documenting the drug supply and CONFIRM BY SIGNING this entry WITHIN 24 hours.

1. BACKGROUND

1.1 About this document

The *Statewide Standing Orders for the Supply or Administration of Medication for Public Health Response* authorises a registered nurse to administer and / or supply for administration specified medications and sets out procedures for ordering, dispensing, supplying and administering medications for the purpose of treatment or of prophylaxis against certain notifiable conditions or to those who fit an agreed case definition.

This Policy Directive is intended for use by registered nurses employed in a public health organisation for the supply or administration of medication for Public Health response in 'off site' settings to the public health organisation. In the case of administration of vaccines for a public health response, although it is desirable, it is not mandatory for the registered nurse to be an Authorised Nurse Immuniser. Settings may include health facilities where availability of an authorised prescriber would delay a timely response, residential care facilities, airports, schools, or workplaces.

Competency to administer medications is included in the qualifications of medical practitioners, dentists, nurse practitioners, midwife practitioners, registered nurses, and registered midwives, but only in accordance with any practice conditions imposed by the person's place of employment and the endorsements, notations and conditions on the person's registration.

The following statewide standing orders are for:

- The management of influenza cases and contacts
- The management of meningococcal disease contacts
- The management of measles contacts
- The subsequent use of adrenaline (epinephrine) to treat anaphylaxis.

1.2 Key definitions

Case	Individual diagnosed with a condition meeting standard defining criteria.
Contact	Individuals who meet the definition of a contact for a specified disease as documented in public health guidelines.
Clearance	Use of medication to prevent secondary cases, through elimination of the bacteria from possible carriers in the defined network of close contacts of each case.
Medical Public Health Officer	*Public Health Officer under the Public Health Act* (who is a medical officer), or a medical officer designated by the District's Public Health Unit Director / Public Health Officer.
Medication	Used singularly throughout the Policy to describe a drug, medicine, pharmaceutical preparation (including a compounded preparation), therapeutic substance, and vaccine.
Prophylaxis	Use of medication to prevent illness in contacts of a known case of disease.
Public health organisation	A local health district, or statutory health corporation, or an affiliated health organisation in respect of its recognised establishments and recognised services.
Registered Nurse	Includes nurses and midwives registered with the Nursing and Midwifery Board of Australia.
Supply	To administer or dispense medications to a group or a specific patient and is consistent with the definition of supply in section 3 of *the Poisons and Therapeutic Goods Act 1966*. Includes administration of a single dose or medication pack dispensed for treatment or prophylaxis by a Registered Nurse.
Treatment	Use of medication to treat an individual case of disease

1.3 Legal and legislative framework

Section 121 of the *Public Health Act 2010* allows the Secretary of the NSW Ministry of Health to appoint individuals to the position of Public Health Officer for a part of the State or for the purpose of exercising particular public health functions. These functions include the investigation of matters affecting public health and coordinating activities in relation to the reduction of any risks to public health in that part of the state.

Clauses 170 and 171 of the Poisons and Therapeutic Goods Regulation 2008 allow the Secretary of the NSW Ministry of Health to authorise (for the purposes of the Act) a particular person (by means of an instrument in writing given to the person) or a specified class of persons (by means of an instrument published in a manner approved by the Secretary) to supply restricted substances according to clause 53 of the regulation. The authorisation only applies to registered nurses or midwives employed by a public health organisation for the medications listed in the standing orders included in this policy.

2. IMPLEMENTATION OF STATEWIDE STANDING ORDERS FOR PUBLIC HEALTH RESPONSE

When a statewide standing order is applied, public health organisation executives are to ensure:

A registered nurse operating under this standing order is aware of their responsibility to:

- ☐ Determine whether the patient meets the criteria for the standing order and explain the treatment and its purpose to the patient (or guardian)
- ☐ Check that the patient is not showing signs and symptoms requiring immediate medical review and contact the medical officer or refer to the emergency department for immediate review as required
- ☐ Determine any known allergies, hypersensitivity to the medication or contraindications to treatment and contact the medical officer to discuss how to proceed
- ☐ Obtain patient / guardian consent from the patient receiving treatment. Nurses or midwives who are authorised to initiate medications have the same obligations as medical practitioners when obtaining consent for the procedures which they are authorised to perform
- ☐ Document all assessments and details relating to the supply or administration of medication
- ☐ Remain competent in cardio-pulmonary resuscitation, and the administration of adrenaline (epinephrine) in the management of anaphylaxis
- ☐ Practice under the Policy Directive PD2013_043 - *Medication Handling in NSW Public Health Facilities*
- ☐ Record the name of the person and the date the medication is supplied to the patient on the medication label at the time of supply - where this information is not available at the time of supply from the hospital pharmacy
- ☐ Record the administration / dispensing of each medication (see sections 8.1, 8.2 and 8.3) and
- ☐ Ensure records relating to the administration / dispensing of medication are retained in accordance with the State Records Authority General Retention and Disposal Authority for Public Health Services: Patient / Client Records (GDA 17).

The Medical Public Health Officer is aware of their responsibility to:

☐ Brief the registered nurse on the relevant section of the Standing Order and complete the Standing Order activation section prior to each occasion of use

☐ Arrange dispensing of medications with the public hospital pharmacy department, including the estimated quantity required

☐ Be able to be contacted to provide advice to the registered nurse during the treatment or prophylaxis program, and

☐ Check the medication record (section 8.2 or 8.3) documenting the drug supply and confirm by signing this entry within 24 hours.

The public hospital Pharmacy Department is aware of their responsibility to:

☐ Label all medication that is to be supplied for dosing at a later time with the name(s) and strength(s), active ingredient(s) of the medication and the directions for use, including duration of use and other required information. If known, the patient's name must be included on the label. Additional information that should also be supplied includes the Consumer Medicine Information (Full manufacturers product information accessible via CIAP).

3. MEDICATIONS FOR TREATMENT OF INFLUENZA

Purpose

This standing order sets out procedures for ordering, supplying and administering the anti-influenza medications oseltamivir (Tamiflu®) and zanamivir (Relenza®), for the purpose of treatment of influenza.

This standing order authorises a registered nurse, who practices in accordance with the requirements set out in section 2, to administer and/or supply the specified medications for the treatment of influenza to those who fit the agreed clinical case definition of influenza-like-illness according to NSW Health Public Health Response Guidelines[1] or on laboratory diagnosis of influenza. Anti-influenza medications have been shown to attenuate disease in cases of influenza if given early in the course of the illness (within 48 hours of developing symptoms). There may be benefit in providing anti-influenza medications to hospitalised patients after 48 hours.

Medications - oseltamivir and zanamivir

This standing order does **NOT** apply to the following patient groups. A medical officer must approve the supply of anti-influenza medications to these groups:

- Oseltamivir to children under the age of 1 year
- Zanamivir to children under the age of 5 years
- Pregnant or breast-feeding women.

Oseltamivir is approved for use as treatment in children 1 year and older, and zanamivir is approved for use as treatment in children five years and older. The decision to administer to children under these ages should only be taken when the potential benefit is considered to outweigh the risk of harm. In these circumstances the medications must be prescribed by a medical practitioner following consultation with a paediatrician.

Oseltamivir and zanamivir should be used with caution in pregnant or breast-feeding women and only where the potential benefit is considered to outweigh the risk of harm. Treatment may only be prescribed by a medical officer.

If the registered nurse applying the standing order has any concerns regarding patient safety for provision of the medication (e.g. people with significant chronic illness or immunosuppression), the nurse should arrange for the Medical Public Health Officer or emergency department to review so the supply or administration of medication can occur as soon as possible.

1 Series of National Guidelines, Influenza Control Guideline for Public Health Units, Communicable Disease Network Australia. Available from: http://www.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-influenza.htm

3.1 Standing order for supply of oseltamivir (Tamiflu®) for TREATMENT

<table>
<tr><td>TITLE</td><td>Standing order for Influenza TREATMENT</td></tr>
<tr><td>Drug(s)</td><td>Oseltamivir (TAMIFLU®)</td></tr>
<tr><td>Presentation [1]</td><td>30 mg, 45 mg and 75 mg capsule
6 mg/mL powder for oral suspension - reconstitute with 55 mL water</td></tr>
<tr><td>Indication</td><td>Oseltamivir is approved for use as treatment of Influenza in adults and children one year and older</td></tr>
<tr><td>Contraindications[1]</td><td>▪ History of hypersensitivity or allergy to oseltamivir , fructose intolerance (this applies to oral suspension only), routine haemodialysis or continuous peritoneal dialysis, subjects with creatinine clearance <10mL/min, history of renal impairment (seek medical advice)
▪ The safety and efficacy of oseltamivir in paediatric patients have not been established in children aged less than 1 year of age.</td></tr>
<tr><td>Precautions[1]</td><td>Use with caution in pregnant or breastfeeding women
Use with caution in adults with chronic renal impairment (reduce dosage)*</td></tr>
<tr><td>Dose[4]</td><td>Recommended dose of oseltamivir for treating patients more than one year of age
<table>
<tr><th>Bodyweight in kg</th><th>Recommended dose</th><th>Equivalent volume for 6 mg/mL oral suspension</th></tr>
<tr><td>15kg or less</td><td>30mg</td><td>5mL</td></tr>
<tr><td>More than 15kg to 23kg</td><td>45mg</td><td>7.5mL</td></tr>
<tr><td>More than 23kg to 40kg</td><td>60mg</td><td>10mL</td></tr>
<tr><td>More than 40 kg</td><td>75mg</td><td>12.5mL</td></tr>
</table>
*Dosage for adults with renal impairment:
Creatinine clearance 30 – 60 mL/min 30 mg TWICE daily for five days
Creatinine clearance 10 –30 mL/min 30 mg ONCE daily for five days
Seek medical advice prior to supply or administration of oseltamivir for patients with creatinine clearance of less than 10 mL/min and for patients on haemodialysis or chronic ambulatory peritoneal dialysis.</td></tr>
<tr><td>Dose frequency[1]</td><td>TWICE daily for five days</td></tr>
<tr><td>Administration[1]</td><td>As a result of reported gastrointestinal upset, oseltamivir should be taken with food. For young children, the dose can be mixed with soft food e.g. yoghurt, honey to disguise the taste of the medicines.</td></tr>
<tr><td>Drug Interactions[1]</td><td>Information derived from pharmacology and pharmacokinetic studies of oseltamivir suggest that clinically significant drug interactions are unlikely.</td></tr>
<tr><td>Adverse effects[1]</td><td>▪ Common: Nausea and vomiting (most common in first 1-2 days); headache;
▪ Rare: GI bleeding; haemorrhagic colitis increased liver enzymes; hepatitis; rash; allergy including anaphylaxis; severe skin reaction; neuropsychiatric event e.g. abnormal behaviour, hallucinations, delirium (mainly in children); laxative effect (suspension). See product information for full list.</td></tr>
<tr><td>Documentation</td><td>Obtain consent, explain side effects, and provide consumer medicine information and patient information sheet</td></tr>
<tr><td>Related Documents</td><td>NSW Health Influenza Factsheet
Consumer Medicine Information for Tamiflu®
Patient Information Sheet for Tamiflu (section 8.4)</td></tr>
</table>

1 The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

3.2 Standing order for supply of zanamivir (RELENZA®) for TREATMENT

TITLE	Standing order for Influenza TREATMENT
Drug(s)	**Zanamivir (RELENZA®)**
Presentation [1]	**5 mg** powder / blister; four blisters in each Rotadisk. Powder is inhaled by mouth using a delivery device called a DISKHALER
Indication	Zanamivir is approved for use as treatment of Influenza in adults and children 5 years and older
Contraindications[1]	History of hypersensitivity to zanamivir or lactose.
Precautions[1]	▪ Use with caution in pregnant or breast-feeding women and subjects with severe asthma or chronic respiratory disease ▪ Children may not be able to inhale zanamivir properly, resulting in inadequate tissue concentrations.
Dose [1]	10 mg (two 5mg blisters) inhaled
Dose frequency[1]	**TWICE** daily for 5 days
Administration[1]	Refer to the "patient instructions for use" for the Diskhaler use. Patients with asthma should use their bronchodilator prior to using zanamivir. If new onset wheeze develops after using zanamivir, discontinue therapy.
Drug Interactions[1]	No clinically significant drug interactions have been reported in clinical studies to date.
Adverse effects[5]	Adverse effects are rare (0.1%) and include bronchospasm (may be fatal); dyspnoea allergy including oropharyngeal oedema, rash and anaphylactic / anaphylactoid reaction. See Product Information for full list.
Documentation	Obtain consent, explain side effects, and provide Consumer Medicine Information for Relenza and patient information sheet for Relenza.
Related Documents	NSW Health Influenza Factsheet Consumer Medicine Information for Relenza Patient Information Sheet for Relenza (section 8.5)

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

1 The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

4. MEDICATIONS FOR THE PROPHYLAXIS OF INFLUENZA

Purpose

This standing order sets out procedures for ordering, supplying or administering the anti-influenza medications oseltamivir (Tamiflu®) and zanamivir (Relenza®), for the purpose of **prophylaxis** of influenza.

This standing order authorises a registered nurse, who practices in accordance with requirements set out in section 2, to administer and / or supply the specified anti-influenza medications for the prophylaxis against influenza to those who fit an agreed case definition.

Prophylaxis should be provided as soon as possible but not if more than seven days has elapsed since the last contact with a probable or confirmed case of influenza. Once it is determined that prophylaxis is required, administration or supply should commence as soon as possible. The clinical condition of all contacts of the confirmed case of influenza should be reviewed prior to administration or supply of prophylaxis to determine whether they have developed symptoms or signs of influenza infection.

Medications - oseltamivir and zanamivir

This standing order does **NOT** apply to the administration or supply of:

- Oseltamivir to children under the age of 1 year
- Zanamivir to children under the age of 5 years
- Pregnant or breast-feeding women.

The decision to administer to children under these ages and pregnant or breast-feeding women should only be taken where the benefit is considered to outweigh the risk, and medication must be prescribed by a medical practitioner including consultation with a paediatrician for children.

If the registered nurse applying the standing order has any clinical concerns regarding patient safety for provision of the medication, the nurse should arrange for the Medical Public Health Officer or emergency department to review so the supply or administration of medication can occur as soon as possible.

4.1 Standing order for supply of oseltamivir (Tamiflu®) for PROPHYLAXIS.

<table>
<tr><td>TITLE</td><td>Standing order for Influenza PROHPYLAXIS</td></tr>
<tr><td>Drug(s)</td><td>oseltamivir (TAMIFLU®)</td></tr>
<tr><td>Presentation [1]</td><td>30 mg, 45 mg and 75 mg capsule
6 mg/mL powder for oral suspension - reconstitute with 55 mL water</td></tr>
<tr><td>Indication</td><td>Oseltamivir is approved for use as prevention of Influenza in adults and children 1 year and older.</td></tr>
<tr><td>Contraindications[1]</td><td>▪ History of hypersensitivity or allergy to oseltamivir, fructose intolerance (this applies to oral suspension only), routine haemodialysis or continuous peritoneal dialysis, subjects with creatinine clearance <10mL/min, history of renal impairment (seek medical advice)
▪ The safety and efficacy of oseltamivir in paediatric patients have not been established in children aged less than 1 year of age.</td></tr>
<tr><td>Precautions[1]</td><td>Use with caution in pregnant or breastfeeding women
Use with caution in adults with chronic renal impairment (reduce dosage)*</td></tr>
<tr><td>Dose[6]</td><td>Recommended dose of Tamiflu for patients more than one year of age
<table>
<tr><td>Bodyweight in kg</td><td>Recommended dose</td><td>Equivalent volume for 6 mg/mL oral suspension</td></tr>
<tr><td>15kg or less</td><td>30mg</td><td>5 mL</td></tr>
<tr><td>More than 15kg to 23kg</td><td>45mg</td><td>7.5 mL</td></tr>
<tr><td>More than 23kg to 40kg</td><td>60mg</td><td>10 mL</td></tr>
<tr><td>More than 40kg</td><td>75mg</td><td>12.5 mL</td></tr>
</table>
*Dosage for adults with renal impairment:
Creatinine clearance of greater than 30 – 60 mL/min 30 mg ONCE daily for 5 days
Creatinine clearance of 10 –30 mL/min 30 mg SECOND daily
Seek medical advice prior to supply or administration of Tamiflu for patients with creatinine clearance of less than 10 mL/min and for patients on haemodialysis or chronic ambulatory peritoneal dialysis.</td></tr>
<tr><td>Dose frequency[1]</td><td>ONCE daily for 10 days</td></tr>
<tr><td>Administration[1]</td><td>As a result of reported gastrointestinal upset, oseltamivir should be taken with food. For young children, the dose can be mixed with soft food e.g. yoghurt, honey to disguise the taste of the medicines.</td></tr>
<tr><td>Drug Interactions[1]</td><td>Information derived from pharmacology and pharmacokinetic studies of oseltamivir phosphate suggest that clinically significant drug interactions are unlikely.</td></tr>
<tr><td>Adverse effects[1]</td><td>▪ Common: Nausea and vomiting (most common in first 1-2 days), headache;
▪ Rare: GI bleeding; haemorrhagic colitis increased liver enzymes; hepatitis; rash; allergy including anaphylaxis; severe skin reaction; neuropsychiatric event e.g. abnormal behaviour, hallucinations, delirium (mainly in children); laxative effect (suspension). See product information for full list.</td></tr>
<tr><td>Documentation</td><td>Obtain consent, explain side effects, and provide consumer medicine information and patient information sheet</td></tr>
<tr><td>Related Documents</td><td>NSW Health Influenza Factsheet
Consumer Medicine Information for Tamiflu®
Patient Information Sheet for Tamiflu (section 8.4)</td></tr>
</table>

1The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

Standing order activation: *(to be completed for each episode of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

4.2 Standing order for supply of zanamivir (Relenza®) for PROPHYLAXIS.

TITLE	Standing order for Influenza PROHPYLAXIS
Drug(s)	**zanamivir (RELENZA®)**
Presentation [1]	**5 mg** powder / blister; four blisters in each Rotadisk. Powder is inhaled by mouth using a delivery device called a DISKHALER
Indication	Relenza is indicated for prophylaxis of infection due to influenza A and B in adults and children (greater than or equal to five years) to reduce transmission among individuals in households with an infected person.
Contraindications[1] and exclusions	History of hypersensitivity to zanamivir or lactose.
Precautions[1]	Use with caution in pregnant or breast-feeding women and subjects with severe asthma or chronic respiratory disease
Dose [1]	10 mg (two 5mg blisters) inhaled
Dose frequency[1]	**ONCE** daily for 10 days
Administration[1]	Refer to the "patient instructions for use" for the Diskhaler use. Patients with asthma should use their bronchodilator prior to usinging zanamivir. If new onset wheeze develops after taking zanamivir, discontinue therapy.
Drug Interactions[1]	No clinically significant drug interactions have been reported in clinical studies to date.
Adverse effects[1]	▪ Adverse effects are rare (0.1%) and include bronchospasm (may be fatal); dyspnoea allergy including oropharyngeal oedema, rash and anaphylactic / anaphylactoid reaction. ▪ Note: there is a warning in the product information regarding an association between zanamivir and neuropsychiatric symptoms (e.g delirium or abnormal behaviour); however, at present, evidence suggests that these rare events are more likely to be due to influenza. ▪ See Product Information for full list.
Documentation	Obtain consent, explain side effects, and provide consumer medicine information and patient information sheet.
Related Documents	NSW Health Influenza Factsheet Consumer Medicine Information for Relenza® Patient Information Sheet for Relenza (section 8.5)

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

1 The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

5 CLEARANCE ANTIBIOTICS FOR MENINGOCOCCAL DISEASE

Purpose

This standing order sets out procedures for ordering, supplying or administering ciprofloxacin, ceftriaxone or rifampicin for close contacts of a case of meningococcal disease. Among close contacts, there is often an asymptomatic individual who is carrying the organism that caused the infection in the index case. The purpose of clearance antibiotics is to eliminate meningococci from any carrier in the defined network of close contacts of each case of meningococcal disease, to reduce the risk of further transmission and prevent further cases of invasive disease.

This standing order authorises a registered nurse, who practices in accordance with requirements set out in section 2, to administer and / or supply the specified antibiotics to contacts of cases of meningococcal disease in the seven days prior to onset of illness according to criteria specified in the national guidelines including[1]:

- Household of a case (including sexual partners)
- Child care facilities or family day care where the case of meningococcal disease was in the same room for more than four hours
- School or university contacts who are “household-like” contacts
- Health care workers who have intubated the case without a face mask or done mouth to mouth resuscitation (after onset of illness)
- Contacts in seats adjacent to the case during long distance travel (more than eight hours)

Medication should be provided as soon as practicable to identified contacts, but should not be provided if more than four weeks have elapsed since the last contact with a probable or confirmed case of meningococcal disease.

Medications

Three antibiotics, ciprofloxacin, ceftriaxone and rifampicin, are considered equally effective as clearance antibiotics for use by defined contacts of a case with meningococcal disease.

The recommended medication for specific patient groups[2]:

- Ciprofloxacin is the preferred medication for all age groups and for women on the contraceptive pill.[3] Ciprofloxacin is currently not available as a suspension except through the Special Access Scheme.
- Ceftriaxone is the preferred medication for use in pregnant women and in women who are breastfeeding.
- Rifampicin can be used for children under 12 who cannot be appropriately dosed with ciprofloxacin tablets.

Where compliance may be an issue, use of ciprofloxacin, which requires only a single oral dose, may be advantageous unless otherwise contraindicated.

1 Invasive Meningococcal Disease CDNA National Guidelines for Public Health Units July 2014, The Department of Health. Available from: http://www.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-IMD.htm
2 Chemoprophylaxis for meningitis. In: eTG complete [Internet]. Melbourne: Therapeutic Guidelines Limited; 2015 Jul.
3 Potential impact on cartilage development for prebubertal children. However, when given for prophylaxis as a stat dose, the effect is unlikely to be a concern

5.1 Standing order for ciprofloxacin for close contacts of meningococcal disease

TITLE	Standing order for meningococcal contacts - ciprofloxacin
Drug(s)	**ciprofloxacin**
Presentation [1]	Tablets - 250mg, 500mg Ciprofloxacin is currently not available as a suspension except through the Special Access Scheme
Indication [1 2]	▪ Clearance of meningococcal carriage in close contacts of known cases. ▪ Ciprofloxacin is the preferred option for women taking oral contraceptives
Contraindications[1]	▪ Not to be given in pregnancy or during breastfeeding ▪ Allergies to ciprofloxacin or other quinolones / fluoroquinolones
Precautions[1]	▪ Adrenaline (epinephrine) must be available for the registered nurse or midwife to administer if anaphylaxis occurs. ▪ Use with caution in patients with cystic fibrosis, central nervous system disorders, such as severe cerebral arteriosclerosis or epilepsy, renal impairment, and liver damage. ▪ G6PD deficiency - increases risk of haemolytic anaemia. ▪ Potential impact on cartilage development for prepubertal children. However, when given for prophylaxis as a stat dose, the effect is unlikely to be a concern. ▪ Avoid direct sunlight and ensure adequate hydration
Dose[1]	**Adults:** 500mg, **Children younger than five years:** 30mg/kg up to 125mg, **Children five to 12 years:** 250mg
Dose frequency[1]	Single dose
Administration[1]	▪ Oral (with a full glass of water) ▪ If possible, recipients should be observed for 30 minutes post-ingestion.
Drug Interactions[1]	▪ Ciprofloxacin may interact with, omeprazole, thyroxine warfarin, cyclosporin, metoclopramide, NSAIDs, and other medicines. Check with a pharmacist for any clinically relevant interactions in patients taking other medicines. ▪ Patients are advised that ciprofloxacin may enhance the effects of caffeine.
Adverse effects[1]	▪ Common (>1%): rash, itch, nausea, vomiting, diarrhoea, abdominal pain, dyspepsia. ▪ Infrequent (0.1-1%): headache, dizziness, insomnia, depression, restlessness, tremors, arthralgia, arthritis, myalgia, tendonitis, interstitial nephritis, raised liver enzymes. ▪ Rare (<0.1%): blood dyscrasias, peripheral neuropathy, hepatitis, tendon rupture, anaphylaxis, psychotic reactions, severe skin reaction, QT prolongation. See Product Information for full list. ▪ The majority of listed adverse effects are very unlikely as only a single dose is being given.
Documentation	Obtain consent, explain side effects and provide consumer medicine information and patient information sheet
Related Documents	NSW Health Meningococcal disease Factsheet Consumer Medicine Information for ciprofloxacin Patient Information Sheet for ciprofloxacin (section 8.7)

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

1 The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration
2 Chemoprophylaxis for meningitis. In: eTG complete [Internet]. Melbourne: Therapeutic Guidelines Limited; 2015 Ju.l

5.2 Standing order for ceftriaxone for close contacts of meningococcal disease

TITLE	Standing order for meningococcal contacts - ceftriaxone
Drug(s)	**ceftriaxone**
Presentation [1]	Powder for injection 250mg, 500mg, 1G per vial
Indication [1 2]	▪ Clearance of meningococcal carriage in close contacts of known cases. ▪ Ceftriaxone is the preferred option during pregnancy.
Contraindications[1]	▪ Not to be given to premature neonates up to corrected age 41 weeks or infants less than 4 weeks old ▪ Known allergy to the cephalosporin class of antibiotics or a major allergy to penicillin (anaphylaxis, angioneurotic oedema, urticaria). ▪ Lignocaine should not be used as a diluent for intramuscular injection in patients who are hypersensitive to lignocaine
Precautions[1]	▪ Adrenaline (epinephrine) must be available for the registered nurse or midwife to administer if anaphylaxis occurs. ▪ Not to be injected intravenously ▪ History of hypersensitivity to cephalosporins, penicllins or other drugs ▪ History of antibiotic-associated pseudomembranous colitis ▪ History of gastrointestinal disease (particularly colitis), severe renal impairment (e.g. dialysis), lignocaine toxicity, chronic hepatic disease, and malnutrition.
Dose[1]	**Adults:** 250mg IM **Children less than 12 years of age**: 125mg IM **Note: Not in children less than four weeks old**
Dose frequency[1]	Single dose
Administration[1]	▪ Deep intramuscular injection in lignocaine solution 1% to reduce pain at the injection site ▪ Dissolve the contents of 500mg vial in 2mL or 1g in 3.5mL of lignocaine 1% solution, administered by deep intragluteal injection. The lignocaine solution must never be administered intravenously. Product is for single use in one patient only. Discard any residue.
Drug Interactions[1]	No drug interactions of particular concern
Adverse effects[1]	▪ Common or infrequent: diarrhoea, nausea, vomiting, pain and inflammation at injection site, rash, headache, dizziness, allergy. ▪ Rare (<0.1%): neurotoxicity (eg confusion, seizures, encephalopathy) particularly with high doses and / or renal impairment, blood dyscrasias, thrombocytopenia, bleeding, renal impairment. ▪ The majority of listed adverse effects are very unlikely as only a single dose is being given. ▪ See Product Information for full list.
Documentation	Obtain consent, explain side effects, and provide consumer medicine information and patient information sheet
Related Documents	NSW Health Meningococcal disease Factsheet Consumer Medicine Information for ceftriaxone Patient Information Sheet for ceftriaxone (section 8.8)

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

1 The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration
2 Chemoprophylaxis for meningitis. In: eTG complete [Internet]. Melbourne: Therapeutic Guidelines Limited; 2015 Jul.

5.3 Standing order for rifampicin for close contacts of meningococcal disease

<table>
<tr><td>TITLE</td><td>Standing order for meningococcal contacts - rifampicin</td></tr>
<tr><td>Drug(s)</td><td>rifampicin</td></tr>
<tr><td>Presentation</td><td>Capsules - 150mg, 300mg, Tablets - 600mg, Syrup - 100mg/5mL</td></tr>
<tr><td>Indication</td><td>Clearance of meningococcal carriage in close contacts of known cases. (Rifampicin is not indicated for the treatment of meningococcal infections.)</td></tr>
<tr><td>Contraindications [1]</td><td>Jaundice, history of hypersensitivity to any of the rifamycins, severe liver disease, pregnancy</td></tr>
<tr><td>Precautions[1]</td><td>▪ Hepatic disease; malnourishment; concomitant TB and leprosy; concomitant hepatotoxic drugs; sodium metabisulfite allergy for those taking rifampicin syrup; porphyria; diabetes; premature and newborn infants.
▪ Rifampicin stains body fluids such as urine, sweat and tears, an orange, red or brown colour. Soft contact lenses should not be worn until the urine has returned to its normal colour, as they may become stained.
▪ Women taking the oral contraceptive pill should use another form of contraceptive for the cycle during which they are taking rifampicin.
▪ Pregnancy – may cause bleeding problems in newborn. If used in last few weeks of pregnancy, Vitamin K should be given to mother and newborn infant.
▪ Lactation - Rifampicin is excreted in breast milk and infants should not be breastfed by a patient receiving rifampicin.</td></tr>
<tr><td>Dose[2]</td><td>Adults: 600mg, Children over 1 month of age: 10mg/kg, Children less than 1 month of age: 5mg/kg
If weights are not able to be obtained, the following dosage is recommended [3]:
<table>
<tr><th>Age</th><th>Recommended dose</th><th>Equivalent volume of 100mg/5ml oral liquid</th></tr>
<tr><td>0-2 months</td><td>20mg</td><td>1 mL</td></tr>
<tr><td>3-11 months</td><td>40mg</td><td>2 mL</td></tr>
<tr><td>1-2 years</td><td>100mg</td><td>5 mL</td></tr>
<tr><td>3-4 years</td><td>150mg</td><td>7.5 mL</td></tr>
<tr><td>5-6 years</td><td>200mg</td><td>10 mL</td></tr>
</table>
Note: Ciprofloxacin is preferred for children older than 6 years if able to tolerate tablets</td></tr>
<tr><td>Dose frequency[2]</td><td>All dosages are TWICE daily (every 12 hours) for 2 days</td></tr>
<tr><td>Administration[1]</td><td>Rifampicin should be taken on an empty stomach at least 30 minutes before or two hours after food.</td></tr>
<tr><td>Drug Interactions[1]</td><td>If taking concomitant antacids, rifampicin should be given at least one hour before the ingestion of antacids. Rifampicin interacts with numerous drugs by accelerating their breakdown and reducing their activity. Check pharmacology texts and/or obtain advice from a pharmacist for patients taking other medications. Examples of interacting medicines include but are not limited to oral anticoagulants (e.g. warfarin), anticonvulsants (e.g. phenytoin, phenobarbitone), antiarrhythmics, tamoxifen, antipsychotics (e.g. haloperidol), antifungals (e.g. fluconazole, itraconazole), antiretroviral drugs (e.g. zidovudine, saquinavir, indinavir), beta-blockers, calcium channel blockers (e.g. diltiazem, verapamil), clarithromycin, corticosteroids,</td></tr>
</table>

1 The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present, refer to MO before administration

2 Chemoprophylaxis for meningitis. In: eTG complete [Internet]. Melbourne: Therapeutic Guidelines Limited; 2015 Jul.

3 Guidance for public health management of meningococcal disease in the UK. Health Protection Agency Meningococcus and Haemophilus Forum.
Updated March 2012. Available from:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/322008/Guidance_for_management_of_meningococcal_disease_pdf.pdf

	cyclosporin, systemic hormonal contraceptives, benzodiazepines (e.g. diazepam), doxycycline, fluoroquinolones, sulfonylureas, levothyroxine, opioids, methadone, tacrolimus, tricyclic antidepressants (e.g. amitriptyline, nortriptyline).
Adverse effects[1]	Common (>1%): Gastrointestinal symptoms (e.g. nausea, vomiting, cramps); rash; body fluid, soft contact lens discolouration (red / orange); Rare (<0.1%): hepatitis, See Product information for full list. Rare adverse effects such as hepatitis are very unlikely as the course for prophylaxis is short.

TITLE	Standing order for meningococcal contacts – rifampicin
Documentation	Obtain consent, explain side effects and provide consumer medicine information and patient information sheet
Related Documents	NSW Health Meningococcal disease Factsheet Consumer Medicine Information for rifampicin. Patient Information Sheet for rifampicin (section 9.6)

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

6 POST-EXPOSURE PROPHYLAXIS OF MEASLES

Purpose

This standing order sets out procedures for ordering, supplying or administering normal human immunoglobulin (NHIg) or measles-mumps-rubella vaccine (MMR) for measles post exposure management of susceptible contacts. A person considered '**susceptible'** to measles is someone who cannot provide acceptable presumptive evidence of immunity to measles as described in 'Measles: Control guidelines for NSW Public Health Units'[1]

This standing order authorises a registered nurse, who practices in accordance with requirements set out in section 2, to administer the specified immunoprophylaxis to defined contacts to protect them from developing measles. Defined contacts may include:

- All household members of the case
- All people sleeping overnight in the same room as the case (e.g. in a hospital, boarding school or military barracks)
- All children and adults at family day care, child care, preschool, school or other educational setting who share a classroom with the case
- People who shared a waiting area at the same time as the infectious case (such as patients in a health care facility's waiting room and any people accompanying these patients) and people who were in a waiting area or consulting room previously occupied by an infectious case for up to 30 minutes after the case has departed
- All work colleagues of the case who share the same work area
- Others who attend or work in the same educational institution as the case, and may have spent time in the vicinity of the case, but do not share a classroom (e.g. a high school, college, lecture theatre block)
- Others who may have been present in the general area where the case was known to be (e.g. cinemas, shopping centres, aeroplane flights and restaurants).

1 Measles: Control guidelines for NSW Public Health Units. Available from: http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/measles.aspx

Immunoprophylaxis

Cases of measles are infectious for around four days prior and four days after the onset of rash. NHIg or MMR should be given as soon as practicable to identified contacts. MMR can be administered within 72 hours (three days) of first contact with an infectious case and NHIg can be administered up to 144 hours (6 days) after first contact. NHIg can be ordered from the Australian Red Cross Blood Service using the order form at

http://www.blood.gov.au/system/files/documents/form-nhig-201115-online.pdf.

Determine the appropriate prophylaxis according to the NSW Health Control Guidelines for Measles[1] based on the time since exposure, age and underlying conditions of the contact:

- Immunocompromised — NHIg
- Pregnancy — NHIg
- Babies under 9 months — NHIg
- Babies at 9 months, children and adults — MMR within 72 hours, NHIG 3-6 days

6.1 Standing order for Measles-Mumps-Rubella Vaccine

TITLE	Standing order for Measles IMMUNOPROPHYLAXIS – MMR
Drug(s)	**Measles-Mumps-Rubella Vaccine**
Presentation [1]	Vials of lyophilised vaccine 0.5 mL (contains live attenuated virus) Store vials at two to eight deg. C. (Refrigerate. Do not freeze.). **Maintain cold chain at all times and protect from all light.**
Indication	Active immunisation to prevent measles in susceptible contacts of confirmed cases of measles.
Contraindications[1]	▪ People with impaired immunity, including AIDS or HIV with impaired immunity, high-dose oral corticosteroids, high-dose systemic immunosuppressive treatment or general radiation, lymphoma, leukaemia. ▪ Untreated tuberculosis ▪ Pregnant women ▪ Allergy to MMR or any component of the vaccine
Precautions[1]	▪ Adrenaline (epinephrine) must be available for the registered nurse or midwife to administer if anaphylaxis occurs. ▪ Patients should be observed for a sufficient period (at least 20 minutes) for the occurrence of early onset reactions seen with measles vaccine ▪ Recent administration of blood product containing antibody (such as NHIG) ▪ Vaccination with another live vaccine in the past 4 weeks ▪ Avoid pregnancy for 28 days after MMR vaccination ▪ Children with a history of seizures- may require treatment to reduce fever 5-12 days after vaccination ▪ Do not use after expiry date on label.
Dose[1]	For both adults and children, the dose of MMR is the same. Reconstitute using diluent supplied.
Dose frequency[1]	Single dose - where a second dose is required, the minimum interval between doses is four weeks.
Administration	Subcutaneous injection - Inject the total volume of the single dose vial (about 0.5mL) into skin of the deltoid muscle or the anterolateral thigh.

1The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

[1]	
Drug Interactions[1]	Immunosuppressants. Immunoglobulin products should not be administered within three weeks after MMR.
Adverse effects[1]	▪ Common (>1%): Headache, Fever may occur 5-12 days after vaccination and last 2-3 days. Fever may be high and should be managed with paracetamol. Lymphadenopathy and rash may occur 1-3 weeks after vaccination and are usually transient. Transient injection site reactions. ▪ Infrequent (0.1-1%): febrile seizures, parotid swelling, arthritis and arthralgia (in children) may occur 1-3 weeks after vaccination and are usually transient. ▪ Rare (<0.1%): thrombocytopenia, chronic joint symptoms. It is uncertain whether encephalopathy occurs, however if it is associated it is less frequent than occurs with measles infection, Anaphylaxis following injection of MMR is rare. There is NO association between MMR vaccination and autism,
Documentation	Obtain consent, explain possible adverse effects and provide consumer medicine information for MMR and patient information sheet
Related Documents	NSW Health Measles Factsheet Consumer Medicine Information sheet for MMR Patient Information Sheet for MMR vaccine (section 8.9)

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

6.2 Standing order for Normal Human Immunoglobulin

TITLE	Standing order for Measles IMMUNOPROHPYLAXIS - Normal Human Immunoglobulin
Drug(s)	**Normal Immunoglobulin - VF**
Presentation [1]	Vials of solution for intramuscular injection, 160 mg/mL: 2 mL, 5 mL 'Normal Immunoglobulin-VF' Store vials at 2 to 8 deg. C. (Refrigerate. Do not freeze). **Maintain cold chain at all times and protect from all light**
Indication	Passive immunisation to prevent measles in susceptible contacts of confirmed cases of measles
Contraindications[1]	▪ Coagulation disorders that would contraindicate intramuscular injections (such as severe thrombocytopenia) ▪ Individuals with isolated immunoglobulin A (IgA) deficiency, unless they have been tested and shown not to have circulating anti-IgA antibodies
Precautions[1]	▪ Seek expert advice prior to administration if live vaccines (e.g. polio, measles, varicella-zoster) have been given within the last 3 weeks. ▪ Must not be injected intravenously ▪ Do not use if the product appears to be turbid by transmitted light or contains any sediment ▪ Do not use after expiry date on label. Must be used immediately after opening the vial and any unused solution discarded ▪ Should be given with caution to patients with a history of prior systemic allergic reactions following the administration of human immunoglobulin preparations. ▪ Consult with obstetrician or GP for pregnant women.
Dose[1] [2]	Immunocompromised 0.5mL/kg - **to max of 15 mL** All others 0.2mL/kg - **to max of 15 mL**
Dose frequency[1]	Single dose
Administration [1]	▪ NHIg should be brought to room temperature before use, and given slowly by deep intramuscular injection in the buttocks, using a large gauge (19 or 20mm) needle. ▪ Where large doses of NHIG are required the dose should be divided in two and injected in each buttock. Hyaluronidase and/or a suitable local anaesthetic may be added to the injection if desired. ▪ NHIg should not be given intravenously. An attempt to draw back on the syringe after IM insertion of the needle should be made in order to ensure that the needle is not in a small vessel.
Drug Interactions[1]	▪ Passively acquired antibody can interfere with the response to live, attenuated virus vaccines. Contact must be informed that they are unable to receive any live vaccines (polio, measles, varicella-zoster) for at least 5 months after IMI NHIg (6 months for immunocompromised patients). ▪ Immunoglobulins should not be administered for at least two weeks after a vaccine is given.
Adverse effects[1]	▪ Common: Local tenderness, erythema and muscle stiffness may occur at the site of injection and may persist for several hours. Mild pyrexia, malaise, drowsiness and urticaria have been reported occasionally after injection. ▪ Rare: Skin lesions, headache, dizziness, nausea, general hypersensitivity reactions and convulsions. Anaphylaxis following injection of NHIG is very rare.
Documentation	Obtain consent, explain side effects and provide consumer medicine information and patient information sheet
Related Documents	NSW Health Measles factsheet Consumer medicine information sheet Patient Information Sheet for NHIg (section 8.10)

1The drug information provided is to act as a guide only, for further information reference should be made to the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

2 Measles: Control guidelines for NSW Public Health Units. Available from: http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/measles.aspx

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

7 ADRENALINE (EPINEPHRINE) FOR ANAPHYLAXIS

Purpose

This standing order sets out procedures for administering adrenaline (epinephrine) for the management of anaphylaxis subsequent to the administration of antibiotics or immunoprophylaxis under public health standing orders.

Symptoms and signs of anaphylaxis

Anaphylaxis causes respiratory and / or cardiovascular signs or symptoms AND involves other organ systems such as skin or gastrointestinal tract, with:

- Skin signs, such as the rapid development of urticarial lesions or erythema, angioedema
- Abdominal cramps, diarrhoea and / or vomiting.
- Signs of upper airway obstruction, such as hoarseness and stridor.
- Indications of lower airway obstruction, such as subjective feelings of retrosternal tightness, dyspnoea or wheeze.
- Limpness and pallor, which are signs of severe anaphylaxis in children.
- Profound hypotension in association with tachycardia, and / or other signs of cardiovascular disturbance, such as sinus tachycardia or severe bradycardia, and weak or absent pulses, when severe.
- Alteration in level of consciousness.

Management of anaphylaxis

- If the patient is unconscious, place them on the left side and position to keep the airway clear. If the patient is conscious, place supine in ‘head down and feet up’ position (unless this results in breathing difficulties).
- Give adrenaline (epinephrine) by intramuscular injection (see standing order for dosage) for any signs of anaphylaxis associated with respiratory and / or cardiovascular symptoms or signs. Although adrenaline (epinephrine) is not required for generalised non-anaphylactic reactions (such as skin rash without other signs or symptoms), administration of intramuscular adrenaline (epinephrine) is safe.
- If there is no improvement in the patient’s condition within five minutes, repeat dose of adrenaline (epinephrine) every five minutes until improvement occurs. Make every effort to call for assistance after first dose
- If oxygen is available, administer by facemask at a high flow rate
- Call for professional assistance and call an ambulance. Never leave the patient alone.
- Begin expired air resuscitation for apnoea, check for central pulse. If central pulse not palpable, commence external cardiac massage (ECM).
- All cases should be admitted to hospital for further observation and treatment.

Experienced practitioners may choose to use an oral airway if the appropriate size is available, but its use is not routinely recommended unless the patient is unconscious.

Antihistamines and / or hydrocortisone are not recommended for the emergency management of anaphylaxis.

7.1 Standing order for adrenaline (epinephrine) for management of anaphylaxis

<table>
<tr><td>TITLE</td><td>Standing order for adrenaline (epinephrine) for anaphylaxis subsequent to the administration of antibiotics or immunoprophylaxis under public health standing orders</td></tr>
<tr><td>Drug(s)</td><td>adrenaline (epinephrine):1000</td></tr>
<tr><td>Presentation [1]</td><td>Solution for injection (clear, colourless) 1 mg/1mL</td></tr>
<tr><td>Indication [1]</td><td>The drug of choice in the emergency treatment of acute severe anaphylactic reactions due to insect bites, drugs and other allergens.</td></tr>
<tr><td>Contraindications[1]</td><td>Nil relevant</td></tr>
<tr><td>Precautions[1]</td><td>▪ Adrenaline (epinephrine) injection contains no antimicrobial agent. It should be used only once and any residue discarded. Adrenaline (epinephrine) injection should not be used if it is coloured.
▪ NOT to be injected intravenously
▪ Use a 1mL syringe to improve the accuracy of measurement when drawing up small doses
▪ Local ischaemic necrosis can occur from repeated injections in one site
▪ Check expiry date of adrenaline (ephinephrine) injection prior to use and on a regular basis.</td></tr>
<tr><td>Dose[1] [2]</td><td>INTRAMUSCULAR ADRENALINE (EPINEPHRINE) DOSAGE
Adult / child 10 micrograms/kg (equates to 0.01mL/kg adrenaline (epinephrine) 1: 1,000). Maximum single dose is 500 micrograms (0.5mL).
Table below gives dosage recommendations according to age.
Dose using 1:1,000 ampoules containing 1 mg per 1 mL
<table>
<tr><th>Age</th><th>Weight (approx)</th><th>Adrenaline (epinephrine) 1:1,000</th></tr>
<tr><td>Less than 1yr</td><td>5-10 kg</td><td>0.05 - 0.1 mL</td></tr>
<tr><td>1-2 yr</td><td>10 kg</td><td>0.1 mL</td></tr>
<tr><td>2-3 yr</td><td>15 kg</td><td>0.15 mL</td></tr>
<tr><td>4-6 yr</td><td>20 kg</td><td>0.2 mL</td></tr>
<tr><td>7-10 yr</td><td>30 kg</td><td>0.3 mL</td></tr>
<tr><td>10-12 yr</td><td>40 kg</td><td>0.4 mL</td></tr>
<tr><td>more than 12 yrs and adult</td><td>More than 50 kg</td><td>0.5 mL</td></tr>
</table></td></tr>
<tr><td>Dose frequency[12]</td><td>Make every effort to call for assistance after first dose
Repeat doses every 5 minutes until improvement occurs</td></tr>
<tr><td>Administration[12]</td><td>Intramuscular injection preferably in the mid-anterolateral (upper outer) thigh (do not inject into buttocks).</td></tr>
<tr><td>Drug Interactions[1]</td><td>No drug interactions of particular concern</td></tr>
<tr><td>Adverse effects[1]</td><td>Fear; anxiety; restlessness; headache; tremor; weakness; dizziness; pallor; palpitation; respiratory difficulty; hypertension; injection site necrosis. See Product Information for full list.</td></tr>
<tr><td>Documentation</td><td>Adrenaline (epinephrine) recipients should be referred to hospital for further observation and treatment</td></tr>
<tr><td>Related Documents</td><td>Nil</td></tr>
</table>

1 The drug information provided is to act as a guide only, for further information reference should be made to the Australian Medicines Handbook and the full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

2 Australian Technical Advisory Group on Immunisation (ATAGI). The Australian immunisation handbook 10th ed (2015 update). Canberra: Australian Government Department of Health, 2015.
http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home

Standing order activation: *(to be completed for each occasion of use)*

Date:	**Public Health Officer Name:**	**Signature:**
Reason for activation: *(Include Index case record number or outbreak response name as applicable)*		

8 ATTACHMENTS

8.1 Procedure checklist for RNs / midwives to administer or supply medications

☐ Arrange the supply of medications from the designated public hospital pharmacy department. The Medical Public Health Officer should advise the Pharmacy of the medicines required, the estimated quantity and patients' details, if known.

☐ Arrange the supply of an anaphylaxis kit (adrenaline (epinephrine) and 1ml syringes) and be familiar with the adrenaline (epinephrine) treatment protocol, found on the back cover of the current edition of "The Australian Immunisation Handbook" [1].

☐ Assess the eligibility for case or contact in accordance with the NSW Health Public Health Control Guidelines[2].

☐ Explain the rationale and purpose of the medication to the case / contact (or parent / guardian).

☐ Check with the case or contact (or parent / guardian) if they:

1. Are pregnant
2. Have any known allergies
3. Are currently taking any interacting medications or
4. Have pre-existing medical condition(s) where the use of a particular medication may be contraindicated or precautions may be required.

☐ Should the case or contact have a contraindication or precaution to the medication, contact the Medical Public Health Officer.

☐ Explain the adverse effects of the recommended medication.

☐ Provide the Patient Information Sheet, the Consumer Medicine Information Sheet(s), and the NSW Health Fact Sheet and advise them to inform their general practitioner of the treatment at the next visit.

☐ For each person, document the following details: name, address, date of birth, sex, phone number; whether the person has any relevant conditions established above; that information has been given. The form provided in the Appendix 8.2 and 8.3 should be used to document these details.

☐ Record whether valid consent has been given.

☐ Supply recommended medication, labelled by the pharmacist for that patient / contact name. If the name was unknown by the pharmacist at the time he/she packaged and labelled the medication, the Registered Nurse / midwife is to hand write the name, drug frequency, dose, duration and date on the label at the time of supply.

☐ The Medical Public Health Officer must be available to provide advice to the registered nurse if there are any concerns or questions.

☐ For each individual, document as appropriate the administration details and the number of doses supplied.

☐ At the completion of any mass vaccination / treatment program, the Medical Public Health Officer must review, and sign and date the records as soon as possible and ideally within 24 hours, to confirm that the program was conducted in accordance with the standing order.

1 Australian Technical Advisory Group on Immunisation (ATAGI). The Australian immunisation handbook 10th ed (2015 update). Canberra: Australian Government Department of Health, 2015.
http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home
2 NSW Health Public Health Control Guidelines. Available from:
http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/default.aspx

8.2 Record of supply / administration - medication records for Individuals

Date:	**Index Case ID:**	
Surname:	**First name:**	
Address:	**Phone number:**	**MRN** *(where applicable)*
	DOB:	**Male** ☐ **Female** ☐

Pregnant: Yes ☐ No ☐

Breastfeeding: Yes ☐ No ☐

Allergies: Yes ☐ No ☐

Details:

_____

Current Medications: Yes ☐ No ☐

Provide details:

_____

_____

Other precautions and/or contraindications present?

Yes ☐ No ☐

Provide details:

_____

_____

If precautions or contraindications identified have they been discussed with a medical officer?

Yes ☐ No ☐

Advice given by medical officer:

_____

_____

_____

_____

_____

_____

_____

_____

Other issues addressed:

_____

_____

_____

▪ Purpose of medication and adverse effects explained	Yes ☐ No ☐
▪ Counselling and education provided where medications are supplied for later use	Yes ☐ No ☐
▪ Informed consent obtained from individual / guardian	Yes ☐ No ☐
▪ Individual / Guardian has been provided with NSW Health Fact Sheet	Yes ☐ No ☐
▪ Individual / Guardian has been provided with Patient Information Sheet(s)	Yes ☐ No ☐
▪ Individual / Guardian advised to inform their doctor of the treatment at the next visit	Yes ☐ No ☐
▪ Contact / Guardian has been supplied with medications	Yes ☐ No ☐
→If not provided, to be collected by……..……from……..…	

Medication and presentation:	**Dosage and route:**	**Amount supplied:**
RN's name:	**RN's signature:**	**Date:**

Following supply of medication / immunoprophylaxis, the Medical Public Health Officer is to check this medication record documenting the supply and CONFIRM BY SIGNING this entry WITHIN 24.

Medical Officer's name:	**Medical Officer's signature:**	**Date:**

11. INFECTIOUS DISEASES, IMMUNISATION AND RELATED MATTERS 11.41

This form will be used as: ☐ PHU Prescription Fax Form **OR** ☐ Standing Order Form
(*if used as a Standing Order Form, Medical Officer to sign as soon as possible)* **Index case ID…….**

Surname: Address:	First Name MRN *(where applicable)* DOB __/__/__ Age: Sex M / F Phone:	Pregnant: Y / N Breastfeeding: Y / N Allergies: Y / N Details: Interacting Medications: Y / N Details:	Medication: Dose and frequency: Dose administered: Amount supplied: If not supplied, to be collected by ……. from……	Adverse Effects explained: Y / N Informed Consent obtained: Y / N Fact sheet supplied: Y / N Information sheet(s) provided: Y / N Advised to inform GP on their next visit: Y / N
Name: Designation:		Signature	Date	
Surname: Address:	First Name MRN *(where applicable)* DOB __/__/__ Age: Sex M / F Phone:	Pregnant: Y / N Breastfeeding: Y / N Allergies: Y / N Details: Interacting Medications: Y / N Details:	Medication: Dose and frequency: Dose administered: Amount supplied: If not supplied, to be collected by ……. from……	Adverse Effects explained: Y / N Informed Consent obtained: Y / N Fact sheet supplied: Y / N Information sheet(s) provided: Y / N Advised to inform GP on their next visit: Y / N
Name: Designation:		Signature	Date	
Surname: Address:	First Name MRN *(where applicable)* DOB __/__/__ Age: Sex M / F Phone:	Pregnant: Y / N Breastfeeding: Y / N Allergies: Y / N Details: Interacting Medications: Y / N Details:	Medication: Dose and frequency: Dose administered: Amount supplied: If not supplied, to be collected by ……. from……..	Adverse Effects explained: Y / N Informed Consent obtained: Y / N Fact sheet supplied: Y / N Information sheet(s) provided: Y / N Advised to inform GP on their next visit: Y / N
Name: Designation:		Signature	Date	

Medical Officer's Signature:……. Print
Name:……..……..Date:……..

8.4 Tamiflu® (oseltamivir) Patient Information Sheet

Read this sheet together with the Consumer Medicine Information Sheet for Tamiflu®

What Tamiflu® (Oseltamivir) is used for

Tamiflu is a medicine used for the treatment and prevention of influenza (an infection caused by the influenza virus). It has no effect on the common cold or other respiratory virus infections.

Tamiflu belongs to a group of medicines that attack the influenza virus and prevent it from spreading inside your body.

Tamiflu is absorbed to the key sites of influenza infection and treats the cause. Taking Tamiflu can help you feel better faster. You will also be less likely to develop complications of influenza, such as bronchitis, pneumonia and sinusitis.

Do not give Tamiflu to children under the age of one year.

How much to take

Take Tamiflu exactly as has been prescribed.

Instructions for taking Tamiflu

- Tamiflu is available as capsules or syrup
- You have been prescribed ***(Please check the appropriate box)***:
  - ☐ Tamiflu twice a day for five days as **treatment** for influenza.
  - ☐ Tamiflu once a day for 10 days as **prevention** for influenza.
- Tamiflu should be taken with food
- For young children, the dose can be mixed with soft food e.g. yoghurt, honey to disguise the taste of the medicines.
- Tamiflu should be started as soon as possible.

You should <u>not</u> take Tamiflu if you:

- Have had an allergic reaction to Tamiflu
- Are undergoing haemodialysis.

Tell your nurse or doctor if:

- You are pregnant or breast-feeding
- You have any type of kidney disease.

Adverse effects of Tamiflu

Some people feel unwell with nausea and vomiting or stomach ache. Mostly these are mild and transient. Taking Tamiflu with food can reduce these adverse effects.

<u>Tell your doctor if you notice anything else that is making you feel unwell, even if it is not listed above.</u>

Interactions with other medicines

Tamiflu has no significant interactions with other medications

8.5 Relenza® (zanamivir) Patient Information Sheet

Read this sheet together with the Consumer Medicine Information Sheet for Relenza®

What Relenza® (Zanamivir) is used for

Relenza is a medicine used for the treatment and prevention of influenza (an infection caused by the influenza virus). It has no effect on the common cold or other respiratory virus infections.

Relenza belongs to a group of medicines that attack the influenza virus and prevent it from spreading inside your body.

Relenza is delivered directly to the primary site of infection in the lungs. It works by attacking the influenza virus. Using Relenza can help you feel better faster. You will also be less likely to develop complications of influenza, such as bronchitis, pneumonia and sinusitis.

Do not use Relenza in children under the age of five years.

Instructions for taking Relenza

- Relenza comes as a fine powder in small pockets (known as blisters) in a round foil sheet (disk)
- You have been prescribed ***(please check the appropriate box)***:

  ☐ Relenza 2 inhalations (1 blister / inhalation) twice daily for five days – as <u>treatment</u> for influenza

  ☐ Relenza 2 inhalations (1 blister / inhalation) once daily for 10 days – as <u>prevention</u> for influenza
- Relenza requires the use of the Diskhaler to deliver the medicine in the blister directly to the lungs. Use one blister for each inhalation.
- Relenza should be started as soon as possible.

Using the Relenza Diskhaler

The medicine in your Relenza Disk is taken by breathing it in using the Relenza Diskhaler. Follow the instructions for use provided in the box containing the Diskhaler.

You should <u>not</u> use Relenza if you:

- You have had an allergic reaction to zanamivir or lactose.

Tell your nurse or doctor if:

- You are pregnant or breast-feeding
- You have asthma or any other breathing problems.

Adverse effects of Relenza

Most people using Relenza find that it causes no problems. However, very rarely, some people feel unwell with shortness of breath, wheezing, swelling of the face or in the mouth or throat, an itchy raised skin rash, skin that may blister, peeling of the skin, fainting and light headed.

<u>Tell your doctor if you notice anything else that is making you feel unwell, even if it is not listed above.</u>

Interactions with other medicines

Relenza has no significant interactions with other medications.

8.6 Rifampicin Patient Information Sheet

Read this sheet together with a Consumer Medicine Information Sheet for rifampicin

Rifampicin is an antibiotic that can be given to those in close contact with a person who has developed a meningococcal infection. The purpose of this antibiotic is to clear any meningococcal germs being 'carried' in the throats of contacts so that they cannot lead to meningococcal infections in other people.

This ‘clearance’ antibiotic cannot treat someone who is already developing the infection, so you still need to look out for symptoms and signs of meningococcal disease. (See Fact Sheet)

Instructions for taking rifampicin

- Rifampicin is taken twice a day for two days (a total of four doses are needed). It is available as tablets, capsules or syrup.
- Rifampicin should be taken on an empty stomach, either half an hour before eating or two hours after eating.
- Rifampicin should not be taken at the same time as antacids. Take rifampicin at least 1 hour before taking antacids, if antacid therapy is required.

You should not take rifampicin if you:

- Are allergic to rifampicin
- Have severe liver impairment (with jaundice)
- Are alcoholic or
- Are pregnant.

If rifampicin is unsuitable, you will need to take another antibiotic to get rid of the meningococcal germs. The nurse will discuss this with you.

Adverse effects of rifampicin

The most common adverse effects are gastrointestinal symptoms, such as nausea, vomiting, and cramps or rash. Rifampicin can colour body fluids a red / orange colour, so urine, faeces, sweat and tears may become orange-red. People who wear soft contact lens should use glasses while taking rifampicin as rifampicin may permanently stain them.

Other adverse effects are rare and very unlikely as the course of rifampicin is very short.

Tell your doctor if you notice anything else that is making you feel unwell, even if it is not listed above.

Interactions with other medicines

Rifampicin can interact with many drugs. It is important that you inform the nurse or public health officer if you are taking any prescription, over the counter or complementary medicines before you take rifampicin.

Rifampicin can reduce the effectiveness of oral contraceptives. While taking rifampicin, women taking the oral contraceptive pill should continue to take the active pills, omitting any pill-free or sugar pill interval and continuing for at least seven days after the last dose of rifampicin before stopping the active pills for the normal pill free or sugar pill interval. They should talk to their nurse, pharmacist or doctor if they are unsure of what to do. They should also use additional barrier contraception, such as condoms, while taking rifampicin and for four weeks after the last dose of rifampicin.

8.7 Ciprofloxacin Patient Information Sheet

Read this sheet together with the Consumer Medicine Information Sheet for ciprofloxacin

Ciprofloxacin is an antibiotic that can be given to those in close contact with a person who has developed a meningococcal infection. The purpose of this antibiotic is to clear any meningococcal germs being 'carried' in the throat of contacts, so that they cannot lead to the meningococcal infections in other people. This ‘clearance’ antibiotic cannot treat someone who is already developing the infection, so you still need to look out for symptoms and signs of meningococcal disease (see Fact Sheet).

Instructions for taking ciprofloxacin

- The dose of ciprofloxacin is a **single** dose taken in tablet form.
- The tablet should be swallowed whole with a full glass of water.
- Do not take the tablet if you have taken antacid / indigestion medicines or medicines containing iron or mineral supplements within the previous four hours. Wait until four hours have passed.

You should not take ciprofloxacin if you:

- Have had a previous allergic reaction to ciprofloxacin
- Are pregnant or are breast-feeding.

If ciprofloxacin is unsuitable, you will need to take a different antibiotic to get rid of the meningococcal germs. The nurse will discuss this with you.

Adverse effects of ciprofloxacin

Adverse effects are unlikely as only a single dose of ciprofloxacin is being taken. A few people may feel unwell after taking ciprofloxacin with nausea (feeling sick) or vomiting, mild diarrhoea; or dyspepsia (heartburn).

A **very** uncommon adverse effect is a severe allergic reaction. If you develop facial swelling, tightness in the throat, breathing difficulties, severe itching or a rash, you should seek medical attention immediately (ring 000).

Tell your doctor if you notice anything else that is making you feel unwell, even if it is not listed above.

Interactions with other medicines

Ciprofloxacin may interact with some medicines. If you are taking any other medications you should check with your doctor or pharmacist before taking ciprofloxacin. It is quite safe to take ciprofloxacin if you are taking the oral contraceptive pill.

8.8 Ceftriaxone Patient Information Sheet

Read this sheet together with the Consumer Medicine Information Sheet for ceftriaxone

Ceftriaxone is an antibiotic that can be given to those in close contact with a person who has developed a meningococcal infection. The purpose of this antibiotic is to clear any meningococcal germs being 'carried' in the throat of contacts, so that they cannot lead to meningococcal infections in other people.

This 'clearance' antibiotic cannot treat someone who is already developing the disease, so you still need to look out for symptoms and signs of meningococcal disease.

Ceftriaxone is given as a single injection into muscle tissue, such as in the thigh or buttock. Ceftriaxone is safe in pregnancy and in breastfeeding women.

You should not have ceftriaxone if you:

- Are allergic to ceftriaxone or other cephalosporin antibiotics or
- Have ever had a severe or immediate allergic reaction to penicillin antibiotics.

Adverse effects of ceftriaxone

Adverse effects are unlikely as only a single dose of ceftriaxone is being given. A few people may feel unwell after receiving ceftriaxone with pain at the injection site; diarrhoea, feeling sick, vomiting; headache or dizziness.

A **very** rare adverse effect is an allergic reaction - if you develop facial swelling, tightness in the throat, breathing difficulties, severe itching or a rash you should seek medical attention immediately (ring 000).

Tell the nurse if you notice anything else that is making you feel unwell, even if it is not listed above

8.9 Information for Measles contacts: Measles Mumps Rubella (MMR) Vaccine

What is MMR Vaccine?

MMR vaccine is given at age 12 months and again at 18 months of age to immunise children against measles, mumps and rubella. MMR vaccine is also given to susceptible people who may have been exposed to cases of measles. MMR vaccine can make the body produce antibodies against measles and will protect against the disease developing if it is given within 72 hours after exposure to the virus.

How safe is it?

MMR is an extremely safe vaccine. Although the MMR vaccine is made using proteins related to egg, it is safe to provide the vaccine even in people with known allergies to eggs. MMR vaccine should not be given to pregnant women, those with previous allergy to MMR vaccine, or people with impaired immunity such HIV patients and those having cancer treatment.

Because autism usually starts to be noticed when a child is one to two years of age, which is when MMR is given, there was a suggestion of a link between MMR and autism. A great number of studies have been carried out and consistently show NO link to autism.

Can I still get measles?

MMR vaccine usually gives good protection against measles. Even so, some people will still get measles, although the illness is likely to be milder than usual. People receiving MMR vaccine should continue to watch for the symptoms of measles, which include **fever**, **cough**, **sore eyes** and a **red, blotchy rash**. If you or your child develops these symptoms, please call your family doctor. Your doctor will be able to advise you about the appropriate steps to take.

Adverse effects of MMR

The most common side effects are tenderness and redness at the site of injection, which may persist for several hours afterwards. Malaise, fever and / or rash may occur 5-12 days after vaccination, lasting 2-3 days. Fever can be managed with paracetamol. Rare side effects include swelling of the lymph glands (lymphadenopathy), swelling of the parotid glands which are salivary glands on the side of the face (parotitis), joint pain (arthralgia) and allergic reactions including rash (urticaria) and swelling of the lips or tongue (angio-oedema). Very rarely, reduced platelets in the blood (thrombocytopenia) and anaphylaxis – a severe allergic reaction – can result. In case this occurs we ask you to wait at the clinic for 15 minutes after your injection.

Tell the nurse if you notice anything else that is making you feel unwell, even if it is not listed above.

8.10 Information for Measles contacts: Normal Human Immunoglobulin

What is normal human immunoglobulin?

Normal human immunoglobulin is an injection that contains antibodies against a number of infections and is given to susceptible people who may have been exposed to cases of measles. If given early enough, it can prevent or reduce the severity of illness in these people.

To be effective, the correct dose of normal immunoglobulin must be given. The dose is calculated according to the person's weight, up to a maximum of 15mL.

How safe is it?

Normal immunoglobulin is prepared from blood donated to the Australian Red Cross Blood Service, and is screened and treated to ensure that it does not contain HIV, hepatitis B or hepatitis C viruses.

Normal immunoglobulin can be given safely to healthy people of all ages, including babies and pregnant women. It should not be given to people who have had a previous allergic reaction to it, or who have disorders of their immune system affecting the production of certain antibodies.

Can I still get measles?

Normal immunoglobulin usually gives good protection for three to four weeks against measles. Even so, some people will still get measles, although the illness is likely to be milder than usual. People receiving the injection should continue to watch for the symptoms of measles, which include **fever**, **cough**, **sore eyes** and a **red, blotchy rash**. If you or your child develops these symptoms, please call your family doctor. Your doctor will be able to advise you about the appropriate steps to take.

Adverse effects of normal human immunoglobulin

The most common side effects are tenderness and muscle stiffness at the site of injection, which may persist for several hours afterwards. Sometimes there may be redness at the injection site or a fever. Rarely, there may be allergic reactions including rash (urticaria) and swelling of the lips or tongue (angio-oedema). Very rarely, anaphylaxis – a severe allergic reaction – can result. In case this occurs we ask you to wait at the clinic for 15 minutes after your injection.

Should I get vaccinated against measles as well?

Normal immunoglobulin can reduce the effectiveness of certain "live virus" vaccines, including measles-mumps-rubella (MMR), if these vaccines are given too soon afterwards. Ideally a person should wait for five months before being immunised with these vaccines. Please speak to your family doctor or immunisation clinic before you or your child are next immunised.

Tell the nurse if you notice anything else that is making you feel unwell, even if it is not listed above.

INFLUENZA – NSW HEALTH INFLUENZA PANDEMIC PLAN (PD2016_016)

PD2016_016 rescinds PD2010_052

PURPOSE

The primary purpose of the NSW Health Influenza Pandemic Plan (the *Plan*) 2016 is to provide guidance to NSW Health staff and agencies on how to effectively prepare for and respond to an influenza pandemic, in order to minimise the adverse health impacts on the NSW population and reduce the burden and disruption to health-related services in NSW.

The *Plan* also aims to contribute to whole-of-government response activity to reduce the adverse social and economic impacts associated with an influenza pandemic in NSW.

The *Plan* is intended to be flexible enough to provide guidance on the response to a large outbreak of any highly transmissible respiratory pathogen with significant morbidity and mortality.

MANDATORY REQUIREMENTS

NSW Health agencies and services must ensure that District level and health facility level pandemic plans align with the planning assumptions, emergency management principles and planned strategic response activities outlined in the *Plan*. A pandemic plan checklist for Local Health Districts (LHDs) and Specialty Health Networks (SHNs) is provided in Appendix 8 of the *Plan*.

IMPLEMENTATION

Preparing for and responding to an influenza pandemic is a whole-of-health responsibility. The *Plan* presents a range of state-level strategic options for NSW Health agencies and services in preparation for and response to an influenza pandemic, but does not provide operational detail.

Appendix 7 of the *Plan* outlines roles and responsibilities for all health-related agencies and services in NSW in preparation for and response to an influenza pandemic. Additional detail on roles and responsibilities for specific key response areas are provided throughout the document.

1 INTRODUCTION

This is the *NSW Health Influenza Pandemic Plan*. The plan provides a framework to aid the New South Wales health sector response to an influenza pandemic and to outbreaks of other respiratory pathogens with pandemic potential. The plan is always ‘active’.

This plan provides a strategic outline of a range of possible NSW Health response activities that will need to be tailored during an influenza pandemic response.

Supporting documents for specific functional or technical areas of the pandemic response are maintained separately by individual NSW Health agencies.

The development of this sub plan has been informed by the following pandemic plans:

- National whole-of-government influenza pandemic plan – *National Action Plan for Human Influenza Pandemic (NAPHIP)*
- National health influenza pandemic plan – *Australian Health Management Plan for Pandemic Influenza (AHMPPI)*
- NSW whole-of-government influenza pandemic plan – *NSW Human Influenza Pandemic Plan (NSW HIPP).*

An influenza pandemic will have a sustained impact over many months and a specific pandemic plan and different organisational arrangements drawing on existing public health systems are required. The aim is to ensure overall management of the health system whilst responding to the pandemic.

This plan will be reviewed:

- On conclusion of an emergency during which this plan was implemented
- On the introduction of any major structural, organisational or legislative changes which affect NSW Health or key stakeholders
- Under direction from the Health Secretary or Chief Health Officer
- Every five years.

Throughout this plan, 'NSW Health' refers to the broader NSW public health system including NSW Ministry of Health (MoH), Local Health Districts (LHDs), Sydney Health Networks (SHNs), and other health agencies such as the Clinical Excellence Commission (CEC), the Agency for Clinical Innovation (ACI), and shared services.

INFLUENZA AND OTHER POTENTIAL PANDEMIC VIRUSES

The influenza virus causes an acute viral disease of the respiratory tract. Influenza is primarily spread person-to-person by inhalation of and/or contact with infectious droplets, produced by infected people when they cough or sneeze.

Typical signs and symptoms of influenza include: fever, cough, myalgia, sore throat, headache, fatigue and chills. Infection may also occur without symptoms. Severe influenza-related complications include viral pneumonia or secondary bacterial pneumonia. Influenza may also cause a deterioration of chronic diseases such as chronic obstructive pulmonary disease or congestive heart failure.

Influenza is generally categorised into three types - A, B, and C – with outbreaks of influenza A and B occurring regularly every year. Seasonal influenza vaccination is an important intervention to reduce morbidity and mortality for groups at risk of severe disease, as listed in the *Australian Immunisation Handbook*.

Influenza viruses are characterised by distinct differences in their surface proteins (antigens). Both influenza A and B strains have a tendency to mutate leading to small changes in these surface proteins (antigenic drift). Novel influenza strains with pandemic potential may emerge when one strain undergoes a large mutation affecting its surface proteins or when different strains mix their genes in an infected host through genetic re-assortment (antigenic shift).

Only novel influenza A viruses have been known to cause pandemics. However other respiratory viruses with pandemic potential might also emerge or re-emerge (such as SARS coronavirus).

The population health impact of an influenza pandemic is determined by how readily it can be transmitted (i.e. transmissibility) and the seriousness of the illness it causes (i.e. clinical severity). The most severe pandemics are associated with a new influenza A virus that is both highly transmissible and causes severe illness, such as the 1918 'Spanish Influenza' pandemic. Pandemic influenza viruses that tend to cause milder illness can still have a major population health impact, as everyone in the community will be susceptible to infection (e.g. the 1957 A(H2N2) pandemic).

For a novel influenza virus to have pandemic potential it must meet three criteria:

- Humans have little or no pre-existing immunity against the virus
- The virus leads to disease in humans
- The virus has the capacity to spread efficiently from person to person.

This plan is designed to be flexible and adaptable enough to also guide the response during a severe influenza season or to another respiratory pathogen with pandemic potential. The key factors determining the specific response measures for a specific pathogen include its mode and ease of spread, whether it is transmissible prior to the onset of symptoms, and the severity of the illness it produces.

More information about pandemic influenza is available from NSW Health (*www.health.nsw.gov.au*) and the Department of Health (*www.health.gov.au*) websites.

KEY ASPECTS OF THE NSW RESPONSE

1.1 Objectives of the response

The key objectives of the pandemic response in NSW are to:

- Minimise transmission, morbidity and mortality of the pandemic virus in the NSW population
- Inform, engage and empower the public and health professionals to assist in the response to the pandemic
- Minimise the burden on the NSW Health system, health support services and partner agencies to respond to the pandemic
- Ensure that all health sectors work in partnership to provide a coordinated and timely response
- Maintain effective functioning across health services to manage other health issues during the pandemic response so as to achieve optimum health outcomes for the NSW population during a sustained influenza pandemic.

These objectives are in accordance with those outlined in the AHMPPI and NSW HIPP.

1.2 Principles guiding the NSW response

The principles guiding the overall pandemic response in NSW are as follows:

- ***Use of existing systems where possible*** – to avoid duplication and to ensure resilience of pandemic arrangements as far as possible (e.g. existing seasonal influenza surveillance systems, emergency department activity coordination).
- ***Flexible approach*** – to be responsive to the range of possible patterns of spread through NSW during a pandemic, and the spectrum of pandemic infections ranging from asymptomatic to severe illness.
- ***Proportionate response*** – to use pandemic response strategies that can be scaled up or down, proportionate to the clinical severity of the pandemic virus and to the needs of the NSW population.
- ***Recognising additional needs of at-risk and vulnerable groups*** – to ensure that additional health support is provided for groups at risk of severe disease, such as Aboriginal people and people with chronic conditions, and which recognises the needs of people from culturally and linguistically diverse backgrounds in NSW.
- ***National coordination*** – to work collaboratively with other jurisdictions to ensure national consistency in pandemic response measures wherever possible and be guided by the Australian Health Management Plan for Pandemic Influenza (AHMPPI).

1.3 Planning assumptions and scenarios

The NSW Health response will need to be flexible for a range of pandemic scenarios dependent on the clinical severity of infection caused by the pandemic virus, as summarised in Table 1.

Key planning considerations for a pandemic response include the following:

- ***Extended response time*** – healthcare services across the state need to be prepared for a marked increase in demand for healthcare services that may last an extended period of time.
- ***Unknown origin*** – a pandemic virus could emerge at any time of the year and anywhere in the world, including Australia. However, the most likely scenario is for a virus to emerge and be identified overseas, and then be imported into Australia by infected travellers over the next few weeks to months.
- ***Border screening ineffective*** – as infected travellers may have no symptoms on their arrival into Australia, border screening of incoming passengers is unlikely to be of benefit in preventing a pandemic influenza strain entering the country.
- ***Rapid community spread*** – a pandemic influenza virus may cause widespread community illness very quickly due to a short incubation period and the lack of existing immunity in the population. Once the pandemic strain enters NSW it is likely to spread to all parts of the state within a few weeks.
- ***Similar at-risk groups*** – it is reasonable to expect that population groups already known to be at increased risk of severe influenza infections will also be at increased risk during the next pandemic. The health needs of at-risk groups (such as pregnant women, people with chronic diseases) and communities with higher numbers of at-risk individuals (such as Aboriginal communities) need to be taken into account in planning for and responding to a pandemic.
- ***Early information critical for responses*** – epidemiological and clinical information about the novel virus – such as how severe the disease is, how readily it is passed from person to person, which people are most impacted (e.g. particular age groups, predisposing co-morbidities) – may be gained from both local and overseas experience. This evidence will, together with health service impact data, help to inform the implementation of health response strategies to minimise the rate of spread and reduce the overall impact of the pandemic.
- ***Multiple pandemic waves possible*** – experience with past pandemics suggests that there may be subsequent waves of infection in the months after the first wave dissipates. The impact of the pandemic virus in subsequent waves will be strongly influenced by the level of acquired immunity in the community and by decisions around influenza vaccination programmes.

Table 1: Planning scenarios for the NSW Health response to a pandemic

Level of clinical severity	Potential population health impacts	Potential health sector response measures/considerations [1]
Low E.g. pandemic virus causing mild illness with impact similar to a severe influenza season	• Majority of cases have illness of mild to moderate severity • At-risk groups may experience severe disease and death	• Early general public communications to inform and provide practical risk reduction measures • Targeted communications to groups at higher risk • Implement hospital surge management strategies to cope with increased demand as the outbreak spreads in the community • Close engagement with the primary care and community pharmacy sectors in response strategies
Medium E.g. pandemic virus causing mild to moderate illness in most but severe illness for different groups across the state	• Clinical presentations for influenza-like illness above what is expected for a severe influenza season • More severe disease and deaths in at-risk groups and young people • Healthcare staff absences may be high	• Social distancing measures may be considered • Early and frequent communications for the community and at-risk groups regarding response strategies • Optimise resources across health services to achieve overall health outcomes for the population • Consider implementing additional surge/demand management actions, such as delaying or reducing non-urgent activities, surge staffing, and alternative models of care • Continuing close engagement with the primary care and community pharmacy sectors in response strategies and consideration of alternative models of care • Diagnostic testing may need to be prioritised to effectively utilise resources • Antiviral and vaccine use focus on at-risk groups • Work with other government stakeholders to control spread
High E.g. pandemic virus causing severe illness across the state	• Clinical presentations for influenza-like illness may be very high in the population • Majority of cases in the community may experience severe illness • Death rates may be high for at-risk groups • Specialist and critical care capacity in hospitals may be challenged • Healthcare staff absences may be high	• Social distancing measures likely • Strong coordination and prioritisation to ensure hospitals maintain essential services • Surge staff strategies and alternate models of care to respond to high staff absences • Laboratory testing targeted to utilise resources effectively • Priority on supporting the health of at-risk groups, including Aboriginal people • Antiviral and vaccine policy may focus on preventing illness and transmission in the population • Potential use of overflow facilities within LHDs to support patient care and management, including residential care facilities and other suitable venues

1 Note that lower level responses also apply in higher level scenarios.

2 GOVERNANCE ARRANGEMENTS

2.1 National governance

National arrangements are detailed in the *AHMPPI* and the *NAPHIP*. Department of Health (DoH) oversees the national pandemic response, collecting and analysing national surveillance data and managing the National Medical Stockpile.

The Australian Health Protection Principal Committee (AHPPC) coordinates inter-jurisdictional health preparedness and the response to the pandemic. The NSW Chief Health Officer represents NSW on AHPPC.

AHPPC is supported by groups such as the Communicable Diseases Network of Australia (CDNA) and the Public Health Laboratory Network (PHLN), both of which have NSW Health representatives.

2.2 NSW whole-of-government governance

The *NSW State Emergency Management Plan* (*EMPLAN)* and the *NSW Human Influenza Pandemic Plan* (sub plan to *EMPLAN*) identify NSW Health as the lead (combat) agency, with decision-making authority, for any human infectious disease emergency.

Unlike other emergencies where NSW Health involvement as a supporting agency is coordinated by the State Health Services Functional Area Coordinator (HSFAC), when NSW Health is the combat agency (i.e. during a pandemic), it is the Incident Controller who leads the response. The Incident Controller is the Health Secretary.

Where a coordinated whole-of-government response is required, the Incident Controller and the State HSFAC will liaise with the State Emergency Operations Controller (SEOCON), under the provisions of *EMPLAN*.

The *Human Influenza Pandemic Plan* enables the formation of a peak strategic and policy decision-making body, of which the Minister for Health, Health Secretary and Chief Health Officer will be key advisors, to coordinate the whole-of-government response to a pandemic.

2.3 NSW Health governance

A pandemic will be managed using existing systems and resources as far as possible. The Health Secretary, as Incident Controller, will have overarching responsibility for Health's response to a pandemic and will establish an incident management team to oversee the response across the Health system.

Core members of the State Pandemic Management Team include:

- Health Secretary (Chair)
- Chief Health Officer/ Deputy Secretary Population and Public Health
- State HSFAC
- Deputy Secretary – System Purchasing and Performance
- Deputy Secretary – Governance Workforce and Corporate
- Deputy Secretary – Strategy and Resources
- Director – Public Affairs, Ministry of Health
- Chief Executive – Agency for Clinical Innovation
- Chief Executive – Clinical Excellence Commission
- Chief Executive – HealthShare NSW
- Chief Executive – NSW Health Pathology
- Chief Executive representation from metropolitan and regional NSW local health districts
- Additional representatives may be invited as required.

Pandemic-specific response groups (e.g. system performance, public health) may be implemented by the State Pandemic Management Team to manage state-wide coordination of their respective portfolio areas. These groups may choose to use an incident management system such as AIIMS as the basis of operational management arrangements. To avoid duplication of advice, requests and activity, it is essential that relevant information is communicated across response groups.

NSW Health Chief Executives remain responsible for the operation of their health services and can draw on the support of the State Pandemic Management Team and local emergency management resources.

Existing emergency management arrangements described in NSW HEALTHPLAN (PD2014_012) are available to support coordination of whole-of-health resources or provision of expertise as needed, however, during a pandemic, the provisions of this plan override those of HEALTHPLAN.

The State HSFAC will assist with coordinating any required reporting to the State Emergency Management Committee (SEMC) and support the Incident Controller as required.

Table 2 below summarises the key NSW Health governance arrangements in NSW during a pandemic.

Table 2: NSW Health governance arrangements during the pandemic

Role	Responsibilities
Health Secretary (Incident Controller)	• Overarching responsibility for pandemic preparation, response and recovery • Chair of the State Pandemic Management Team • Participates in peak NSW whole-of-government pandemic strategic and policy decision-making bodies • Incident Controller responsibilities as per section 7, #706 *EMPLAN*
Chief Health Officer (CHO)	• Liaises with the Minister for Health and the Health Secretary to provide advice and make recommendations regarding response management • NSW representative on the Australian Health Protection Principal Committee • Member of the State Pandemic Management Team • Participates in peak NSW whole-of-government pandemic strategic and policy decision-making bodies
State Health Services Functional Area Coordinator	• Supports the Incident Controller as requested, including liaising with State Emergency Operations Controller (SEOCON) regarding whole of government support • Member of the State Pandemic Management Team
State Pandemic Management Team	• Coordinates strategic management of NSW Health's response to a pandemic • For membership see previous page
LHD/SHN Chief Executives	• Responsible for LHD/SHN preparation for, operational response to and recovery from a pandemic
LHD/SHN Health Service Functional Area Coordinators	• Support LHD Chief Executives with pandemic response activities as requested

3 PANDEMIC STAGES AND KEY RESPONSE STRATEGIES

The framework for pandemic management in NSW is one of *prevention*, *preparedness*, *response* and *recovery* (*PPRR*). This aligns with the response stages outlined in the *AHMPPI* and the NSW response arrangements detailed in this plan.

The *AHMPPI* response stages (summarised in Appendix 5) focus on pandemic preparedness and operational response for the health sector but also guide the whole-of-government response. The AHMPPI pandemic stages are independent of the global pandemic phases as declared by the World Health Organization (WHO).

A detailed summary of the key state-level NSW Health responsibilities at each stage of the pandemic are presented in Appendix 6.

3.1 Prevention

The period prior to the identification of a novel pandemic influenza strain affecting humans is an important time to optimise existing influenza surveillance systems and ensure they are applicable to pandemic responses. This includes laboratory surveillance to identify novel influenza strains with pandemic potential.

NSW Health also collaborates closely with the NSW Department for Primary Industries in its efforts to prevent and control outbreaks of influenza in animals to minimise the risk of transmission to humans.

3.2 Preparedness

During the preparedness stage, potential pandemic pathogens that have emerged would be under close monitoring and surveillance by international and national health agencies to allow a tailored and proportionate response.

Within NSW, pandemic preparedness requires active engagement and communication with a range of stakeholders including:

- Clinical groups in health facilities most affected, including emergency departments, infectious diseases, infection control and critical care
- Peak general practice groups and other primary care and pharmacy groups
- Other government agencies and community groups that may be impacted.

Preparedness of the health system requires development of the workforce, particularly through training in infection control and through participation in exercises testing responses to a range of pandemic scenarios.

Pandemic response capacity relies on, and builds upon, seasonal influenza response measures embedded in the health system. This includes robust infection control practices (such as hand-washing, respiratory etiquette, isolation of cases) and routine influenza vaccination for healthcare workers and at-risk populations. This also includes interventions to optimise emergency department performance at times of peak influenza activity in the community.

3.3 Response

Once a new human virus with pandemic potential has been identified a range of major pandemic response strategies will be considered. Under the AHMPPI, the response stage is delineated into four sub-stages including: *Standby, Initial action, Targeted action and Stand down* reflecting the need to tailor response activities according to the spread and impact of the pandemic virus in Australia.

The transition through pandemic response stages will be guided by emerging data on the clinical severity and transmissibility of the virus and its impact on the population. The decision to transition through the different stages will be taken by the Australian Government in consultation with states and territory jurisdictions. The Health Secretary in consultation with the State Pandemic Management Team will determine the transition through different response stages in NSW.

The *Standby stage* may vary considerably in duration depending on the spread of the pandemic virus once it reaches Australia. It represents a period of time to ensure enhanced arrangements are in place to coordinate the early response to the pandemic in NSW; for example, communications, governance, surveillance and any border activities if appropriate.

During the *Initial action* stage, detailed clinical and epidemiological data are gathered to understand the nature of the virus and its potential impact in NSW.

During the *Targeted action* stage, as the pandemic becomes more widespread and the demand on health care services increases, tailoring response measures will require regular review of data from disease surveillance and from monitoring of health system and workforce impacts. The effectiveness of any interventions implemented will be assessed to help ensure that the best use is made of the resources available to achieve optimum health outcomes for the population.

During the *Stand down* stage, the decreasing impact of the pandemic may not be the same across geographical areas or population groups in NSW. Targeted response measures may still be required for some LHDs with higher activity, as other areas wind down their activities and move into recovery.

3.4 Recovery

The states and territory jurisdictions have primary responsibility for managing the *Recovery* stage. All NSW Health agencies will work together to support health services and community recovery.

Considerations for LHDs/SHNs and other NSW Health agencies during the recovery stage include the need to plan for services and staff to transition back to “normal” levels/duties. This is an important stage to conduct intra- and interagency evaluations and lessons learnt exercises and incorporate these lessons into future plans and strategic policies.

Auditing and replenishing stockpiles of essential medical supplies and equipment is also a key activity during the recovery stage.

4 ROLES AND RESPONSIBILITIES

The MoH, which for the purposes of this plan includes Health Protection NSW (HPNSW), is responsible for state-wide strategic planning and the implementation of key response activities for a pandemic through the State Pandemic Management Team. This will require close collaboration between all NSW Health and partner agencies.

Appendix 7 outlines the specific responsibilities of MoH Divisions and key NSW Health supporting agencies.

LHDs/SHNs are responsible for planning and delivering health services for their populations according to the principles outlined in this plan. An implementation checklist for LHDs/SHNs is provided in Appendix 8 to support the development of a district-level operational plan for a pandemic.

All NSW Health agencies must undertake regular training, exercises and have business continuity plans, policies and guidelines in place for a pandemic. During the response stage, all NSW Health agencies will be required to provide relevant expertise and advice according to their portfolio. It will be important during a pandemic response to seek feedback and disseminate information through key networks.

5 COMMUNICATION

Timely and accurate communication with the public, healthcare workers, government agencies and industry will assist with maintaining a coordinated and controlled response to a pandemic.

The *AHMPPI* contains information on the national coordination and sharing of information and strategies for how this information is communicated to health stakeholders and the public during the pandemic response.

5.1 Communicating with the public

At the national level, the coordination of the content, delivery and timing of communication messages for the public will be crucial for ensuring confidence in our response to the pandemic. The National Health Emergency Media Response Network (NHEMRN) is responsible for developing and disseminating national communication messages and adaptations for specific audiences.

The NHEMRN is made up of all state and territory health department media units, relevant government agencies, national medical colleges, National Aboriginal Community Controlled Health Organisation (NACCHO) and parts of the private sector directly involved in emergency management.

The Australian Government's Department of Foreign Affairs is responsible for issuing travel warnings to Australians during the pandemic.

In NSW the Public Information Functional Area Coordinator (PIFAC), established under *EMPLAN*, coordinates public information messages on behalf of all government agencies during a multi-agency coordinated emergency response. During a pandemic, the Health Communications Controller works closely with the PIFAC.

MoH Public Affairs Unit will coordinate the response to media enquiries, including the development and dissemination of key messages on behalf of NSW Health at the state level. MoH Strategic Relations and Communications Branch will be responsible for the development and dissemination of state-wide resources and healthcare awareness campaigns in collaboration with MoH Population and Public Health Division. MoH Public Affairs Division and Strategic Relations and Communications Branch will support the Health Communications Controller to develop an integrated communication plan, including use of new media, to ensure coordination of all state-level communications during a pandemic.

The Health Communications Controller in close liaison with the PIFAC will coordinate the timing and release of national messages via NHEMRN during a pandemic.

Health content experts (e.g. public health or clinical services) will work with the Health Communications Controller to develop consistent state-wide public information messages delivered by a qualified spokesperson.

A pandemic can result in a large surge of inbound calls from the public to LHDs. LHDs should plan for options that help utilise existing local telecommunications infrastructure to manage demand as far as possible during a pandemic. If the surge of inbound calls to either the LHDs and/or MoH substantially increases, the Public Health Controller may activate contact centre capacity. The PIFAC in liaison with the Health Communications Controller may also activate the state Public Information Centre.

Some culturally and linguistically diverse (CALD) populations will require tailored and clear messages to address specific health concerns. MoH will work with health partner agencies, including the Aboriginal Health and Medical Research Council of NSW, NSW Multicultural Health Communication Service, NSW Refugee Health, community elders and leaders, to develop a consistent state-wide and coordinated approach to developing and disseminating information and resources for CALD groups during the pandemic.

LHDs should coordinate public messages of local relevance (including those specific for CALD populations) with the approval of the Health Communications Controller.

MoH will work with NSW Multicultural Health Communications Service to ensure that the state-wide NSW Health Care Interpreter Service is briefed as early as possible during a pandemic, so that it can respond accordingly to any increased demand for interpreter services.

5.2 Communicating within the NSW health system

During a pandemic, information about changes to specific aspects of the NSW pandemic response such as infection control recommendations, clinical services, and case definitions will need to be quickly and reliably communicated to healthcare workers, including staff working in NSW Health agencies, Aboriginal health services and community healthcare providers such as GPs and community pharmacies.

The State Pandemic Management Team will coordinate dissemination of relevant information to NSW Health agencies via key contacts (such as Chief Executives, Directors of Clinical Operations, LHD HSFACs, Public Health Unit (PHU) Directors or LHD emergency operations centres).

MoH in collaboration with the DoH will disseminate national messages regarding key pandemic response actions (e.g. change in pandemic stage) to general practitioners (GPs) and community pharmacies.

MoH communicates with the primary health care community (e.g. GPs, Aboriginal health services, community pharmacies) both through their peak bodies and existing reference groups and through direct communications, such as GP practice fax alerts. The National Health Services Directory may also be utilised for emailing information as required. MoH will continue to convene meetings with the peak private hospital groups and aged care facility agencies (e.g. Aged and Community Services NSW and ACT) to keep them informed about pandemic influenza planning developments and to encourage them to adopt appropriate pandemic management policies in their facilities.

The Centre for Aboriginal Health (NSW Health) will convene an Aboriginal Medical Services Advisory Group to consult with Aboriginal health services during a pandemic.

LHDs/SHNs are responsible for maintaining and utilising existing networks and channels of communication to notify local service providers, including any private hospitals, of any changes in key pandemic response activity during a pandemic. LHDs/SHNs are responsible for managing communication with their employees. These messages will complement those being released by the NSW and Australian governments but will add tailored local messages as appropriate.

5.3 Communicating with key government agencies and industry

The Health Communications Controller will liaise closely with cross-government agencies.

The PIFAC is responsible for coordinating communications to business and industry across NSW in consultation with the MoH and Health Communications Controller and other relevant agencies. This would ensure agencies or services providing contractual services to the NSW Health system (e.g. waste disposal and cleaning contractors) are adequately informed of any changes to the pandemic response in NSW.

6 MITIGATION OF TRANSMISSION

6.1 Infection control

The overall aim of infection control measures is to reduce exposure to and transmission of a pathogen. The *AHMPPI* outlines several infection control strategies for managing a pandemic virus in healthcare facilities and in the community.

There is good experimental evidence to demonstrate that influenza is transmitted directly through infectious droplets (i.e. from coughing and sneezing) or indirectly through contact with surfaces contaminated by respiratory droplets (e.g. skin, clothing or objects).

The risk of transmission can be greatly decreased by:

- Individual measures (e.g. hand hygiene and respiratory etiquette)
- Appropriate use of standard, contact and droplet infection control precautions
- Appropriate use of PPE (e.g. gloves, gowns, eye protection and respiratory protection, as appropriate)
- Organisational environmental measures, including: signage; triaging and patient management; isolation rooms and/or cohorting of patients; increased environmental cleaning; and staff vaccination when available.

6.2 Healthcare facilities

Many infection control methods are applied on an ongoing basis, as outlined in the NSW Health *Infection Control Policy* (PD2007_036). More stringent methods may be used across the health system during a pandemic, as outlined in *Minimising Transmission of Influenza in Healthcare Facilities guideline* (GL2010_006).

If there is a reasonable risk of airborne transmission, additional airborne precautions may need to be added to existing infection control measures in healthcare facilities.

In the setting of a pandemic with medium to high clinical severity, enhanced infection control (such as additional environmental cleaning) and isolation measures (e.g. visitor screening) may be recommended to protect at-risk inpatients from transmission of pandemic influenza within healthcare facilities. Minimum standards for environmental cleaning in healthcare facilities are outlined in the NSW Health *Environmental cleaning policy* (PD2012_061).

Through ongoing workforce training schemes, LHDs are responsible for ensuring all personnel working within facilities of their district are equipped with adequate infection control skills.

6.3 Community resources

Communication materials (e.g. pamphlets, online factsheets, mass media advertisements, social media campaigns and signage) in community settings can be effective tools for promoting good infection control practices in the community.

Members of the general community will also require information on strategies to minimise their risk of exposure to influenza and to reduce the risk that they will transmit the virus to others in households, schools, workplaces and public spaces. This may include guidance on early treatment to reduce the infective period.

MoH will work with LHDs to ensure this information is distributed to members of the general public through appropriate channels and in a timely fashion (see *Communication section*). Information provided to primary and community health care providers will include recommendations on clinical assessment and management, including infection control, laboratory testing, antiviral treatment and vaccination.

6.4 Social distancing

Social distancing is a community-level intervention to reduce normal physical and social population mixing in order to slow the spread of a pandemic throughout society, as described in the *AHMPPI*. Minimising the number of contacts of an infectious case can help reduce transmission of the pandemic virus. A range of social distancing interventions are discussed in the *AHMPPI* (pgs. 143-152), including school and/or workplace closures, cancellation of mass gatherings and home isolation and quarantine of cases and contacts (see section below).

The decision to implement widespread and significant social distancing measures would be carefully considered by national and state whole-of-government processes. The implementation of social distancing measures in NSW would depend on the timing and stage of the pandemic response, along with the transmissibility and clinical severity of the pandemic virus.

Depending on the extent to which social distancing measures are applied, the effect on workforce absenteeism and the disruption to daily life may be considerable. The compliance with and benefits of social distancing measures are likely to be highest when the disease is clinically severe.

MoH in partnership with the PIFAC will develop and disseminate public messages emphasizing the rationale and importance of following social distancing procedures as appropriate.

6.5 Home isolation and quarantine

During a severe pandemic, symptomatic individuals may be recommended to remain in home or hospital isolation and this may be extended to exposed contacts (i.e. home quarantine). Both methods are important ways of reducing further virus transmission. Voluntary measures are preferred as compliance is generally high when the community is provided with the rationale behind the measures. Public health powers are an option to enforce quarantine or isolation and this may be considered in the context of a pandemic virus associated with severe clinical outcomes.

A key aspect of emergency preparedness is encouraging self, family and community resilience to improve individuals' ability to self-manage in home isolation (for cases) and quarantine (for contacts, if recommended). This may include the promotion and use of community resources such as a plan for a home emergency kit and emergency pantry list.

This guideline also outlines a range of strategies for health agencies on how to collect surveillance data from cases and contacts in home isolation and quarantine. This includes the use of phone calls and/or SMS systems, as well as NCIMS to collect and record epidemiological data.

Support in sourcing alternative accommodation for large numbers of people would be provided by the State Emergency Operations Controller under the arrangements detailed in the *NSW HIPP*. However, this is unlikely to be a useful measure during a pandemic and would only be recommended in extreme circumstances.

It is essential that the health and welfare needs of those in home isolation and quarantine are adequately addressed. Arrangements for accessing support from other NSW agencies are detailed in the *NSW HIPP*.

7 HEALTHCARE DELIVERY - FACILITIES

Hospitals and other healthcare facilities will need to consider a range of service options to enable them to continue to deliver optimal health outcomes to the population, both for pandemic and non-pandemic patients. Communications within and between LHDs to share information on approaches to service delivery will be important in identifying the best service delivery options for each facility.

During the pandemic response, CEs may wish to consider a range of healthcare facility models to assess, manage and treat pandemic patients according to the spread and potential impact of the virus.

- During the *Initial action* stage, when the pandemic virus has only just emerged in NSW, LHDs may wish to consider enhanced ED triage for patients presenting with ILI and/or respiratory complications.
- During the *Targeted action* stage, as the pandemic virus spreads more widely in the community, LHDs may need to consider alternative models of care that preserve the capacity of EDs to respond to other patients with acute care needs either within or outside of the facility.

LHDs/SHNs should liaise with private health and aged care about key response strategies utilised during a pandemic in NSW.

Private hospitals are encouraged to adopt pandemic planning and management policies similar to those outlined in this plan. Private hospitals providing public services should prepare their plan together with the relevant LHD.

LHDs should incorporate EDs, critical care units and PACs into their business continuity planning for responding to a pandemic. These business continuity plans should include consideration of the need for additional resources to support:

- Staffing in critical demand areas
- Infection control, including PPE
- Medical supplies and equipment (e.g. ventilator equipment and medications).

Facility managers in LHDs should review food and linen production and distribution requirements during a pandemic, in consultation with HealthShare NSW in order to support the clinical management of patients within healthcare facilities.

7.1 Clinical management

During a pandemic, demand for acute care is predicted to be very high. Adjustments may need to be made to the routine delivery of hospital services to maximize the benefit of scarce resources in the most effective and ethical way. Principles guiding the management of demand and capacity within healthcare services include:

- That care given to people will be maximised within the available resources
- Plans should be consistent with the aim of preserving and maintaining essential healthcare services
- Changes to service delivery and clinical protocols should reflect changes in local and/or regional demand where appropriate
- Decisions regarding surge capacity and demand management should be coordinated at a strategic level within the health care service to ensure consistency of approach
- That a phased approach be used in scaling back any healthcare services to ensure demand management reflects the pandemic impact at the time
- Coordination by Health system support staff to ensure cross-district consistency of access is maintained.

Prior to the pandemic, LHDs and SHNs should identify all acute services that they provide, how services might be prioritised and plan for alternative mechanisms of service delivery where necessary. This planning work should encompass all local health service providers.

In developing plans for healthcare demand management during a pandemic, LHDs and SHNs should consider inter-related elements of healthcare services, including:

- physical aspects of capacity (e.g. beds, wards and ventilation equipment)
- hospital staff numbers (e.g. of clinical, allied health and administrative staff) and ability for staff to cross over to other areas
- clinical services and protocols (e.g. types of services and models of care).

While governance for service delivery changes within LHDs rests with LHD Chief Executives, state-wide agreement will be sought wherever possible for any major changes to services, such as criteria for admission, triage or discharge, or new clinical management guidelines. This will be with the aim of promoting equitable delivery of healthcare across all districts.

Groups of specialist physicians (e.g. infectious diseases, maternal and newborn care and critical care) will be consulted to provide expert advice on the appropriate clinical management of patient groups.

7.2 Emergency departments (EDs)

EDs are a critical part of the hospital response to a pandemic in NSW. The level of response needed by EDs should be based on data on the epidemiology of the pandemic virus and the capacity of EDs to respond.

Guidance on clinical models of care and the role of ED staff during a pandemic are provided in the Australasian College of Emergency Medicine (ACEM) guidelines on the *Management of severe influenza, pandemic influenza and emerging respiratory illnesses in Australasian Emergency Departments.*

EDs will need to monitor capacity to manage suspect and/or infected patients throughout the pandemic to help inform LHD planning in regards to the establishment or stand down of different models of care. For example, the ACEM guidelines include consideration of advanced screening stations outside EDs, designated ‘flu areas’ within EDs and/or establishment of stand-alone PACs (see below).

7.3 Pandemic assessment centres

Pandemic Assessment Centres (PACs) are stand-alone facilities, separate (physically and operationally) from existing hospital EDs, which are used for triaging and assessing individuals with ILI. PACs provide one option for healthcare facilities to respond to increased patient demand during a pandemic but they may not be the most appropriate option for all facilities, particularly where alternative strategies already exist.

PACs may be activated by LHDs/SHNs at any time. The Health Secretary, in consultation with LHD CEs, may also direct the opening of PACs.

The purpose of PACs is to ensure:

- EDs and GP surgeries are not overwhelmed with suspected influenza cases and can continue, as far as possible, with their routine business
- Hospital-associated transmission of influenza is minimised by ensuring potentially infectious patients visiting the clinic are kept separate from other patients seeking care in the hospital facility
- A standardised method for assessing and managing patients is adopted
- Anti-viral medication is commenced as required.

In the preparation period, each LHD should identify appropriate sites and develop a staffing and resource plan for PACs. As far as possible, staff for PACs should not be drawn from existing ED staff, or from intensive care or specialist units. Consideration should be given to sites suitable for a range of pandemic scenarios, from mild to severe.

MoH provides guidance on the set-up, operation and resourcing of PACs to support LHDs during the pandemic. MoH will provide a standardised PAC patient form to enable appropriate assessment of patients and collection of data to inform the response at the LHD and state level.

To operate PACs efficiently, LHDs/SHNs will need to ensure there is adequate staffing, IT, network and internet access to enable collection and reporting of PAC service data. LHDs should consider how to inform local healthcare providers of PAC locations and operating hours should the need arise. Private hospitals with EDs may also consider having plans for establishing PACs.

7.4 Critical care services

Critical care services may experience a significant increase in demand for personnel, specialised equipment (e.g. ventilators) and beds. Careful and detailed planning is essential for managing demand in intensive care units (ICUs), high-dependency units, paediatric intensive care units (PICUs), neonate intensive care units (NICUs) and medical retrieval services, as these services operate at or near full capacity on a regular basis.

The standard treatment for pandemic patients will mainly consist of antiviral medication (if indicated and available), antibiotics for secondary pneumonia, and supportive care. The use of mechanical ventilation or extracorporeal membrane oxygenation (ECMO) as treatment modalities for individual patients remains a clinical decision.

Communication will be essential between all critical care services in LHDs/SHNs and MoH to help build an epidemiological profile of the novel virus within clinical settings. MoH will engage and obtain strategic advice from the Medical Controller, ACI (including the Critical Care Taskforce), and the Sydney Children's Hospitals Network (SCHN, including the Paediatric Controller) on the prioritisation and delivery of critical care services for adults and children during a pandemic.

Complex ethical and clinical treatment issues can occur during a pandemic, especially when healthcare demand exceeds supply. Strategies for managing capacity and ensuring evidence-based and equitable care for patients requiring intensive care are outlined in NSW Health policy *Influenza Pandemic – providing critical care* (PD2010_028).

LHDs/SHNs may choose to designate other hospital areas (e.g. operating theatres or general wards) as intensive care surge areas. Some children may be able to be treated and managed at adult hospitals.

7.5 Isolation spaces within healthcare facilities

Isolation spaces are an important component of isolating patients with communicable respiratory infections to contain further spread of the infection. If isolation of individuals is not possible, healthcare facilities may determine that isolation by cohort can occur. Purpose-built isolation spaces, as well as alternate facilities, may be used during a pandemic.

Further guidance on isolation and cohorting of patients to control outbreaks is provided in the NHMRC (2010) *Australian Guidelines for the Prevention and Control of Infection in Healthcare* (see B3.2).

7.6 Hospital in the home

Hospital in the home (HITH) services allow a range of clinical conditions to be effectively and safely managed without a person needing to stay in hospital. HITH services are already provided by many LHDs and SHNs and may be used or expanded during a pandemic response so that are sufficient beds available for patients who need to be in hospital for their care.

7.7 Overflow facilities

Overflow facilities are used to accommodate patients when it is impractical to manage them at home or in a hospital. Healthcare facilities, including private hospitals, would be used preferentially. However, schools, warehouses, convention centres, hotels or sports arenas may be alternative sites.

Overflow facilities may be needed during a long-lasting and/or large-scale health emergency. During a pandemic they may serve as facilities to care for the large additional number of patients requiring treatment and management. The care provided in overflow facilities is generally supportive rather than interventional.

Depending on the infrastructure, staff and capacity within LHDs, the care provided in overflow facilities could include:

- Acute care for cohorted patients
- Expanded ambulatory care (low-level care for non-pandemic patients)
- Palliative care (acute and low-level care).

Each LHD should identify initial overflow facility sites, and planning should detail the circumstances where and when overflow facilities would be established and how these facilities would be staffed appropriately. Geographic variability in attack rates may dictate that overflow facilities are not established in all LHDs simultaneously during a pandemic.

In the event of a severe and widespread pandemic in NSW, the Health Secretary may instruct LHD CEs to open overflow facilities to ensure delivery of essential health services.

7.8 Health workforce issues

Pandemics present significant workforce challenges for NSW Health. Different services may experience increased demand for staff at the same time (e.g. clinical, public health, administrative, support and human resources staff). Staff absenteeism during a pandemic has the potential to place significant further strain on the health workforce.

The risk of occupational acquisition of influenza infection by healthcare workers is low, relative to community settings. However, perceived safety at work is a critical determinant of staff willingness to work during pandemic events, particularly for workers responsible for the care of children in the home environment.

7.8.1 Staff management

A number of inter-related workforce issues have been identified as being particularly pertinent during a pandemic, including:

- The levels of personal protection deemed acceptable by healthcare workers
- Infection control and disease control issues directly impacting upon staff availability (such as quarantine of exposed workers)
- The availability of sufficient staff, including recruitment, retention and equitable allocation issues
- The capacity to support staff in preparing for, responding to and recovering from a pandemic.

Absenteeism levels will vary according to the severity, duration and timing of the pandemic. However, health services should prepare contingency human resource plans in the event of high levels of absenteeism. This should include both positions in critical health services and critical administration areas. Plans should be regularly disseminated and additional training may be needed to prepare staff to work under different conditions.

The *Public Health Workforce Surge Guidelines* (GL2014_003) have been developed to assist LHDs in understanding when and how to identify, recruit and utilise surge staff for public health aspects of the pandemic response.

To ensure continuity of government services during a pandemic, the NSW Government has a Memorandum of Understanding with Unions NSW which sets out employment conditions that would apply during the pandemic, including attendance, salary payments and ability to require staff to provide additional support outside their usual job description.

Human resource plans should:

- Advise staff that they may be called upon at short notice to temporarily work different hours, in a different location or in a different way
- Ensure staff are aware that requests for flexibility on their part will be made with regard to appropriate use of their skills and their award conditions (NB: only clinical staff should be assigned clinical roles during the pandemic)
- Determine minimum staffing levels sufficient to safely maintain services
- Identify part-time staff who can work additional hours
- Identify staff who are prepared to defer annual or long service leave
- Identify casual staff who can work additional hours (while at the same time appropriately managing worker fatigue)
- Identify displaced employees or those on 'return to work' plans who can be deployed
- Identify staff who have recently left the organisation and who can be temporarily engaged
- Identify staff who can provide non-clinical support and can be redeployed
- Identify agency resources which can be called upon
- Identify a manager/s and support staff to coordinate planning, communication, resource management and the orientation of staff.

Healthcare workers may believe that they are at increased risk of becoming infected themselves and/or transmitting infection to their friends and families. The adequacy of current Employee Assistance Programs and other systems to support the mental health needs of healthcare workers should be carefully considered and augmented if insufficient.

Managers in all NSW Health and affiliated organisations have a duty of care for staff under Work Health and Safety legislation to ensure that the exposure of healthcare workers to influenza is minimised, such as through appropriate infection control measures and use of PPE. Managers must ensure that all work health and safety risks are assessed and documented, in line with obligations under legislation.

Staff immunisation programs are an important risk mitigation strategy. All NSW Health agencies are required under the Policy Directive - *Occupational assessment, screening and vaccination against specified infectious diseases* (PD2011_005) - to ensure that staff in their district are appropriately screened and immunised (which includes offering seasonal influenza vaccination to all staff).

7.8.2 Education and training

The Health Education and Training Institute (HETI) will work in collaboration with MoH and LHDs to develop appropriate state-wide staff training programs relevant for the pandemic response. LHDs are responsible for regular delivery of staff education and training and for ensuring staff meet training requirements for pandemic preparedness and response as appropriate.

Specialised training may be required for the following groups:

- Front-line clinical healthcare staff such as paramedics and those working in EDs, ICUs and respiratory wards (e.g. refresher training in use of PPE)
- The public health workforce
- Laboratory services
- Primary healthcare and acute clinical staff
- Emergency services or other surge staff personnel supporting a pandemic vaccination clinic or overflow facility
- Clinical staff who will be assessing and managing patients in PACs (e.g. training in the use of clinical screening and triaging protocols).

In particular, critical care units including ICUs and High Dependency Units are staffed by personnel with specific medical or nursing intensive care training, many of whom work in more than one hospital, creating particular challenges for workforce surge. LHDs/SHNs must consider where to source additional personnel and provide additional training to ensure staff can work in intensive care (e.g. personnel trained in respiratory medicine or anaesthesia).

8 HEALTHCARE DELIVERY - COMMUNITY

Under *NSW HEALTHPLAN*, NSW Health may request assistance from health supporting agencies during a pandemic; these include residential care facilities, private health facilities, local government councils and primary healthcare networks. In preparation for a pandemic, MoH works with peak bodies, professional associations and other stakeholder groups to determine the most appropriate role for services that deliver healthcare within a community during a pandemic. Services may be asked to focus on maintaining core business or to take on specific pandemic-related roles depending on the severity of the pandemic.

Community healthcare providers may also be asked to participate in the deployment of alternative models of care to respond to clusters of illness in remote communities. The LHD in consultation with community health providers would be responsible for the implementation and operational management of alternative facilities or models of care in the community.

Other community healthcare providers (e.g. drug and alcohol services, dentists, physiotherapists or specialist rooms) should be prepared to implement screening, increase infection control and appropriately manage or defer attendance by people with ILI during a pandemic.

8.1 General practice

MoH works closely with primary care peak bodies in NSW to determine the most appropriate role for general practice during a pandemic. A key challenge for general practice will be the maintenance of routine services for patients when experiencing a potentially significant increase in demand during a pandemic. The Royal Australian College of General Practitioners (RACGP) has released the *Managing pandemic influenza in general practice* guidelines (as well as an implementation toolkit – see Appendix 4) which outline strategies to help GPs maintain business continuity during a pandemic. The RACGP has also developed Infection prevention and control standards for GPs and other community health providers which would be essential in the preparation and response to pandemic influenza.

LHDs/SHNs should work with their primary health networks to plan the local implementation of national and state pandemic response activities and to coordinate care between general practices and LHD facilities. GPs in rural and remote areas may have little support or relief available from other healthcare providers. LHDs/SHNs should consider and develop ways to work with GPs in rural and remote areas, and involve them in local pandemic planning. Additional roles for nursing staff in primary health networks in remote communities during a pandemic response should also be considered.

8.2 Community pharmacies

Community pharmacies may be asked to take on additional tasks or provide surge workforce capacity during a pandemic. Pharmacies are kept informed about pandemic phase changes through engagement between MoH and the NSW Pharmacy Guild and provided with advice to inform their customers about treatment for ILI.

MoH will consult with the NSW Pharmacy Guild and LHDs/SHNs to help identify any additional tasks (e.g. assistance with distribution of oseltamivir suspension and other anti-viral medications) that may be requested from community pharmacies.

8.3 NSW Ambulance and patient transport

It is anticipated that the NSW Ambulance workload will increase during a pandemic. This will require enhanced triaging of all patients to ensure NSW Ambulance is able to maintain core service delivery to emergency cases. NSW Ambulance is also responsible for providing coordination and communication processes across the service during emergency or campaign type operations. This includes close liaison with the NSW Health Non-Emergency Patient Transport (NEPT) Hub for the expected increase in non-emergency patient transports. Specific command and control operational arrangements are detailed in NSW Ambulance operational plans.

The State HSFAC may request support from the State Emergency Operations Controller for moving large numbers of people to alternate accommodation (e.g. relocating people from the airport that have been exposed to the virus during a flight). NSW Ambulance personnel may be best placed to assist with moving smaller groups of people.

HealthShare NSW is responsible for ensuring pandemic readiness for all Greater Metropolitan NEPT services; including business continuity and surge staff planning. Operational interagency liaison will occur between NSW Ambulance and HealthShare NSW and frontline supervisors during a pandemic.

8.4 Mental health services

Mental health services need to continue to provide core services (e.g. inpatient acute care, rehabilitation and emergency psychiatric services) during a pandemic as well as providing extra support services for mental health workers, other healthcare workers and members of the broader community. Mental health NGOs, GPs, peak bodies and consumer and carer organisations will be key stakeholders in planning and preparedness.

Individuals may develop short or long-term mental health concerns as a result of community anxiety, prolonged isolation or other significant changes to daily life experienced during a pandemic. The particular mental health needs of specific populations must also be considered. It will be important to ensure clear, consistent and timely public communication is produced and disseminated to reduce anxiety.

The psychological issues for healthcare workers in a pandemic will be significant, requiring clear, consistent and frequent communication to reduce community anxiety associated with exposure in the workplace. Many patients with mental health concerns are managed by clinicians in primary care. Early communication between the local LHD and GPs will be important to ensure smooth continuity of care.

The NSW Health Mental Health Line will be briefed on the pandemic and will be the main point of contact for those wishing to access or consult with mental health services. MoH may also activate the Mental Health Disaster Help Line if a specific service is required or if there are large numbers of people seeking assistance.

In order to continue to provide core mental health services to patients, alternative delivery mechanisms may be needed, including telephone or internet consultations and/or alternative access points for medication monitoring. Any decision regarding reduction of services would need to be made in consultation with the Mental Health Controller following full consideration of risk factors and the level of support available in the community.

The MoH Mental Health and Drug & Alcohol Office and LHD Mental Health Directors remain actively involved in pandemic planning to ensure mental health services are incorporated into LHD planning (e.g. developing protocols for the treatment of acutely mentally ill patients with pandemic influenza).

8.5 Correctional and detention facilities in NSW

Corrective Services and Juvenile Justice NSW (as part of the Department of Justice NSW) are responsible for the operational management of services and programs to manage adult and juvenile offenders respectively in corrective facilities or in the community in NSW. The Justice Health and Forensic Mental Health Network (JH&FMHN) as a state-wide specialty NSW Health network, maintains guidelines on supporting the health of adult and juvenile offenders during an influenza pandemic in NSW.

Correctional facilities present unique challenges in relation to social distancing and mitigating the impact of a pandemic. A range of strategies including screening prior to transport, isolation and quarantine are implemented by the JH&FMHN in consultation with Corrective Services NSW, Juvenile Justice NSW, the Department of Justice and NSW Police. JH&FMHN health facility centres, while not linked to specific hospitals, may also serve as PACs in consultation with the relevant LHD.

Immigration detention facilities are the responsibility of the Australian Government; however some detention facilities are contractually operated and managed by private providers. In the event of an influenza pandemic affecting detainees within NSW immigration detention facilities, NSW Health would collaborate with the Commonwealth to implement a range of strategies to support the health of detainees, such as case and contact follow-up, management and treatment.

8.6 Schools and children's services

The NSW Department of Education is responsible for early childhood centres, public primary and secondary schools as well as some adult tertiary education centres such as campuses of TAFE NSW.

During a pandemic, early childhood centres and schools may be a focus of social distancing measures (during the *Standby* and/or *Initial action stage*) to reduce the community-level impact of pandemic influenza, as children typically have higher infection rates, shed virus longer than adults and may be less capable of maintaining high levels of infection control (e.g. adequate hand washing).

It is important to note that school closures have only been shown to be moderately effective at reducing transmission rates and the timing and duration of closures would need to be carefully considered (see *AHMPPI*). Therefore a range of measures designed to help reduce social mixing of students in order to reduce transmission of the pandemic virus may be considered by MoH (e.g. cancellation of extra-curricular or after-school activities).

MoH would liaise closely with the NSW Department of Education, the Catholic Education Commission of NSW and the Association of Independent Schools of NSW to ensure the agreed implementation of any social distancing measures in early childhood centres and/or schools was timely, appropriate and communicated to relevant services and families in NSW.

8.7 Residential care facilities

People living in residential care facilities represent a potentially vulnerable population to the pandemic virus due to a variety of factors such as older age, disability, chronic illness and close living arrangements.

Most residential aged care services are the responsibility of the Australian Department of Social Services (DSS). However MoH and LHDs work closely with DSS and non-governmental organisations (e.g. Aged and Community Services NSW and ACT), facility managers and private providers in NSW on a regular basis to help protect the public health of residents through investigation and control of any infectious disease outbreaks.

All residential care facilities in NSW are encouraged to have plans in place for an influenza pandemic. CDNA maintains guidelines on the *Prevention and management of influenza outbreaks in residential care facilities*. Seasonal influenza outbreaks represent an opportunity for residential care facilities to test any plans, revise arrangements with health partners and incorporate any lessons learnt.

During a pandemic, MoH would work closely with the Commonwealth to ensure communications to residential care facilities in NSW regarding response strategies were coordinated in a timely and appropriate manner.

9 AT-RISK GROUPS

The *AHMPPI* acknowledges that some population groups will be at risk of severe morbidity or mortality from a pandemic virus. Depending on the clinical epidemiology of the pandemic virus, at-risk groups may include traditional seasonal influenza at-risk groups as listed in the *Australian Immunisation Handbook* , including infants, older people, people with chronic conditions, pregnant women and Aboriginal people.

Other population groups may also be at increased risk of influenza complications during an influenza pandemic because their health needs may not be met by traditional or mainstream health services, or they may have difficulty accessing health services and emergency resources. This includes some people from culturally and linguistically diverse backgrounds, including refugees, and the homeless.

LHDs need to consider how to identify and support at-risk populations in their district to ensure timely and appropriate information and healthcare is given during a pandemic. This will include appropriate models of care for ensuring that at-risk groups can access anti-viral medication and/or vaccination during a pandemic. Engaging and building relationships with local GPs, multicultural health networks, community and other care providers will be important in preparing to support the health needs of at-risk groups during a pandemic.

9.1 People with chronic diseases

During a pandemic, MoH would work with the ACI, NSW Pharmacy Guild and LHDs/SHNs to ensure people with chronic conditions are adequately supported in the community to manage their conditions. Public messaging may be used to encourage people with chronic conditions to maintain their treatment and seek advice for exacerbations.

The NSW Chronic Disease Management Program (CDMP) is a free service delivered by LHDs which targets NSW adults who have difficulty managing their condition and are at risk of hospitalization. The CDMP model supports care coordination and integration across the primary health care sector. LHDs should work with local GPs and other community providers (e.g. pharmacies) to develop effective business continuity and workforce surge plans that explore the best use of the CDMP and/or alternative models of care that support people with chronic conditions in the community.

9.2 People from culturally and linguistically diverse (CALD) backgrounds

During a pandemic, MoH would leverage off existing relationships with the NSW Multicultural Health Communication Service, NSW Refugee Health Service and the NSW Healthcare Interpreters Service to ensure the health needs of people from CALD backgrounds are supported. These services provide established pathways of communicating with multicultural families, children and young people, older people and people living in rural areas.

Strategies to support culturally appropriate communication with CALD groups during a pandemic are outlined in the *Communications* section of this plan. MoH would also work with the NSW Multicultural Health Communication Service and NSW Refugee Health Service to ensure that other not-for-profit organisations (e.g. Ethnic Community Council) and ethnic medical associations (e.g. Australian Chinese and Vietnamese Medical Associations) are briefed on the key pandemic response strategies over time so that support services could be provided if appropriate. The NSW Community Relations Council can provide links with community leaders in different CALD groups across NSW if appropriate.

LHDs/SHNs should ensure district level pandemic plans incorporate profiling, mobilisation and health services appropriate for CALD groups during a pandemic. Partnership arrangements in the delivery of health services for CALD groups during a pandemic should also be outlined, such as non-governmental organisations, primary health networks and community outreach services.

It will be important to ensure CALD groups are aware of strategies that will help them mitigate any risk of contracting or transmitting pandemic influenza within their community, such as infection control practices and social distancing measures, and how to access locally appropriate health services for prevention or management of pandemic influenza (e.g. PACs and pandemic vaccination clinics). This might include promotion and use of multilingual resources, local interpreter services, bi-lingual GPs and local refugee health services (including paediatric clinics and refugee health nurses where available).

9.3 Other at-risk groups

Depending on the clinical epidemiology of the pandemic virus, other groups including infants, the elderly and pregnant women might also be at increased risk of severe morbidity and mortality.

Strategies to support the health needs of infants and the elderly in regards to outbreaks of pandemic influenza in early childhood centres and residential facilities are outlined in the *Healthcare delivery – community* section of this plan.

10 ABORIGINAL PEOPLE

Aboriginal communities are a particular focus for pandemic planning as they are characterised by having higher numbers of at-risk individuals (i.e. people at higher risk of severe complications from influenza infections) than the general community.

NSW Health also recognises the importance of embedding the needs and interests of Aboriginal people in the development, implementation and evaluation of all NSW Health initiatives, as described in the *Aboriginal Health Statement and Impact Guidelines* (PD2007_082). Consistent with the principle of working in partnerships, adequate and appropriate pandemic planning for Aboriginal communities will only be achieved through effective partnership arrangements.

There are a number of barriers for Aboriginal people to access mainstream health services, such as availability, location, cost and continuity of care. For a range of reasons there may be potential for wide-spread reluctance of Aboriginal people to present to EDs, PACs and other mainstream health services during a pandemic.

LHDs must ensure that appropriate services are available to mitigate the impact of pandemic influenza in Aboriginal communities.

MoH works with the Aboriginal Health & Medical Research Council (AH&MRC) and LHDs to determine the most appropriate service delivery role for Aboriginal health services during a pandemic. Aboriginal Community Controlled Health Services (ACCHS) should be engaged through established partnership arrangements at a district level. Collaborative planning arrangements with non-ACCHS providers of health and health-related services for Aboriginal people should also be developed and implemented.

PHUs and LHD Directors/Managers of Aboriginal Health can facilitate partnerships with ACCHSs for advice on pandemic planning and its cultural appropriateness for Aboriginal people and communities. The MoH Centre for Aboriginal Health is available as another source of advice on Aboriginal health policy and programs at the state level. Due to the strength of kinship and family relationships, LHDs also need to work with Aboriginal health services and community representatives to develop and promote appropriate social distancing methods.

MoH maintains detailed guidance on how these partnership arrangements with ACCHS and Aboriginal communities in NSW should work in regards to planning for and responding to a pandemic.

11 SURVEILLANCE AND MONITORING

CDNA is responsible for determining any national changes in the case definition of the pandemic virus to enable accurate identification of cases and contacts. The Chief Health Officer will advise LHDs, GPs and community pharmacies and other partner agencies of changes to the case definition. LHDs are responsible for informing health facilities as well as private hospitals and Aboriginal health services (in collaboration with the Centre for Aboriginal Health) within their district of changes.

MoH will be primarily responsible for conducting and coordinating surveillance data collection and timely reporting of data to DoH on behalf of NSW Health. DoH will facilitate development of data transfer protocols for this process and will feed back information and analyses to jurisdictions via CDNA and AHPPC. MoH will inform LHDs of any changes to surveillance arrangements as the pandemic progresses.

LHDs are responsible for conducting and coordinating the early and enhanced data collection on cases and contacts during the pandemic. This enhanced data collection is to be undertaken in parallel with the core responsibilities of LHDs during the pandemic, including the appropriate assessment, treatment and management of cases and contacts. Surveillance data will be a key component of health situation reports and reporting through any emergency operation centres established at state and LHD levels.

Surveillance arrangements

During the early response stage (i.e. *Initial action* stage*)*, detailed data on individual confirmed cases and household contacts will be needed to inform the national and state response to the pandemic as described in the AHMPPI.

Intelligence gathering within Australia will be less important if there is high quality surveillance information available characterising the severity and transmissibility of the pandemic strain from the studies carried out overseas prior to the arrival of the pandemic virus into Australia.

As the pandemic progresses and community transmission becomes established (i.e. *Targeted action* stage) it will be less important and less feasible to identify and follow-up each new case and their contacts. Surveillance activities will then focus on monitoring the impact of the pandemic on the community in general and on the health system in particular.

As the pandemic response transitions to the *Stand down* and *Recovery* stages, the new virus may remain circulating in the population and potentially become a new seasonal influenza virus. It will be important to continue to monitor the pandemic virus for a second wave of infection and/or for antiviral resistance using routine surveillance systems.

11.2 Surveillance systems and data

Wherever possible, existing routine surveillance systems will be used during the pandemic. This approach aligns with the *AHMPPI* and the Population Health Surveillance Strategy NSW 2011 to 2020. Routine surveillance for human influenza occurs year-round in NSW but increases during the winter influenza season.

The following systems may be utilised during a pandemic:

- ***Virological surveillance*** – identifying and monitoring virus types and strains over time. Laboratories across NSW notify confirmed cases of influenza to PHUs. In addition, several public and private laboratories contribute a proportion of virological samples sent each year to the World Health Organization Collaborating Centre (WHO CC) for Reference and Research on Influenza (Melbourne) for monitoring antigenic changes in the influenza virus.
- ***Syndromic surveillance*** – monitoring and detecting any increased presentations for ILI in emergency departments or in the community through general practice. Current examples include the Public Health Real-time Emergency Department Surveillance System (PHREDSS) and eGPS, a program to monitor ILI consultations in sentinel GP practices.
- ***Clinical surveillance in hospitals*** – for monitoring hospitalisations or ICU admissions related to severe respiratory disease for adults or children. Current examples include FluCAN (the Influenza Complications Alert Network) and the Australian Paediatric Surveillance Unit.
- ***Case and outbreak notification*** - PHUs receive influenza notifications from laboratories and reports of outbreaks of ILI in institutions such as residential aged care facilities. Notification data are managed with the state-wide Notifiable Conditions Incident Management System (NCIMS).
- ***Mortality surveillance*** - Death registration data from the NSW Registry of Births, Deaths and Marriages are reviewed for deaths attributable to pneumonia and influenza on a weekly basis. Statistical estimates are then produced to predict the number of influenza-related deaths against a baseline estimate of deaths occurring each year.

- ***Initial action stage / First Few 100 surveillance*** – for a limited period at the start of pandemic, LHDs may be required to assist with the national effort to actively follow-up suspected and confirmed cases of pandemic influenza and their household contacts to examine transmissibility of the pandemic virus, the severity of infections and the groups at risk of severe disease. This enhanced data will be managed in NCIMS and shared with the National Notifiable Diseases Surveillance System (NNDSS) under existing arrangements.
- ***Health facility impact monitoring*** – data on the capacity of healthcare services to manage demand (e.g. ED presentations/admissions and bed/ventilation capacity). The Patient Flow Portal currently managed by MoH provides data on bed capacity and patient flow/transfers at the health facility level. Impacts on other areas such as on ED performance, surgical waiting lists, and staff absenteeism will also need to be monitored.
- ***Detailed clinical surveillance in intensive care units*** – for monitoring severity and clinical outcomes of patients admitted to ICU with suspected or confirmed influenza and/or viral pneumonia.
- ***Vaccine distribution and monitoring data*** – if and when a pandemic vaccine becomes available the current vaccine distribution and monitoring system may need to be enhanced to monitor the distribution and uptake of pandemic vaccines.
- ***Adverse event following immunisation (AEFI) surveillance*** – the existing AEFI system will be utilised by DoH and MoH to monitor adverse events associated with any new pandemic vaccine, particularly adverse events that may not have been detected in pre-licensure vaccine trials.

In addition, other surveillance data may need to be collected depending on the severity of the pandemic and the response strategies utilised in NSW, including:

- International border monitoring (if implemented)
- Workforce absenteeism monitoring.

During the pandemic, routine and enhanced data collection may also need to be supported by additional targeted research studies. These studies are likely to be coordinated at a national level. Pandemic research conducted in NSW will be subject to the capacity and interest of different agencies in NSW, including universities, research institutes, LHDs and other Health agencies.

11.3 International border surveillance

The Australian Government is responsible for developing and implementing policies relating to international border control activities. Roles and responsibilities relating to airports are outlined in the *National Pandemic Influenza Airport Border Operations Plan* (FLUBORDERPLAN).

The suite of border measures that the Australian Government may consider during a pandemic are outlined in the *AHMPPI*. The Australian Government has broad quarantine powers supported by legislation, as listed in Appendix 3.

MoH would respond to requests from the Australian Government via AHPPC to provide assistance with international border control and related risk management activities and the implementation of any measures in NSW. MoH would notify LHD Chief Executives of any border assistance required.

MoH routinely works with relevant LHDs to support Biosecurity Officers (Australian Department of Agriculture and Water Resources) with their border health screening work at international points of entry (airports and seaports) as needed, including providing training and assessing referrals.

MoH supports South East Sydney LHD to conduct the Airports and Seaports Human Biosecurity Program with a focus on cruise ships and Sydney International Airport. South East Sydney LHD would likely take a lead role in supporting border agencies at Sydney International Airport if additional border surveillance activities were recommended.

12 LABORATORY

At the national level, PHLN provides expertise and national guidelines for public health labs involved in microbiological testing.

NSW Health Pathology has primary responsibility for maintaining appropriate provision of laboratory services across NSW during a health emergency, including a pandemic. NSW Health Pathology response plans should be referred to for more detail on laboratory roles and responsibilities.

Supporting NSW guidelines for a laboratory response to an emergency may also be developed to help prepare public and private laboratories to respond to a health emergency such as an influenza pandemic.

12.1 Operational aspects of the laboratory response

In order to have an adequate state-wide capacity to detect novel pandemic viruses in humans, certain laboratories have the capability and capacity to develop tests for novel viruses with pandemic potential.

Diagnostic laboratories face a risk of high demand for diagnostic tests throughout the pandemic, and may also have to deal with increased staff absences. Laboratories should regularly review business continuity plans in order to ensure their capability and capacity to respond to a pandemic.

- During the *Initial action* stage of the pandemic (i.e. before the pandemic virus becomes widespread in NSW), the emphasis of laboratory testing will be on early, accurate diagnosis of all cases to identify and determine the spread of the virus across NSW, and to inform case and contact management.
- During the *Targeted action* stage (i.e. as the pandemic becomes more widespread), the pre-test probability of the pandemic virus being the cause of the illness becomes high. Clinicians will need to be advised to restrict testing to cases where the result will directly impact on clinical management.
- Experience from the pandemic in 2009 suggests that there may be particularly high demand on laboratory capacity when there is widespread influenza activity in the community, even following advice to clinicians. Some screening of test requests may be required to prioritise testing.
- During the later stages of a pandemic, testing should focus on cases admitted to hospital, particularly those in at-risk groups, where the outcome affects clinical management of the patient. Testing may also be used to monitor for strain drift and antiviral resistance.

Serological testing using a specific test for the pandemic virus may be useful for retrospective diagnosis, particularly for severely ill patients for whom specimens were not collected or were negative for the virus. Serological studies may be considered to inform a more robust estimate of the prevalence of infection, and assist in formulation of vaccine strategy.

13 ANTIVIRAL MEDICATIONS

Antiviral medication may be administered to cases to reduce the severity and duration of infection and to shorten the period when the patient is infectious. The medication is most effective if taken within 48 hours of symptom onset. Antiviral medications can be used for treatment of cases, and for both pre-exposure and post-exposure prophylaxis.

During a pandemic, antiviral medications, including those held within the National and NSW stockpiles, will be prioritised for treatment.

Widespread use of antiviral medications as prophylaxis (either pre-exposure or post-exposure) is not recommended as this may deplete a critical treatment resource. The limited use of anti-influenza medication as prophylaxis may be recommended by AHPPC for certain priority groups, such as at-risk contacts or healthcare workers treating pandemic influenza patients during a particularly severe pandemic.

MoH in consultation with LHDs, ACI and other clinical care networks will make decisions around prioritisation of antiviral medications for prophylaxis in NSW based on national recommendations.

Access to antiviral medication for young children pre-prepared as a suspension (i.e. in liquid form) is likely to be limited. If required, hospital pharmacies and some community pharmacies in NSW will be able to compound oral antiviral medication suspension. MoH would work with the peak pharmacy bodies and LHDs/SHNs to ensure access and timely distribution of this medication during a pandemic.

Recommendations for the use of antivirals in NSW will depend on the epidemiological and virological characteristics of the virus (e.g. severity, transmissibility, antiviral resistance, and antiviral efficacy), pre-existing immunity in the community, vaccine availability and logistical constraints.

MoH will provide LHDs, community pharmacies and primary health care providers with clear and timely guidance on antiviral medication use (e.g. agreed target groups, indications for use, dosage, precautions, storage, transport and disposal) as early as possible during the pandemic response. Clinicians can search the NSW Health website for more information on these medications if needed.

The *State-wide Standing Order for Supply or Administration of Medication for Public Health Response* policy (PD2013_035) outlines the arrangements for NSW Health registered nurses to administer and/or supply antiviral medication to cases and contacts for the purpose of treatment or prophylaxis in the community, such as at PACs, residential aged care facilities, or schools.

14 VACCINATION

Vaccination against a novel pandemic virus is a key response activity outlined in the AHMPPI. As soon as a pandemic virus is identified, work begins to produce a customised pandemic vaccine. Due to the lead-time required to manufacture a new vaccine, it may take many months after the emergence of a pandemic before there is enough vaccine for the Australian population.

In addition to customised pandemic vaccines, candidate pandemic vaccines may be available from DoH. Candidate vaccine seed strains have been developed for the avian-origin and swine-origin influenza virus sub-types. The effectiveness of these vaccines will depend upon the match between the seed strain and influenza strain causing the pandemic.

The use of candidate vaccines will depend on many factors, including early virological data, timing and spread of infection in Australia, availability of vaccine and predicted impact of the pandemic. It might be decided these vaccines would be prioritised for at-risk groups and/or healthcare workers during the initial action response stage of the pandemic.

The principles of vaccine prioritisation for the states and territory jurisdictions will be discussed collaboratively through the AHPPC. DoH will coordinate distribution of pandemic vaccines to states and territories. MoH will coordinate the distribution of vaccine to nominated vaccine dispensers (e.g. LHDs/SHNs, GPs) in NSW.

The national pandemic vaccine distribution strategy will be influenced by the amount of vaccine available and the stage of the pandemic when it becomes available. If the vaccine only becomes available after the first wave of pandemic has passed then there will be a preference for using existing vaccine delivery systems, particularly involving general practice.

If an initial supply of a pandemic vaccine becomes available during a pandemic and is recommended to be distributed as part of the outbreak response then this likely to be most effectively delivered through LHDs and SHNs.

LHDs /SHNs are responsible for developing strategies to provide pandemic vaccination to the public within their district in the outbreak setting, in addition to their usual staff vaccination programmes.

Provision of both candidate and pandemic-specific vaccines can be via several models coordinated by LHDs/SHNs depending on the severity of the pandemic virus and vaccine supply. MoH maintains guidelines for LHDs/SHNs regarding the establishment and operation of vaccination clinics during a pandemic.

LHDs/SHNs will be asked to plan for two vaccination scenarios according to MoH guidelines: (i) vaccination of priority groups with a candidate or pandemic-specific vaccine, (ii) mass vaccination for the wider LHD population with a pandemic specific vaccine. It will also be important that LHDs/SHNs consider the needs of at-risk groups in their population when planning vaccination clinics according to these scenarios

LHDs/SHNs should collaborate with local health service and community providers to plan for appropriate models of pandemic vaccine delivery that meet the needs of their population in accordance with MoH guidelines. This may include vaccination through general practice clinics, community centres (e.g. schools or sporting clubs) or through Aboriginal Community Controlled Health Services (ACCHS).

LHDs/SHNs will need to plan for appropriate vaccine clinic locations that allow for adequate crowd control, patient flow and space to facilitate patient assessment, vaccination and observation. LHDs/SHNs will also need to consider staffing arrangements to ensure adequate numbers of immunisers are available to participate in vaccination clinics.

Staff at general practices and community health centres – including GPs, practice nurses and nurse practitioners – represent a skilled workforce capable of supporting pandemic vaccine delivery and administration. LHDs/SHNs should work with primary health networks in their district to plan for inclusion of these staff in the delivery of vaccination clinics as appropriate. Community pharmacists registered in NSW to administer influenza vaccines may also be utilised.

A pandemic influenza vaccination campaign may overlap with the annual seasonal influenza campaign. MoH will provide any specific state-wide instructions about coordinating both vaccination campaigns simultaneously.

15 NATIONAL AND STATE MEDICAL STOCKPILES

Medical stockpiles are strategic reserves of medicine and equipment designed to allow rapid access to standardised items that may not be available in a timely manner through routine supply channels due to increased national or international demand.

The Australian Government is responsible for maintaining the National Medical Stockpile (NMS) and for developing related deployment plans for these items to states and territories. The Chief Health Officer is able to request deployments from the NMS. If national demand is significant, requests may need to be prioritised across the states and territory jurisdictions.

MoH maintains the State Medical Stockpile (SMS) of essential supplies, such as PPE and antiviral medications, for NSW and is responsible for developing deployment plans for these items to LHDs.

HealthShare NSW is responsible for routine procurement of goods and services for LHDs in NSW. During a pandemic, warehousing and distribution of health supplies and uptake of essential items will be monitored by HealthShare NSW. When essential items (e.g. PPE) are no longer available through routine procurement channels, MoH will provide advice to LHDs regarding requesting SMS items.

LHDs are responsible for planning local distribution of resources provided to LHD facilities. In some situations, MoH may ask LHDs to help distribute goods to other healthcare facilities within their area.

APPENDIX 1: ACRONYMS AND ABBREVIATIONS

ACI	Agency for Clinical Innovation
AH&MRC	Aboriginal Health & Medical Research Council
AHMPPI	Australian Health Management Plan for Pandemic Influenza
AHPPC	Australian Health Protection Principal Committee
CALD	Culturally and linguistically diverse
CDNA	Communicable Diseases Network Australia
CE	Chief Executive
DoH	Department of Health (Commonwealth)
EDs	Emergency departments
EMPLAN	NSW State Emergency Management Plan
GP	General practice
HEMU	Health Emergency Management Unit
HSFAC	Health Services Functional Area Coordinator
HPNSW	Health Protection NSW
ICU	Intensive care unit
ILI	Influenza-like illness
JH&FMH	Justice Health and Forensic Mental Health
LHD	Local health district
MoH	NSW Ministry of Health
NAPHIP	National Action Plan for Human Influenza Pandemic
NCIMS	Notifiable Conditions Incident Management System
NHEMRN	National Health Emergency Media Response Network
NMS	National Medical Stockpile
PHLN	Public Health Laboratory Network
PHREDSS	Public Health Real-time Emergency Department Surveillance System
PHU	Public health unit
PIFAC	Public Information Functional Area Coordinator
PPE	Personal protective equipment
SERM Act	State Emergency Rescue Management Act
SCHN	Sydney Children's Hospitals Network
SHN	Specialty health network
SMS	State Medical Stockpile
WHO	World Health Organization
WHOCC	WHO Collaborating Centre for Reference and Research on Influenza

APPENDIX 2: GLOSSARY

AIIMS	Australasian Inter-Service Incident Management System provides an emergency management structure that enables seamless integration of activities and resources of amongst and between agencies when applied to an emergency.
Antiviral medications	Antiviral medications decrease the severity and duration of influenza infections, and reduce the risk of illness in exposed individuals.
Combat agency	The agency identified in *EMPLAN* as the agency primarily responsible for controlling the response to a particular emergency (source: *SERM Act*).
Candidate pandemic vaccine	A vaccine based on a strain of influenza virus considered to have pandemic potential. This vaccine may provide partial protection if it develops into a pandemic strain that is easily transmissible between humans (source: *AHMPPI, 2014)*
Customised pandemic vaccine	A customised pandemic vaccine is a vaccine tailored to a specific pandemic virus strain. It cannot be developed until the next pandemic virus emerges (source: *AHMPPI 2014*).
Health services (NSW)	Health services refer to any medical, hospital, ambulance, paramedical, community health or environmental health service or any other service relating to the maintenance or improvement of the health, or restoration to health, of persons or the prevention of disease in or injury to persons in NSW(source: *Health Administration Act, 1982* No 135, pg. 2).

	This definition specifically refers to the administration of NSW Health services (see below).
First Few 100	FF100 is a surveillance protocol developed by the Australian Government for collection of detailed epidemiological and clinical data on the first few hundred confirmed cases (& their household contacts) of pandemic influenza (source: *AHMPPI 2014).*
NCIMS	Notifiable Conditions Incident Management System – routine database for recording and collecting epidemiological data on cases of notifiable diseases in NSW.
NSW Health	The expression "NSW Health" may be used to describe the Ministry and any other body and organisation under the control and direction of the Minister or the Health Secretary. This includes local health districts, pillars, shared services and other affiliated health agencies, such as NSW Ambulance, HealthShare NSW, Health Infrastructure, NSW Health Pathology, eHealth and St Vincent's Health network.
NHEMRN	National Health Emergency Media Response Network – national peak committee (including jurisdictional health department communications teams) responsible for coordinating the development and dissemination of national communications during a pandemic. (source: *AHMPPI, 2014*).
Pandemic	A pandemic is an epidemic on a global scale. Only Type A influenza viruses have been known to cause influenza pandemics (source: *AHMPPI*, 2014).
Pandemic assessment centres (PACs)	PACs (formerly known as *flu clinics*) are specifically planned facilities that will be needed during a pandemic for medical assessment and management of people with suspected pandemic influenza (source: *AHMPPI 2014*).
Post-exposure prophylaxis	A dose/s of a drug (usually antibiotic or antiviral) given immediately after exposure to disease and before onset of illness (source: *AHMPPI,* 2014).
Pre-exposure prophylaxis	A dose/s of a drug (usually antibiotic or antiviral) given before exposure to a disease, to protect the person from being infected (source: *AHMPPI, 2014*).
Quarantine	The limitation of freedom of movement for a period of time of well persons who are likely to have been exposed to the virus to prevent their contact with people who have not been exposed (source: *AHMPPI, 2014*).
Sub plan	A sub plan is an action plan for a specific hazard, critical task or special event. It is prepared when the management arrangements necessary to deal with the effects of the hazard, or critical task or special events differ from the general coordination arrangements set out in the main or supporting plan for the area (source: *NSW EMPLAN*).
Surge capacity	Health service's to expand beyond normal capacity to meet an increased demand for clinical care (source: *UK DH, Managing Demand and Capacity guidance, 2009*)

APPENDIX 3: LEGAL FRAMEWORK

There are several key pieces of legislation supporting the NSW response to a pandemic.

Australian Government legislation

The Quarantine Act 1908

This Act aims to prevent the introduction of specified diseases into Australia and prevent the spread of such diseases within Australia.

The Biosecurity Act 2015

The new Biosecurity Act will commence on 16 June 2016, replacing the Quarantine Act 1908. Just as with the Quarantine Act, the biosecurity legislation will be co-administered by the Ministers responsible for Agriculture and Health.

National Health Security Act 2007

This Act provides for the exchange of public health surveillance information between the Australian Government and the states and territories, and, where relevant, the WHO.

NSW legislation

State Emergency Rescue and Management Act 1989 (as amended)

This Act details the emergency management framework in NSW.

Public Health Act 2010 and Regulation 2012

This Act outlines public health management in NSW, including notifiable diseases and infectious disease emergencies.

Health Administration Act 1982

This Act establishes the Health Administration Corporation and outlines the functions of the NSW Minister of Health and Health Secretary.

Health Records and Information Privacy Act 2002 (as amended)

This Act governs the management of health information in the NSW public and private sectors.

Health Services Act 1997 (as amended)

This Act outlines the structure of the NSW public health system.

Local Government Act 1993 (as amended)

This Act governs the functions (including regulatory functions) of local councils in NSW.

Poisons and Therapeutic Goods Act 1966 (as amended)

This Act lists poisons and drugs of addiction and states that Australian Government therapeutic goods laws apply in NSW.

Poisons and Therapeutic Goods Regulation 2008 (as amended)

This Regulation supports the *Poisons and Therapeutic Goods Act 1966* and authorises the Health Secretary with powers for emergency medication supply.

Protection of the Environment Operations Act 1997 (as amended)

This Act is the key piece of environment protection legislation administered by the Environment Protection Authority and allows the Government to set out explicit protection of the environment policies.

Work Health and Safety Act 2011 (as amended)

This Act aims to protect workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from workplace practices.

APPENDIX 4: ASSOCIATED POLICIES AND GUIDELINES

International plans

World Health Organization's Global Influenza Programme

National plans

Australian Health Management Plan for Pandemic Influenza (AHMPPI)

Australian Immunisation Handbook

National Action Plan for Human Influenza Pandemic (NAPHIP)

National Pandemic Influenza Airport Border Operations Plan (FLUBORDERPLAN)

Sector-specific guidance

Australasian College of Emergency Medicine – *Management of Severe Influenza, Pandemic Influenza and Emerging Respiratory Illnesses in Australasian Emergency Departments*

Communicable Diseases Network Australia – *Influenza infection: national guidelines for public health units*

Communicable Diseases Network Australia – *A practical guide to assist in the prevention and management of influenza outbreaks in residential care facilities*

National Health and Medical Research Council (2010) *Australian Guidelines for the Prevention and Control of Infection in Healthcare*

Royal Australian College of General Practitioners – *Managing Pandemic Influenza in General Practice*

Royal Australian College of General Practitioners – *Pandemic flu kit – implementation guide*

Royal Australian College of General Practitioners – *Infection prevention and control standards*

NSW whole of government guidelines and policies

Memorandum of Understanding between NSW Government and Unions NSW in relation to an influenza pandemic

New South Wales State Emergency Management Plan (EMPLAN)

NSW Human Influenza Pandemic Plan

NSW Health guidelines and policies

(Check NSW Health website for most recent versions)

Aboriginal health impact statement and guidelines (PD2007_082)

Child Wellbeing and Child Protection Policies and Procedures for NSW Health (*PD2013_007*)

Emergency Management Arrangements for NSW Health (PD2012_067)

Environmental cleaning policy (PD2012_061)

Infection control policy (PD2007_036) *[or most current version]*

Influenza pandemic – providing critical care (PD2010_028)

Influenza – Minimising transmission of influenza in healthcare facilities: 2010 influenza season (GL2010_006)

Leave matters for the NSW Health service (PD2014_029)

Notification of infectious diseases under the Public Health Act 2010 (IB2013_010)

NSW HEALTHPLAN (PD2014_012)

NSW Hospital in the Home (HITH) guideline (GL2013_006)

Occupational assessment, screening and vaccination against specified infectious diseases (PD2011_005)

Public Health Workforce Surge Guidelines (GL2014_003)

Public Health Emergency Response Preparedness Minimum Standards (PD2013_039)

Public Health Field Response Guidelines (GL2014_001)

State-wide Standing Orders for the Supply or Administration of Medication for Public Health Response (*PD2013_035*)

APPENDIX 5: AUSTRALIAN PANDEMIC RESPONSE STAGES

Stage	Sub-stage	Key national-level response strategies
Preparedness* No novel strain detected (or emerging strain under initial investigation)		• Establish pre-agreed arrangements by developing and maintaining plans; • Research pandemic specific influenza management strategies; • Ensure resources are available and ready for rapid response; and • Monitor the emergence of diseases with pandemic potential, and investigate outbreaks if they occur.
Response	**Standby** Sustained community person to person transmission overseas	• Prepare to commence enhanced arrangements; • Identify and characterise the nature of the disease (commenced in Preparedness); and • Communications measures to raise awareness and confirm governance arrangements.
	Action Cases detected in Australia Sporadic cases and/or outbreaks occurring in the community Widespread person to person transmission in community	Action is divided into two groups of activities: Initial (when information about the disease is scarce) • Prepare and support health system needs; • Manage initial cases; • Identify and characterise the nature of the disease within the Australian context; • Provide information to support best practice health care and to empower the community and responders to manage their own risk of exposure; and • Support effective governance. Targeted (when enough is known about the disease to tailor measures to specific needs.) • Support and maintain quality care; • Ensure a proportionate response; • Communications to engage, empower and build confidence in the community; and • Provide a coordinated and consistent approach.
	Stand down Virus no longer presents a major public health threat	• Support and maintain quality care; • Cease activities that are no longer needed, and transition activities to seasonal or interim arrangements; • Monitor for a second wave of the outbreak; • Monitor for the development of antiviral resistance; • Communications activities to support the return from pandemic to normal business services; and • Evaluate systems and revise plans and procedures.

Source: Australian Health Management Plan for Pandemic Influenza 2014

* The Prevention stage, although not detailed here, represents an ongoing stage of alertness and preparation for the next pandemic. This includes close collaboration between the human and animal health sectors to monitor viruses with pandemic potential and regular exercising of existing response arrangements.

APPENDIX 6: NSW RESPONSE ACTIVITIES BY PANDEMIC STAGE

PREVENTION
• Monitor for emergence of potential pandemic pathogens • Contribute to regional and global influenza surveillance • Contribute to research on pandemic influenza mitigation strategies • Monitor emerging evidence on influenza treatment and influenza outbreak control measures
PREPAREDNESS
• Promote respiratory etiquette and hand hygiene practices to the general public, particularly in relation to annual influenza season messaging • Promote infection prevention and control practices with healthcare workers, and maintain high levels of infection control for usual respiratory pathogens • Develop, test, revise and exercise pandemic plans for the health sector and across government • Ensure the State Medical Stockpile (SMS) is maintained • Support the development and maintenance of a health workforce with skills necessary for rapid deployment during a pandemic • Support NSW Health agencies to develop operational plans • Engage with primary care providers (especially GPs), the community pharmacy sector and other stakeholders • Optimise hospital performance during peak seasonal influenza activity
RESPONSE **Standby -** *Sustained community person-to-person transmission of a novel virus overseas*
• Initiate emergency management arrangements as required • Check stockpiles, pre-deploy essential items and plan use of resources and medical stockpile items (e.g. PPE, antivirals and vaccines, and resources to support their administration) • Enhance surveillance activities that enable early characterisation of disease • Commence communications to mobilise health services, emergency responders and to inform the public about the pandemic and key response strategies • Awareness campaigns developed to reflect the age and cultures of at-risk groups • Consider appropriate telephony surge options for the NSW Health service, including the identification and training of additional communications staff • Review and consider appropriateness of social distancing measures • Ensure laboratory capability/capacity, including specimen collection and transport are ready • Review support arrangements for home isolation of cases and home quarantine of contacts • Prepare primary and secondary care services for anticipated surge in patients (e.g. use of triage protocols, plans for cohorting and using infection control protocols and resources)
RESPONSE **Initial action -** *initial cases detected in Australia. Intelligence about the disease is scarce*
• Provide clinical management and public health guidelines to support health system response • Provide information through the PIC and SEMC to support the whole-of-government response • Contribute to border control measures as appropriate • Support the implementation of the enhanced surveillance arrangements in LHDs for early characterisation of the pandemic virus (e.g. First Few 100 surveillance studies) • Provide antiviral medication for cases (treatment) and/or contacts (prophylaxis) as appropriate • Monitor workforce surge requirements and consider deployments of staff across LHDs and seek inter-jurisdictional support where necessary

- Communicate with the public and healthcare workers to inform them of early response and actions that can help mitigate risk of exposure
- Develop targeted messaging and education for sectors directly affected by pandemic response measures (e.g. schools, public transport)
- Support effective governance arrangements with NSW Health agencies and other sectors/networks
- Support the implementation of candidate vaccine programs in LHDs if appropriate
- Consider implementation of a range of social distancing measures
- Implement appropriate NSW Health telephony surge options
- Isolate early cases and contacts in healthcare settings or in the community
- Implement strategies that support the health of at-risk groups in the community
- Prepare and/or deploy alternative models of care in the LHDs
- Focus laboratory testing resources on early and accurate diagnosis of cases

RESPONSE
Targeted action – *widespread activity in the community. Response measures tailored to specific needs based on available intelligence.*

- Support and maintain quality of care across health services (e.g. implement triaging protocols for EDs and ICUs, re-enforcing infection control measures)
- Provide antiviral medication for cases (treatment) as appropriate
- Support the implementation and management of whole of hospital initiatives, including alternative models of care, where appropriate and feasible
- Support the implementation of vaccination clinics in LHDs as appropriate for pandemic vaccines
- Focus surveillance activity on collecting core data from routine established systems, including health system performance data
- Communicate with the public and healthcare workers to help them understand changes in the pandemic response and actions that will help mitigate risk of exposure
- Implement strategies that continue to support the health of at-risk groups in the community
- Monitor and support health workforce surge requirements to maintain healthcare services
- Continue to promote infection control measures for health care workers and public
- Prioritise influenza diagnostic testing for patients where results will affect clinical management.

RESPONSE
Stand down – *manage the withdrawal of response strategies and transition to inter-pandemic arrangements*

- Consider additional support for maintenance of services in areas disproportionately affected
- Determine whether to cease enhanced activities and health response measures
- Continue to ensure that core data is collected from routine surveillance systems - including monitoring for second wave and/or antiviral resistance
- Ensure communication activities support return to normal business
- Plan evaluation and/or pandemic review exercises where relevant

RECOVERY
Support the return to 'normal business' and recovery activity in the community

- Contribute to community recovery (via State Emergency Recovery Controller if activated)
- Ensure surge and support staff recruited to work during the pandemic response are briefed and supported to return to their normal duties across NSW Health and partner agencies
- Conduct debrief and evaluation activity to inform future plans and policies
- Consider preparations for a subsequent pandemic wave

APPENDIX 7: PANDEMIC ROLES AND RESPONSIBILITIES

Agency or organisation	Responsible for coordinating aspects of pandemic planning and response at the state level, including but not limited to:
Ministry of Health	
Population and Public Health Division and Health Protection NSW	• Coordinating surveillance and monitoring activity, including early enhanced case finding and contact tracing in the *Initial action* stage • Developing and implementing isolation and quarantine guidelines • Developing public health communication resources in collaboration with the Strategic Relations and Communications Branch (SR&CB) • Health service planning for at-risk groups and Aboriginal peoples • Implementing international border measures in consultation with the State Pandemic Management Team and relevant LHDs • Deploying and assisting in the delivery of pandemic vaccine programs • Providing guidance and support to laboratories • Managing stockpile strategy • Managing antiviral and vaccine distribution • Developing policies to support operational management • Developing and running exercises with relevant stakeholders to test and improve operational plans for the pandemic response • Ensuring state-wide coordination of the public health response through the Public Health Controller
System Purchasing and Performance Division	• Monitoring and reporting on the impact of the pandemic on health system performance • Coordinating with LHDs on the management of emergency departments and other pandemic-related services • Coordinating the sharing of key learnings between LHDs and troubleshooting resource sharing and optimal resource allocation • Monitoring the impact of the pandemic on elective surgery • Providing expert advice on patient flow and emergency departments for public hospitals across NSW in conjunction with the ACI
Governance, Workforce and Corporate Division	• Supporting communications with the private healthcare sector (e.g. private hospitals) in collaboration with LHDs and MoH • Providing advice on the supply and administration of pharmaceuticals, and supporting links and communications with the NSW Pharmacy Guild, NSW Therapeutic Advisory Committee and hospital pharmacies • Providing legal advice regarding emergency legislation and the healthcare response • Developing pandemic-related workforce planning strategies and initiatives, including occupational health and safety policies for NSW Health agencies • Liaison with unions and other workforce groups • Managing Ministerial/Parliamentary requirements • Implementing communication strategies and resources to help keep healthcare workers informed about the pandemic • Developing and distributing state-wide health communication resources in collaboration with Population and Public Health Division • Supporting development of public awareness/notice campaigns and resources during the pandemic in collaboration with the Public Affairs Unit

Strategy and Resources Division	• Providing support, where required, for negotiating inter-government or cross-jurisdictional assistance • Assisting in the identification of and supporting liaison with primary health networks and groups • Supporting the following technical areas including preparing guidance, monitoring and communicating with networks and providing spokespeople: paediatrics, family and maternal health, aged care, disability, mental health & drug and alcohol • Supporting close liaison between the Chief Paediatrician/Paediatric Controller, the LHDs and MoH Population and Public Health Division • Supporting the Mental Health Controller
Public Affairs Unit	• Liaising with the Public Information Functional Area Coordinator • Managing the response to all press enquiries • Preparing press releases • Preparing spokespeople for media appearances • Acting as the focal point for liaison with National Health Emergency Media Response Network
NSW Health agencies	
Clinical Excellence Commission	• Providing infection control and patient safety advice and expertise to MoH • Developing state-wide strategies and resources (including training modules to rapidly up-skill staff) to maintain high levels of compliance with infection control and patient safety recommendations • Monitoring of and communicating with relevant networks • Monitoring and responding to potential quality and safety issues
Agency for Clinical Innovation	• Maintaining links with key clinical networks and providing clinical expertise on patient care • Developing targeted communication for specific medical specialities • Serving as primary point of contact with and providing secretariat support to clinical networks, including identifying emerging issues with networks • Maintaining close liaison with the Medical Controller
Health Education and Training Institute	• Coordinating the development of state-wide education and training packages in agreement with LHDs and MoH • Providing advice on the suitability of current online training resources (e.g. infection control) and the options for "just-in-time" training for surge staff prior to the pandemic
Bureau of Health Information	• Redeploying surge staff during a pandemic (e.g. biostatistical and research staff) where possible • Considering additional targeted research studies in NSW
HealthShare NSW	• Ensuring the supply and delivery of food, hotel, linen and cleaning services are maintained during a pandemic for LHDs, including the public hospital system and PACs • Coordinating state-wide procurement of clinical supplies including pharmaceuticals, consumables and equipment • Monitoring and reporting on system usage of items in short supply • Identifying and providing medical and disability equipment support to people in the community during a pandemic (e.g. home oxygen) • Considering appropriate use of the Greater Metropolitan Non-Emergency Patient Transport services to support the pandemic • Supporting the HealthShare NSW Controller

E-Health	• Maintaining strategies and procedures that both minimise state-wide information communication technology (ICT) service failure and allow for effective support for increases in clinical demand for ICT services during a pandemic
Local health districts (LHDs) / specialty health networks (SHNs)[1]	• Preparing and maintaining arrangements for surge staff capacity across all NSW Health employment categories • Operating and/or deploying surveillance systems for pandemic data collection and reporting as appropriate (e.g. FF100 surveillance studies) • Implementing models of care that allow for delivery of antivirals and vaccines • Supporting and maintaining quality of care across health services and implementing infection control measures as appropriate • Ensuring cleaning and waste management services are appropriate for pandemic influenza • Preparing and implementing arrangements with the Aboriginal Community Controlled Health Services and other key partners that provide health support for at-risk groups in the population • Undertaking engagement and seeking agreement with local government councils on possible support roles during a pandemic (e.g. recruitment of staff to support surge strategies and assist with delivering pandemic vaccination clinics) • Coordinating targeted local communication and supporting communication of state-wide messages • Coordinating consistent content of local health facility pandemic plans
NSW Health Pathology	• Communicating with public and private laboratories across the state regarding pandemic response arrangements, including testing capability/capacity, specimen collection and transport, supplies of reagents and consumables and timely reporting of results to clients • Supporting public reference laboratories with resources for surge response • Ensuring reference centres provide support to other laboratories for acquisition of pandemic-specific testing capacity • Considering, in conjunction with Health partners, prioritisation/suspension of non-emergency testing and outsourcing to an alternative provider based on clinical advice and technical and workforce constraints • Liaising with interstate laboratories for local testing close to state borders • Supporting the Pathology Controller and close liaison with the Public Health Controller
NSW Ambulance	• Ensuring pandemic readiness for all ambulance services across NSW (e.g. business continuity and surge staff planning) • Supporting the Ambulance Controller and close liaison between the Public Health and Medical Controllers during a pandemic response • Coordinating aeromedical services during the pandemic • Responsible through the Ambulance Controller for coordination of patient transport as defined in *NSW HEALTHPLAN*

1 For the purposes of this document when referring to LHDs we also include SHNs (i.e. Justice Health and Forensic Mental Health Network and the Sydney Children's Hospitals Network). However, there is recognition that the implementation of some emergency response activities may differ between LHDs and these two health entities due to a focus on providing healthcare for target at-risk groups within specific correctional or hospital settings respectively and with a lack of field deployment.

APPENDIX 8: CHECKLIST FOR LHD/SHN PANDEMIC PLAN

LHD Pandemic Plan				
Item	**Details**	**Completed**	**In Progress**	**Not Started**
Requirements of the plan	Currency - plan last revised (specify date)	…/…/…..	☐	☐
	Hierarchy - notes how the plan inter-relates to other relevant facility and LHD plans	☐	☐	☐
	Consistency – note how the plan relates to the LHD, state and national pandemic plans	☐	☐	☐
	Management by objectives – notes the objectives of the response at the district level	☐	☐	☐
	Roles and responsibilities – notes responsibilities of all stakeholders at the district level	☐	☐	☐
	Stages – outlines response activities at each stage of the pandemic response (i.e. prevention, preparedness, response, recovery)	☐	☐	☐
	Testing or exercises – outlines how and when (frequency) the plan and key response activities would be exercised	☐	☐	☐
Communication	Details networks for local dissemination of MoH information	☐	☐	☐
	Details how LHDs will communicate with private healthcare providers and other health partners in their district	☐	☐	☐
Surveillance and monitoring	Details arrangements for collection of enhanced data & follow up of first few cases and contacts of pandemic	☐	☐	☐
	Details arrangements for collection of key epidemiological and clinical data throughout the pandemic as agreed at the national and state level	☐	☐	☐
Laboratory arrangements	Identifies the process for the urgent transfer of clinical specimens to a reference laboratory	☐	☐	☐
Medical stockpiles	Describes arrangements to order, store and distribute national and/or state medical stockpile items locally within the district	☐	☐	☐
Mitigation of transmission	Includes reference to relevant national or state infection control guidelines, and/or gives specific instructions on how to implement these guidelines locally within the district	☐	☐	☐
	Details how local support will be provided to people in home isolation and quarantine (particularly early in the pandemic)	☐	☐	☐
Antiviral medications	Identifies how antiviral agents will be distributed and administered to patients according to MoH policy	☐	☐	☐
Vaccination	Details how vaccination clinics would be set up and operated with appropriate resources and staff	☐	☐	☐
Clinical management	Includes reference to guidelines or protocols for management of pandemic patients in health care facilities	☐	☐	☐

Clinical Management (ctd)	Includes reference to guidelines for the isolation / cohorting of large number of pandemic patients	☐	☐	☐
	Describes strategies to manage additional demand for clinical services at both the facility and LHD level	☐	☐	☐
Healthcare delivery-facilities	Includes plans for the screening and triage of pandemic patients through emergency departments	☐	☐	☐
	Includes reference to guidelines for the management of patients in critical care units (adults and children)	☐	☐	☐
	Includes detail on how pandemic and non-pandemic patients would be managed in facilities	☐	☐	☐
	Includes detail on the establishment, staffing, and resources required to operate a PAC	☐	☐	☐
	Considers alternative models of care for rural and remote healthcare providers	☐	☐	☐
Healthcare delivery - community	Plan specifically details the role of GPs, community pharmacies and primary health care networks	☐	☐	☐
	Plan considers how support might be provided to immigration detention facilities or other residential institutions for controlling outbreaks	☐	☐	☐
	Plan considers how support might be provided to local schools or early childhood centres for controlling outbreaks	☐	☐	☐
	Plan considers the role of community health providers in the maintenance of core mental health services	☐	☐	☐
Aboriginal people	Identifies way to engage and partner with Aboriginal Community Controlled Health Services in pandemic planning and response	☐	☐	☐
	Identifies way to provide appropriate models of care for Aboriginal peoples during a pandemic	☐	☐	☐
At-risk groups	Identifies ways to support the health needs of at-risk groups, such as people with chronic diseases and CALD groups during a pandemic.	☐	☐	☐
Workforce issues	Detail included on how on to manage staff shortages, particularly surge strategies for clinical and non-clinical staff	☐	☐	☐
	Identifies alternative workforce staff to assist critical areas during a pandemic response	☐	☐	☐
	Consideration of staff training needs and exercises	☐	☐	☐
Role of local government	Plan specifically details the support roles that local government councils will provide during a pandemic	☐	☐	☐
Recovery arrangements	Describes arrangements to return the health facility back to where it was prior to the emergency	☐	☐	☐
	Details arrangements to support staff welfare during the return to 'business as usual'	☐	☐	☐
	Details arrangements for conducting evaluation or lessons learnt exercises	☐	☐	☐

INFECTION PREVENTION AND CONTROL POLICY IN HEALTHCARE SETTINGS (PD2023_025)

PD2023_025 replaced PD2017_013

POLICY STATEMENT

Effective infection prevention and control is central for reducing the burden of healthcare associated infections and providing a safe working environment within the healthcare settings. All health workers must comply with infection prevention and control requirements to prevent, identify, manage, and control healthcare associated infections.

SUMMARY OF POLICY REQUIREMENTS

This Policy Directive outlines the mandatory infection prevention and control requirements for NSW Health Organisations including inpatient, outpatient, outreach.

All NSW Health Organisations must implement the requirements that are set out in this Policy Directive, including:

- clinical governance oversight of infection prevention and control program
- legal and legislative framework
- requirements for the infection prevention and control program.

Local infection prevention and control documents are to align with the principles outlined in this Policy Directive and are consistent with the principles and practice outlined within the following NSW Health publications:

- Infection Prevention and Control Practice Handbook
- COVID-19 Infection Prevention and Control Manual
- Respiratory Protection Program Manual
- NSW Health Policy Directive Cleaning of the Healthcare Environment (PD2023_018).

The full Infection Prevention and Control in Healthcare Settings policy is available at:

https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2023_025

COMMUNITY SHARPS DISPOSAL BY AREA HEALTH SERVICES (PD2008_004)

PD2008_004 rescinds PD2005_262.

The Policy Directive should be read in conjunction with:
PD2017_013, Infection Prevention and Control Policy
PD2017_026, Clinical and Related Waste Management for Health Services
GL2017_024, Needle and Syringe Program

INTRODUCTION

The purpose of the Policy Directive is to clarify services to be provided at public hospitals for the disposal of used needles, syringes, and other community sharps resulting from the self-management of medical conditions by members of the public. The Policy Directive applies specifically to public hospitals controlled by an Area Health Service. Similar services must be provided at Area Health Service facilities authorised as outlets of the NSW Needle and Syringe Program regardless of whether the person requesting the disposal service is a client of the Needle and Syringe Program.

"Community sharps" are sharps that have been generated by non-clinical activities. This category includes any instruments or medical devices that have sharp points or edges capable of cutting, piercing or penetrating the skin (for example needles, syringes with needles or lancets), that are designed for such a purpose, and that have the potential to cause injury or infection. In practice the items for which disposal is most commonly requested are syringes, insulin pen needles and lancets used by people in the self-management of diabetes and other medical conditions. However, other items of a similar nature are within the scope of the Policy Directive, including syringes used by injecting drug users.

Ambulatory care in a community setting has become increasingly accepted as a preferred management approach for people with chronic disorders. As a consequence, the disposal of sharps generated in the self-management of these conditions has moved from the healthcare facility clinical waste stream into local communities where domestic waste and recycling services are not designed to accept them.

The inappropriate disposal of community sharps can have a significant impact on workplace health and safety in many non-clinical occupations, particularly in local government and the waste and recycling industries. In many areas of NSW the options available for the disposal of community sharps by people with diabetes and other medical conditions requiring self-injection do not meet current principles and practices for infection control.

While the peer reviewed literature indicates that the potential for transmission of a blood borne virus from an injury involving a community sharp is extremely low, sharps injuries also expose the recipient to the emotional trauma associated with the possibility of disease transmission. Media reporting of these incidents can encourage the perception that harm minimisation initiatives like the Needle and Syringe Program are responsible for all adverse events involving community sharps.

NSW Health works with a range of partner organisations to improve the management of community sharps. Initiatives include publication of *Community Sharps Management Guidelines for NSW Councils*, and development of an information and resource website at http://www.communitysharps.org.au A copy of the Guidelines can be downloaded from the website. The Guidelines promote the concept of "shared responsibility" for the safe management and disposal of community sharps by major stakeholders involved in the life cycle of this equipment, including Area Health Services.

ROLE OF AREA HEALTH SERVICES

It has been NSW Health policy since 1 October 2002 that a community sharps disposal service must be provided at all public hospitals and authorised outlets of the Needle and Syringe Program, with the cost to be met from existing Area Health Service budgets. A shared responsibility approach to community sharps management requires that all Area Health Services provide appropriate services to manage the environmental impact of

community sharps, including their ultimate disposal. Many public hospitals have well-established procedures in place to accept community sharps from the public for disposal at no charge. Such a service may represent the only disposal option consistent with current infection control principles and practices available in those locations where the local council has not yet implemented community sharps disposal arrangements.

Area Health Services have discretion to determine the most appropriate and cost-effective service in each case. To minimise the risk of occupational exposure of hospital staff to community sharps during disposal, one preferred model is to provide a secure disposal bin capable of accepting the most commonly used sizes of sharps containers in a readily accessible part of the hospital grounds. This model removes the necessity for hospital staff to handle sharps containers, allows direct and confidential disposal by community members, and enables 24-hour access. It also avoids any inconvenience to members of the public if a designated staff member is not available to assist them with disposal. While there is no regulation or standard in NSW that applies to the design and construction of community sharps bins, *Community Sharps Management Guidelines for NSW Councils* (page 40) provides design criteria for large public place disposal bins to address duty of care and occupational health and safety considerations.

There is no legislative or other requirement in NSW that individuals use a sharps container that conforms to an Australian Standard for the storage, transport or disposal of community sharps. To stipulate the use of such containers for community sharps disposal at public hospitals may act as a significant disincentive to community members to follow safe disposal practice and potentially places other members of the community at risk of injury from inappropriate disposal. A well-designed public hospital disposal service for community sharps that does not require staff involvement in the disposal process will address occupational health and safety risks potentially associated with this practice and will avoid the need to stipulate that only sharps containers that conform to an Australian Standard will be accepted for disposal.

It should be noted that there is no requirement to provide a replacement sharps container to members of the public who choose to use the disposal service.

MINIMUM SERVICE REQUIREMENTS

The minimum requirements for a community sharps disposal service at a public hospital or authorised outlet of the Needle and Syringe Program are as follows:

1. There must be no charge to access the disposal service.
2. There must be reasonable access at public hospitals in regard to the location of the disposal service and times when the service is available. Consideration should be given to ensuring that short-term parking is provided in close proximity to the disposal point at hospitals where traffic is heavy and/or parking facilities are limited.
3. Persons requesting a disposal service must not be required to provide information or documentation of a personal or medical nature.
4. The service must adequately address the occupational health and safety of staff and contractors, and public safety considerations.
5. Persons who are not clients of the Needle and Syringe Program may choose to attend a needle and syringe service, drug and alcohol service or similarly identified facility in order to obtain a disposal service but must not be required to do so.

An Area Health Service is not required to provide a disposal service for commercial generators of clinical waste/sharps waste, or local government authorities, but at its discretion the Area Health Service may agree to do so under such conditions as it considers appropriate.

Once community sharps have been accepted or aggregated at a public hospital or authorised outlet of the Needle and Syringe Program the needles, syringes, lancets and similar equipment are classified as clinical waste and must be managed in accordance with Policy Directive PD2005_132, *Waste Management Guidelines for Health Care Facilities*.

PROMOTION OF SAFE DISPOSAL

To encourage safe disposal behaviour, patients who generate community sharps should be provided with accurate and consistent information on the importance of appropriate disposal and the location of community sharps disposal facilities provided by the Area Health Service. Staff in contact with patients who generate community sharps should ensure that this information is provided at the commencement of treatment or service access, and is reinforced during subsequent contacts. Referral of patients to their local council for information on the location of other community sharps disposal facilities in their area is also appropriate.

To facilitate this process it is recommended that each Area Health Service establish a coordinating committee or working group consisting of representatives from services or programs that have contact with patients or clients who generate community sharps, or have responsibility for workplace safety or public health issues. Stakeholders with an involvement in community sharps management include diabetes educators, renal unit staff, community health nurses, infection control staff, Public Health Units, and the Needle and Syringe Program.

A useful model for this approach is the Safe Disposal Committee established by the HIV and Related Programs Unit at South Eastern Sydney Illawarra Area Health Service. This multi-disciplinary Committee has operated for a number of years and has collaborated with hospital administrators to facilitate the installation of public access community sharps bins at public hospitals. The Committee includes representatives from local councils and stakeholders such as Diabetes Australia-NSW as well as Area Health Service representatives and has been active in promoting the safe disposal of community sharps to Area Health Service staff and local communities.

Further advice on current service models and minimum standards of service provision can be obtained by contacting the Senior Project Officer, Community Sharps, Mr David Baker, by email at david.baker@hnehealth.nsw.gov.au

67(5/08)

COMMUNITY SHARPS MANAGEMENT (GL2017_023)

PURPOSE

The *Community Sharps Management Guidelines* have been developed to help NSW councils assess and manage risks and minimise harm associated with unsafe or inappropriate disposal of community sharps. Councils, Local Health Districts, government and some non-government organisations all have a role in providing an effective disposal infrastructure and in encouraging safe disposal.

These guidelines replace the *Community Sharps Management Guidelines for NSW Councils* (2004).

KEY PRINCIPLES

Sharps which are generated by community members through self-administered healthcare or recreation are called community sharps. This includes needles, syringes, lancets and prickers resulting from self-injection at private residences and self-injection in public places that are not placed in a designated sharps container provided by a business, commercial or community service activity.

Although no single strategy will be appropriate for all local government areas, the following general principles apply to all community sharps disposal services and infrastructure.

Public health - A focus on improving public health for the whole community.

Harm reduction - A focus on management activities that promote better health, social and economic outcomes for both the individual and the community.

Collaboration - Consultation with partners including all levels of government, local health and social services, business groups, waste management contractors, residents and other stakeholders .

301(20/12/17)

Capacity building - Providing appropriate resources and encouraging the community and other stakeholders to maintain sustainable local community sharps management activities.

USE OF THE GUIDELINE

These guidelines promote a shared responsibility model that encourages engagement by NSW councils of a range of stakeholders to coordinate and deliver a local community sharps management program. Potential partners include state government agencies, medical equipment manufacturers, waste and recycling contractors, local businesses, non-government organisations, and local/regional healthcare services.

To download the guidelines please go to
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2017_023

301(20/12/17)

NSW NEEDLE AND SYRINGE PROGRAM (GL2023_002)

GL2023_002 replaced GL2017_024.

GUIDELINE SUMMARY

The NSW Needle and Syringe Program is an evidence based public health program that aims to reduce the transmission of bloodborne viruses. It provides sterile injecting equipment, peer support and healthcare navigation to people who inject drugs.

KEY PRINCIPLES

The Guideline outlines Needle and Syringe Program approval and authorisation requirements, service models, operation requirements and workforce development opportunities. This Guideline is applicable to all services and agencies delivering the Needle and Syringe Program in NSW.

NSW Health recognises the important public health contribution made by the Needle and Syringe Program. The following supports the aim and objective of the Needle and Syringe Program:

- Distribution of sterile injecting equipment
- Distribution of condoms and lubricants
- Provision and promotion of safe disposal of used injecting equipment
- Development of a peer workforce
- Development and delivery of education and health promotion programs, including peer support programs
- Provision of information and patient referrals to other health and welfare services, including primary health care and psychosocial support
- Provision of take-home naloxone and other overdose prevention strategies
- Vaccinations
- Hepatitis C (HCV), Hepatitis B (HBV) and Human Immunodeficiency Virus (HIV) testing
- Contribution to blood borne virus and other research and evaluation activities
- Provision of brief interventions

These activities aim to address barriers to accessing sterile injecting equipment, increase health education and reduce the experiences of stigma and discrimination faced by people who inject drugs.

The NSW Needle and Syringe Program guidelines are available at:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2023_002

345(18/01/23)

MANAGEMENT OF PEOPLE WITH HIV WHO RISK INFECTING OTHERS
(PD2019_004)

PD2019_004 rescinds PD2009_023

PURPOSE

This Policy Directive sets out roles, responsibilities and communication pathways for service providers that manage people with HIV who risk infecting others. It provides a management framework that recognises education, support and access to HIV antiretroviral treatment as effective and sustainable responses. The policy also gives directions on how to escalate responses when required.

MANDATORY REQUIREMENTS

- Management of HIV transmission risk behaviours must be consistent with the NSW *Public Health Act 2010*, *NSW Public Health Regulation 2012,* and *Public Health Amendment (Review) Act 2017.*
- Where a person presents with behaviours that risk HIV transmission, professionals and health entities must deliver services consistent with the roles and responsibilities set out in section 2 and the management framework in section 4 of this policy.
- Referrals to Police must be directed through the Ministry of Health on advice from the Panel for management of people with HIV who risk infecting others (the Panel) or the Panel Chair (section 6).
- Communication with other jurisdictions on public health matters about a person with HIV must be via the Chief Health Officer (CHO).

IMPLEMENTATION

Clinicians are responsible for:

Diagnosing clinicians are responsible for ensuring that their patients with HIV have access to the NSW HIV support program and five key support services, including:

- Treatment
- Psychosocial support
- Counselling on prevention of infection to others
- Support for partner notification
- Linkage to services including specialist and community services.

Local Health Districts (LHDs) are responsible for:

- Assigning a point of contact for people under management level 1 or above who can coordinate appropriate services and resources available within the LHD
- Implementing an effective work health and safety management system for staff that seek out a client in the community in unknown environments. This must be in line with the policy directives on Work Health and Safety: Better Practice Procedures and Preventing and Managing Violence in the NSW Health Workplace – A Zero Tolerance Approach.

The LHD point of contact is responsible for:

- Identifying a clinical case coordinator where complex issues present
- Seeking advice from the Panel Chair and where the Panel's advice is sought:
    - submitting reports as requested
    - ensuring that an appropriate LHD representative is available to present on the case at Panel meetings
    - implementing the Panel's recommendations.
- Monitoring and ensuring the person's ongoing engagement in care (including referral to other LHDs and coordination of referral to other jurisdiction when required)
- Implementing public health orders
- Acting as the point of contact for the Panel and the Ministry staff.

CPH, NSW Ministry of Health and Health Protection NSW are responsible for:

- Providing secretariat support to the Panel and coordinating communication between the Panel and the CHO. The Panel secretariat is responsible for:
    - seeking reports from the clinician or other service provider responsible prior to the Panel meetings
    - providing Panel meeting minutes to the CHO
    - communicating all recommendations to the LHD and preparing and sending a letter from the CHO to the LHD Chief Executive (CE) in a timely way.
- Referring HIV transmission risk issues brought by the LHD to the attention of the Ministry to the Chair and ensuring formal feedback is provided to the LHD in a timely and supportive way
- Obtaining and communicating advice from Legal and Legislative Services Branch as required
- Collaborating and partnering with HIV organisations, state-wide services and government departments to activate State-wide resources to ensure transmission risk behaviours of a person with HIV are minimised
- Managing notifications of patients with HIV infection and referrals to the HSP.

The Panel is responsible for:
Providing expert advice (through collaboration with LHDs) to clinicians, LHDs and the CHO on strategies to minimise transmission risks.

Panel Chair is responsible for:

- Providing advice and other responses to queries raised on public health risk concerns
- Referring cases to the full Panel where additional advice is needed
- Raising urgent or complex cases about alleged risks with the CHO via the Director, Population Health Strategy & Performance, CPH or their delegate.

Management of people with HIV who risk infecting others – Procedures

1 BACKGROUND

This Policy Directive provides a health system framework for managing people with HIV who risk infecting others.

Under the NSW *Public Health Act 2010*, people with a sexually transmissible infection (STI) (including HIV) are required to take reasonable precautions against transmitting their infection to others. Reasonable precautions against the spread of HIV through sexual activities are:

- Having a suppressed HIV viral load (less than 200 copies/mL), usually resulting from being on antiretroviral therapy (ART) ; or
- Using a condom; or
- Seeking and receiving confirmation from a sexual partner that they are taking HIV pre-exposure prophylaxis (PrEP).

ART is readily available to people with HIV in NSW.

HIV can also be transmitted by sharing drug injecting equipment (contaminated needles, syringes and other injecting equipment, and drug solutions). HIV transmission among injecting drug users can be prevented by never sharing injecting equipment. Though rare in NSW, HIV can also be transmitted from women with HIV to their unborn infants during pregnancy.

There are occasions where a person aware of their HIV infection fails to take precautions against transmitting HIV to others. Reasons for this vary, but generally include contributing factors like substance use and/or misuse, mental health issues, intellectual/cognitive impairment, and psychosocial vulnerabilities (like homelessness and/or social isolation).

In most cases, Local Health Districts (LHDs) can address these contributing factors through holistic and multidisciplinary case management. Case management can include providing access to counselling, education, housing providers, and disability pensions. Supportive measures (for example shopping vouchers) can also be used to encourage a person to initiate and adhere to ART. NSW Health funds a range of services that the LHDs can access to fund appropriate supportive measures. These services and their contact details can be found in Section 7.

As HIV is a chronic illness, preventing transmission may require practices that must be maintained over a life time of the person with HIV. Directive strategies are difficult to sustain and may result in negative outcomes like mistrust of health workers.

1.1 Public health orders

The NSW *Public Health Act 2010* has mechanisms to direct a person's behaviours under certain circumstances using a public health order. A public health order may require a person to be tested, undergo treatment or be detained. Only in rare circumstances, and typically after exhausting other options, public health orders can be used to detain or require a person to take specific actions.

Further information on public health orders is in Section 4.3.

1.2 Public health risks

A person with HIV may pose public health risk if they engage in behaviours that do not consider HIV infection implications for others. It is unlikely that a single risk incident (for example, failing to adhere to ART during a short, exceptional circumstance) would be considered a public health risk. Single risk incident should be managed at a local level (see Section 4.1).

To assess whether there is a public health risk, the following needs to be considered:

- Whether the person's risk behaviour is current and likely to continue (risk behaviour may include: having a viral load of more than 200 copies/mL, or engaging in condomless sex or having sex with a partner not on PrEP and/or engaging in unsafe injecting practices
- The person's understanding of their HIV status and how their behaviour risks transmission of HIV to others
- Whether the person understands how they can prevent transmitting HIV
- Whether the person has access to reasonable precautions like access to ART, condoms and sterile needles and syringes
- The person's adherence to ART, engagement in care (including regular monitoring of HIV viral load)
- The person's cooperation and engagement with services in managing their transmission risk.

ROLES AND RESPONSIBILITIES

Person with HIV

A person with HIV is ultimately responsible for managing HIV transmission risks. If a person with HIV injects drugs, they are ultimately responsible for safe injecting practices.

There has been widespread education and information publicly available about HIV prevention through safe sex and injecting practices for many years.

If a person with HIV is known to be placing others at risk of infection, then collaborative efforts by health and other services (including Housing, Family and Community Services and non-government organisations) to support HIV treatment initiation and adherence may help address the risk of transmission.

Clinicians

Diagnosing clinicians (both specialists and general practitioners) are responsible for ensuring that their patients with HIV have access to the NSW HIV support program and five key support services, including:

1. Treatment
2. Psychosocial support
3. Counselling on prevention of infection to others
4. Support for partner notification
5. Linkage to services including specialist and community services.

This includes:

- Advising the person on their obligation under Section 79 of the NSW *Public Health Act 2010* to take reasonable precautions against spreading their HIV infection
- Monitoring engagement of the person with HIV with health services and following up where the person fails to engage or disengages from care
- Referring patients with complex care needs to specialist assessment and support, e.g., HIV community teams, AIDS Dementia and HIV Psychiatry Service (Adahps), NSW Partner Notification Service, and alcohol and mental health services (in accordance with the management framework (Section 4 of this Policy Directive)
- Referring patients to the Chair (for cases involving concerns about HIV transmission risks).

Local Health Districts

Local Health Districts (LHDs) are responsible for:

- Assigning a point of contact for people under management Level 1 or above (see Section 4) who can coordinate services and resources that are available and appropriate within the LHD for people who risk infecting others with HIV. The point of contact should be a senior health professional in the LHD who can liaise with the NSW Ministry of Health (the Ministry) and other service providers.

The LHD point of contact is responsible for:

- Identifying a clinical case coordinator where complex issues present
- Seeking advice from the Chair of the Panel for Management of People Who Risk Infecting Others (the Panel). The Panel consists of experts appointed by the Ministry to advise on complex HIV risk management issues (see Section 2.6 of this Policy Directive)
- Where the Panel's advice is sought:
    - submitting reports as requested
    - ensuring that an appropriate LHD representative (e.g. a clinical case coordinator or case coordinator) is available to present on the case at Panel meetings
    - implementing the Panel's recommendations.
- Monitoring and ensuring the person's ongoing engagement in care and
    - where the person relocates to another LHD, referring and ensuring linkage to a relevant service
    - consistent with National Guidelines for the Management of People with HIV Who Place Others at Risk, informing the Centre for Population Health (CPH, at the Ministry) if certain people under management relocate to another state or territory, to coordinate a formal communication from the Chief Health Officer (CHO) to another jurisdiction.
- Implementing an effective work health and safety management system for staff that seek out a client in the community in unknown environments. This must be in line with the Policy Directives on Work Health and Safety: Better Practice Procedures and Preventing and Managing Violence in the NSW Health Workplace – A Zero Tolerance Approach
- Implementing public health orders
- Acting as the point of contact for the Panel and the Ministry staff to liaise with about a person with HIV with risk behaviours in their LHD
- Following up on actions relevant to the LHD from Panel's recommendations (including following up on the implementation of the public health order).

At any stage, the LHD can contact the Chair for advice about management of a patient with HIV who may risk infecting others.

Centre for Population Health, NSW Ministry of Health and Health Protection NSW

The CPH and Health Protection NSW are responsible for:

- Providing secretariat support to the Panel and coordinating communication between the Panel and the CHO. The Panel secretariat is responsible for:
    - seeking reports from the clinician or other service provider responsible prior to the Panel meetings
    - providing Panel meeting minutes to the CHO. The minutes will include the Panel Chair's (the Chair) advice on the referrals received between regular Panel meetings and the Panel's deliberations and advice on cases under assessment or management
    - communicating all recommendations to the LHD and preparing and sending a letter from the CHO to the LHD Chief Executive (CE) in a timely way. This includes communicating key recommendations to the LHD point of contact informally prior to the letter from the CHO to the LHD CE.
- Referring HIV transmission risk issues brought by the LHD to the attention of the Ministry to the Chair and ensuring formal feedback is provided to the LHD in a timely and supportive way
- Obtaining and communicating advice from Legal and Legislative Services Branch as required
- Collaborating and partnering with other agencies to activate State-wide resources (e.g. from other NSW State agencies) to ensure transmission risk behaviours of a person with HIV are minimised
- Managing notifications of patients with HIV infection and referrals to the NSW HIV Support Program.

Panel for the management of people with HIV who risk infecting others

The Panel is responsible for:

- Providing expert advice (through collaboration with LHDs) to clinicians, LHDs and the CHO on strategies to minimise transmission risks. The Panel's membership and Terms of Reference are in Appendix 1.

Panel Chair

The Chair is appointed by the CHO and is responsible for:

- Providing advice and other responses to queries raised on public health risk concerns
- Referring cases to the full Panel where additional advice is needed
- Raising urgent or complex cases about alleged risks with the CHO via the Director, Population Health Strategy & Performance, CPH or their delegate.

The Chair's contact details are available at Appendix 1.

PRIVACY AND CONFIDENTIALITY

Information about a person's HIV status, testing or treatment is 'health information', and is regulated by the NSW *Health Records and Information Privacy Act 2002* and the NSW *Public Health Act 2010.*

LHDs, the Ministry, Health Protection NSW and all other service providers involved in the care of a person with HIV are responsible for maintaining the person's confidentiality and privacy.

Medical practitioners must not include a patient's name or address in a notification to the Secretary of the Ministry under Sections 54 or 55 of the NSW *Public Health Act 2010,* if the information relates to a person's HIV status. Under Section 56, a person who, in the course of providing a service, acquires information that another person has HIV, has been or is to be, or is required to be tested for HIV, must take all reasonable steps to prevent disclosure of that information. However, information about a person's HIV status may be disclosed:

- When the person consents to disclosure, or
- To a person involved in providing care, treatment or counselling to the person concerned, or
- To the Secretary of the Ministry, if a person has reasonable grounds to suspect that failure to disclose the information would likely present a risk to public health, or
- In connection with administration of the NSW *Public Health Act 2010* or the regulations, or
- For the purposes of legal proceedings arising from the NSW *Public Health Act 2010* or the regulations, including any report of those proceedings, or
- In accordance with a requirement imposed under the NSW *Ombudsman Act 1974,* or
- In circumstances prescribed by the regulations

Maximum penalty for breach of Section 56 is 100 penalty units or imprisonment for 6 months, or both.

LHDs should put in place reasonable measures to ensure that information about a person's HIV status is only disclosed in line with the above.

It is recommended that precautions be taken to ensure the person's identity remains confidential to services directly involved in the patient's management. Correspondence with services involved in the person's management should refer to the person using an alias or anonymous reference. If de-identifying using a 2x2 name of the patient, it should be first two letters of the last name, followed by first two letters of the first name, all capital letters. A person's name must be fully de-identified when there are only two letters in the person's names. De-identifying the person in correspondence relating to the person's management is important to guard against unintended disclosure to unauthorised third parties, e.g. as a result of accidentally misdirected emails, unauthorised access to emails, loss of files etc.

HIV information should not be disclosed to police except in response to a warrant or subpoena (noting that, if information has been provided to the Secretary of the Ministry under Part 4 or 5 of the NSW *Public Health Act 2010*, the Secretary of the Ministry cannot be compelled to disclose the information). If police request information about a person's HIV status or medical history in the context of an investigation of an allegation of intentional transmission of HIV, advice should be sought from the Ministry (CPH and Legal Branch).

Patient consent is required if a medical practitioner wishes to disclose a HIV positive patient's identity to the patient's sexual partner(s) or drug use contact(s). A signed consent is advisable in these circumstances. This does not limit the patient's attending medical practitioners' ability (in accordance with clause 39B of the *Public Health Regulation 2012)* to inform sexual partner(s) or drug contact(s) that they may be at risk of contracting HIV, without disclosing the HIV positive patient's identity. See Section 4.1.3.

For further information on privacy, see: Privacy Manual for Health Information at http://www.health.nsw.gov.au/policies/manuals/Pages/privacy-manual-for-health-information.aspx

THE MANAGEMENT FRAMEWORK

The management framework for people with HIV who risk infecting others includes following levels:

Management level	Summary of case management
Local management	The client is managed by the treating clinician(s) who can obtain advice from the Chair as required.
Level 1 supported management	The client is managed by the treating clinician(s) with support from the Panel. The client may be issued with a letter of warning.
Level 2 public health order	The client is managed by the treating clinician(s) with support from the Panel. An authorised medical practitioner has issued the client with a public health order, placing conditions about their behaviour, treatment, health care, and/or supervision or requiring the client to be detained.

Each level is discussed in detail below.

Initial steps: counselling, education and support

The clinician is primarily responsible for a person's HIV health care. The clinician is responsible to provide (or refer) a person with HIV to support and counselling at the time of diagnosis. This includes counselling on public health responsibilities and safe sex and injecting practices.

If a person is alleged to be behaving in a way that endangers, or is likely to endanger public health, as a first step, the clinician should clarify the person's understanding of their public health responsibilities and provide counselling and education to support behavioural change.

In some cases, the clinician may refer the patient to an experienced sexual health/HIV counsellor for regular and intensive counselling.

The involvement of other service providers may also assist. Where possible and appropriate, a community organisation with peer group involvement or relevant cultural knowledge and/or translator services should be involved to advise or support appropriate behaviour by the person.

If the behaviours or other issues presenting are likely to result in management challenges, the clinician should refer the case to the Chair.

The Chair is responsible to advise and support the clinician to effectively manage risks. The clinician will need to create a supportive environment where health promoting messages are clearly and frequently reiterated and the consequences of behaviours that place others at risk are spelt out. The means of prevention (including for instance, condoms, sterile needles and syringes and information) should be readily and easily accessible, along with access to regular health checks, testing and ART. Where a patient does not have a sustained undetectable viral load, the clinician should regularly discuss the risk to new partners, their access to PrEP (long term) or post-exposure prohylaxis (short term) and any contacts that need follow up because of their HIV infection risk.

Case conferencing

A case conference is often useful in developing a comprehensive care plan for the person. The complex needs often arise from cognitive/behavioural and/or mental health issues.

Case conference should involve all local services engaged in the care of the person. Services that should be included are:

- Adahps or other outreach teams (depending on the person's place of residence) – to assess and manage the person's risk behaviours
- Where possible, the Public Health Unit/Sexual Health Service (as nominated by the LHD) – to facilitate the involvement of service directors in the case conference, particularly when underlying problems, such as drug, alcohol and mental health issues contribute to the risk behaviours
- Aboriginal health worker or Multicultural HIV and Hepatitis Service (MHAHS) to advise when cultural issues are present and consideration should be given to getting interpreter services when language barriers present.

This case conference should not replace case conferences which occur in the context of good multidisciplinary clinical care for patients with chronic illnesses. The purpose of this case conference is to discuss issues relevant to the HIV risk and risk management.

Contact tracing or partner notification

The diagnosing clinician (or a delegate under their direction) must ensure that contact tracing (also known as partner notification) of sexual and/or needle sharing partners is conducted in accordance with appropriate ethical and legal standards.

Further guidance on contact tracing can be found on https://stipu.nsw.gov.au/wp-content/uploads/GP-Contact-Tracing-Tool.pdf. Local sexual health services or the NSW Sexual Health InfoLink (SHIL) can also provide further guidance on partner notification. The NSW Sexual Health InfoLink can be contacted on 1800 451 624.

Seeking advice from the Chair

At any stage, LHDs and service providers can contact the Chair where there are complexities or the person of concern has risk behaviour despite LHD and/or clinician having given advice or taken other steps . The Chair can provide direct advice to the LHD, or may choose to seek advice from the Panel.

The Chair will consider a range of matters including the public health risk, credibility of the information, the person's competence or co-morbidities, steps taken by the local clinician/local service, involvement of appropriate services, and the likelihood that local actions may succeed.

Level 1: Supported management

Cases concerning current or ongoing HIV transmission risks can be referred to the Chair for advice.

If the Chair considers on the basis of the information available, that the person may need management with support from the Panel, then a meeting of the Panel will be convened to discuss the case.

As the Panel has an advisory role, even though a case may be accepted under Panel management, the LHD remains responsible for public health and clinical care/case management functions. This includes where cases are complex or need longer term management strategies.

The LHD point of contact and the CPH will support effective communication between the LHD and the Panel.

Letter of warning

The Panel may recommend sending a letter of warning to the person of concern.

The letter of warning's purpose is to ensure that the person is aware of their responsibilities and to prompt a change in risk behaviours. It will also outline the person's public health responsibility to take reasonable precautions, options for preventing HIV transmission, and other expectations that the person should respond to (e.g. participating in counselling, attending HIV clinical services).

The clinician, Clinical Nurse Consultant, or the Public Health Unit must deliver the letter of warning in person, with discussion to ensure that the person understands the content of the letter. If appropriate and necessary, an Aboriginal health worker or MHAHS should be involved to overcome language barriers.

The directions in the letter of warning remain valid for two years from its issue unless revoked earlier. The Panel must consider at its meeting whether the person is complying with the directions in the letter of warning and whether further actions are required.

Before a letter of warning can be issued, there needs to be evidence of the person knowingly placing another at risk of infection. The evidence may include detectable viral load, lack of engagement with services, and/or psychosocial factors (e.g. sex work, homelessness, mental health issues) that may instigate risk taking behaviours.

Panel's ongoing assessment

The Panel will consider the follow up reports on the person's management at each of its regular meetings.

Officers of the Ministry's Legal and Regulatory Services can provide advice on these issues. Approaches to Legal and Regulatory Services should be made via the CPH.

Discharge from supported management

The Panel can decide to either continue to monitor the person's management or discharge them from Panel support, depending on:

- Whether actions recommended by the Panel were implemented
- The effectiveness of the actions implemented
- Whether the risk behaviours have stopped or have been reasonably managed
- Whether there is continuing information or evidence that the person is endangering others
- An assessment of the likelihood that the person will continue to present transmission risks.

CPH will communicate the discharge of the person from the Panel support to the LHD point of contact in a timely manner.

Level 2: Public health order

A public health order under the NSW *Public Health Act 2010* should be considered on a case-by-case basis. It should only be considered when such an order is judged the most effective way to prevent risk to public health, and where all other management options have been unsuccessful.

Where the Panel recommends that a public health order is issued, the Chair should verbally advise the CHO without delay, in consultation with the CPH, Health Protection NSW and Legal Branch. The LHD point of contact and Public Health Unit Director or delegate should meet to provide advice on public health orders if required.

A public health order can be modified on the subsequent recommendation of the Panel.

A public health order may require the person to do one or more of the following:

a) To refrain from specified conduct
b) To undergo specified treatment (including ARTs)
c) To undergo counselling by one or more specified persons or by one or more persons belonging to a specified class of persons
d) To submit to the supervision of one or more specified persons or of one or more persons belonging to a specified class of persons
e) To undergo specified treatment at a specified place.

A public health order may also require a person with HIV to be detained at a specified place for the duration of the public health order, and specify what the person is required to do during the detention. A public health order detaining a person on the basis that their HIV status and sexual activity presents a genuine risk to public health expires automatically at the end of 3-business days after the person is served with the order. The 3-day detention period can possibly be extended if an application is made to the NSW Civil and Administrative Tribunal (NCAT) to extend the detention period, and the person under the order is served with copies of the application to NCAT. NCAT will then be required to hold a hearing into the reasons for the detention, and has the power to confirm the public health order, vary the public health order and confirm it as varied or revoke the order under Section 64 of the NSW *Public Health Act 2010*.

Making the public health order

Authorised medical practitioners may make public health orders under Section 62 of the NSW *Public Health Act 2010.* Authorised medical practitioners are: the CHO or a registered medical practitioner authorised by the Secretary of the Ministry to exercise the functions of an authorised medical practitioner under Division 4 of the NSW *Public Health Act 2010.*

An authorised medical practitioner must take into account the principle that restriction of the liberty of the person should be imposed only if such restriction is the most effective way to prevent a real risk to the public. An authorised medical practitioner may issue a public health order if satisfied on reasonable grounds that a person:

- Has HIV; and
- Is behaving in a way that poses a risk to public health (e.g. has a detectable viral load and engages in condomless sex or has sex with a partner not on PrEP, and/or engages in unsafe injecting practices).

The public health order should specify what the person with HIV is required to do and the duration of the order.

The LHD point of contact has responsibility for implementing a public health order and advising the CHO that it has been served to the person.

Key decisions and record of decisions

The Chair must record the advice provided to LHDs, clinicians and others in a file note, and report to the Panel on advice provided to LHDs, clinicians and others at the Panel meetings.

The Chair is responsible for ensuring that the rationale, decisions and recommendations are made both at the Panel meeting and outside the meetings. The recording of these will normally be made by the Panel secretariat in the form of confidential minutes, which are reviewed and approved by the Chair.

Accurate record keeping is required in all instances.

CUSTODIAL SETTINGS

If a person under the Panel's management is remanded in custody by NSW police (while awaiting a court hearing or following a court sentencing), the Panel will consider whether they remain under the management or be discharged, on a case by case basis.

Corrective Services NSW is responsible for securing the person and the Justice & Forensic Mental Health Network (JH&FMHN) is responsible for the healthcare of the person.

The Panel may provide advice to JH&FMHN having consideration for:

- The inmate's confidentiality, legal and safety issues
- The level of negotiation required with the JH&FMHN, Corrective Services NSW and/or Juvenile Justice NSW.

Where an inmate has been known to the Panel, it is important to ensure planning occurs prior to their release from the prison. JH&FMHN, in conjunction with the CPH must inform the LHD where the person is likely to live after release. JH&FMHN and the LHD should follow a discharge plan to ensure that the person is not lost to care. The inmate should be managed under the Persons in Custody HIV Referral Project, a joint initiative between Adahps, JH&FMN and the HIV community teams that connect inmates who are HIV positive to an appropriate service in the area where they will live on release.

REFERRAL TO NSW POLICE

Intentionally or recklessly infecting a person with HIV is a serious criminal offence under the NSW *Crimes Act 1900*.

The LHD should contact the CPH through the Panel secretariat:

- Immediately where there are clear grounds for a charge involving intentionally causing serious bodily harm
- After further examination and/or management strategies, of unwillingness to alter behaviour that may recklessly or negligently endanger or cause serious harm.

Any concerns or evidence of this type of behaviour (e.g. through partner notification) or of breaches of a public health order should be referred to the Ministry for consideration and appropriate action. This includes possible referral to the NSW Police Force, which must be done by the Ministry on advice from the Panel or the Chair. Charges for intentionally infecting others with HIV trigger Level 1 management under the Panel.

Members of the public, who believe they may have been intentionally or recklessly infected with HIV, may choose to report to the police directly.

USEFUL CONTACTS

Panel Chair
The Chair of the Panel is the Director of Sydney Sexual Health Centre. The Sydney Sexual Health Centre can be contacted on 9382 7440.

In the event of absence of the Chair, contact the head of Sexually Transmissible Infections Programs Unit (STIPU), Sydney Sexual Health Centre.

Panel Secretariat
For information on Panel referrals and advice on this Policy Directive contact: MOH-BBVSTI@health.nsw.gov.au or 9391 9214.

Sexual Health Clinics

A list of Sexual Health Clinics and their contact details can be found on http://www.health.nsw.gov.au/sexualhealth/Pages/default.aspx or call the NSW.

NSW Sexual Health InfoLink (SHIL)

For guidance on partner notification, contact SHIL on 1800 451 624.

The HIV Support Program (HSP) and 5 key support services

Any doctor can self-request support from the HSP. Contact the NSW Health Communicable Disease Branch on 02 9391 9195 and ask to speak with an HIV Surveillance Officer. HSP coordinators strive to contact diagnosing doctors before the doctor gives an HIV diagnosis to a patient but this is not always possible.

Support services

- **Aboriginal Health & Medical Research Council –** Council to represent, support and advocate for Aboriginal communities on Aboriginal health.
  Contact: 02 9212 4777, ahmrc@ahmrc.org.au, http://www.ahmrc.org.au/

- **ACON –** Provides peer focused support to end HIV transmission among gay and homosexually active men and promotes lifelong health of lesbian, gay, bisexual, transgender and intersex (LGBTI) people.
  Contact: 02 9206 2000, acon@acon.org.au, https://www.acon.org.au/

- **Bobby Goldsmith Foundation (BGF) –** Provides a range of support and interventions that address key determinants of poor health outcomes for people living with HIV. BGF provides direct financial and practical assistance, emotional support, financial counselling, housing, study and employment support to the most vulnerable and disadvantaged people living with HIV.
  Contact: 02 9283 8666

- **Multicultural HIV and Hepatitis Service (MHAHS) –** Organisation working with culturally and linguistically diverse (CALD) communities in NSW to improve health and wellbeing in relation to HIV, hepatitis B and hepatitis C.
  Contact: 02 9515 1234, info@mhahs.org.au, http://mhahs.org.au/index.php/en/

- **NSW Users and AIDS Association (NUAA) –** A community-based organisation governed, staffed and led by people with lived experience of drug use that provides education, practical support, information and advocacy to users of illicit drugs, their friends, and allies.
  Contact: 02 8354 7300, nuaa@nuaa.org.au, https://nuaa.org.au/

- **Positive Life NSW –** Promotes a positive image of people living with and affected by HIV with the aim of eliminating prejudice, isolation, stigma and discrimination.
  Contact: 02 9206 2177, contact@positivelife.org.au, www.positivelife.org.au

- **PozHet –** Organisation located and managed day-to-day through the Community HIV Service in the Sydney LHD to promote the health and wellbeing of heterosexual people with HIV, their partners and family across NSW through community education, peer support and linkage to health and social services.
  Contact: 1800 812 404, pozhet@pozhet.org.au, https://pozhet.org.au/

- **Sex Workers Outreach Project (SWOP) –** A peer education sex worker organisation focused on HIV, STI and hepatitis C prevention, education and health promotion for sex workers in NSW.
  Contact: 02 9206 2166, swopconnect@swop.org.au, https://swop.org.au/

Organisations to support management of people with HIV related cognitive impairment, multiple comorbidities and complex psychosocial issues

- **Adahps –** AIDS Dementia and HIV Psychiatry Services is a specialist state-wide tertiary outreach service for people with HIV related cognitive impairment, multiple comorbidities and complex psychosocial issues.
  Contact: 02 9382 8600, adahps@health.nsw.gov.au,www.health.nsw.gov.au/adahps

- **South East Sydney LHD Community HIV Outreach Team –** A multidisciplinary team including nurses, dieticians, social workers and an occupational therapist that provides health care services for people living with, or closely affected by HIV across the South East Sydney LHD and Illawarra Shoalhaven LHD.

  Contact: 02 9382 8666, SESLHD-HIVCommunityTeam@health.nsw.gov.au,
  http://www.seslhd.health.nsw.gov.au/HIV_Outreach_Team/aboutus.asp

- **South Western Sydney LHD HIV Outreach Team –** Provides multidisciplinary care for people living with HIV in the South-Western Sydney LHD. The team includes specialist physicians, psychiatrist, and health professionals in the areas of nursing, social work, and dietetics.
  Contact: 02 8738 8372, www.swslhd.health.nsw.gov.au/liverpool/immunology/HIV_AIDS.html

- **Sydney LHD Community HIV Service (Positive Central) –** Provides specialist allied health case management support for people with HIV, including occupational therapy, social work, physiotherapy and dietetics.
  Contact: 02 9395 0444, www.slhd.nsw.gov.au/communityhealth/HIVCommunity/services.html

USEFUL LINKS

National Guidelines for the Management of People with HIV Who Place Others at Risk

www.health.gov.au/internet/main/publishing.nsf/Content/B4D7BD21A78763EDCA257BF0001F951B/$File/hiv-at-risk.pdf

NSW Public Health Act 2010
https://www.legislation.nsw.gov.au/#/view/act/2010/127/full

STI contact tracing tool for general practice
https://stipu.nsw.gov.au/wp-content/uploads/GP-Contact-Tracing-Tool.pdf

APPENDIX: PANEL TERMS OF REFERENCE

The role of the Panel

The Panel provides expert advice to the CHO, LHDs, and specialist clinicians on managing people who risk transmitting HIV to others.

The person's LHD of residence is responsible for coordinating management strategies recommended by the Panel.

Panel membership

Permanent members of the Panel include:

- Chair, an individual with extensive experience in the clinical management of HIV and sexually transmissible infections
- A professional with expertise in the management of people with HIV and complex needs
- A representative of HIV community organisations
- A nominee of the NSW Public Health Directors network
- A professional ethicist.

The Director, Health Protection NSW or their nominee and Director Population Health Strategy & Performance, CPH or their nominee also hold Panel membership. Their role is to advise on NSW health policy, the relevant legislation and service options that may assist in resolving risks and in implementing the Panel's recommendations.

The CHO appoints Panel members and the Chair.

Panel membership is reviewed every two years.

The Chair and all participants in Panel meetings are indemnified by the NSW Treasury Managed Fund in relation to advice provided in the course of the work of the Panel.

The Panel secretariat is an officer nominated by the Executive Director, CPH.

Standards of conduct and conflicts of interest
Panel members must conduct themselves in a professional manner and abide by the NSW Health Code of Conduct while performing duties as part of the Panel.

Members must not disclose official information or documents acquired as a result of their membership, other than as required by law, or when the member has been given proper authority to do so.

Members must declare any actual or perceived conflicts of interest to the Committee Chair as they become known to the member. Conflicts of interests reported by members will be managed in accordance with Conflicts of Interest policy.

Context for the Panel
The Panel supports a well-established framework for managing people with HIV whose behaviours present a public health risk. The framework is based on the principle that most people with HIV are motivated to avoid infecting others and will respond to counselling, education, and access to resources for the prevention of transmission, and services supporting the specific needs of individuals.

The framework allows for a variety of management strategies proportionate to the risk of transmission. Less restrictive strategies will generally be the most sustainable and effective in the long term. To date, application of the framework has effectively stabilised behaviours, therefore averting the need for public health orders in most cases.

Panel Meetings
The Panel meets at least every four months, with additional meetings as needed. Panel members are expected to attend Panel meetings with teleconferencing reserved for exceptional circumstances.

At a minimum, the Panel will receive a report from the Chair on the activities and queries she received since the previous meeting, as well as the advice she provided and reports on progress of those being managed by LHDs with advice from the Panel.

Where the Chair initially assesses a new case as being likely to require intensive management, the person's clinician or referring LHD officer will complete an initial report and will present the case when initially discussed by the Panel. Where a case is under Levels 1 or 2 Panel Management, the LHD will nominate a case coordinator. The case coordinator will ensure that official reports are updated and submitted to the Panel when requested by the Secretariat.

The Chair will invite the clinician or case coordinator to Panel meetings to present on the case. The Chair may invite additional experts to contribute to the Panel's deliberations. Where a case remains under Level 1 management because of pending legal issues and there is no identified risk of transmission the clinician/case coordinator may not need to participate.

The Secretariat is responsible for coordinating the submission of Panel reports and maintaining minutes of the meeting. Minutes will be reviewed and approved by the Chair.

CPH will provide a summary of agreed actions to Panel members immediately after meetings, communicate about relevant actions that need follow up, and monitor implementation of the actions between meetings.

HIV, HEPATITIS B AND HEPATITIS C – MANAGEMENT OF HEALTH CARE WORKERS POTENTIALLY EXPOSED (PD2017_010)

PD2017_010 rescinds PD2017_009, PD2005_311

PURPOSE

Human immunodeficiency virus (HIV), hepatitis B and hepatitis C may be transmitted by significant percutaneous or mucosal exposure to infective blood or other infective body substances. Occupational exposure is defined as an incident that occurs during the course of a person's employment and involves direct contact with blood or other body substances. Such exposures may put the person at risk of acquiring a blood borne virus infection. The purpose of this Policy Directive is to assist Health Services to appropriately assess and manage a health care worker following an occupational exposure in order to prevent disease transmission.

MANDATORY REQUIREMENTS

All health facilities within the NSW public health system are required to implement this Policy Directive. It is also recommended that licensed private health care facilities have regard to this Policy Directive.

Facilities must ensure that:

- An efficient local system is established for reporting and managing potential exposures of HCWs (including non-LHD, non-hospital based health staff or volunteers) to blood borne viruses
- HCWs (including non-LHD, non-hospital based health staff or volunteers) and source patients have access to blood borne virus testing, as appropriate, following an occupational exposure
- Confidentiality is maintained for all testing and reporting relating to occupational exposures
- All staff are aware of whom to contact for advice regarding occupational exposures
- Expert advice is available to all HCWs (including non-LHD, non-hospital based health staff or volunteers) 24 hours a day following a potential BBV occupational exposure to enable rapid assessment and, if needed, timely administration of prophylaxis
- All occupational exposures are reported to SafeWork NSW as required under the *Work Health and Safety Act* (s35 and 36) and *Work Health and Safety Regulation* (cl699) (Refer to SafeWork NSW Factsheet http://www.safework.nsw.gov.au/media/publications/health-and-safety/when-to-notify-blood,-body-fluid-and-needlestick-exposure-incidents)
- HCWs are able to obtain the support to which they are entitled, including access to an Employee Assistance Program or workers compensation if appropriate as documented in NSW Policy Directive *Employee Assistance Program* (PD2016_045)
- The local Public Health Unit is notified in the rare event that hepatitis B or hepatitis C is transmitted from a patient to a health care worker.

Health care workers must ensure that:

- All exposures to blood and body substances are reported as per local protocols.

IMPLEMENTATION

Sections 2 to 5 describe the procedures to be followed by health care workers and health facilities in the event that a health care worker is potentially exposed to a blood borne virus following an occupational exposure.

1. BACKGROUND

1.1 About this document

Human immunodeficiency virus (HIV), hepatitis B and hepatitis C may be transmitted by significant percutaneous or mucosal exposure to infective blood or other infective body substances. Occupational exposure is defined as an incident that occurs during the course of a person's employment and involves direct contact with blood or other body substances. Such exposures may put the person at risk of acquiring a blood borne virus infection.

Adherence to infection prevention and control practices as outlined in the current version of the NSW *Infection Control Policy* remains the first line of protection for health care workers (HCWs) against occupational exposure to HIV, hepatitis B and hepatitis C. The policy and guidelines for the NSW Health Service on prevention of sharps injuries are documented in the NSW Policy Directive *Sharps Injuries – Prevention in the NSW Public Health System* (PD2007_052). The current version of the NSW Policy Directive *Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases* mandates that health staff directly involved in patient care and/or the handling of human tissue, blood or body fluids complete the full course of hepatitis B vaccination and provide their post vaccination serology result.

This policy directive outlines the procedures that should be followed in the event of an occupational exposure including:

- The immediate care to be taken by the exposed HCW
- An assessment of the risk of blood borne virus transmission
- Management of the exposed HCW including blood borne virus testing and post exposure prophylaxis.

1.2 Key abbreviations and definitions

Appropriately skilled officer – means a medical practitioner or nurse with expertise in the assessment of the risk of blood borne virus transmission and the management of the exposed HCW following an occupational exposure

anti-HBs – antibody to hepatitis B surface antigen

BBV – blood borne virus. Refers to HIV, hepatitis B and hepatitis C viruses.

HBV – hepatitis B virus

HBIG – hepatitis B immunoglobulin

HBsAg – hepatitis B surface antigen

HCW – health care worker. Refers to all persons working in healthcare settings who have the potential for exposure to infectious/potentially infectious body fluids. This also includes non-LHD, non-hospital based health staff and volunteers.

HCV – hepatitis C virus

HIV – human immunodeficiency virus

PCR – polymerase chain reaction

PEP – post exposure prophylaxis

Source - person from whom blood or body fluids originated

Window period – refers to the time after a person has been exposed and is the maximum time it takes for a test to give an accurate result

Legal and legislative framework

Health Services have obligations under the *Work Health and Safety Act* 2011 (NSW) and the *Public Health Act* 2010 (NSW) and their associated regulations.

2 IMMEDIATE CARE OF THE EXPOSED HEALTH CARE WORKER

After exposure to blood or other body substances the exposed HCW should as soon as possible do the following:

- Wash the exposure site with soap and water
- Undertake appropriate care of any wound(s)
- If eyes are contaminated then rinse them, while they are open, gently but thoroughly with water or normal saline
- If blood or other body substances get in the mouth, spit them out and rinse the mouth with water several times
- If clothing is contaminated remove clothing and shower if necessary
- Inform their line manager so they can immediately be relieved from duty and notify the appropriately skilled officer who is designated to conduct an urgent risk assessment on potentially exposed staff (as per local reporting procedures) to ensure that necessary further action is undertaken.

Sections 2 to 5 outline the procedures to be followed by health care workers and health facilities following an occupational exposure. Refer to Appendix A for a summary of these procedures and Appendix B for a summary of recommended laboratory testing.

RISK ASSESSMENT OF THE EXPOSURE

In the event of an occupational exposure, appropriately skilled officer/s should conduct a risk assessment immediately. The first step in the risk assessment is to establish the type of injury (see Table 1). Following this, consideration should be given to the body fluid involved (see Table 2).

Table 1: Risk of transmission of blood borne viruses from an infectious bodily fluid, by injury type (based on UK guidelines[1])

Level of risk	Injury type
Higher risk injury	• Deep percutaneous injury • Visible blood on sharps • Needle used on source's blood vessels
Lower risk injury	• Superficial injury, exposure through broken skin, mucosal exposure (usually splashes to eye or mouth) • Old discarded sharps • No visible blood on sharps • Needle not used on blood vessels e.g. suturing, subcutaneous injection needles
Injury with no risk	• Skin not breached • Contact of body fluid with intact skin • Needle (or other sharp object) not used on a patient before injury

Table 2: Body fluids and risk for blood borne virus transmission (based on UK guidelines[1])

Level of risk	Body fluid
Infectious (good evidence of BBV transmission following occupational exposure)	• Blood • Visibly bloody body fluids
Potentially infectious (risk of BBV transmission following occupational exposure unknown)	(In alphabetical order): • Amniotic fluid • Cerebrospinal fluid • Human breast milk • Pericardial fluid • Peritoneal fluid • Pleural fluid • Saliva in association with dentistry (likely to be contaminated with blood even when not visibly so) • Semen • Synovial fluid • Tissue fluid from burns or skin lesions • Vaginal secretions
Not infectious (unless visibly blood stained)	• Nasal secretions • Saliva (non-dentistry associated) • Sputum • Stool • Sweat • Tears • Urine • Vomit

Where the exposed HCW is uncertain about actions to be taken, the Blood and Body Fluid Exposure Phoneline (formerly the NSW Needlestick Hotline) may assist. The Blood and Body Fluid Exposure Phoneline is an information, support and referral service for NSW based health care workers who sustain needlestick injuries and other blood/body fluid exposures during the course of their work. The line is answered by an on-call nurse 7 days a week from 7am to 11pm and can be contacted on free call 1800 804 823 within NSW. The Exposure Phoneline is not a reporting or surveillance service.

4 MANAGEMENT OF EXPOSURES WITH NO RISK OF BLOOD BORNE VIRUS TRANSMISSION

Occupational exposures are not considered to have the potential for blood borne virus transmission if **either** the injury is classified as no risk (Table 1) **or** the body fluid is not infectious (Table 2). For such exposures, no further action with respect to the health worker is required other than an opportunistic assessment of his/her protection against hepatitis B in accordance with the current NSW Policy Directive *Occupational assessment, screening and vaccination against specified infectious diseases*. Post exposure prophylaxis (PEP) is not indicated and testing of the source patient is not required. Such workers should be advised that the potential side effects and toxicity of taking HIV PEP outweigh the negligible risk of transmission posed by this exposure regardless of the HIV status of the source patient. No HCV or HIV testing of the exposed HCW is required.

A risk assessment of the incident should be conducted and local documentation procedures should be followed after each potential exposure.

MANAGEMENT OF EXPOSURES WITH POTENTIAL FOR BLOOD BORNE VIRUS TRANSMISSION

An occupational exposure has the potential for blood borne virus (BBV) transmission if the injury carries a risk (see table 1) **and** the body fluid is infectious/potentially infectious (see table 2). Following all such exposures a risk assessment of the incident should be conducted.

Post exposure prophylaxis

Post exposure prophylaxis (PEP) is available following exposure to HIV and hepatitis B. It is recommended for all higher risk injuries involving an infectious/potentially infectious body fluid. It should be considered for lower risk injuries involving an infectious/potentially infectious body fluid (see Tables 1 and 2).

Greater efficacy is achieved the earlier prophylaxis is administered (ideally within 1-2 hours of exposure). The initiation of PEP should not be delayed while awaiting laboratory testing of either the source patient or the health care worker. The continuation of PEP should be reconsidered once laboratory results become available. Further information on PEP is found in section 5.2.3 (for HIV) and 5.2.4 (for HBV). Prophylaxis can be commenced up to 72 hours post exposure.

Risk assessment of the source patient

Following occupational exposures that carry a risk of BBV transmission, officer/s conducting the risk assessment should seek information on the BBV status of the source patient as soon as is practicable.

If the blood borne virus status of the source patient at the time of the incident is unknown, the staff conducting the risk assessment should arrange for the source patient to be tested as soon as practicable for HIV, HBV and HCV infection (refer to Table 3). Results of source testing will better inform the exposed HCW about the risk of transmission and where PEP has been initiated, inform the need for continuation. Informed consent for testing must be obtained from the source patient. The exposed HCW should not approach the source patient for consent. If the patient does not provide consent, testing cannot occur. Consent should also be sought for the results of testing to be provided to the exposed HCW.

Occupational exposures occurring during autopsies should be managed as set out in section 5.2.2.

Note that testing of the source patient for HBV infection is not required if the exposed HCW has previous documented evidence of immunity to hepatitis B (anti-HBs level ≥10 mIU/mL at any time or HBcAb positive). Viral load should be measured for source patients who are known, or discovered, to be infected with HIV, HCV or HBV. The source should be offered immediate referral to a specialist service if a previously undiagnosed blood borne virus is detected.

Table 3: Recommended testing of source patient [#]

- Combined HIV antigen and antibody immunoassay (fourth generation HIV test)
- Hepatitis B surface antigen (not required if HCW has hepatitis B immunity)
- Hepatitis C antibody*

[#] Viral load should be measured for source patients who are known, or discovered, to be infected with HIV, HCV or HBV

*Consider qualitative hepatitis C RNA testing if individual is at risk of hepatitis C infection as may be antibody negative in acute infection and remain negative for up to 12 months if immunocompromised.

Source potentially in the window period

If the source patient tests negative for BBV infection but reports a recent (within previous three months for HIV or six months for HBV and HCV) risk behaviour that places them at high risk for infection, he/she should be advised to seek medical attention if they develop signs and/or symptoms of primary infection. For their own health benefit, they should also be advised to undergo testing for that BBV six weeks and 12 weeks after the exposure. If the source is at risk of a recent hepatitis B or C infection final tests should be done at 24 weeks after exposure.

Follow up and documentation of source testing is not required by staff managing the occupational exposure as it will not influence the care of the exposed HCW (due to timing of results). Until such time as infection can be excluded in the source, the exposed HCW should be managed as for exposure to a positive source.

The risk assessment of the source patient is outlined in Table 4.

Table 4: Risk assessment of source patient (based on UK guidelines[1])

Level of risk	Source
Higher risk source	• Known to be infected with one or more blood borne viruses (viral load and treatment status unknown) • Known to have a detectable viral load for one or more blood viruses • Unknown viral load but known to have advanced or untreated blood borne infection • Blood borne virus status unknown and known risk factors*
Lower risk source	• Infected with a blood borne virus but known to have a fully supressed viral load • Unknown viral load but receiving long term antiviral treatment for blood borne virus with good adherence and known to be stable • Blood tests at/near to the time of the incident were negative for all three blood borne viruses but source reports ongoing risk factors for blood borne viruses • Blood borne virus status unknown but had no known risk factors for such viruses
Source with minimal or no risk	• Recent blood test that was negative for all three blood borne viruses and no recent risk behaviours reported

* Example of risk factor may include intravenous drug use, men who have sex with men, origin or unprotected sexual intercourse with a sexual partner from high prevalence area for either HIV infection, or hepatitis B or hepatitis C.

Source negative for HIV, HBV and HCV

In the event that the source undergoes testing and is found to be negative for HIV, HBV and HCV and does not report recent behaviour that may place them at risk of a blood borne virus then no further action is required. PEP, if commenced, should be discontinued. If there is reason to suspect the self-reported risk history of the source may unreliable or incomplete, the exposed HCW should be managed as per exposure to a positive source (refer to sections 5.2.3 to 5.2.5).

Source with unknown infectious status and source unable to be tested

If the status of the source is not known then the risk of the source being positive for HIV, HBV and HCV must be assessed from the available information relating to risk factors known to be associated with BBVs (e.g. intravenous drug use, male homosexual sex and origin or sexual partner from a high prevalence area). If there is a risk of the source being infected with HIV, HBV or HCV then the exposed HCW should be managed as per exposure to a positive source (refer to sections 5.2.3 to 5.2.5).

Source positive or potentially positive for HIV

Risk of HIV transmission from positive source patient

The overall risk of acquiring HIV infection following occupational exposure to HIV is low. The average risk of HIV transmission (without prophylaxis) after a percutaneous exposure to HIV infected blood has been estimated to be 0.3% (95% confidence interval (CI): 0.2-0.5%). [2] The risk of seroconversion following mucous membrane exposure is estimated to be 0.09% (95 % CI: 0.006%-0.5%) and the risk following non-intact skin exposure is estimated to be even lower. [2]

A case control study conducted by the US Centers for Disease Control and Prevention showed that significant risk factors for HIV infection were deep injury (odds ratio (OR) = 15, 95% CI: 6.0-41), injury with a device that was visibly contaminated with the source patient's blood (OR= 6.2, 95% CI: 2.2-21), a procedure involving a needle placed in the source patient's artery or vein (OR =4.3, 95% CI 1.7-12), and exposure to a source patient who died of the acquired immunodeficiency syndrome within two months afterward (OR=5.6; 95 %CI: 2.0-16)[3].

There have been no confirmed cases of HIV infection in a HCW following an occupational exposure in NSW since 1994 and nationally since 2002. Only one confirmed case of occupational HIV acquisition (involving a laboratory technician working with a live HIV culture) has been reported in the US since 1999[4]. There has only been one other case report of occupational HIV transmission in the developed world published since 2005. In this instance, a nurse acquired HIV following a needle stick injury from a patient (not previously known to have HIV) with a high viral load[5]. Due to delayed reporting of the incident, PEP was not given. Table 5 shows a summary of the occupational exposure registry reviews published in the international literature since 2005.

Table 5: Evidence of HIV transmission following occupational exposure

Country	Time period	No. of HCW exposures to HIV	No. HIV sero-conversions (rate)	Notes
Australia[6]	2000-2003	13	0 (0%)	Includes percutaneous and mucous membrane exposures. All given PEP
Brazil[7]	1997-2009	80	0 (0%)	Includes only percutaneous injuries. No information provided on PEP
Denmark[8]	1999–2012	276	0 (0%)	Includes percutaneous and mucous membrane exposures. All given PEP
Germany[9]	2010-2012	51	0 (0%)	Includes only percutaneous injuries. PEP (3 drugs, mean time to start 75 mins > exposure) given to 35/51 and for other 16 cases the source patient was known to have a viral load <20 copies/mL at time of incident.
Netherlands[10]	2003-2010	60	0 (0%)	Includes only percutaneous injuries. No information provided on PEP
Thailand[11]	1996–2014	84	0 (0%)	Includes percutaneous, mucous membrane and non-intact skin exposures. All offered PEP, completed in 62/84 instances.
United Kingdom[12]	2004-2013	1478	0 (0%)	Includes percutaneous, mucous membrane and non-intact skin exposures. 1135 (77%) given PEP.

Post exposure prophylaxis (PEP)

Based on evidence from animal models and what is known about primary HIV infection, there is a window of opportunity following exposure to HIV, during which antiviral medication may prevent infection. However, the evidence for efficacy of PEP in preventing HIV acquisition is limited[13,14]. A small US case-control study of HIV seroconversion in HCWs after percutaneous exposure published in 1997 provided the first evidence in humans that PEP seemed to be protective against infection[3]. This study found that zidovudine PEP was associated with an 81% reduction in the odds of infection after adjustment for relevant exposure risk factors. There have been 24 reports of PEP failure following occupational needle stick exposures in the literature[15]. In over three quarters of these instances, zidovudine only was used; only six instances of PEP failure in the context of occupational needle stick injury have been reported with multi-drug regimens with three of these occurring after 1999. Factors that may have contributed to the failure of the combination drug PEP include drug resistance (in 3 cases the HCW was found to be infected with a strain resistant to the PEP regimen), exposure to a high HIV viral load and delayed initiation of PEP.

Multi-drug regimens are now prescribed to prevent HIV infection following exposure. However, there is no definitive evidence to support a two versus a three-drug regimen. Instead, the additional benefit of a third drug must be weighed against the cost and potential harms.

While newer HIV antiretrovirals are less toxic and better tolerated than the older HIV drugs, adverse effects still occur. In addition, serious drug interactions can occur when antiretroviral agents are used with certain other drugs. More commonly reported side effects include nausea, vomiting, diarrhoea and fatigue. Rare, but important side effects of tenofovir include acute renal failure and proximal renal tubolopathy (Fanconi's syndrome). There is a small risk of rhabdomyolysis with raltegravir.

The need for HIV PEP depends on an assessment of the risk of transmission and consideration of the potential adverse effects. Where possible, information concerning the source's stage of HIV infection, viral load, resistance testing and history of therapy and medication adherence should be ascertained so that the most appropriate therapy and counselling can be offered. While the evidence supports a significantly lower risk of HIV transmission following sexual exposure to a source with an undetectable viral load, such evidence does not exist for occupational exposures. While it is assumed there is also an extremely low risk of HIV transmission, it is still reasonable for a healthcare worker who has had a higher risk exposure to a source who is HIV positive but with an undetectable viral load to complete the course of PEP. The recommended PEP regimen is outlined in Table 6. Refer to Appendix C for the antiretroviral drug regimens recommend by the Australasian Society of HIV Medicine.

Table 6: PEP recommendations following occupational exposure to HIV positive source

Injury type	Source viral load known to be undetectable	Source not on treatment or on treatment with detectable or unknown viral load
Needlestick injury or other sharps exposure	Consider 2 drugs	3 drugs
Mucous membrane or non-intact skin exposure	Consider 2 drugs	Consider 3 drugs

Any medical officer can prescribe a PEP starter pack (lasting 3 to 7 days). The recommended course of PEP is 28 days. A prescription for the remainder of the PEP course must be obtained from a clinician experienced in the administration of drugs for the treatment of HIV.

Where there is a risk that a woman may be pregnant, undertake a serum beta HCG urgently. If possible, contact an HIV experienced Infectious Disease or Sexual Health Physician before starting HIV prophylaxis for a woman who is pregnant or at risk of pregnancy. Where it is not immediately possible and the risk of contracting HIV appears to outweigh any potential risk for the pregnancy commence prophylaxis and advise making an appointment with an HIV experienced physician for the next working day. Truvada® and Combivir® are category B3 drugs which means that there is limited data relating to safety in pregnancy but no human evidence of harm.

Exposed HCW testing recommendations

It is recommended that 4th generation HIV antibody/antigen testing be conducted at 6 weeks. A negative test at 6 weeks is likely to exclude infection but the exposed HCW should be retested at 12 weeks to definitively exclude infection. HIV viral load tests have the capacity to detect early HIV infection before antibody development and should be considered following higher risk exposures to a higher risk source. Longer follow up with additional testing may also be indicated in complex cases (e.g. possibility of coinfection) as directed by an expert clinician.

Advice for the exposed HCW during follow up period

During the follow up period the exposed HCW should be advised:

- Not to donate plasma, blood, body tissue, breast milk or sperm
- To protect sexual partners by adopting safe sexual practices (use of condoms)
- To seek expert medical advice regarding pregnancy and/or breastfeeding
- To seek medical attention about any acute illness (i.e. fever, rash, myalgia, fatigue, malaise, lymphadenopathy, anorexia).

Modification to work practices (including avoidance of exposure prone procedures) is not required on the basis of an occupational HIV exposure.

Source positive or potentially positive for HBV

Susceptibility of the exposed HCW to HBV infection

In accordance with the current NSW Policy Directive *Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases* all staff who have direct contact with patients, deceased persons, blood, body substances or infectious material or surfaces/equipment that might contain these must complete a full course of hepatitis B vaccination and/or provide serological evidence of protection.

If the exposed HCW has a documented protective response (anti-HBs level ≥10 mIU/mL) at any time following completion of the vaccination course, then he/she is considered immune to hepatitis B and no further action (i.e. testing of the source patient or post exposure prophylaxis) is required regardless of the exposure. If the response to previous vaccination is unknown, the anti-HBs level of the exposed HCW should be determined as quickly as possible. If immunity status cannot be determined quickly then the HCW should be managed as a susceptible person until such time that evidence of immunity is available.

The following provisions relate only to those who are presumed susceptible to HBV infection (those with anti-HBs level <10 mIU/mL and who are hepatitis core antibody negative).

Risk of HBV transmission from positive source patient

The probability of infection following exposure to a susceptible person depends on a number of factors including the volume and infectiousness of the body fluids and the route of the exposure. Occupational HBV transmission primarily occurs via percutaneous and mucosal exposure to blood. Of viral parameters, the risk of infection best correlates with viral load (HBV DNA) rather than hepatitis B serology. The presence of hepatitis B e antigen (HBeAg) is a surrogate marker for high viral load.

In studies of hepatitis B susceptible HCWs who sustained injuries from needles contaminated with blood containing HBV, the risk for developing clinical hepatitis if the blood was both HBsAg-positive and HBeAg-positive was 22%–31%, and the risk for developing serologic evidence of HBV infection was 37%–62%. By comparison, the risk for developing clinical hepatitis from a needle contaminated with HBsAg-positive, HBeAg-negative blood was 1%–6%, and the risk for developing serologic evidence of HBV infection was 23%-37%.[17]

Post exposure prophylaxis (PEP)

Where indicated (see Section 5.1) HBV post exposure prophylaxis with hepatitis B immunoglobulin and vaccine should be offered to non-immune and non-infected individuals in accordance with the recommendations in the current edition of the Australian Immunisation Handbook (refer to Appendix D). Requests for hepatitis B immunoglobulin should be directed to the local hospital blood bank.

Source testing recommendations

If a source is known or found to be HBsAg positive, then HBeAg and quantitative HBV DNA testing of the source patient should be performed, with the consent of the source, so that the exposed HCW can be counselled appropriately about the risk of transmission.

Exposed HCW testing recommendations

The exposed susceptible HCW should undergo HBsAg testing at 6 weeks, 12 weeks and 24 weeks. In the rare event that an exposed HCW is newly diagnosed with HBV infection, the local Public Health Unit should be notified. Post-vaccination serological testing is recommended 4 to 8 weeks after completion of the vaccination course.

Advice for the exposed HCW during follow up period

During the follow up period the exposed HCW should be advised:

- Not to donate plasma, blood, body tissue, breast milk or sperm
- To seek medical attention if they develop signs and/or symptoms of acute hepatitis (i.e. anorexia, vague abdominal discomfort, nausea and vomiting, fatigue and/or jaundice)

The exposed HCW is not required to modify sexual practices provided that HBV PEP has been administered on time. Ideally the HCW should refrain from becoming pregnant until completion of the vaccination course. There are no restrictions regarding breastfeeding. Modifications to work practices (including avoidance of exposure prone procedures) are not required on the basis of an occupational HBV exposure.

Source positive or potentially positive for HCV

Risk of HCV transmission from positive source patient

Overall, the risk of HCV transmission following an occupational exposure is low. The probability of infection following exposure depends on a number of factors including the volume and infectiousness of the body fluids and the route of the exposure. The average incidence of anti-HCV seroconversion after accidental percutaneous exposure from a HCV-positive source is estimated at 1.8% (range 0-7%)[20]. The risk of transmission increases significantly if the source has a high viral load. A review of the recent published evidence of HCV transmission following occupational exposures is summarised in Table 7.

A case control study on the risk factors for HCV transmission in HCW based on UK data collected from 1997 to 2007, found that all HCV seroconversions followed percutaneous injuries[21]. As had been previously shown[22], the depth of injury was significantly associated with seroconversion and the majority of exposures involved hollow bore needles from a vein or artery contaminated with blood or blood stained fluid. Transmission rarely occurs from mucous membrane exposures to infective blood and there are only two published reports to date of HCV transmission to a HCW via non-intact skin exposure[23,24].

Post exposure prophylaxis (PEP)

Currently, there is no vaccination or post exposure prophylaxis that is effective in the prevention of hepatitis C transmission. However, treatment of acute hepatitis C infection is now highly effective. Early identification of infection is necessary to enable prompt referral and treatment.

Table 7: Evidence of HCV transmission following occupational exposures

Country	Time period	Number of exposures involving HCW and HCV positive source	Number of HCV seroconversions	Rate
Australia[6]	2000-2003	64 #	0	0%
Austria[21]	1995-2009	150*	0	0%
Brazil[7]	1997-2009	38#	2	5%
Denmark[22]	2003-2012	62	0	0%
Germany[9]	2010-2012	44*	1	2.3%
Italy[23]	2004-2006	26	0	0%
Korea[24]	2004 -2008	327	3	0.9%
Netherlands[10]	2003-2010	53	1	1.9%
United Kingdom[12]	2004-2013	2566	9	0.4%

*All percutaneous injuries with source known to be HCV PCR positive
#All percutaneous injuries involving large bore catheter needles

Source testing recommendations

If the source is known or found to be HCV antibody positive, then quantitative hepatitis C RNA testing of the source patient should be performed with the consent of the source, so that the exposed HCW can be counselled appropriately about the risk of transmission.

Exposed HCW testing recommendations

The exposed HCW should undergo qualitative HCV PCR testing at 6 weeks and HCV antibody testing at 6 weeks and 12 weeks. If results are negative at that time the HCW can be advised that the risk of transmission is negligible but an antibody test at 24 weeks post exposure should still be undertaken to confirm that transmission has not occurred. Given its low specificity, liver function testing is not recommended. In the rare event that an exposed HCW is newly diagnosed with HCV infection, the local PHU should be notified.

Advice for the exposed HCW during follow up period

During the follow up period the exposed HCW should be advised:

- not to donate plasma, blood, body tissue or sperm
- to seek medical attention if they develop signs and/or symptoms of acute hepatitis (i.e. anorexia, vague abdominal discomfort, nausea and vomiting, fatigue and/or jaundice)

The exposed HCW is not required to modify sexual practices. In most circumstances the HCW should refrain from becoming pregnant until HCV infection is excluded. There are no restrictions regarding breastfeeding. Modifications to work practices (including avoidance of exposure prone procedures) are not required on the basis of an occupational HCV exposure.

Testing of the exposed HCW

The exposed HCW should have baseline testing for HIV, HBV and HCV infections as detailed in Table 8. If the exposed HCW is known to be infected with one or more of these BBVs, then baseline testing for those BBVs is not required. Note that a HCW with previous HCV infection who has been successfully treated or who has cleared the virus spontaneously remains susceptible to HCV re-infection.

Informed consent must be obtained before testing can proceed. The exposed HCW needs to be informed that baseline testing:

- Determines whether they were infected before the exposure and can be done up to a few days after the exposure (there is no need for after-hours testing)
- Does not have to be done at the workplace. The HCW can seek testing at their GP or other offsite service but the reason for the test (i.e. following occupational exposure) should be documented.
- Although not urgent, is important in case of a worker's compensation claim in the rare event of seroconversion

If the HCW is not immune and not previously vaccinated against HBV, or not currently infected with HBV, then he/she should be vaccinated as outlined in The Australian Immunisation Handbook and in accordance with the current NSW Policy Directive *Occupational assessment, screening and vaccination against specified infectious diseases*.

The HCW should be offered immediate referral to a specialist service if a previously undiagnosed blood borne virus is detected. Refer to current version of the NSW Policy Directive *HIV, Hepatitis B or Hepatitis C – Health Care Workers Infected*. Immediate consultation with a HIV specialist is required in the event that the exposed HCW who had commenced HIV PEP is found to be HIV positive on baseline testing.

All occupational exposure incidents should be documented according to local procedures.

Table 8: Baseline testing of the HCW

HCW hepatitis B status unknown	HCW previously shown to be hepatitis B immune
• Hepatitis B surface antigen, hepatitis B surface antibody, hepatitis B core antibody • Combined HIV antigen and antibody immunoassay (fourth generation HIV test) • Hepatitis C antibody	• Combined HIV antigen and antibody immunoassay (fourth generation HIV test) • Hepatitis C antibody

Special situation: when a patient is exposed to the blood or body fluids of a HCW

In some instances, when a HCW is exposed to potentially infectious fluids from a patient, there is also exposure of the patient to the HCW's blood. For example, this might occur if the HCW experiences a used sharps injury and blood from the sharps injury comes into contact with the patient's open wound or mucous membrane. In this situation, in addition to the risk of BBV transmission to the HCW, there is also a potential risk of BBV transmission from the HCW to the patient. In such circumstances, the HCW should be managed as per Sections 2 to 5 as a potential source for the patient. The patient and their treating medical team must be informed of the incident as soon as possible after the exposure. Injuries to patients must be reported in the Incident Information Management System.

The Australian National Guidelines for the Management of Health Care Workers Known to be infected with Blood Borne Viruses minimize the risk that a patient will be exposed to the blood of an infected health care worker. In the event of an occupational exposure incident involving a HCW known to be infected with a BBV, refer to the NSW Policy Directive, *HIV, Hepatitis B or Hepatitis C – Health Care Workers Infected*.

6 REFERENCES

1 Riddell A, Kennedy I, Tong CY. Management of sharps injuries in the health care setting. BMJ. 2015 Jul 29;351:h3733.

2 Kuhar DT, Henderson DK, Struble KA, Heneine W, Thomas V, Cheever LW, Gomaa A, Panlilio AL; US Public Health Service Working Group.Updated US Public Health Service guidelines for the management of occupational exposures to human immunodeficiency virus and recommendations for postexposure prophylaxis.Infect Control Hosp Epidemiol. 2013 Sep;34(9):875-92.

3 Cardo DM, Culver DH, Ciesielski CA, Srivastava PU, Marcus R, Abiteboul D, Heptonstall J, Ippolito G, Lot F, McKibben PS, Bell DM; Centers for Disease Control and Prevention Needlestick Surveillance Group. A case-control study of HIV seroconversion in health care workers after percutaneous exposure. N Engl J Med. 1997 Nov 20;337(21):1485-90.

4 Joyce M, Kuhar D, Brooks J. Notes from the Field: Occupationally Acquired HIV Infection among Health Care Workers — United States, 1985–2013 Morbidity and Mortality Weekly Report (MMWR). January 9, 2015 / 63(53): 1245-1246.

5 Gibellini D, Borderi M, Bon I, Biagetti C, De Crignis E, Re MC. HIV-1 infection of a nurse from a newborn with an unknown HIV infection: a case report. J Clin Virol. 2009 Dec;46(4):374-7.

6 Peng Bi, Tully PJ, Boss K, Hiller JE. Sharps injury and body fluid exposure among health care workers in an Australian tertiary hospital. Asia-Pacific Journal of Public Health. 20(2):139-47, 2008.

7 Medeiros WP, Setúbal S, Pinheiro PY, Dalston MO, Bazin AR, de Oliveira SA. Occupational hepatitis C seroconversions in a Brazilian hospital. Occup Med (Lond). 2012 Dec;62(8):655-7.

8 Lunding S, Katzenstein TL, Kronborg G, Storgaard M, Pedersen C, Mørn B, Lindberg JÅ, Kronborg TM, Jensen. The Danish PEP Registry: Experience with the use of post-exposure prophylaxis following blood exposure to HIV from 1999-2012. J.Infect Dis (Lond). 2016;48(3):195-200.

9 Himmelreich H, Rabenau HF, Rindermann M, Stephan C, Bickel M, Marzi I, Wicker S. The management of needlestick injuries. Dtsch Arztebl Int. 2013 Feb;110(5):61-7.

10 Frijstein G, Hortensius J, Zaaijer HL. Needlestick injuries and infectious patients in a major academic medical centre from 2003 to 2010. Neth J Med. 2011 Oct;69(10):465-8.

11 Wiboonchutikul S, Thientong V, Suttha P, Kowadisaiburana B, Manosuthi W. Significant intolerability of efavirenz in HIV occupational postexposure prophylaxis. J Hosp Infect. 2016 Apr;92(4):372-7.

12 Woode Owusu M, Wellington E, Rice B, Gill ON, Ncube F & contributors. Eye of the Needle United Kingdom Surveillance of Significant Occupational Exposures to Bloodborne Viruses in Healthcare Workers: data to end 2013. December 2014. Public Health England, London.

13 Black RJ. Animal studies of prophylaxis. Am J Med 1997;102:39–44. 14 Tsai CC, Emau P, Follis KE, et al. Effectiveness of postinoculation (R)-9-(2-phos- phonylmethoxypropyl) adenine treatment for prevention of persistent simian immunodeficiency virus SIVmne infection depends critically on timing of initiation and duration of treatment. J Virol 1998;72:4265–73.

14 Otten RA, Smith DK, Adams DR, et al. Efficacy of postexposure prophylaxis after intravaginal exposure of pig-tailed macaques to a human-derived retrovirus (human immunodeficiency virus type 2). J Virol 2000;74:9771–5.

15 Beekmann SE, Henderson DK. Prevention of human immunodeficiency virus and AIDS: postexposure prophylaxis (including health care workers). Infect Dis Clin North Am. 2014 Dec;28(4):601-13.

16 Hawkins DA1, Asboe D, Barlow K, Evans B. Seroconversion to HIV-1 following a needlestick injury despite combination post-exposure prophylaxis. J Infect. 2001 Jul;43(1):12-5.

17 Panlilio AL, Cardo DM, Grohskopf LA, Heneine W, Ross CS. Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. MMWR Recomm Rep. 2005; 54:1–17.

18 Camacho-Ortiz A. Failure of HIV postexposure prophylaxis after a work-related needlestick injury. Infect Control Hosp Epidemiol. 2012; 33:646–7.

19 Borba Brum MC, Dantas Filho FF, Yates ZB, Vercoza Viana MC, Martin Chaves EB, Trindade DM. HIV seroconversion in a health care worker who underwent postexposure prophylaxis following needlestick injury. Am J Infect Control. 2013; 41:471–2.

20 Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis MMWR June 29, 2001/50(RR11);1-42

21 Tomkins SE, Elford J, Nichols T, Aston J, Cliffe SJ, Roy K, Grime P, Ncube FM. Occupational transmission of hepatitis C in healthcare workers and factors associated with seroconversion: UK surveillance data.J Viral Hepat. 2012 Mar;19(3):199-204.

22 Yazdanpanah Y, De Carli G, Migueres B, Lot F, Campins M, Colombo C, Thomas T, Deuffic-Burban S, Prevot MH, Domart M, Tarantola A, Abiteboul D, Deny P, Pol S, Desenclos JC, Puro V, Bouvet E. Risk factors for hepatitis C virus transmission to health care workers after occupational exposure: a European case-control study. Clin Infect Dis. 2005 Nov 15;41(10):1423-30.

23 Beltrami EM, Kozak A, Williams IT, Saekhou AM, Kalish ML, Nainan OV, Stramer SL, Fucci MC, Frederickson D, Cardo DM. Transmission of HIV and hepatitis C virus from a nursing home patient to a health care worker. Am J Infect Control. 2003 May;31(3):168-75.

24 Toda T, Mitsui T, Tsukamoto Y, Ebara T, Hirose A, Masuko K, Nagashima S, Takahashi M, Okamoto H. Molecular analysis of transmission of hepatitis C virus in a nurse who acquired acute hepatitis C after caring for a viremic patient with epistaxis. J Med Virol. 2009 Aug;81(8):1363-70.

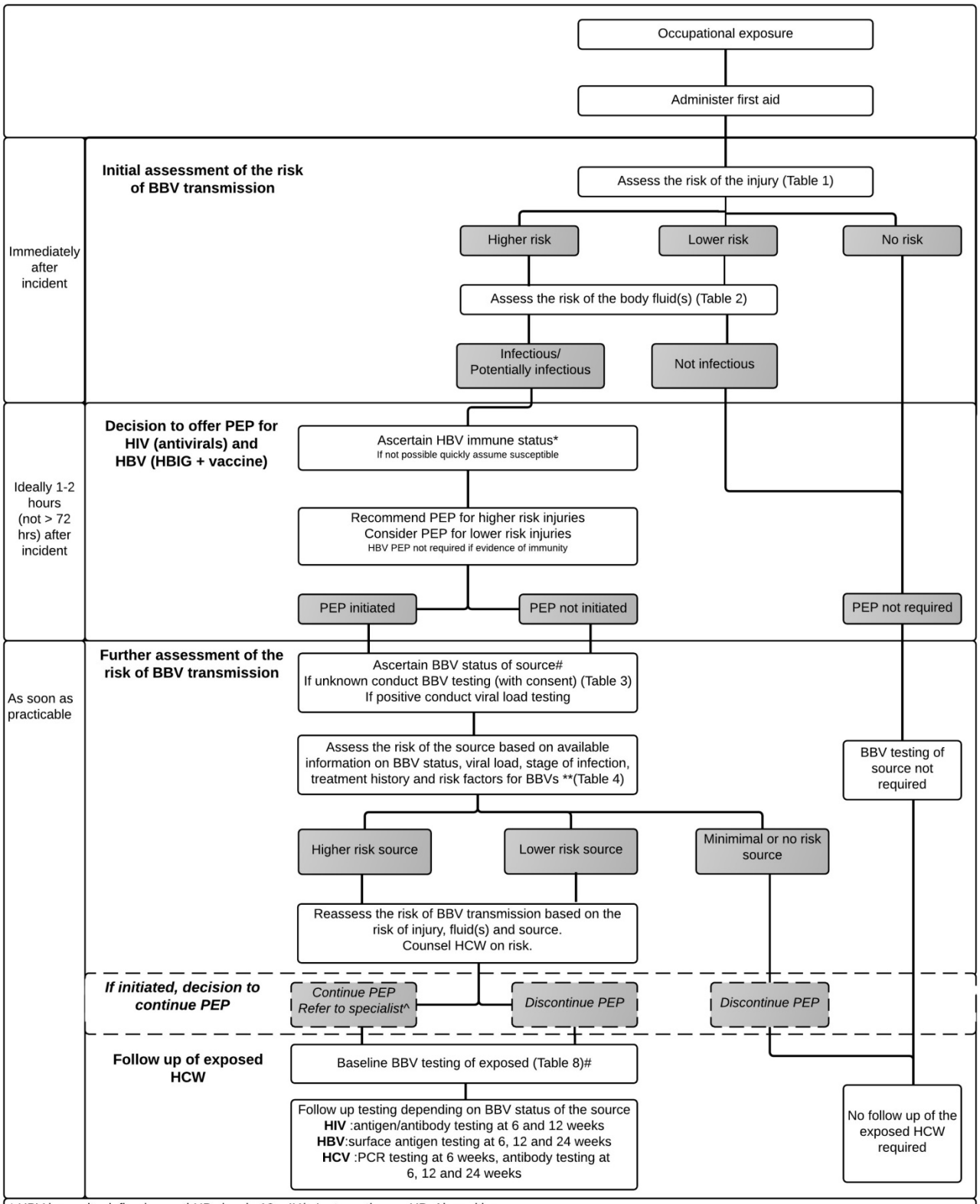
25 Michael Strasser, Elmar Aigner, Ilse Schmid, Andreas Stadlmayr, David Niederseer, Wolfgang Patsch and Christian Datz (2013). Risk of Hepatitis C Virus Transmission from Patients to Healthcare Workers: A Prospective Observational Study. Infection Control & Hospital Epidemiology, 34, pp 759-761

26 Eskandarani HA, Kehrer M, Christensen PB.No transmission of blood-borne viruses among hospital staff despite frequent blood exposure. Dan Med J. 2014 Sep;61(9):A4907.

27 Davanzo E, Frasson C, Morandin M, Trevisan A. Occupational blood and body fluid exposure of university health care workers. Am J Infect Control. 2008 Dec;36(10):753-6.

28 Ryoo SM, Kim WY, Kim W, Lim KS, Lee CC, Woo JH. Transmission of hepatitis C virus by occupational percutaneous injuries in South Korea.J Formos Med Assoc. 2012 Feb;111(2):113-7.

APPENDIX A: MANAGEMENT OF THE EXPOSED HCW FOLLOWING AN OCCUPATIONAL EXPOSURE



* HBV immunity defined as anti-HBs level ≥10 mIU/mL at any time or HBcAb positive
** If BBV status of the source patient remains unknown and there is the risk of being infected then manage as per expsoure to positive source
^ Specialist refers to a clinician with experience in the administration of drugs for HIV
# HBV testing not required if HCW has documented evidence of immunity

APPENDIX B: RECOMMENDED LABORATORY TESTING FOR THE EXPOSED HCW

BBV status of the source patient[#]	Time (in weeks) following BBV exposure		
	6 weeks	12 weeks	24 weeks
HIV positive	Combined HIV antigen and antibody (fourth generation HIV immunoassay)	Combined HIV antigen and antibody (fourth generation HIV immunoassay)	
HBV positive*	Hepatitis B surface antigen	Hepatitis B surface antigen	Hepatitis B surface antigen
HCV positive	Hepatitis C antibody, qualitative HCV PCR	Hepatitis C antibody	Hepatitis C antibody

[#] If BBV testing of the source patient at the time of the incident is negative but there is the possibility of being in the window period or BBV status of the source is unknown and there is a risk of being infected then follow up as per positive source.

* If the HCW is immune (i.e. anti-HBs level ≥10 mIU/mL or HBcAb positive) no further HBV testing is required regardless of the exposure or status of the source patient.

APPENDIX C: HIV PEP RECOMMENDATIONS

HIV PEP starter packs may very between facilities. The Australasian Society for HIV Medicine *(ASHM*) recommendations are provided here.

Recommendations for PEP following occupational exposure to HIV1

2-drug regimens*
Tenofovir 300mg with lamivudine 300mg (daily) *(TGA approved generic lamivudine may be used to reduce cost) OR Tenofovir disoproxil fumarate/emtricitabine 300mg/200mg (daily)

*Zidovudine, in combination with lamivudine, can be used in two-drug PEP combinations. The benefits of cheaper zidovudine cost are offset by the need for a twice-daily treatment regimen, higher incidences of gastrointestinal side effects, myalgia and headaches in comparison to the recommended regimens.

3-drug regimens
The preferred 2 drug-regimen PLUS dolutegravir 50mg (daily) OR raltegravir 400mg (bd) OR rilpivirine 25mg (daily with food)

Note: Refer to *Post Exposure Prophylaxis after Non-Occupational and Occupational Exposures: Australian National Guidelines 2nd Edition* for cautions in relation to specific antiretroviral medications

APPENDIX D HEPATITIS B PEP RECOMMENDATIONS

Management of non-immune HCWs following occupational exposure to a positive/likely positive HBsAg source2

Type of exposure	Hepatitis B Immunoglobulin	Vaccine
Percutaneous, ocular or mucous membrane	Single dose of 400IU by IM injection within 72 hours of exposure	1ml recombinant antigen by IM injection within 7 days* of exposure, repeated at 1 month and again 6 months post first dose

*The 1st dose can be given at the same time as HBIG, but should be administered at a separate site. Administration as soon as possible after exposure is preferred.

301(04/05/17)

1 Taken from the *Post Exposure Prophylaxis after Non-Occupational and Occupational Exposures: Australian National Guidelines 2nd Edition*

2 Taken from the Australian Immunisation Handbook, 10th Edition

MANAGEMENT OF HEALTH CARE WORKERS WITH A BLOOD BORNE VIRUS AND THOSE DOINGPERFORM EXPOSURE PRONE PROCEDURES
(PD2019_026)

PD2019_026 rescinds PD2005_162

PURPOSE

This Policy Directive prescribes how the *Australian national guidelines for the management of healthcare workers living with blood borne viruses and healthcare workers who perform exposure prone procedures at risk of exposure to blood borne viruses 2018* (the National Guidelines) are to be implemented within NSW Health Organisations and Affiliated Health Organisations.

The objective of implementation of the National Guidelines is to ensure: patients are protected from acquiring a blood borne virus infection from a health care worker (HCW) during an exposure prone procedure (EPP); and, in the event that a HCW with a blood borne virus (BBV) infection may have exposed a patient to a BBV during an EPP, that patient notification and lookback are based on expert advice.

Adherence to this Policy will assist to fulfil the requirements of NSW Health under the National Guidelines.

MANDATORY REQUIREMENTS

All NSW Health local health districts and networks are required to implement this Policy Directive.

Local health districts and networks must establish an incident management team to undertake a risk assessment in all instances where a HCW with a blood borne virus has performed EPPs outside the criteria in the National Guidelines. Where the risk assessment suggests a potential risk of BBV transmission the incident must be referred to the NSW Health Blood Borne Viruses Advisory Panel (BBVAP). Where the HCW is knowingly non-compliant with the National Guidelines, then must be reported to the Australian Health Practitioner Regulation Agency (AHPRA) (section 2.1).

Health care facilities must specify a person to whom a HCW who performs EPPs should notify in the event that the HCW is diagnosed with a BBV infection. Health care facilities must protect the confidentiality and privacy of HCWs with a BBV infection, and support these HCWs in the workplace setting (section 2.2).

Local health district public health units must on receipt of a notification of a HCW who has performed EPPs while infectious with a BBV, provide this information to the designated person in the health facility in which the HCW works. Public health units must complete a risk assessment on any reports of a newly acquired BBV in an individual with a history of an EPP and no known risk factors for infection acquisition, and refer any cases where there is a potential risk of BBV transmission to the BBVAP (section 2.3).

HCWs must be aware whether procedures they perform are classified as exposure prone (section 2.4).

HCWs who perform EPPs are required to comply with the National Guidelines for BBV testing and annual declaration of compliance to AHPRA (section 2.5).

HCWs who are newly diagnosed with a BBV and who perform EPPs must cease EPPs immediately and inform the person identified in their health care facility. HCWs infected with a BBV who perform EPPs must comply with the National Guidelines in order to return to EPP work and must remain compliant when performing EPPs. They must immediately report all incidents of patient exposure to their blood to the identified person in their health facility (section 2.6).

Student HCWs in a discipline that undertakes EPPs must undergo BBV testing within 12 months prior to commencement of study. They must submit a form declaring that they have undergone BBV testing and meet the requirements of this policy directive to NSW Health before their first clinical placement, and notify the person identified in the health facility when newly diagnosed with a BBV if EPPs are to be undertaken during the placement (section 2.9).

IMPLEMENTATION

Health facilities are responsible for promoting awareness of the National Guidelines amongst their employees who perform EPPs.

Section 2 describes the responsibilities of NSW Health employers and HCWs employed in the implementation of the National Guidelines within NSW Health and in the investigation and follow up of incidents where the public may have been put at risk of BBV acquisition via an infected HCW.

Responsibilities under the National Guidelines apply to clinicians who diagnose and/or manage a HCW with a BBV infection, irrespective of whether they work for NSW Health or in the private sector. These include reporting to NSW Health where there is a potential public health risk that has not been reported to NSW Health by the infected HCW.

Management of health care workers with a blood borne virus and those doing exposure prone procedures

1 BACKGROUND

About this document

NSW Health has a duty of care to provide a workplace environment that is as safe as possible for both patients and health care workers (HCWs) by eliminating health and safety risks so far as is reasonably practicable, and if it is not reasonably practicable to do so, to minimise those risks.

Adherence to standard precautions as outlined in the current NSW *Health Infection Prevention and Control Policy* ensures that the majority of procedures in health care settings pose minimal risk of transmission of a blood borne virus (BBV) from an infected health care worker to a patient. However, while the risk is very low, there are certain procedures during which it is possible for human immunodeficiency virus (HIV), hepatitis B and/or hepatitis C to be transmitted to a patient. Such procedures are referred to as exposure prone procedures (EPPs). During EPPs it is possible that an injury to the HCW could unknowingly result in the worker's blood contaminating the patient's open tissues.

Conversely, when performing EPPs, HCWs are also at risk of being exposed to the blood of patients and so may unknowingly acquire a BBV from an infected patient. NSW Health Policy Directive PD2017_010 *HIV, Hepatitis B and Hepatitis C – Management of Health Care Workers Potentially Exposed* assists health services to appropriately assess and manage a HCW following a known occupational exposure in order to prevent BBV acquisition.

The *Australian national guidelines for the management of healthcare workers living with blood borne viruses and healthcare workers who perform exposure prone procedures at risk of exposure to blood borne viruses 2018* (the National Guidelines) were developed by the Communicable Diseases Network of Australia and endorsed by the Australian Health Ministers' Advisory Council in June 2018.

Registered HCWs in professions which perform EPPs must declare whether they are complying with the National Guidelines at the time of their health practitioner registration and annually at registration renewal, including that they are compliant with the testing requirements in the National Guidelines.

NSW Health policy is to follow the National Guidelines, and this Policy Directive outlines the implementation of the National Guidelines within NSW Health services. It should be read in conjunction with the National Guidelines.

Key definitions

Must - indicates a mandatory action that must be complied with.

Should - indicates a recommended action that should be followed unless there are sound reasons for taking a different course of action.

Healthcare worker - persons, including students and voluntary workers who undertake procedures in public and/or private healthcare settings that normally involve patient care and/or contact with blood or other body fluids.

Infected healthcare worker - a HCW with a confirmed infection of one or more BBV

Blood borne virus – refers to HIV, hepatitis B and hepatitis C viruses.

Student – refers to a person enrolled at a university or other educational institution

Exposure prone procedures – are procedures where there is a risk of injury to the HCW resulting in exposure of the patient's open tissues to the blood of the HCW. These procedures include those where the HCW's hands (whether gloved or not) may be in contact with sharp instruments, needle tips or sharp tissues (spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all times. Examples of EPPs are at Appendix 1 of the National Guidelines and included in Appendix 3 of this document.

Blood Borne Virus Advisory Panel - NSW Health Blood Borne Viruses Advisory Panel provides expert advice to the NSW Chief Health Officer on the assessment of potential public health risks related to transmission of blood borne viruses.

Legal and legislative framework

Health services have a duty of care to their patients and obligations under the *Work Health & Safety Act 2011* (NSW), the *Public Health Act* 2010 (NSW) and their associated regulations and the *Health Records and Information Privacy Act* 2002 (HRIP Act). Consideration must be also given to the requirements of Part 4A of the *Anti-Discrimination Act 1977 (NSW)* which deals with discrimination on the ground of disability and the *Disability Discrimination Act 1992* (Cth).

Registered medical practitioners have a responsibility to protect public health by complying with the Medical Board of Australia's *Guidelines for Mandatory Notifications* and *Good Medical Practice: A Code of Conduct for Doctors in Australia*.

REQUIREMENTS UNDER THIS POLICY DIRECTIVE

The following sections describe the obligations for individuals and the procedures to be followed by health facilities, medical practitioners and educational institutions in fulfilling the requirements of this Policy Directive.

2.1 Local Health District Directors of Clinical Governance

Response when an infected HCW has performed EPPs outside the criteria for the specific BBV regarding care, treatment, monitoring and viral load as stipulated in the National Guidelines

The Director of Clinical Governance must:

- Establish an incident management team to collect relevant information and undertake a preliminary assessment of any risk of BBV transmission to patients. The team should include:
    - the head of infection prevention and control unit at the health facility;
    - the local public health unit;
    - the designated person from the health facility (refer to 2.2 below;)
    - a clinician with expertise in the relevant area; and
    - other members as appropriate (e.g. Staff Health, laboratory staff, other clinicians).
- Refer, via the public health unit, to the NSW Health Blood Borne Viruses Advisory Panel (BBVAP) any incident where the preliminary risk assessment suggests a potential risk of

BBV transmission in the health care setting

- Ensure any instances where a HCW has been diagnosed with a BBV and is non-compliant with the National Guidelines are reported to the Australian Health Practitioner Regulatory Authority (AHPRA) as this is placing the public at risk of substantial harm and therefore meets the criteria for mandatory reporting under the National Law (for further information see the Mandatory notifications guidelines for registered health practitioners 2014).

2.2 Health facilities

Management of an infected HCW

The health facility must:

- Promote awareness of the National Guidelines amongst their employees who perform EPPs (for example at orientation and infection control training).
- For students in disciplines that undertakes EPPs, verify each student's declaration form (Attachment 1) indicating that they are aware of and comply with the requirements of this PD and enter the information into ClinConnect1.
- Ensure that confidentiality of an infected HCW's BBV status is maintained as far as possible, even if the HCW has died or ceased practice.
- Ensure the rights of the infected HCW as employees are safeguarded.
- Ensure infected HCWs have access to appropriate expert medical advice as required (noting that some HCWs will seek expert medical advice outside NSW Health).
- Support an infected HCW to return to work in accordance with the NSW Policy Directive *Injury Management and Return to Work* (PD 2013_006) and the current Public Service Commission's document Procedures for Managing Non-Work Related Injuries or Health Conditions.
- Provide an environment in which HCWs living with a BBV know their privacy and confidentiality will be respected and maintained.

Response when a HCW has performed EPPs outside the criteria in the National Guidelines

The health facility must have local procedures in place to be followed in the event that a HCW who performs EPPs is newly diagnosed with a blood borne virus (BBV), or if a HCW with a BBV inadvertently exposes a person to their blood or performs EPPs outside the criteria in the National Guidelines. These procedures must:

- Specify who the HCW should notify (the designated person); this person should have an understanding of the principles underpinning this policy directive including confidentiality requirements, and have the authority to relieve the HCW of their EPP duties and appoint another HCW to fulfil these duties without breaching the HCW's confidentiality (e.g. Director of Medical Services or Director of Nursing).
- Direct that the incident be reported in a de-identified manner to the local health district Director of Clinical Governance.
- Direct that the incident be notified in a de-identified manner on the Incident Information Management System (IIMS).
- Indicate that the local health district, via the local public health unit, will liaise with Health Protection NSW and refer the incident in a de-identified manner to the Blood Borne Virus Advisory Panel (BBVAP) to seek advice on the need for patient notification and testing as appropriate.
- Ensure a system is in place for urgent BBV viral load testing of HCWs, if required, in the event of an incident in which another person is exposed to the blood/bodily fluids of an infected HCW (noting the facility may not be aware of the HCW's infection until such an

1 ClinConnect is a web-based application built to assist Districts Health Services (Local Health and Specialty Health Networks) and Education Providers manage all clinical placements in NSW Health facilities. It is used to book and manage placements in Nursing & Midwifery, Allied Health and Dental & Oral Health and used to record clinical placement activity for Medicine.

incident occurs and the HCW discloses their status).

Health facilities must also:

- Report, via the designated person, any instances where an infected HCW is knowingly non-compliant with the National Guidelines to the Australian Health Practitioner Regulatory Authority (AHPRA).
- Ensure that the confidentiality of the infected HCW is protected as far as possible.

2.3 Local Public Health Units must:

Response when a HCW has performed EPPs outside the criteria in the National Guidelines

On report that a HCW who performs EPPs is newly diagnosed with a BBV, or if a HCW with a BBV inadvertently exposes a person to their blood, or performs EPPs outside the criteria in the National Guidelines, the local public health unit must:

- Participate in the local health district incident management team to collect relevant information and undertake an initial assessment of the risk of BBV transmission to patients.
- In collaboration with Health Protection NSW, complete a detailed risk assessment on any reports of a newly acquired hepatitis B, hepatitis C or HIV infection in an individual with a history of an EPP and no known risk factors for infection acquisition.
- Refer via HPNSW to the BBVAP for advice on management of situations in which a preliminary assessment indicates a potential risk of BBV transmission in the health care setting.
- Receive and refer, as appropriate, reports where an infected HCW is knowingly non-compliant with the National Guidelines to the BBVAP for advice on the need for patient lookback.
- On receipt of a notification of a HCW who has performed EPPs while infectious with a BBV which indicates a serious threat to public health, and subject to s56 of the *Public Health Act 2010*, provide this information to the designated person (refer section 2.2) in the health facility in which the HCW works1.

2.4 Health care workers

Management of an infected HCW

All HCWs:

- Must be aware if any procedure that forms part of their (current or known future) duties is classified as an exposure prone procedure (EPP) according to the guidance in the National Guidelines.
- Should be aware of their BBV status, and if they have non-occupational risk factors associated with the acquisition of BBVs, they should have regular BBV testing2 according to standard guidelines (refer to national testing policies for HIV, hepatitis C virus (HCV) and hepatitis B virus (HBV)).
- If infected with a BBV and compliant with treatment and monitoring set out in the National Guidelines, may continue to provide clinical care to patients and are not required to disclose their status if their work does not involve EPPs except in the very unlikely event that a patient is exposed to the HCW's blood/bodily fluids.

1 Disclosure by an organisation of information that a HCW who has performed EPPs while infectious is permitted under the *Health Records and Information Privacy Act 2002* if disclosure is reasonably believed to be necessary to lessen or prevent a serious threat to public health or safety. In the case of HIV infection, disclosure of the identity of the HCW can only be made to the Secretary under section 56(4)(c) of the *Public Health Act 2010* (on the basis that failure to disclose the information about a HCW with HIV and un-suppressed viral load who undertakes EPPs is likely a risk to public health).

2 All laboratory testing referred to in this policy are to be conducted in a NATA/RCPA accredited laboratory

316(21/06/19)

2.5 Health care workers who perform EPPs

Management of an infected HCW

HCWs who perform EPPs must:

- Be familiar with the National Guidelines.
- Take reasonable steps to know their BBV status and undergo testing for HIV, HCV and HBV at least once every three years as set out in the National Guidelines.
- Make a declaration to the Australian Health Practitioner Regulation Agency (AHPRA) at the time of annual registration renewal, stating that they are compliant with the National Guidelines.

2.6 Health care workers infected with HIV, hepatitis B and/or hepatitis C who perform EPPs

Response when a HCW has performed EPPs outside the criteria in the National Guidelines

HCWs infected with HIV, hepatitis B and/or hepatitis C who perform EPPs must:

- Cease performing EPPs immediately and inform the person identified in their health facility local procedures if they are newly diagnosed with a BBV
- Seek ongoing care from an appropriately skilled medical practitioner (see section 2.8).
- Meet the criteria for viral suppression outlined in the National Guidelines for initial clearance to perform EPP.
- If cleared for EPP work by their treating medical practitioner, meet the ongoing health monitoring requirements described in the National Guidelines in order to continue EPP work.
- Make a declaration to the Australian Health Practitioner Regulation Agency (AHPRA) at the time of annual registration renewal that they are compliant with the National Guidelines.
- Seek medical advice if they experience a change in health condition which may affect their ability to practice.
- Immediately report all incidents to the designated (refer section 2.2) person in their health facility where he/she is aware of accidentally exposing a patient to their blood or bodily fluids, regardless of the risk of transmission.

2.7 Clinicians who conduct BBV testing for health care workers

The diagnosing clinician must:

- Refer a HCW who performs EPPs who is newly diagnosed with a BBV to an appropriate treating medical practitioner (see section 2.8).
- Counsel the infected HCW to notify the designated person (refer section 2.2) in their workplace, as required by the National Guidelines, if it is possible that he/she performed any EPPs while infectious.

In the event that the diagnosing clinician is aware that the HCW does not notify their workplace that it is possible that the HCW performed EPPs while infectious and there is a serious threat to public health or safety the diagnosing clinician must notify the local public health unit1.

1 Disclosure by an organisation of information that a HCW who has performed EPPs while infectious is permitted under the *Health Records and Information Privacy Act 2002* if disclosure is reasonably believed to be necessary to lessen or prevent a serious threat to public health or safety. In the case of HIV infection, disclosure of the identity of the HCW can only be made to the Secretary under section 56(4)(c) of the *Public Health Act 2010* (on the basis that failure to disclose the information about a HCW with HIV and un-suppressed viral load who undertakes EPPs is likely a risk to public health).

2.8 Medical practitioners who provide expert clinical care to BBV infected health care workers and student HCWs who perform EPPs

The treating doctor for the infected HCW who performs EPPs must:

- Be familiar with the National Guidelines and aware of the requirements and necessary skill sets of treating medical practitioners set out in the National Guidelines.
- Provide formal advice to the HCW regarding personal care, health monitoring and work practices (including initial and ongoing clearance to perform EPPs).
- Ensure a HCW who is newly diagnosed with a BBV receives counselling regarding potential impacts on future career (advice may be sought from the relevant professional college as needed).
- Encourage BBV infected HCWs who perform EPPs to notify the health service of their BBV status.
- Ensure that the HCW has scheduled appointments of appropriate frequency to meet the required level of monitoring and actively follow up missed appointments.
- Report concerns regarding HCW compliance with professional standards and/or breaches in compliance with the National Guidelines to AHPRA, as appropriate.
- Ensure that concerns regarding actual or potential exposures constituting a serious public health risk are reported to the local public health unit in a timely manner to enable a risk assessment of BBV risk to patients to be undertaken.[5]

2.9 Student health care workers in a discipline that undertakes EPPs

Disciplines that may undertake EPPs include: medicine; midwifery; paramedicine; dentistry and oral health.

Student HCWs of a discipline that undertakes EPPs must:

- Undergo testing for BBVs at commencement of study or within the 12 months prior to commencement.
- Follow the same BBV testing requirements as health care workers who perform EPPs (refer to Section 3).
- Submit a form (Attachment 1) declaring that they have undergone BBV testing and meet the requirements of this Policy Directive to NSW Health as part of the verification process before their first clinical placement.
- Ensure they undergo regular testing as outlined in this Policy Directive and submit further declaration forms to NSW Health, via their education provider's partner local health district
- Notify the person identified in the health facility local procedures when newly diagnosed with a BBV if EPPs are to be undertaken during the placement.

The educational institution for students of a discipline that undertakes EPPs must:

- Inform all students of the requirements of this Policy Directive
- Ensure that all students in the relevant disciplines are aware of the requirement to undergo BBV testing and complete a form declaring that they have undergone BBV testing and meet the requirements of the Policy Directive.
- Inform students of the process to have their declaration form verified by NSW Health
- Inform students that those who are non-compliant will not be able to attend clinical placements

MANAGEMENT OF HCWs

BBV testing for health care workers who perform EPPs

HCW who perform EPPs must take reasonable steps to know their BBV status and should be tested for BBVs at least once every three years as outlined in the National Guidelines.

It is the responsibility of the HCW to arrange BBV testing. Following the demonstration of immunity to hepatitis B, further HBV testing is not required.

HCWs who are classified as hepatitis B vaccine non-responders can continue to perform EPPs but must be retested in accordance with the National Guidelines and should seek advice following an occupational exposure to the blood/bodily fluids of a patient.

HCW who perform EPPs must make a declaration to AHPRA when applying for renewal of registration that they are complying with, and have been tested in accordance with the National Guidelines. The results of BBV testing will not be declared to, or recorded by, AHPRA.

The procedures that health services should follow to prevent disease transmission following an occupational exposure to a BBV are outlined in the NSW Policy Directive *HIV, Hepatitis B and Hepatitis C—Management of Health Care Workers Potentially Exposed*.

Health care workers infected with BBVs who perform EPPs

HCWs who are infected with BBVs are permitted to perform EPP work providing he/she:

1. Is under the care of an expert in the treatment of their BBV who also has an understanding of the regulatory framework for HCWs infected with BBVs, including the National Guidelines and this Policy Directive

   AND

2. Meets the criteria for initial and ongoing health clearance set out for each BBV in the National Guidelines as assessed by the HCW's treating medical practitioner

Clearance to allow an infected HCW to perform EPPs

Initial and ongoing clearance to perform EPP work is provided by the treating medical practitioner to the health care worker if the treating practitioner is satisfied that the criteria are met as stipulated in the National Guidelines. Expert assistance is available from the BBVAP (via the Director Communicable Diseases Branch) if required.

Non-compliance by an infected HCW

In accordance with the mandatory reporting requirements under the National Law and the National Guidelines the treating medical practitioner must notify the HCW to AHPRA if the HCW is putting the public at risk. If required advice can be sought from the local public health unit.

The treating medical practitioner must also inform the local public health unit if a serious risk to public health is suspected so that the public health unit can undertake a risk assessment (refer to Section 4).

Support for an infected HCW

Providing the individual is complying with the National Guidelines there is no requirement for an infected HCW who is permitted to perform EPPs to inform a health facility of their BBV status at the commencement of employment; however this is encouraged to facilitate an immediate response to an incident in which a patient is exposed to their blood or other infected bodily fluid. Note that

disclosure of the HCW's BBV status to relevant health facility/LHD staff is required in the event of such an incident (refer to Section 4).

316(21/06/19)

Should a HCW disclose their BBV status to their health facility, this information must be treated confidentially and appropriate support and advice provided to the HCW as required.

NSW Health services are required to have occupational rehabilitation programs in place consistent with the NSW Directive *Injury Management and Return to Work* (PD2013_006) to manage employees with a work related blood borne virus infection. This includes, where relevant, making every effort to provide alternative suitable employment both within NSW Health, and if that is not possible, external to NSW Health. Where the HCW acquired the BBV infection outside of work, the obligations of all public health facility employers are outlined in the Public Service Commission's document *Procedures for Managing Non-Work Related Injuries or Health Conditions* and includes where relevant the investigation of alternative positions within NSW Health and other agencies.

Should the HCW be required to take time off from their work duties due to their infection, the relevant health profession board and the relevant specialist college can provide support and advice on retraining and supervision on their return to work.

INVESTIGATION AND RESPONSE WHEN A HCW HAS PERFORMED EPPs OUTSIDE THE CRITERIA IN THE NATIONAL GUIDELINES

Newly diagnosed HCW who has performed EPPs

In the event that a HCW who performs EPPs is newly diagnosed with a BBV he/she must stop all EPP work immediately and seek medical care from an appropriately skilled practitioner. At the time of diagnosis, the HCW must notify the designated person (section 2.2) identified in their health facility local procedures if it is possible that they have been performing EPPs while infectious. The relevant professional college can provide advice as to the classification of procedures. If required, the newly diagnosed HCW can discuss the need to inform the health facility/LHD with their diagnosing doctor or the local public health unit.

In the unlikely event that the newly diagnosed HCW has been involved in an incident in the previous 72 hours where it was recognised that another person was exposed to the HCW's bodily fluid, decisions regarding the use of post exposure prophylaxis for HIV and HBV for the exposed person(s) should be made locally based on a risk assessment of the nature of the exposure as outlined in the NSW Policy Directive 2017_010 *HIV, Hepatitis B and Hepatitis C—Management of Health Care Workers Potentially Exposed*.

The health facility, in collaboration with the local public health unit, will collect information regarding the infected HCW (including relevant surgical procedures performed, infection control practices, any known incidents where another person was exposed to the HCW's blood and health monitoring information) in order to make an assessment of the risk of BBV transmission in the health care setting. (Refer to Appendix 1 for guidance.) Where there is the potential for BBV transmission, the public health unit, in conjunction with Health Protection NSW will refer the case in a de-identified manner to the Blood Borne Virus Advisory Panel (BBVAP). The HCW should be informed that their de-identified health and health practice information will be provided to the BBVAP.

The BBVAP will review the risk assessment (refer to Appendix 2 for the terms of reference for the BBVAP). The Chief Health Officer, on advice from the BBVAP, will make decisions regarding the need for a lookback1 investigation to identify any patients who may have acquired a BBV from the HCW. The health facility should ensure that the infected HCW is informed of this process.

1 A lookback is defined as the process of identifying, tracing, recalling, counseling and testing patients or HCW who may have been exposed to an infection in the health care setting in the *NHMRC Australian Guidelines for the Prevention and Control of Infection in Healthcare 2010*.

BBV infected HCWs and lookback exercises

In the event that the Chief Health Officer, following receipt of advice from the BBVAP, requests that a lookback be undertaken, the infected HCW must be counselled by the health facility that relevant patients will be informed about a potential exposure to the blood of a HCW who is infected with a BBV in a non-identifying manner. In accordance with the *NSW Privacy Manual for Health Information*, only staff for whom it is considered necessary in order to carry out their work duties should be aware of the infected HCW's BBV status.

Disclosure of an individual HCW's BBV status to a patient is not necessary and the health facility has an obligation to ensure that confidentiality of an infected HCW's BBV status is maintained as far as possible even if the infected HCW has died, ceased practice or has been identified publicly.

Potential health care associated BBV transmission

All new HIV diagnoses are notified (using a name code) to Health Protection NSW which routinely collects risk factor information from the relevant clinician. Notifications of newly acquired hepatitis B and hepatitis C cases are routinely followed up for risk factor information by the local public health unit. If a patient presents with a newly acquired hepatitis B, hepatitis C or HIV infection after undergoing an EPP, and the origin of the infection is unclear, the local public health unit will complete a detailed risk assessment in conjunction with Health Protection NSW. Referral to the BBVAP for advice as to the appropriate public health action may occur depending on the outcome of the risk assessment.

Management of patients following exposure to blood/bodily fluids of an infected HCW

Infected HCWs who are performing EPPs as permitted within the National Guidelines, are required to report to the designated person (refer section 2.2) in their health facility any incidents in which a patient is known to have been accidentally exposed to their blood or bodily fluids.

In this situation, a detailed risk assessment should be done, in conjunction with the HCW's treating clinician and the local public health unit as outlined in the National Guidelines. This should include assessment of several factors including the most recent viral load of the HCW, the history of the HCW with a BBV including their adherence to treatment, the frequency and magnitude (if any) of fluctuations in their viral load and the presence of factors which might increase the HCW's viral load. If there is concern that the viral load of the HCW could be above the level stipulated in the National Guidelines, the health facility should arrange for the infected HCW to undergo urgent viral load testing. The local public health unit will work with the health facility to collect the information required for a detailed risk assessment and, in conjunction with Health Protection NSW urgently refer the matter to the BBVAP.

In consultation with the HCW's treating doctor, the BBVAP will make an assessment of the risk to the patient(s) based on the criteria outlined in the National Guidelines. Following the risk assessment, the BBVAP will make recommendations to the Chief Health Officer regarding the need for follow up of patient(s).

Where urgent decisions on the need for post exposure prophylaxis for HIV and HBV are required (potential patient exposures within the previous 72 hours), the facility should follow the risk assessment guidance in the NSW Policy Directive PD2017_010 *HIV, Hepatitis B and Hepatitis C, Management of Health Care Workers Potentially Exposed*

APPENDIX 1 Guide for assessing the risk of BBV transmission in the health care setting

When there is evidence that a HBeAg, HBV DNA, HCV PCR or HIV positive HCW has performed exposure prone procedure/s the following steps should be taken to determine if there is a risk of transmission from the infected HCW to others.

It should be noted that there are serious legal, human and financial implications of look-back exercises to identify and test patients on whom the infected health care worker performed invasive procedures. The health facility has an obligation to ensure that confidentiality of an infected HCW's BBV status is maintained as far as possible, even if the HCW has died or ceased practice.

The health facility should work with the local public health unit to collect the information required to determine if there is the potential for BBV transmission in the health care setting. This should be done in cooperation with the infected HCW and in a non-identifying manner.

Information required for a risk assessment includes:

- Relevant health monitoring information (such as viral load).
- The nature and history of the clinical practice of the HCW, including the type of procedural practice.
- Evidence of physical or mental impairment or behavior which could have affected the HCW's standard of practice.
- Evidence of poor infection prevention and control practice by the HCW or at the relevant health care setting during the time the HCW was likely infectious with the BBV (a formal infection control audit may be required).
- Known episodes of high risk exposure to a patient, for example sharps injuries (a review of previously reported occupational exposure incidents may be required) , and
- Any other relevant considerations.

The health facility, together with the local public health unit, will review this information and make an assessment of the potential for BBV transmission. Where there is a risk of transmission, the public health unit will refer the matter to the BBVAP for advice regarding a lookback. The health facility should inform the infected HCW that relevant de-identified information will be shared with the BBVAP for the purposes of determining if a lookback is required. The extent of any lookback will be decided by the BBVAP on a case-by-case basis using a risk-based approach.

APPENDIX 2 NSW Health Blood Borne Viruses Advisory Panel

Role of the Advisory Panel

The role of the NSW Health Blood Borne Viruses Advisory Panel (the Panel) is to provide expert advice to the NSW Chief Health Officer on the assessment of potential public health risks related to transmission of blood borne viruses. Its members come from a range of specialist fields to inform the response to a wide range of blood borne virus transmission health risks.

Purpose

The Panel will provide advice on the current scientific evidence on a range of issues related to the transmission of blood borne viruses and provide analysis of the potential public health risks.

Specifically the panel will:

- Provide advice regarding the implementation of the current version of the *Australian National Guidelines for the Management of Health Care Workers Known to be Infected with Blood-borne Viruses* (the National Guidelines).
- Undertake the function of the Expert Advisory Committee as defined in the National Guidelines, including providing advice on:
    a. the risk to patients; and
    b. the work practices of health care workers infected with a blood borne virus (BBV).
- Provide supplementary specialist occupational advice to physicians of health care workers infected with BBV, occupational physicians and professional bodies.
- Provide advice on the management, including the need for patient notification, of incidents involving:
    a. the investigation of potential BBV transmission in health care settings;
    b. inadequate reprocessing of instruments or equipment used in invasive procedures; and
    c. other incidents in health care settings where patients may have been exposed to a BBV.
- At the request of the Chief Health Officer, provide advice on other issues related to BBV transmission.

Governance

Chair
The Panel Chair is appointed by the NSW Chief Health Officer. The Deputy Chair is the Director of Health Protection NSW.

Code of conduct
Members will be required to agree to and sign a Declaration of Ethical Behaviour upon joining and membership renewal (every 2 years) and adhere to the NSW Health code of conduct as appropriate.

Confidentiality
Members will be required to sign a confidentiality agreement upon joining, and membership renewal (every 2 years). Information provided to members to inform their discussion is provided in confidence and is not to be disclosed to any third party.

Conflicts of interest
Members will be required to declare any potential conflicts of interest (real or perceived) upon joining. In addition conflicts of interest will be addressed as an agenda item at the commencement of each meeting, in light of the issues at hand, and recorded in the meeting minutes.

Decision making
The panel is an advisory body to the NSW Chief Health Officer. The panel will not be a decision making entity.

Membership

Membership will be by invitation of the NSW Chief Health Officer and will be reviewed every 2 years. Membership may include experts from within NSW Health, government agencies, academia, research organisations and industry.

Standing Panel members will include at least one:

- Infectious Diseases Physician
- Director, Health Protection NSW
- Virologist
- Occupational Health Physician
- Infection Control Practitioner
- Ethicist
- Public Health Unit Director
- Director, Communicable Diseases Branch

In addition, the Panel may also include ad hoc members from the following groups:

- A member of the professional group, relevant to the health care worker e.g. RoyalAustralasian College of Surgeons
- A health care worker advocate
- A hepatologist, immunologist or other appropriate medical expert

Nominated experts may be invited by the Chair of the Panel to be supplementary members of the Panel to attend meetings to provide specific advice in their areas of expertise on a needs basis for a period of up to 2 years, in conjunction with Panel membership review. Nominated experts will be asked to self-select a secondary contact for this purpose in the event that they are unable to attend a Panel meeting when required. These nominated members (and their secondary contacts) will be subject to the same code of conduct, confidentiality and conflict of interest requirements as other members.

Meeting frequency

The Panel will meet quarterly. Additional meetings will be arranged on a needs basis as issues arise (often on short notice). In these instances, the Panel may meet by teleconference to discuss specific blood borne virus related health risks or incidents.

Where practicable, advance notification and circulation of meeting papers and agenda will be carried out, however, due to the nature of the Panel and the potential urgency of issues to be addressed, meetings may be required to be carried out with less than 48 hours' notice.

Panel Structure

Where issues outside the scope of expertise of standing members arise, additional experts may be invited to participate in relevant meetings of the Panel.

Proxies

Due to the expertise based nature of the panel, proxies will not be accepted if a member is unable to attend a meeting.

Record of meetings

Minutes of the meetings will be prepared by the secretariat, and endorsed by the Panel Chair, prior to submission to the Chief Health Officer.

Referral of issues to the panel
Issues may be referred to the Panel by representatives of Local Health Districts, or by Health Protection NSW. All referrals are required to be submitted in the format of the pro forma referral brief.

A treating doctor may seek individual advice directly from the BBVAP on case management in relation to any aspect of this policy directive or the National Guidelines.

Remuneration

No sitting fees will be provided.

Secretariat

Secretariat support will be provided by Health Protection NSW via the Communicable Diseases Branch.

Terms of reference

The terms of reference will be reviewed every 2 years.

APPENDIX 3: Definitions and examples of EPPs
Non-exposure prone procedures (non-EPPs) are procedures where the hands and fingers of the HCW are visible and outside of the body at all times and procedures or internal examinations that do not involve possible injury to the HCW's hands by sharp instruments and/or tissues, provided routine infection prevention and control procedures are adhered to at all times.

Examples of non-EPPs include routine oral examination (gloved with mirror and/or tongue depressor); vaginal and rectal examinations (except where there is a possibility of pelvic fractures in trauma); insertion and maintenance of intravenous or central lines; incision of superficial abscesses and incision and drainage of superficial haematomas; percutaneous drainage of abscesses and haematoma under radiation or ultrasound guidance; minor suturing of uncomplicated skin lacerations; risk from handling sharps (such as handling needles and scalpels outside of a patient's body).

Exposure prone procedures (EPPs) are procedures where there is a risk of injury to the HCW resulting in exposure of the patient's open tissues to the blood of the HCW. These procedures include those where the HCW's hands (whether gloved or not) may be in contact with sharp instruments, needle tips or sharp tissues (spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all times. [5, 76].

Examples of EPPs include:

- **Cardiothoracic surgery:** generally all cardiothoracic procedures.
- **Dentistry:** including maxillofacial surgery and oral surgical procedures, including the extraction of teeth (but excluding extraction of highly mobile or exfoliating teeth), periodontal surgical procedures, endodontic surgical procedures, implant surgical procedures.
- **Gynaecological surgery:** including perineal surgery, trans-vaginal surgery, and open abdominal gynaecological surgery.
- **Neurosurgery:** that involves exposure to sharp bone fragments e.g. trauma and some spinal surgery.
- **Obstetric or midwifery procedures:** including caesarean birth, instrumental birth, infiltration of the perineum with local anaesthetic, episiotomy, repair of an episiotomy or perineal/vaginal tear, application of a fetal scalp electrode, and fetal blood sampling.

- **Open surgical procedures:** including open abdominal or thoracic general surgery, open abdominal or thoracic vascular surgery and open urological procedures.
- **Orthopaedic procedures:** including procedures involving the cutting or fixation of bones or the distant transfer of tissues from a second site (such as in a thumb reconstruction), and open surgical procedures where there is the possibility of bone fragments and/or bone spicules, mechanical drilling is involved, or the procedure involves deep tunneling using sharp instruments.
- **Otolaryngology, head and neck surgery:** in particular bony facial reconstructive surgery (elective or after trauma).
- **Plastic surgery:** where it involves extensive cosmetic procedures that involve bony reconstruction or free tissue transfer involving bone or in the thorax.
- **Trauma:** including open head injuries, facial and jaw fracture reductions, extensive soft tissue trauma, rectal examination in the presence of suspected pelvic fracture, deep suturing to arrest haemorrhage and internal cardiac massage.

Examples of procedures that are generally considered to be non-EPP but have the potential to escalate to open or trauma procedures that will require access to a colleague who can perform EPPs include:

- **Minimally invasive procedures:** including laparoscopy, endovascular procedures, thoracoscopic procedures, Natural Orifice Transluminal Endoscopic Surgery (NOTES), cystoscopic procedures, arthroscopic procedures, and robotic surgery.
- **Trauma/emergency situations:** there is the risk in trauma/emergency situations that a previously non-EPP may escalate (and quickly) into an EPP. This context must be considered for paramedics, emergency department staff, and HCWs who work in rural or remote areas.

These lists are intended as a guide only and do not cover all eventualities and must be interpreted with caution. Moreover, it is recognised that variations in practice may exist in Australia, and may change over time. It is therefore recommended that the over-arching EPP definition given is used as the primary guidance when deciding whether a particular practice/procedure is exposure prone or not. The relevant specialist college can provide more detailed information about what procedures are considered exposure prone in their specialities. The relevant specialist colleges may recommend a greater frequency of BBV testing for their speciality, particularly when high risk EPPs are commonly performed, and their contact details are provided in Appendix 2: Roles of the National Guidelines.

Attachment 1: Blood Borne Virus Student Declaration Form
All student health care workers of a discipline* that undertakes exposure prone procedures (EPPs) must complete this document prior to their first clinical placement, and again after repeat testing has been undertaken every three years. Students will only be permitted to attend clinical placements if they have submitted this form.

The educational provider must ensure that all student health care workers of a discipline* that undertakes EPPs have completed this form and submitted it for assessment by NSW Health.

Declaration	Initials
I have read and understand the requirements of the *Australian National Guidelines for the Management of Healthcare Workers Living with Blood Borne Viruses and Healthcare Workers who Perform Exposure Prone Procedures at Risk of Exposure to Blood Borne Viruses* and the NSW Health policy *Management of health care workers infected with HIV, Hepatitis B or Hepatitis C and health care workers who perform exposure prone procedures*.	
Select either A or B ☐ A: I have undergone testing for blood borne viruses** (BBVs) at commencement of study in Australia or within the 12 months prior to commencement. ☐ B: I have undergone a repeat test for BBVs within a three year period from the date of my last test. The date of my test was: _____	
I agree to the following: • be tested for Hepatitis B, Hepatitis C and HIV at least once every three years. • have appropriate and timely testing and follow up care after a potential occupational exposure associated with a risk of BBV acquisition. • have appropriate testing and follow up care after potential non-occupational exposure, with testing frequency related to risk factors for virus transmission. • notify the person identified in the health facility local procedures if I am newly diagnosed with a BBV and will refrain from performing EPPs until a risk management plan has been developed by the NSW Health agency during the placement. • cease performing all EPPs if diagnosed with a BBV until the criteria in the *National Guidelines* are met.	

Declaration: I _____ declare that I comply with the requirements of the *National Guidelines* and that the information provided is correct.

Full name:	*Date of Birth:*	*Student ID:*
Email:	*Education Provider:*	
Date:	*Signature:*	

***Disciplines that undertake exposure prone procedures** include: medicine; midwifery; paramedicine; dentistry and oral health.
****Relevant blood borne viruses** are Human Immunodeficiency Virus (HIV), Hepatitis B and Hepatitis C.

OCCUPATIONAL ASSESSMENT, SCREENING AND VACCINATION AGAINST SPECIFIED INFECTIOUS DISEASES (PD2023_022)

PD2023_022 replaced PD2022_030

POLICY STATEMENT

All NSW Health organisations must establish systems to ensure that all workers are appropriately assessed, screened and vaccinated to reduce the risk associated with vaccine-preventable diseases in accordance with the risk category of their position.

These diseases include SARS-CoV-2 (COVID-19), diphtheria, tetanus and pertussis, hepatitis B, measles, mumps, rubella, varicella, tuberculosis and influenza.

SUMMARY OF POLICY REQUIREMENTS

All workers must be assessed, screened and vaccinated as required by the risk category of their position before they commence employment/ engagement or attend clinical placements in NSW Health facilities.

Each NSW Health agency must ensure that resources and appropriately trained assessors are provided to conduct assessments of compliance.

All workers and new recruits are required to receive 2 doses of a Therapeutic Goods Administration approved or recognised COVID-19 vaccine to commence employment/ engagement or continue to work within a NSW Health service.

A worker and new recruit will be considered compliant if they have a medical contraindication to all available Therapeutic Goods Administration approved or recognised COVID-19 vaccines and provide medical contraindication evidence in line with the policy requirements.

In addition, all Category A workers and new recruits are required to receive one dose of the seasonal influenza vaccine annually to be considered compliant.

Category A workers and new recruits who are non-compliant with seasonal influenza vaccination or have a medical contraindication to influenza or COVID-19 vaccinations must comply with all other infection control risk reduction strategies as directed while working in a Category A position.

Category A workers and new recruits must have completed the Tuberculosis (TB) Assessment Tool and the follow-up required.

For new recruits, compliance with this Policy Directive is at the individual's own cost (except for chest x-ray and/ or TB clinical review where required). Workers employed in existing positions must be informed of the requirements of this Policy Directive and any assessments, screening and vaccinations required to meet compliance must be provided as required at no cost to the worker.

Workers and new recruits who have been granted temporary compliance for hepatitis B or tuberculosis must complete the Undertaking/Declaration Form and comply with the requirements within 6 months for hepatitis B compliance, or, in the case of tuberculosis temporary compliance, attend chest x-ray surveillance and clinical reviews as required by the tuberculosis service/ chest clinic until discharged.

Ongoing compliance includes a diphtheria, pertussis, and tetanus (dTpa) booster every 10 years.

All job advertisements must advise potential applicants of the requirements of this Policy Directive and new and existing position descriptions must include the designated risk category of the position.

All students must be advised of the requirements of this Policy Directive prior to and at enrolment/ commencement of the course.

Compliance details must be recorded in VaxLink or ClinConnect (students and facilitators).

The full version of the Occupational Assessment, Screening and Vaccination against specified Infectious Diseases Policy and Procedures is available at https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2023_022

CREUTZFELD-JAKOB DISEASE RELATED INFORMATION SHARING
(PD2014_041)

PURPOSE

To facilitate patient and public health management of suspect cases of Creutzfeld-Jakob Disease (CJD) in NSW residents, a Deed between the Health Administration Corporation (for NSW Health) and the Florey Institute of Neurosciences and Mental Health (for the Australian National Creutzfeld-Jakob Disease Registry) has been endorsed for mutual sharing of information about suspect CJD cases in NSW.

This Policy Directive describes the information to be disclosed, and the disclosure procedure, for information to be provided from NSW Health to the Australian National Creutzfeld-Jakob Disease Registry.

MANDATORY REQUIREMENTS

NSW Health must notify suspected CJD cases and other variants of prion diseases, including variant CJD (vCJD), to the Australian National Creutzfeldt-Jakob Disease Registry (ANCJDR) for the purposes of national surveillance, exposure investigation, classification of the case, and to inform public health response.

IMPLEMENTATION

As required by the *Public Health Act 2010 (NSW*), doctors, hospitals and laboratories must notify suspected CJD cases and other variants of prion diseases, including variant CJD (vCJD), to the local public health unit, who will then inform the Australian National Creutzfeldt-Jakob Disease Registry (ANCJDR).

If the ANCJDR then requires additional information from a doctor, hospital or laboratory for a suspect CJD case in NSW, this must be provided.

The information to be disclosed, and the disclosure procedures for information to be provided by NSW Health and the Australian National Creutzfeld-Jakob Disease Registry (ANCJDR) are described in the following *CJD Related Information Sharing:Procedures, Section 2*.

1. BACKGROUND

1.1 About this document

Identification of suspect cases of Creutzfeld-Jakob Disease (CJD) is needed by public health to determine risks of transmission and to minimise these risks for public safety through infection control.

To facilitate patient and public health management of suspect cases of CJD in NSW residents, a Deed between NSW Health and the Australian National Creutzfeld-Jakob Disease Registry (ANCJDR) at the Florey Institute of Neurosciences and Mental Health (FNI) has been endorsed for mutual sharing of information about suspect CJD cases in NSW.

Under the *NSW Public Health Act 2010*, doctors, hospitals and laboratories must notify suspected CJD cases and other variants of prion diseases, including variant CJD (vCJD), to Health Protection NSW, who will then inform the ANCJDR for the purposes of national surveillance, exposure investigation, classification of the case, and to inform public health response.

Additional information may be requested by the ANCJDR from a doctor, hospital or laboratory for a suspect CJD case in NSW.

The information to be disclosed, and the disclosure procedures for information to be provided by NSW Health and the Australian National Creutzfeld-Jakob Disease Registry (ANCJDR) are described in *Section 2*.

1.2 Key definitions

Australian National Creutzfeld-Jakob Disease Registry (ANCJDR)	The ANCJDR was established in October 1993 in response to the recognition of four probable Australian human pituitary hormone related CJD deaths. The FNI is responsible for the ANCJDR under the auspices of a contract with the Commonwealth to determine all suspect cases of TSE in Australia.
Creutzfeld-Jakob Disease (CJD)	CJD is a fatal neurological disorder thought to be caused by the accumulation of abnormal proteins known as prions. Prions are transmissible under certain rare circumstances. CJD is part of a group of diseases known as Transmissible Spongiform Encephalopathies (TSEs), and has two main forms - classical (which includes sporadic, familial and iatrogenic cases) and variant CJD.
Authorised clinician	A NSW clinician who is an employee under the *Health Services Act 1997 (NSW).*
CJD Related Information Sharing Deed	The Deed provides the legal framework for sharing information about suspect cases of CJD between NSW Health and the ANCJDR.

1.3 Legal and legislative framework

1.3.1 *CJD Related Information Sharing Deed 2014*

A Deed describing the responsibilities of the Health Administration Corporation (for NSW Health) and the Florey Institute of Neurosciences and Mental Health (FNI) (for the Australian National Creutzfeld-Jakob Disease Registry) for disclosure of information between NSW Health and the ANCJDR, including the confidentiality obligations, return of information and other general aspects of the agreement. The disclosure information and disclosure procedure are described in an attached Schedule.

1.3.2 *Public Health Act 2010 (NSW)*

CJD, including vCJD, is a notifiable disease under the Act.

NSW Health Notifiable Disease Data Security and Confidentiality, PD2012_047

In accordance with this Policy Directive, NSW Health is permitted to release identifying data on the basis that, where available, the patient (or their 'authorised representative') has given explicit written permission for such release of information.

1.3.3 *Health Records and Information Privacy Act 2002 (NSW)*

In accordance with the Health Privacy Principles in the Act, NSW Health will, when reasonable, disclose confidential information to the ANCJDR.

1.3.4 *Health Services Act 1997 (NSW)*

A NSW Health authorised clinician defined as an employee under the Act may directly notify a possible case of CJD to the ANCJDR.

2. DISCLOSURE INFORMATION AND DISCLOSURE PROCEDURE

2.1 Responsibilities

2.1.1 NSW Health

Under the *NSW Public Health Act 2010*, doctors, hospitals and laboratories must notify suspected CJD cases and other variants of prion diseases, including variant CJD (vCJD), to Health Protection NSW, who will then inform the ANCJDR for the purposes of national surveillance, exposure investigation, classification of the case, and to inform public health response.

2.1.2 Florey Institute of Neuroscience and Mental Health (FNI)

The ANCJDR will:

- Undertake exposure investigation and final classification of suspected cases of CJD in order to determine the likely diagnosis, the cause of the disease in each case and if there are any implications for public health. For this purpose, ANCJDR will collect information from patients, with consent if possible, referred to the FNI by NSW Health, from treating clinicians and/or from the 'authorised representative', as necessary. The FNI will collect information about cases or possible cases in accordance with the Privacy Laws.
- Conduct public health surveillance for CJD in NSW residents to monitor trends in the incidence, risk factors and clinical outcomes of CJD and its various forms.
- Notify NSW Health of cases and publish annual summary data about NSW cases.
- Provide advice to individual clinicians about suspect, possible, probable or confirmed cases, recommending investigations or other follow up, including infection control measures, as required.
- Provide advice to NSW clinicians, NSW Health and NSW public health units about public health risks (specifically the risks of transmission of CJD to others) of any individuals referred to the ANCJDR, as required.
- Provide advice to NSW Health in relation to the incidence of CJD on an ongoing basis.

The FNI will not share any information with international bodies for the purpose of research or otherwise without the written permission of NSW Health. Any such information must be appropriately de-identified.

2.2 Disclosure Information

The information to be exchanged between NSW Health and the ANCJDR, including the following personal information, to the extent that this information is available:

<u>General cases</u>

1. Patient name
2. NSW Health unique identifier number eg Medical Record Number
3. Date of birth
4. Residential address at time of notification
5. Hospital at the time of notification
6. Treating doctor name and contact telephone number
7. Issues of concern/relevant public health issues

8. FNI outcome classification
9. Date and cause of death if applicable
10. Officer notifying outcome
11. Details of the patient's relevant medical condition(s), including investigations and relevant medical treatments.

Classical cases

12. History of relevant surgery, particularly neurosurgery or ophthalmic surgery or invasive neurological testing (including stereotactic EEG).
13. History of receipt of corneal transplant, or of receipt of human dura mater graft (particularly 'Lyodura' used in Australia between 1972 and 1987).
14. History of Treatment with cadaver-derived human pituitary hormones (used for treatment of short stature or infertility in Australia between 1967 and 1985).
15. History of receiving or donating blood, other blood products or organs.
16. History of dental or surgical care, renal dialysis, or other medical procedures, tattoos or piercings, or acupuncture.
17. Family history of similar illness.

Variant CJD

18. Screening for variant CJD risk factors including travel history and consumption of foods suspected containing beef or bovine products for any case of suspected or confirmed variant CJD.

2.3 Disclosure Procedure

2.3.1 Information from NSW Health to the ANCJDR

- A NSW Public Health Unit (PHU) will notify the ANCJDR of possible, probable or confirmed cases of CJD and its variant (vCJD) where the PHU is aware that no previous report has been made by the treating clinician.
- A NSW authorised clinician (to the extent that they are an employee under the *Health Services Act 1997* (NSW)) may directly notify a possible case to the ANCJDR.
- Where additional clinical information is required by the ANCJDR to classify a case or undertake the exposure investigation, the clinician or healthcare facility will be directly contacted by the ANCJDR.
- Information included under the Deed can be provided by the treating clinician or healthcare facility under the following circumstances:
    - With patient consent
    - With consent from the patient's 'authorised representative' in circumstances where the patient lacks capacity.

The *Health Records and Information Privacy Act 2002* sets out a list of people who can be an authorised representative on behalf of a patient who lacks capacity. This is set out in the Privacy Manual for Health Information (March 2015) as amended from time to time. It includes someone who has an '*enduring* power of attorney' for the individual or is a guardian.

- With consent from the patient's authorised representative or a close relative in circumstances where the patient is deceased. Once a patient has died, the authorised representative will be an executor or administrator of the deceased's estate which endures indefinitely. Powers of attorney and guardianship orders cease on death.

- In circumstances where consent cannot be obtained from the person, or their authorised representative (or is unreasonably delayed), exemptions set out in the *Health Records and Information Privacy Act 2002* (and the Privacy Manual for Health Information (March 2015), as amended from time to time) may be applicable in allowing the release of information under the Deed.

- If the ANCJDR encounters problems in obtaining information for a particular case, they may contact Health Protection NSW to request assistance under the auspices of the Deed.

2.3.2 Information from the ANCJDR to NSW Health

- The ANCJDR will report all notifications of possible NSW cases reported directly to the ANCJDR eg from clinicians, family members, or the CJD support group, or other individuals.
- The ANCJDR will report the final classification of NSW cases to NSW Health.

NSW FRAMEWORK AND STANDARD OPERATING PROCEDURE FOR HIV POINT OF CARE TESTING (GL2019_010)

GL2019_010 rescinds GL2015_018

PURPOSE

This Framework has been developed to guide the delivery of high quality, safe, sustainable and appropriate Point of Care Testing (PoCT) for HIV within NSW Health supported non-laboratory settings in NSW in order to increase uptake of HIV testing among high risk groups, increase the proportion of people who receive their test result, and reduce the number of people with undiagnosed HIV infection.

KEY PRINCIPLES

Point of Care Testing (PoCT) is one pathway to increase testing for HIV, particularly among high risk groups who can experience barriers to testing, including the need to attend a health service to access a test, time taken for test results to be available, poor access to health care providers, stigma and the risk of discrimination. PoCT addresses these barriers through increasing access, supporting autonomy, and providing convenience. PoCT should be offered where possible in conjunction with STI screening and/or conventional HIV testing.

Based on the epidemiology of HIV infection, PoCT for HIV is appropriate for gay men and other men who have sex with men (MSM). PoCT for HIV is generally not appropriate in populations with a low prevalence of undiagnosed HIV infection because of the lower positive predictive value of PoCT in these populations.

Only PoCT devices approved by the Therapeutic Goods Administration (TGA) can be used for HIV testing in Australia. Testing must be conducted in accordance with any product specific conditions placed on the test by the TGA. Information on approved tests and product specific conditions is available from the TGA website www.tga.gov.au.

For a PoCT site to be eligible to operate under the NSW Framework and participate in the NSW Health Quality Assurance and Safety package from the St Vincent's NSW State Reference Laboratory for HIV, it is required to use the NSW Health recommended HIV PoCT device.

A PoCT site that elects to operate outside the NSW Health Framework and the NSW Health Quality Assurance and Safety package would require a strong justification for using an alternative HIV PoCT device to that NSW Health recommended device. In these circumstances, each site should be assessed on a case by case basis and would be required to make a submission to NSW Health outlining the relative benefits of the alternative test with regards to service efficiency, client throughput and test performance for the particular site submitting the application.

USE OF THE GUIDELINE

This Framework is for NSW Health, other NSW Government departments, health professionals, others involved in the delivery of health services and non-government organisations involved in providing HIV related services.

To download the Guideline please go to
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2019_010

HUMAN IMMUNODEFICIENCY VIRUS (HIV) – MANAGEMENT OF NON-OCCUPATIONAL EXPOSURE (PD2015_005)

PD2015_005 rescinds PD2006_005.

PURPOSE

This Policy Directive outlines the service obligations of Local Health Districts (LHDs) in the management of individuals who have been exposed or suspected to have been exposed to HIV in a non-occupational setting.

Evidence suggests that the timely provision of post-exposure prophylaxis (PEP) following a non-occupational exposure may prevent subsequent HIV infection. Prescribing of PEP must be based on a careful risk assessment of the risk of HIV infection in accordance with the national guidelines *Post Exposure Prophylaxis after Non-Occupational and Occupational Exposure to HIV* published in December 2013 ('National PEP Guidelines').

This Policy Directive should be read in conjunction with National PEP Guidelines, which provide comprehensive clinical guidance on PEP provision.

MANDATORY REQUIREMENTS

LHDs are responsible for the cost of drugs used in PEP, and for ensuring that prescribing is conducted in accordance with the National PEP Guidelines. LHDs must ensure that local PEP services address the time-critical nature of PEP assessment and commencement, and provide prompt referral and follow-up of all patients prescribed PEP.

Compliance with this Policy Directive is mandatory for all health care providers in receipt of funding from NSW Health, including Local Health Districts and Chief Executive Governed Statutory Health Corporations, and Affiliated Health Organisations (both declared and undeclared), and their staff.

IMPLEMENTATION

Chief Executives of LHDs, Statutory Health Corporations and Affiliated Health Organisations in receipt of funding from NSW Health are responsible for ensuring that:

- Local policies and procedures are in place to ensure provision of PEP in accordance with the National PEP Guidelines (Section 2).
- PEP drug provision is funded through the LHD.
- All staff are made aware of their obligations in relation to this Policy Directive; and
- All staff receive appropriate training to enable them to carry out their obligations in relation to this Policy Directive.

All staff must comply with this Policy Directive.

1. BACKGROUND

This Policy Directive specifies the service obligations of Local Health Districts (LHDs) in the provision of Post Exposure Prophylaxis (PEP) for non-occupational HIV exposure. It should be read in conjunction with the national guidelines *Post-Exposure Prophylaxis after Non-Occupational and Occupational exposure to HIV* published in December 2013[1] ('the National PEP Guidelines'), which provide comprehensive clinical guidance.

[1] http://www.ashm.org.au/pep-guidelines

There is evidence in relation to HIV that PEP may prevent infection[1], although there are currently no data from randomised controlled trials of PEP efficacy. The prescribing of PEP must be based on a careful assessment of the risk of HIV infection in accordance with the National PEP Guidelines. PEP should be prescribed as soon as possible after exposure and within 72 hours[2].

Drugs used in PEP are not currently funded through the s100 program. LHDs are responsible for the cost of drugs used in PEP, and for ensuring drugs are prescribed in accordance with the National PEP Guidelines. Treatment prescribed at a patient's first presentation, usually sufficient for one week, is a bridging step until the client is fully assessed by an authorised s100 prescriber or specialist affiliated with a designated HIV/AIDS Unit.

LHDs must ensure that PEP services address the time-critical nature of PEP assessment and commencement, and the need for prompt referral and follow-up of all patients who are prescribed PEP.

The occupational exposure of health care workers to the risk of HIV infection is dealt with in the NSW Health Policy Directive PD2005_311 *HIV, Hepatitis B, and Hepatitis C – Management of Health Care Workers Potentially Exposed.*

2. PROCEDURES FOR MANAGEMENT OF HIV NON-OCCUPATIONAL PEP

2.1 General requirements for Local Health Districts (LHDs)

LHDs are required to have policies and procedures in place that ensure provision of PEP in accordance with the National PEP Guidelines, including:

- Emergency response and assessment of the patient to ensure timely administration of PEP where indicated, as soon as possible after exposure and within 72 hours.
- Access 24 hours-a-day to expert advice and guidance on clinical best practice treatment and management of recent HIV exposure.
- Ready access to drugs used for PEP.
- Information about PEP for the patient.
- Informed consent of the patient.
- Prescribing and dispensing of medication.
- Baseline and follow up testing for HIV.
- Assessment of risk of exposure to other infections, with immunisation, testing and treatment as indicated.
- Provision of, or referral for, follow-up assessment and ongoing monitoring by an authorised s100 prescriber, or specialist affiliated with a designated HIV/AIDS Unit, preferably in the patient's local area.
- Referral to specialist counselling and peer support services where indicated.
- Referral to services that offer ongoing blood borne virus (BBV) and sexually transmissible infection (STI) testing and management, such as publicly funded sexual health services, as patients presenting for PEP are often at a high, ongoing risk for other BBVs and STIs.

2.2 HIV status of the source individual

Attempts should be made to contact the source and ask them to have an urgent HIV test. Where possible obtain information about the source individual including HIV status, and if HIV positive, including viral load, whether on treatment, which treatment, any treatment failures or known resistance.

[1] J Hoy, S Lewin, JJ Post, A Street. HIV Management in Australasia: A Guide for Clinical Care. Australasian Society for HIV Medicine, 2009.
[2] National PEP Guidelines at p.8

Initiation of PEP should not be delayed while establishing the HIV status of the source.

2.3 HIV status of the exposed individual

All candidates for PEP require baseline HIV antibody testing. Where possible, the results should be followed up within 24 hours.
Initiation of PEP should not be delayed while determining the HIV status of the exposed individual.

2.4 Management of possible exposure to other conditions

Hepatitis B
All patients presenting for PEP must be assessed for possible hepatitis B exposure, and tested and provided with immunisation including hepatitis B immunoglobulin where indicated[1].

Other conditions for which testing may be indicated, depending on the nature of the exposure, are listed below: See the National PEP Guidelines for a recommended schedule of baseline and follow-up testing for these conditions in conjunction with PEP assessment[2].

Sexually transmissible infections
Patients are to be tested for chlamydia, gonorrhoea, and syphilis, as indicated by the type of exposure.

Hepatitis C
Patients who are potentially at risk of hepatitis C infection after exposure require follow-up and specialist referral if seroconversion is detected.

Pregnancy
All women who have the potential to be pregnant on presentation for PEP should be offered pregnancy testing. Emergency contraception should be offered to women presenting for PEP who are at risk of pregnancy. Follow-up pregnancy testing should be offered at two weeks post-exposure where indicated. If the test is negative but pregnancy is still suspected, the test should be repeated in 1 week. Specialist advice must be sought urgently for women who require PEP and are pregnant or breastfeeding.

2.5 Recording information where a patient is assessed for PEP

Every assessment for PEP must be documented, regardless of whether PEP is commenced. The required information covers the time of the assessment and first dose (if prescribed), details, including date and time of the exposure, information about the exposed person (including any previous HIV test and result), information about the source, details of PEP discussion with the patient, referral, and follow-up arrangements. Further details are provided in the National PEP Guidelines[3].

2.6 Patient confidentiality

The confidentiality of the patient and the source must be maintained in accordance with the requirements of the *Public Health Act 2010* (NSW).

2.7 Quality assurance

LHDs must have a quality assurance process in place to monitor and review the effectiveness of arrangements for managing exposed individuals, including in relation to health outcomes for patients.

[1] National PEP Guidelines at p.15
[2] At p.8
[3] National PEP Guidelines at p.11

3. APPENDIX

3.1 Contacts and information for health care workers

List of NSW HIV s100 prescribers by suburb: http://www.ashm.org.au/hiv/prescriber-lists
Australasian Society for HIV Medicine
Tel: 02 8204 0700

NSW HIV Support Program
Tel: 02 9391 9195
Email: hivsupportprogram@doh.health.nsw.gov.au
Support for doctors and patients where the patient is newly diagnosed with HIV

Needlestick Hotline
Tel: 1800 804 823
Information and support for healthcare, paramedical, and emergency services workers, who sustain a needlestick injury and/or experience occupational exposure to blood and body fluids

NSW Sexual Health Infolink
Tel: 1800 451 624
TTY: 9221 6515

NSW Sexual Health Clinics
Phone the NSW Sexual Health Infoline for information about clinics and services in your area: 1800 451 624
http://www.health.nsw.gov.au/sexualhealth/pages/sexual-health-clinics.aspx

NSW AIDS Dementia and HIV Psychiatry Service
Tel: 02 9382 8600
http://www.health.nsw.gov.au/adahps/pages/default.aspx

Needle Cleanup Hotline
Arranges clean-up of dumped needles and syringes in public places anywhere in NSW
Tel: 1800 633 353

Community services
ACON
Tel: 1800 063 060
www.acon.org.au
Provides health promotion services specialising in people living with with HIV and lesbian, gay, bisexual, transgender and intersex (LGBTI) health.

NSW PEP Hotline
Tel: 1800 737 669
Information, assessment, and referral of people who may require HIV PEP following a high risk exposure (not an information line for general questions about HIV).
Multicultural HIV and Hepatitis Service
Tel: 02 9515 1234
Free call (NSW country): 1800 108 098
www.mhahs.org.au
A statewide service providing information and assistance for culturally and linguistically diverse communities.

NSW Users and AIDS Association (NUAA)
Tel: 02 8354 7300
Tel (NSW Country): 1800 644 413
http://www.nuaa.org.au/
Provides information and support for users of illicit drugs, and their families and friends, as well as needle and syringe program services.

PozHet
Information Line: 1800 812 404
http://pozhet.org.au/
Provides support for heterosexual people with HIV.

Positive Life NSW
Tel: 02 9206 2177
Free call: 1800 245 677
http://www.positivelife.org.au/
Provides support for people living with HIV.

Sex Workers Outreach Project
Tel: 02 9206 2000
www.swop.org.au
Provides sexual health information and support to people who engage in sex work.

HIV Information Line
Tel: 1800 451 600
Information, support, and referral, about HIV.

Legislation, policies and resources

National Guidelines for Post-Exposure Prophylaxis after Non-Occupational and Occupational Exposure to HIV. Australasian Society for HIV Medicine, 2013
http://www.ashm.org.au/pep-guidelines

HIV, Hepatitis B, and Hepatitis C – Management of Health Care Workers Potentially Exposed. NSW Health Policy Directive PD2005_311
http://www0.health.nsw.gov.au/policies/pd/2005/PD2005_311.html

Public Health Act 2010 (NSW)
http://www.austlii.edu.au/au/legis/nsw/consol_act/pha2010126/

Public Health Regulation 2012 (NSW)
http://www.austlii.edu.au/au/legis/nsw/consol_reg/phr2012217/

TUBERCULOSIS MANAGEMENT OF PEOPLE KNOWINGLY PLACING OTHERS AT RISK OF INFECTION (PD2015_012)

PD2015_012 rescinds PD2005_068.

PURPOSE

This Policy Directive provides a framework for the management of people with tuberculosis (TB) who knowingly place others at risk of infection.

Where persons with TB knowingly risk infecting others, the health system is responsible for taking action to protect the health of the public.

In circumstances where support, counselling and behavioural change techniques fail, the health service may be required to implement restrictive measures under *The Public Health Act 2010*.

MANDATORY REQUIREMENTS

All staff involved in the care of clients with TB must adhere to these principles.

IMPLEMENTATION

Chief Executives must ensure that:

- The principles and requirements of this policy are applied, achieved and sustained.
- Relevant staff are made aware of their obligations in relation to the Policy Directive.
- Documented procedures are in place to support the Policy Directive.

Clinicians:

- Must comply with this Policy Directive.

1. BACKGROUND

1.1 About this document

This Policy Directive provides a framework for the management of people with tuberculosis (TB) who knowingly place others at risk of infection.

The management framework established by this Policy Directive is based on the following principles and assumptions:

- The general public have the right to appropriate protection against the risk of infection.
- A range of factors, including long duration of treatment, medication side effects, perception of stigma and restrictiveness of daily treatment can impact on a person's willingness to accept and comply with TB treatment.
- Social and other health factors, including drug and alcohol dependence, mental health issues, housing concerns and work, family and other responsibilities can also impact on a person's willingness to accept and comply with TB treatment.
- Lessening of the risk of transmitting TB can be brought about by changes in individual behaviour with the help of counselling and education.
- Each person with infectious TB must accept responsibility for preventing the further transmission of the infection.

This Policy Directive explains the framework and process, through which the health system may encourage, facilitate and potentially enforce adherence to TB treatment.

The management of people with TB who knowingly risk infecting others may require intensive, individualised case management, a variety of responses to broader health and social service needs and an escalating series of behavioural management techniques including counselling, behavioural supervision, formal warnings and Public Health Orders, including, if necessary, detention or referral to law enforcement authorities.

1.2 Key definitions

TB is caused by bacteria from the *Mycobacterium tuberculosis* complex. The disease most commonly occurs in the lungs (pulmonary TB), although it can affect any region of the body (extrapulmonary TB). The pulmonary form is most infectious.

1.3 Legal and legislative framework

TB is a Category 4 Scheduled medical condition under the *Public Health Act 2010*. As such it is an offence for a person who has been diagnosed with TB, and is in a public place, to fail to take reasonable precautions against spreading the condition.

The *Act* contains a mechanism to restrict the behaviour of a person who has TB in certain circumstances, using a Public Health Order.

Authorised medical officers under Section 62 of the *Public Health Act 2010* are the Chief Health Officer, or a registered medical practitioner authorised by the Secretary of the NSW Ministry of Health to exercise the functions of an authorised medical practitioner.

2. THE MANAGEMENT FRAMEWORK

The management framework for people with TB who risk infecting others includes the following levels:

Management level	Summary of case management
1. Local management	• The person is managed by the treating clinician and TB service. Expert advice is sought locally as required.
2. Supported management	• The person is managed by the treating clinician and TB service with support from the NSW TB Program Expert Panel.
3. Public Health Order	• The person is managed by the treating clinician and TB service with support from the NSW TB Program Expert Panel. • A Public Health Order is in place which places conditions on the person in relation to their behaviour, treatment, healthcare and supervision.
4. Detention order	• The person is managed by the treating clinician and TB service with support from the NSW TB Program Expert Panel. • The person's movements are restricted by a Public Health Order which includes an order for detention.

Each level is discussed in detail below. Regardless of the level of management it is important that the person's confidentiality is respected and that any communication regarding the person and their management is restricted to those service providers who are directly involved in management of the issues.

2.1 Level 1: Local Management

2.1.1 Initial counselling, education and support

Counselling, education and support is an integral part of the management of all persons with TB, and must be provided from the time of diagnosis. Persons with infectious TB must receive culturally and linguistically appropriate counselling and education to ensure that they understand the public health significance of their diagnosis and the importance of complying with treatment and isolation. A professional interpreter should be used whenever relevant.

The treating clinician and local TB service are responsible for ensuring counselling and education is provided to the person with TB. The treating clinician and TB service should work in partnership with the client, and provide a supportive environment in which there is a mutual trust between the client and the healthcare workers. The person with TB must be given opportunity to voice concerns and ask questions about their treatment.

In the event that a person with infectious TB is non-compliant with recommended anti-tuberculous treatment or isolation requirements in such a way that is endangering, or likely to endanger the health of the public, as a first step the person's understanding of their public health responsibilities should be clarified, and the power of an authorised medical practitioner to make a Public Health Order explained. Intensive counselling and education to support behavioural change should be implemented. This is best undertaken by the treating clinicians and local TB service.

A suitable community organisation may be able to assist with supporting appropriate behaviour by the individual. Their involvement could include social support, and facilitating self-isolation until non-infectious.

Specific incentives and initiatives may include:
- Counselling.
- Provision of housing or supported accommodation.
- Independent living skills training (help with budgeting, life skills).
- Home care support (shopping, cooking, cleaning).
- Emotional support persons (such as a 'buddy' system or peer support group).
- A letter from the public health unit director to the effect that the attending doctor is concerned about compliance with treatment and emphasising the importance of following the doctor's treatment recommendations.

2.1.2 Psychosocial assessment

A person's ability and willingness to comply with TB treatment and isolation may be impacted by a range of factors, including:
- Homelessness, housing and financial concerns.
- Social isolation.
- Alcohol and illicit drug use.
- Mental illness.
- Psychiatric disturbances related to side effects of TB medications.
- Real or perceived stigma.
- Responsibilities and competing priorities, including work, childcare, education.

A full psychosocial assessment of the person is critical at this stage, if it has not already been undertaken. Expert support from a social worker, psychologist or psychiatrist may be required at this stage. The treating clinician and TB service should work with other healthcare teams involved in the person's management, such as drug and alcohol and mental health services, in order to overcome barriers to the person's non-compliance.

2.1.3 Case conference and consultation

A case conference between the treating clinician, local TB service, Public Health Unit, Aboriginal Health Unit or Multicultural Health Service (if applicable) and other local services involved in the care of the person with TB is often useful in addressing specific management issues, as well as developing a comprehensive care plan for that person.

The NSW TB Program Manager, Communicable Diseases Branch and Public Health Unit Director should also be consulted.

2.2 Level 2: Supported Management

In circumstances where counselling and support measures have failed to mitigate concerns that a person presents an imminent public health risk, more assertive management should be initiated. At this level, the NSW TB Program Manager should be consulted to consider the need to convene an expert panel, additional assessment should be undertaken, and other initiatives should be considered.

2.2.1 Seeking input from the NSW TB Program Expert Panel

Where the treating clinician and local TB service are concerned about the compliance of a person with infectious TB after local management has been attempted, they may seek advice from the NSW TB Program Manager regarding the potential to convene an Expert Panel to consider the case. The constitution of the Expert Panel is detailed in section 3 of this policy directive.

The Expert Panel is convened on a needs basis to review the management of challenging and complex cases. The Expert Panel will review the management of the case and provide advice on additional or alternative strategies.

In cases where the Expert Panel is consulted, care and management of the patient remains the responsibility of the treating clinicians and local TB service.

The TB service must provide a monthly report on treatment progress to the NSW TB Program until the person completes treatment or is transferred out of the TB service.

2.2.2 Letter of warning

A formal letter from the Local Health District Public Health Unit Director to the person should be considered at this stage. In some cases a formal letter of warning may be sufficient to improve behaviour.

This letter would act as an official warning to the person to discontinue any activity which may place other people at risk of infection with TB. The letter would include:

- The responsibilities of the client with respect to their diagnosis of TB.
- Expected behaviours of the client and the rationale for these.
- The services available to the person to support them to comply with their TB management .

- The steps that should be taken by the person to satisfactorily comply with their TB management.
- The legal powers available to take action against persons contravening the public health legislation, including the power to make a Public Health Order.

2.3 Level 3: Public Health Order

In extenuating circumstances where other strategies within management levels 1 and 2 have failed, a Public Health Order may be considered.

In the event that a Public Health Order under the *Public Health Act 2010* is considered the appropriate course of action by the Expert Panel, treating clinician, and local Public Health Unit Director, a recommendation is accordingly made to the Chief Health Officer by Health Protection NSW, in consultation with the NSW Ministry of Health Legal and Regulatory Services Branch.

A Public Health Order may require the person subject to the order to do any one or more of the following:

- To refrain from specified conduct.
- To undergo specified treatment.
- To undergo counselling by one or more specified persons or by one or more persons belonging to a specified class of persons.
- To submit to the supervision of one or more specified persons or of one or more persons belonging to a specified class of persons.
- To undergo specified treatment at a specified place.

2.3.1 Making the Public Health Order

The procedures associated with making a Public Health Order are:

- An authorised medical practitioner may make a written Public Health Order in respect of a person if satisfied on reasonable grounds that the person has TB and because of the way the person behaves, the person may, as a consequence of that condition, be a risk to public health. It would be expected that the authorised medical practitioner would be provided with advice from the Expert Panel to assist in this determination.
- In deciding whether to make a Public Health Order, the authorised medical practitioner must take into account:
    - The principle that any restriction on the liberty of a person should only be imposed if it is the most effective way to prevent any risk to public health.
- Unless it is an emergency or it is otherwise not reasonably practicable to do so, in deciding whether to make a Public Health Order in respect to TB, the authorised medical practitioner must also take into account:
    - Whether reasonable attempts have been made to provide the person with information about the effects of the condition the person has and the risks to public health of that condition.
    - The options other than a public health order that are available to deal with the risk to public health posed by the person.
    - If the proposed public health order will require the person to undergo treatment - the availability and effectiveness of the proposed treatment and the likely side effects of the proposed treatment on the person.
    - If the proposed public health order will require the person to be detained - the likely social, economic, physical and psychological effects of the detention on the person.
    - These guidelines.

- Section 66 of the Act allows a person who is subject to a Public Health Order for a category 4 condition to appeal to the Administrative Decisions Tribunal. A person to whom an Order is issued should be informed of their right of appeal and arrangements should be made to ensure that the person has appropriate legal representation in the Tribunal hearing.

2.3.2 Duration of the Public Health Order

A Public Health Order must state that it expires a specified number of days (not exceeding 28 days) after its service on the person, unless the order is earlier varied as to its duration or is earlier revoked. A Public Health Order ceases to have effect if:

- A copy of the application made to the Administrative Decisions Tribunal for confirmation of the order under Section 64 of the *Public Health Act 2010* is not served upon the client within three days of service of the order.
- The Tribunal revokes the order.
- The order expires before it is confirmed or revoked by the Tribunal or before or after an application to continue the order is made to the Tribunal.
- If the authorised medical practitioner considers that the person subject to the order is no longer a risk to public health, the authorised medical practitioner must revoke the order and immediately give notice in writing of the revocation to the person and the Civil and Administrative Tribunal.

2.3.3 Continuation of orders

Before the expiry of the Order, an authorised medical practitioner may apply to the Tribunal for continuation of the order for a period up to six months if the authorised medical practitioner is satisfied that the person subject to the order would continue to be a risk to public health as a consequence of having TB, if not subject to a Public Health Order.

The decision to seek continuation of a Public Health Order should be made in consultation with the NSW TB Program Expert Panel.

2.4 Level 4: Detention order

It must be emphasised that the use of public health detention is expected to be a rare occurrence, and should only ever be considered as a last resort.

All Local Health Districts should identify appropriate facilities and staff who are able to implement an order for secure detention under the *Public Health Act 2010*. See section 4.

Where the person to whom the Public Health Order applies is already detained under a custodial sentence, consideration should be given to the unique circumstances of implementing the Public Health Order, including:

- That client confidentiality, legal and safety issues be considered, and
- That isolation measures may require negotiation with Justice Health, Corrective Services NSW and Juvenile Justice.

3. NSW TB PROGRAM EXPERT PANEL

The role of the NSW TB Program Expert Panel is to provide expert advice to clinicians and to support local decision making in relation to complex and challenging cases of TB, including persons who knowingly risk infecting others. The Expert Panel is convened on an ad-hoc basis, at the request of the treating clinician or local TB Coordinator.

The treating clinician and local TB Coordinator are responsible for presenting the case to the Expert Panel. The Expert Panel reviews the clinical and public health management of the case and recommends additional or alternative management strategies.

The core constitution of the Expert Panel includes:
- Director, Health Protection NSW (Chairperson)
- Director, Communicable Diseases Branch
- Manager, NSW TB Program (Secretariat)
- At least one nominated expert TB physician
- Director, Public Health Unit (of the relevant local health district).

Additional Expert Panel members are selected based on specific needs of the case, and may include:
- Specialist TB nurses
- Additional expert TB physicians
- Aboriginal health worker
- Social worker
- Psychiatrist
- Representative of a refugee health service, or multicultural health worker
- Professional ethicist
- A member of the relevant community or key support group.

The Panel will advise the Chief Health Officer based on consideration of issues identified in section 2.3.1.

4. ACCOMMODATION

4.1 Hospital facilities

Persons with TB may require hospitalisation, either for the purposes of undertaking investigations, establishing a treatment regimen, or to ensure respiratory isolation. Local Health Districts should be prepared to effectively manage persons with TB who may be resistive to treatment and isolation orders.

Local Health Districts must:
- Develop a management plan addressing the needs of the case, other patients, staff and visitors.
- Provide adequate staff training.
- Assure the availability of appropriate secure facilities and processes, including the use of security personnel ('secure' in this context means the minimum additional security to ensure that the person does not injure themselves, or inconvenience staff or other patients).
- Identify a suitable location for accommodating a person with infectious TB who is detained under public health legislation.

People with TB may have concurrent mental illness, which can potentially be exacerbated by isolation and the effect of some TB medications. Local Health Districts should ensure that relevant expertise is available to safely and effectively manage such patients. The use of mental health legislation for detention of recalcitrant persons with TB will never be appropriate or lawful, except in circumstances where their mental health status is serious enough to warrant detention under the *Mental Health Act 2007*.

4.2 Alternative accommodation

When accommodation is required for the primary purpose of respiratory isolation or public health detention in patients who are medically stable, a non-hospital setting may offer the most appropriate environment. Local Health Districts must consider how best to accommodate people with TB in such situations and ensure suitable security arrangements to maintain them in detention.

MASS VACCINATION CLINICS DURING AN INFLUENZA PANDEMIC
(GL2018_008)

PURPOSE
This Guideline is a supporting document to the NSW Health Influenza Pandemic Plan (PD2016_016). It provides Local Health Districts with the framework to develop operational level plans for the establishment of clinics to deliver mass vaccination to the public.

KEY PRINCIPLES
Immunisation with a vaccine specific for the pandemic influenza strain, when available, is likely to be the most effective measure to control the spread of influenza in the community. The implementation of a mass immunisation program is identified as a key strategy of the Australian and NSW Health influenza pandemic plans.

This Guideline:
- provides guidance to NSW Local Health Districts (LHDs) on how to plan for and operate mass vaccination clinics during an influenza pandemic
- is a supporting guideline and should be read in conjunction with the policy directive NSW Health Influenza Pandemic Plan (PD2016_016), and other supporting guidelines including the Pandemic Guideline – Aboriginal Communities
- recognises that the delivery of mass vaccination of the population with pandemic vaccines will require models different to those currently used for routine immunisation programs in NSW
- outlines the scenarios and strategies that LHDs would be expected to plan for in order to establish and operate mass vaccination clinics
- describes the roles and responsibilities of key national, state and regional level stakeholders assisting in the development or distribution of vaccine and operation of vaccination clinics
- provides guidance on the minimum staff and resource requirements for LHDs to be able to operate vaccination clinics in their district
- may be able to be adapted for other infectious disease emergencies where large-scale vaccination clinics are required.

USE OF THE GUIDELINE
LHDs should use the attached Guideline to develop local plans for the establishment and operation of vaccination clinics should these be required during an influenza pandemic. Sections of particular relevance include:
- Vaccine Storage and Dispatch (Section 4)
- Mass Vaccination Clinic Requirements (Section 5)
- Mass Vaccination Clinic Operations (Section 6)

In planning for the establishment of clinics, LHDs need to:
- consider how to identify and deliver vaccine to likely priority groups in their population;
- in rural areas, consider alternative models where necessary for delivery of vaccination to population groups within their district
- monitor vaccine distribution, uptake and adverse events following immunisation;
- ensure that all staff working under the auspices of the LHD have completed the necessary education and training appropriate to their role in a vaccination clinic;
- work with their local primary healthcare organisations to determine if general practice clinics or community health centres could be used to conduct local mass vaccination clinics during the pandemic; and
- work with Aboriginal Community Controlled Health Services (ACCHS) in their district to determine if mass vaccination clinics could be established and operated within the ACCHSs.

The full guidelines can be downloaded at
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2018_008

NSW CONTINGENCY PLAN FOR VIRAL HAEMORRHAGIC FEVERS
(GL2016_002)

PURPOSE

The objectives of the *NSW Contingency Plan for Viral Haemorrhagic Fevers* are to provide guidance to support a coordinated response to the importation of suspected and confirmed cases of viral haemorrhagic fever (VHF), and to make recommendations on the appropriate management of cases and their contacts.

KEY PRINCIPLES

VHFs are severe and life-threatening viral diseases that are endemic to parts of Africa, the Middle East, Eastern Europe, and Asia. VHFs are of particular public health importance because they can spread via human-to-human contact in the community and particularly within hospital settings. They are often associated with a high case fatality rate as there are few if any effective treatments.

A single case of VHF constitutes a public health emergency. The management of a VHF patient requires considerable care to prevent further transmission in clinical settings and extensive public health action to identify and manage close contacts at risk of infection.

Contingency planning for VHFs aims to enable early diagnosis of VHF cases, to provide VHF patients with appropriate clinical care in a safe environment, and to prevent transmission to other people.

VHFs are notifiable infectious diseases and scheduled medical conditions under the NSW Public Health Act (2010). VHFs are also listed diseases under national biosecurity legislation and the International Health Regulations.

USE OF THE GUIDELINE

Chief Executives should ensure:

- Local protocols are developed based on the NSW Contingency Plan for Viral Haemorrhagic Fevers Practice Guideline
- Local protocols are in place in all hospitals and facilities which may be required to assess or manage patients with a VHF
- Ensure that all hospitals and facilities are appropriately resourced to safely assess, manage and, if indicated, transfer patients with a VHF
- Ensure that all staff treating patients are trained in the use of the NSW Contingency Plan for Viral Haemorrhagic Fevers Practice Guideline and locally developed protocols
- Ensure that clinical laboratory staff are educated in the use NSW protocols for the safe collection, transfer and testing of clinical specimens for VHF testing.

The full guidelines can be downloaded at
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2016_002

316(11/01/16)

PANDEMIC PREPAREDNESS AND RESPONSE – ABORIGINAL COMMUNITIES (GL2019_009)

PURPOSE

This Guideline is a supporting document to the *NSW Health Influenza Pandemic Plan* (PD2016_016). It is intended to support Local Health Districts (LHDs) in implementing pandemic preparedness and response activity specifically related to Aboriginal people.

KEY PRINCIPLES

Aboriginal people in NSW are at a greater risk from morbidity and mortality during an influenza pandemic. Without specific consideration and preparedness, a future pandemic may exacerbate existing health inequalities in Aboriginal communities.

Pandemic planning requires close and ongoing partnerships with Aboriginal people and communities to develop effective and culturally appropriate strategies for reducing the risk of a pandemic. This Guideline outlines key issues in pandemic preparedness and responses that are specific to Aboriginal communities and which need to be addressed for pandemic planning at state, regional and local levels, in conjunction with key stakeholders. This Guideline:

- Describes the roles and responsibilities of key NSW stakeholders in the implementation of this guidance;
- Outlines the strategies that LHDs would be expected to consider when working with Aboriginal communities in pandemic planning;
- Provides guidance for LHDs over activity that should be considered at each stage of a pandemic in NSW
- Is a supporting Guideline to the NSW Health Policy Directive *Influenza Pandemic Plan* (PD2016_016).

This Guideline is also intended to inform the Aboriginal Health and Medical Research Council of NSW (AH&MRC), Aboriginal Community Controlled Health Services (ACCHS) and other relevant stakeholders about ways of working with LHDs in pandemic preparedness and during the response.

USE OF THE GUIDELINE

LHDs should use the attached Guideline to lead the planning and response to the pandemic at a District level, and collaborate with ACCHSs to determine appropriate health service models for local Aboriginal people and communities during a pandemic. Key considerations are the need to:

- Work in collaboration with ACCHSs, Aboriginal Community Leaders and Elders' groups, Local Aboriginal Lands Councils (LALCs) and any Local Decision Making (LDM) regional alliances
- Take a family centred approach towards prevention
- Provide culturally appropriate information for families and means of communicating the information
- Seek input from AH&MRC and/or ACCHSs to develop and disseminate health messages effectively, including information about why Aboriginal people may be prioritised for antiviral treatment and or vaccination
- Show respect and acknowledgement of the Aboriginal land or Country being entered when undertaking pandemic planning and during a pandemic.

The full guidelines can be downloaded at

https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=gl2019_009

MANAGEMENT OF PEOPLE EXPOSED TO A CONTACT ORDER CONDITION (PD2019_037)

PURPOSE

This Policy Directive provides a process for the management of people who have been exposed to certain serious infectious diseases that pose a threat to public health because they can be either rapidly spread in the community, have a high mortality rate, or in the case of typhoid, can be transmitted by people without symptoms through food handling.

These conditions are known as 'contact order conditions'. Persons who have been exposed to a contact order condition can be subject to a public health order under The Public Health Act 2010 (the Act).

This Policy Directive explains the process through which the health system may encourage, facilitate and, only if required, enforce compliance with recommendations to avoid certain behaviours and/or other quarantine requirements for people following exposure to a contact order condition.

Public health orders are measures of last resort to prevent a public health risk and, in the case of exposure to contact order conditions, are only used when voluntary quarantine recommendations are refused.

MANDATORY REQUIREMENTS

All staff involved in the management of people who have been exposed to a contact order condition must adhere to these principles.

IMPLEMENTATION

Chief Executives must ensure that:

- The principles and requirements of this policy are applied, achieved and sustained
- Relevant staff are made aware of their obligations in relation to the Policy Directive
- Documented procedures are in place to support the Policy Directive.

Clinicians:

- Must comply with this Policy Directive.

Management of People Exposed to a Contact Order Condition Procedures

1 BACKGROUND

About this document

This Policy Directive provides a process for the management of people who have been exposed to certain serious infectious diseases that pose a threat to public health because they can be either rapidly spread in the community, have a high mortality rate, or in the case of typhoid, can be transmitted by people without symptoms through food handling. These conditions are known as "contact order conditions". Persons who have been exposed to a contact order condition can be subject to a public health order under the Public Health Act 2010 (the Act).

The management framework established by this Policy Directive is based on the following principles and assumptions:

- The general public have the right to appropriate protection against the risk of serious communicable infections.

- A person exposed to serious communicable infection has an important role in preventing the further transmission of the infection.
- Effective quarantine permits early detection and clinical management of serious infections where they arise, and helps to prevent further transmission.
- Counselling can affect the person's behaviour and lessen the risk of transmission.
- A person's willingness to comply with quarantine requirements is influenced by a range of factors, including the degree and duration of the restrictions, their physical and mental health, and their social, housing, work and family circumstances and responsibilities.
- Any public health measure implemented should be proportional to the public health risk posed.
- Any restriction on the liberty of a person should be imposed only if it is the most effective way to prevent a risk to public health.

This Policy Directive explains the process through which the health system may encourage, facilitate and, only if required, enforce compliance with recommendations to avoid certain behaviours and/or enter quarantine requirements for people following exposure to a contact order condition.

Public health orders are measures of last resort to prevent a public health risk and, in the case of exposure to contact order conditions, are only used when voluntary quarantine recommendations are refused.

Key definitions

Authorised medical practitioner: means the NSW Chief Health Officer or a registered medical practitioner authorised by the Secretary to exercise the functions of an *authorised medical practitioner* under Division 4 of the Act.

Contact order condition: means one of the conditions listed in Schedule 1A of the Act as contact order conditions. These are reproduced in Table 1 below. More information about each condition and the related public health concerns are included in the Appendices.

Expiry period: means the maximum period which a person who has been exposed to a contact order condition can be subject to a public health order. The expiry period for each contact order condition correlates to the expected incubation periods for each condition.

Exposed
The term 'exposed' is used when a person has encountered a disease causing pathogen in a way that is judged to be sufficient for infection to take place. However, it is not necessarily the case that infection occurs. The criteria for a person to be judged to have been 'exposed' vary by the disease and are described in published public health control guidelines for each disease as 'contact definitions'. Public health authorities apply these criteria to contacts identified during investigations of people with the disease.

Incubation period: means the time period between when a person is exposed to a pathogen and the appearance of the first symptoms or signs of the condition caused by infection with the pathogen. It is assumed that if an exposed person has not developed the signs or symptoms of the condition by the end of the incubation period then they are no longer at risk of developing the infection from that exposure.

Table 1: The five contact order conditions listed in Schedule 1A with their expiry periods:

Condition	Expiry period
Avian influenza in humans	10 days
Middle East respiratory syndrome coronavirus	10 days
Severe Acute Respiratory Syndrome	10 days
Typhoid	14 days
Viral haemorrhagic fevers	21 days

Isolation: refers to the public health practice of separating ill people who have a serious communicable disease from those who are healthy. This enables treatment of the person to be provided while preventing exposure of well people.

Quarantine: means the limitation of freedom of movement of a person who may be infected with a disease, but who has not yet developed symptoms or signs. Quarantine continues until the incubation period for the disease expires. If a person in quarantine develops symptoms or signs of the disease then clinical management in isolation is arranged. Quarantine (and isolation) may be voluntary or enforced.

Legal and legislative framework

The amendments to the Act relating to contact order conditions came into force on 1 April 2018.

Division 4 of Part 4 of the Act details the powers and provisions related to public health orders for Category 4 and 5 conditions and public health orders made in respect to a person exposed to a contact order condition.

Under section 62(1)(b) of the Act, an *authorised medical practitioner* may make a public health order in respect of a person if satisfied, on reasonable grounds, that the person:

- has been exposed to a contact order condition, and
- is at risk of developing the contact order condition, and
- because of the way the person behaves, may be a risk to public health.

THE MANAGEMENT STAGES

The management of people exposed to a contact order condition begins with a voluntary stage that seeks to support the person to comply with recommendations to avoid certain behaviours and/or enter into voluntary quarantine. It only proceeds to consideration of a public health order if the person refuses to comply with some or all of these recommendations.

Management of typhoid contacts

For contacts of a person with a typhoid infection, the focus of public health measures is to restrict specific activities that have a higher likelihood of disease transmission, such as preparing food for others or caring for vulnerable contacts (e.g. child care work).

Contacts who are assessed to be at higher risk of transmitting infection because of occupational or personal characteristics are recommended to be excluded from work, school, and child care until they can be excluded as a typhoid case. Usually this is achieved after they provide two negative stool samples at least 24 hours apart. If feasible, they may undertake other duties (not high risk) while awaiting specimen results.

Other quarantine measures are unlikely to be recommended for typhoid contacts.

Voluntary quarantine

For contacts exposed to one of the listed contact order conditions (other than typhoid), it is important to stress the importance of quickly achieving appropriate[1] quarantine arrangements. This ensures that other people are not exposed to these serious conditions if a contact is already infectious or becomes infectious during the incubation period.

Counselling and support is an integral part of the management of all persons exposed to a contact order condition but it needs to be balanced with the public health imperative to rapidly implement disease control measures.

People exposed to a contact order condition should receive culturally and linguistically appropriate counselling to ensure that they understand the public health significance of their exposure and the importance of their compliance with quarantine. A professional interpreter should be used whenever relevant.

The person is to be managed in voluntary quarantine by the public health unit (PHU) of the relevant local health district (LHD), with additional support through the LHD. PHU staff must counsel the person and seek agreement for voluntary quarantine for the person. The LHD should identify and seek to overcome any barriers to quarantine (e.g. family, accommodation, employer, pet care). The PHU should identify whether other agencies may be able to assist, such as Aboriginal medical services when an Aboriginal person is identified as a contact.

The PHU must also provide documentation and information to the person explaining why voluntary quarantine is necessary, for how long it will last, how the person in quarantine can get support, and the possible consequences if voluntary quarantine is refused. This may include organising supporting letters from the PHU director for employers where required.

Daily contact is to be made by the PHU with the person in quarantine to monitor for signs or symptoms of infection, typically by phone. If concerns arise, the PHU must take action to organise appropriate investigation and isolation for the patient.

Health Protection NSW will provide expert advice to support the PHU.

Case conference and consultation

A case conference between the PHU and other local services involved in the care of the person is essential in addressing specific management issues, as well as developing a comprehensive quarantine and monitoring plan for that person. The Director, Communicable Diseases (HPNSW) should also be invited to attend.

Psychosocial assessment

A person's ability and willingness to comply with quarantine restrictions may be impacted by a range of factors, including housing and financial concerns, mental illness, real or perceived stigma, and competing responsibilities, including work, childcare, and education.

The LHD should support the PHU and work with appropriate agencies in order to overcome barriers to the person's non-compliance.

If voluntary quarantine is refused

In the event that a contact is not compliant with recommended quarantine and monitoring requirements in such a way that is endangering, or likely to endanger the health of the public, as a first step the PHU should counsel the person to ensure that he or she understands the public health consequences of refusal, and the power of an *authorised medical practitioner* to make a public health order.

[1] As assessed by the Public Health Unit Director.

The PHU should identify barriers and provide specific incentives (e.g. books, movies, games to overcome boredom) and other initiatives, such as further specialised counselling, or providing appropriate accommodation for quarantine.

The PHU may also deliver a formal letter from the PHU director that emphasises the importance of following the PHU quarantine recommendations and possible implications of refusing recommendations, such as a public health order. Before any formal warning letter is sent, Legal and Regulatory Services should be consulted.

In circumstances where counselling and support measures have failed to mitigate concerns that a person will not comply with quarantine requirements, more assertive management should rapidly be initiated.

A consultation by a public health physician and or infectious diseases physician should be organised to ensure that the person understands the public health significance of their exposure and the importance of their compliance with quarantine.

Additional support from HPNSW

The Director, Communicable Diseases Branch should also be consulted to consider the need to convene an expert panel, and other initiatives should be considered.

Where the PHU director is concerned about the compliance of a person exposed to a contact order condition they may seek advice from the Director, Communicable Diseases Branch regarding the potential to consult with the Executive Director, Health Protection and the Chief Health Officer.

The Chief Health Officer may choose to rapidly convene an expert panel to consider the circumstances, review the management of the contact and provide advice on additional or alternative strategies. In these circumstances, the management of the person remains the responsibility of the LHD.

Involuntary quarantine and public health orders

If a person refuses to comply with a recommendation to undertake voluntary quarantine according to the PHU's directions, then a public health order should be urgently considered.

Note that in the case of people considered contacts of a confirmed typhoid case, a public health order would usually only be considered for those contacts who are in a high risk occupational group, such as a food handler, and who have refused the recommendation to cease work until they have been confirmed to be non-infectious through stool screening. This includes where a high risk typhoid contact is refusing to submit a stool sample for testing.

The process for issuing a public health order would generally commence with a recommendation made by the PHU director to the Chief Health Officer, in consultation with the Executive Director, HPNSW. The Chief Health Officer may also convene an expert panel to advise on the need for a public health order and the specific provisions that would be included in the public health order, if supported.

A public health order is made by the Chief Health Officer (or other authorised medical officer). This would generally occur in consultation with the Executive Director, Health Protection and the Executive Director, NSW Ministry of Health Legal and Regulatory Services Branch.

Expert panel composition

The Chief Health Officer may convene an expert panel to provide expert advice on issues related to persons exposed to contact order conditions, including the need, if any, for a public health order to be issued.

The PHU director is responsible for presenting information about the source case and the contact to the expert panel. The expert panel reviews the public health management of the contact and recommends additional or alternative management strategies.

The core constitution of the expert panel includes:

- Chief Health Officer (Chairperson), who may delegate to Executive Director, Health Protection NSW
- Executive Director, Health Protection NSW
- Director, Communicable Diseases
- One or more infectious diseases physicians
- PHU director of another LHD.

Additional expert panel members are selected based on specific needs of the case, such as a social worker, a professional ethicist or a member of a relevant community or key support group. Clinicians managing the source case may also be consulted.

An expert panel may also be convened by Health Protection NSW on behalf of an LHD to provide advice on the local management of persons exposed to contact order conditions.

Conditions of a public health order

A public health order relating to exposure to a contact order condition may require the person subject to the order to do any one or more of the following:

- to refrain from specified conduct, e.g. to not make physical contact with other people or maintain a specified distance from others,
- to undergo specified treatment (whether at a specified place or otherwise),
- to undergo counselling by one or more specified persons or by one or more persons belonging to a specified class of persons,
- to submit to the supervision of one or more specified persons or of one or more persons belonging to a specified class of persons, (e.g. an infectious diseases physician or infectious diseases unit staff)
- to notify the Secretary of other persons with whom the person has been in contact within a specified period,
- to notify the Secretary if the person displays any specified signs or symptoms, to undergo specified testing for the relevant condition.

A public health order may authorise the person subject to the order:

- to be detained at a specified place for the duration of the order, or
- in relation to an order that requires the person to undergo specified treatment at a specified place—to be detained at that place while undergoing the treatment.

A public health order should specify who is responsible for managing the person subject to the order. This will generally be the Director of the PHU of the LHD where the person resides or an infectious diseases physician.

Making the public health order

An *authorised medical practitioner* may make a written public health order in respect of a contact order condition if satisfied on reasonable grounds that the person:

- has been exposed to a contact order condition, and
- is a risk of developing that contact order condition, and
- because of the way the person behaves, the person may be a risk to public health.

It would generally, time permitting, be expected that the *authorised medical practitioner* would be provided with advice from an Expert Panel to assist in this determination.

In deciding whether to make a public health order, the *authorised medical practitioner* must take into account:

- the principle that any restriction on the liberty of a person should only be imposed if it is the most effective way to prevent any risk to public health, and
- the matters set out in the Public Health Regulation 2012 (clause 39) being:
    - the options other than a public health order that are available to deal with the risk to public health posed by the person,
    - if the proposed public health order will require the person to undergo treatment—the availability and effectiveness of the proposed treatment and the likely side effects of the proposed treatment on the person,
    - if the proposed public health order will require the person to be detained— the likely social, economic, physical and psychological effects of the detention on the person.

The matters set out in the Public Health Regulation do not need to be taken into account in the case of an emergency or if it is otherwise not reasonably practicable.

Duration of the public health order

A public health order does not take effect until it is served personally on the person subject to the order.

A public health order must state that it expires at the end of the expiry period for the particular contact order condition, unless earlier revoked.

However, a public health order based on a contact order condition will expire at the end of 3 business days after the person subject to the order is served with the order unless, before it expires, the person is served with a copy of an application for its confirmation under section 64. If an application for confirmation is not served on the person within 3 business days, the order will lapse and the person should be notified that they are no longer the subject of a public health order and no action can be taken under the order (e.g. if the person is detained, the person must be released from detention). As soon as practicable after such an application is made, the Civil and Administrative Tribunal is to inquire into the circumstances surrounding the making of the public health order.

Following its inquiry, the Civil and Administrative Tribunal:

 may confirm the public health order, or may

vary the order and confirm it as varied, or may

revoke the order.

If the *authorised medical practitioner* considers that the person subject to the order is no longer a risk to public health, the *authorised medical practitioner* must revoke the order and immediately give notice in writing of the revocation to the person and the Civil and Administrative Tribunal.

Detention order

While any condition of a public health order will restrict a person's liberty and should only be used if it is the most effective way to prevent any risk to public, detention of a person seriously restricts a person's liberty. It would be expected to be a rare occurrence, and should only ever be considered as a last resort. Consideration should be given to using other conditions in a public health order, such as refraining from certain conduct, before detention is considered.

All LHDs should identify appropriate facilities and staff who are able to implement an order for secure detention under the *Public Health Act 2010*. See section 3 below.

Where the person to whom the public health order applies is already detained under a custodial sentence, consideration should be given to the unique circumstances of implementing the public health order, including:

- that client confidentiality, legal and safety issues be considered, and
- that quarantine/isolation measures may require negotiation with Justice Health, Corrective Services NSW and Juvenile Justice.

ACCOMMODATION

Voluntary quarantine

When accommodation is required for the purpose of voluntary quarantine of a contact who is medically stable, quarantine at the person's home or at a commercial residential environment is preferred.

LHDs must consider how best to accommodate contacts in such situations and ensure arrangements to monitor them in quarantine.
The NSW Ministry of Health may be able to assist LHDs with identifying suitable accommodation for contacts through its links with other government agencies.

Involuntary quarantine with a public health order

When accommodation is required for the purpose of involuntary quarantine, i.e. subject to a public health order, for a contact who is medically stable, quarantine at a person's home may not be appropriate. If a public health order includes an order for detention, the order will specify where the person is to be detained. If the place of detention is on LHD property, LHDs must consider how best to accommodate contacts in such situations so that quarantine can be enforced in accordance with the conditions of the public health order.
LHDs must:

- Identify a suitable location for accommodating a contact who is detained under a public health order. This location would be specifically named in the public health order.
- Develop a management plan addressing the needs of the contact.
- Provide adequate staff training.
- Assure the availability of appropriate secure facilities and processes, including the use of security personnel
  ('secure' in this context means the minimum additional security needed to ensure that the person does not injure themselves and does not attempt to leave the premises without authority).

People exposed to a contact order condition may have concurrent medical conditions or mental health concerns which can potentially be exacerbated by quarantine. LHDs should ensure that relevant expertise and services are available to safely and effectively manage such contacts.

The use of public hospitals as locations for the involuntary quarantine of medically stable contacts is not recommended but remains an option if no other suitable alternative can be found.

APPENDICES

The five contact order conditions are summarised below. For further information consult the NSW Health infectious disease website: http://www.health.nsw.gov.au/infectious .

Avian influenza in humans

Humans are at risk of infection with influenza viruses that are circulating in animals, particularly avian influenza viruses. If such a virus acquired the capacity to spread easily among people it could start an epidemic or pandemic.

Avian influenza viruses are the most diverse group of influenza viruses and are considered to be the most likely source of novel pandemic influenza viruses affecting human populations.

Humans with influenza infections typically have the virus appear in the respiratory tract in the 24 hours prior to the onset of illness. This means infected persons can be infectious to others through the respiratory route prior to feeling unwell.

A single case of human influenza caused by an avian influenza virus or other new subtype may constitute a public health emergency of international concern under the International Health Regulations (2005), and is required to be reported to the World Health Organization (WHO). Infection with avian influenza also meets the criteria for a listed human disease under the Australian Biosecurity Act, in the category *human influenza with pandemic potential*.

Middle East respiratory syndrome coronavirus

Middle East respiratory syndrome (MERS) is a serious infection caused by the MERScoronavirus (MERS-CoV). In humans, MERS-CoV infection is mainly associated with respiratory infections and can lead to severe disease, particularly in older people and in people with underlying medical conditions. Since it was first identified in 2012, case fatality rates have been approximately 35%.

Camels are the major animal source of MERS-CoV infection in humans but the majority of human cases of MERS have been attributed to person to person spread of the infection in health care settings.

While the MERS-CoV virus does not currently pass easily from person to person, transmission has been well documented following close contact, such as occurs when providing unprotected care to a patient. Hospital-associated outbreaks have occurred in several countries, with the largest outbreaks seen in Saudi Arabia, United Arab Emirates, and the Republic of Korea.

While most cases transmit the infection to few other people, there have been a number of well documented incidents where a single infected person has been linked to a large cluster of new infections. Rapid implementation of droplet and contact precautions has been effective in preventing further spread and controlling outbreaks.

A single human case of MERS-CoV infection may constitute a public health emergency of international concern under the International Health Regulations (2005), and would usually be reported to the World Health Organization. This would also be considered a listed human disease under the Australian Biosecurity Act, in the category *Middle East respiratory syndrome*.

Severe Acute Respiratory Syndrome

Severe acute respiratory syndrome (SARS) is a serious infection caused by the SARScoronavirus (SARS-CoV). In humans, SARS infection is mainly associated with respiratory infections and can lead to severe disease.

Case fatality rates during the 2002-2003 global outbreak of SARS ranged from 7% to 17% but were as high as 50% in older people and in people with underlying medical conditions.

The spread of SARS between humans is thought to have occurred mainly through the respiratory route but also by direct contact and fomite transmission. While most cases transmitted the infection to few other people, there were a number of well documented ‘superspreading events’ where a single infected person was linked to many new infections. Rapid implementation of droplet and contact precautions was effective in preventing further spread and controlling outbreaks.

There has been no or very limited person to person spread of SARS since 2002-2003, but there remains a risk that the virus could be re-introduced to human populations from an animal reservoir, most likely certain bats species in Asia.

A single human case of SARS infection may constitute a public health emergency of international concern under the International Health Regulations (2005), and is required to be reported to the World Health Organization. This would also be considered a listed human disease under the Australian Biosecurity Act, in the category *severe acute respiratory syndrome*.

Typhoid

Typhoid is a febrile illness caused by infection with *Salmonella* Typhi bacteria which can cause severe disease. Without treatment the case fatality rate is approximately 15%. Asymptomatic and mild infections also occur.

The time from contact with the typhoid bacteria to the start of symptoms (incubation period) is usually from 8 to 14 days but can rarely be as long as 60 days. The bacteria that cause typhoid are found in the faeces of infected people.

If left untreated, about 10% of typhoid fever patients will excrete the bacteria in their faeces for three months after the onset of symptoms and 3-5% become chronic carriers.

Transmission occurs via the faecal-oral route, usually when faecally-contaminated food or water is ingested. Transmission from infected persons prior to the onset of illness has been documented and is a particular risk for infected food handlers who may put large numbers of people at risk.

Close contacts of typhoid cases are considered at higher public health risk if their work involves food handling or caring for children, hospital patients or the elderly. Public health guidelines state that contacts in these high risk groups must not work until they have had two stool samples, taken at least 24 hours apart, test negative for typhoid, showing that they are not infectious.

Viral haemorrhagic fevers

Viral haemorrhagic fevers of serious public health concern include infections caused by Ebola viruses, Marburg virus, Lassa fever virus and Crimean-Congo haemorrhagic fever virus. Infections tend to be severe and often fatal. For example, outbreaks of Ebola virus disease in African countries have had case fatality rates of 50% or higher.

The mode of transmission depends on the particular virus and in the particular country in which it is endemic. In Australia, infections would most likely be brought in through an infected traveller and be spread through direct contact with infected blood or body fluids.

A single human case of a VHF infection may constitute a public health emergency of international concern under the International Health Regulations (2005), and would usually be required to be reported to the World Health Organization. This would also be considered a listed human disease under the Australian Biosecurity Act, in the category *viral haemorrhagic fevers*.

SURVEILLANCE AND MANAGEMENT OF CARBAPENEMASE-PRODUCING ENTEROBACTERALES (CPE) IN NSW HEALTH FACILITIES (GL2019_012)

PURPOSE

This guideline is designed to assist public health care facilities in NSW to:

1. Identify suspected cases of Carbapenemase producing *Enterobacterales* (CPE)1
2. Implement control measures to prevent transmission of CPE
3. Understand the local epidemiology of CPE.

While this Guideline has been written specifically for CPE, recommended measures may also be applicable to any species of multidrug-resistant *Enterobacterales* (MDR-E) and other carbapenemase producing organisms (CPO). The local decision whether to apply to other MDR-E and CPO is to be made in consultation with content experts.

As evidence for recommendations continues to emerge, recommendations will be reviewed and revised when significant new findings are available.

KEY PRINCIPLES AND USE OF THE GUIDELINE

Identify CPE cases

- Conduct a risk assessment to identify people who should be screened for CPE at admission
- Screen patients for CPE at admission if a case contact, if flagged or if admitted to a healthcare facility or aged care facility overseas in the last 12 months
- The minimum requirement for admission screening is one rectal swab or faecal sample
- Screening during hospital admission may also be indicated in additional clinical scenarios, based on local risk assessment

Manage CPE cases

- Implement contact precautions for patients with suspected or confirmed CPE
- Inform health care providers of patients with suspected or confirmed CPE
- Educate the patient and their family on CPE and how to prevent transmission
- Place alerts in patient medical records for patients with suspected or confirmed CPE
- Routinely manage all CPE cases under contact precautions for subsequent admissions

Manage contacts of CPE cases

- Identify contacts of all suspected and confirmed CPE cases
- Screen contacts of all confirmed CPE cases
- For contacts that have already left the health care facility, place alerts in patient medical records to prompt screening when the patient is readmitted

Manage local transmission of CPE

- When local transmission of CPE is identified, convene a CPE outbreak management team
- Investigate the cause of the local transmission
- Implement strategies to limit further transmission
- Report local transmission to the Clinical Excellence Commission (CEC)

The complete Guideline is available at:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2019_012

316(16/08/19)

1 This document uses the collective term *Enterobacterales*, rather than *Enterobacteriaceae*. Recent taxonomic studies have narrowed the definition of the family *Enterobacteriaceae*. *Enterobacteriaceae* are one of seven families in the *Enterobacterales* order. When the abbreviation CPE is used in this document, it refers to carbapenemase producing *Enterobacterales*.

TRIGGERS FOR ESCALATION FOLLOWING DETECTION OF INFECTION OUTBREAKS OR CLUSTERS (GL2019_013)

PURPOSE

This Guideline has been developed to support NSW public healthcare facilities with effective and timely escalation of information on outbreaks or clusters of healthcare associated infections, multidrug-resistant organisms (MROs) and/or non-MROs.

KEY PRINCIPLES

NSW public healthcare facilities must have written procedures that address the outbreak management requirements for common communicable diseases and MROs (e.g. gastroenteritis, influenza, Carbapenemase-producing *Enterobacterales*) and identify delegations of responsibility during the outbreak (Infection Prevention and Control Policy).

A framework for escalating outbreaks and clusters with effective and timely management will ensure minimal impact and when adhered to guide future assistance.

This Guideline provides a tool to assist NSW public healthcare facilities with developing local escalation frameworks or protocols that are tailored to their needs and available resources.

USE OF THE GUIDELINE

Chief Executives should ensure that

- This Guideline is implemented in healthcare facilities where there is or may be a risk of an outbreak or cluster of infection
- Health workers are made aware of the escalation process for outbreaks and clusters of infection
- There is adequate resourcing for the response to an outbreak or cluster of infection.

Health workers should escalate outbreaks or clusters of infection as per the local escalation framework or protocol.

The complete Guideline is available at:

https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2019_013

EARLY RESPONSE TO HIGH CONSEQUENCE INFECTIOUS DISEASES
(PD2023_008)

POLICY STATEMENT

NSW Health coordinates a central, specialised response during the initial stage of high consequence infectious disease management, in order to mitigate the risk of public health emergency and associated healthcare system impacts.

SUMMARY OF POLICY REQUIREMENTS

High consequence infectious diseases have the potential to significantly impact individual and population health, and can in turn pose a risk to the delivery of healthcare services. A specialised, centrally coordinated response is required to ensure effective clinical management and containment of such diseases.

This Policy Directive details the NSW Health operational response to the early phase when there is limited or no transmission in the community including the function of: the Statewide High Consequence Infectious Disease service, the Physical Containment Level 4 (PC4) High-Security Laboratory at NSW Health Pathology Institute of Clinical Pathology and Medical Research, and a summary of strategic and planning activities that need to occur in the initial phase should case numbers be expected to rise.
inf
The roles and responsibilities of all parties involved in a centrally coordinated response are outlined in this Policy Directive.

Local Health Districts, Specialty Health Networks and pillars of NSW Health are required to ensure relevant planning and clinical staff are familiar with the Policy Directive and make any local preparations necessary to guarantee adherence to the roles and responsibilities described, in the event of a high consequence infectious disease case presentation.

The Policy Directive includes direction on key response actions such as communication, enhanced surveillance, laboratory diagnostic testing, clinical management, infection prevention and control processes, and acquisition and distribution of key treatments and equipment.

Different immediate patient flow and referral actions are detailed for identification of potential high consequence infectious disease patients at international borders, general practitioner or specialist rooms, and hospital facilities.

This Policy Directive will remain in effect until disease-specific operational response plans are developed and ready for implementation, or until the High Consequence Infectious Diseases Advisory Group considers there is no further risk of transmission or significant health impacts within NSW.

The Early Response to High Consequence Infectious Diseases policy directive is available at:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=pd2023_008

NSW INFECTION PREVENTION AND CONTROL RESPONSE AND ESCALATION FRAMEWORK (IB2023_019)

PURPOSE

The NSW IPAC Response and escalation framework (Framework) in NSW has been revised to include other acute respiratory infections while continuing to provide guidelines for COVID-19.

The Framework supports NSW Health to respond to both outbreaks and pandemics or infections of state or national significance. The Framework outlines a foundational level for when the NSW Health system remains prepared for infection risks, with structured infection prevention and control escalation strategies for yellow, amber and red transmission risks.

The NSW Health Secretary will direct the minimum state alert level, and NSW Health organisations must undertake local risk assessments to determine if further infection prevention and control measures are required in their facilities.

This Information Bulletin must be read in conjunction with the *Infection Prevention and Control Manual: COVID-19 and other Acute Respiratory Infections*.

KEY INFORMATION

Chapter 3 of the *Infection Prevention and Control Manual: COVID-19 and other Acute Respiratory Infections* - Infection Prevention and Control (IPAC) Response and Escalation Framework was developed to provide guidance to NSW Health facilities to manage changing levels of COVID-19 transmission risk. This has transitioned to include other acute respiratory infections and potential communicable diseases of state or national significance.

Situation

The revised Framework adopts a foundational level approach to ensure the application of robust infection prevention and control practices as a minimum on which escalation strategies are added to enhance IPAC. The Framework also provides guiding controls for transmissible infections with a clear response to changing transmission risk and burden to the health care system.

Clinical Recommendations

All state-wide changes to risk level will continue to be informed by consultation closely monitored through health system metrics and guided by the Risk Escalation Review Panel (RERP) with the state alert level being directed by the NSW Health Secretary.
NSW Health organisations:

- May apply local IPAC enhancements based on internal monitoring and risk assessment (refer to the NSW IPAC Response and escalation framework – Principles for IPAC monitoring and management for local implementation on page 54 of the *Infection Prevention and Control Manual: COVID-19 and other Acute Respiratory Infections*).
- Are to refer for review any planned escalation or de-escalation to a different risk level to the Risk Escalation Review Panel.

Additional supporting policies and guidelines:

- Infection Prevention and Control Practice Handbook
- NSW Health Guideline *Triggers for Escalation Following Detection of Infection Outbreaks or Clusters* (GL2019_013)
- NSW Health Policy Directive *Infection Prevention and Control Policy* (PD2017_013).