Policy Directive

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Statewide Standing Orders for the Supply or Administration of Medication for Public Health Response

Document Number	PD2016_032
Publication date	09-Aug-2016
Functional Sub group	Clinical/ Patient Services - Infectious diseases Clinical/ Patient Services - Pharmaceutical Population Health - Communicable Diseases
Summary	This Policy Directive provides information on the management of patients that require urgent provision of medication for treatment or prophylaxis, as a result of infection with or exposure to an infectious condition.
Replaces Doc. No.	Statewide Standing Orders for the Supply or Administration of Medication for Public Health Response [PD2013_035]
Author Branch	Communicable Diseases
Branch contact	Communicable Diseases 02 9391 9195
Applies to	Local Health Districts, Board Governed Statutory Health Corporations, Specialty Network Governed Statutory Health Corporations, Public Health System Support Division, Government Medical Officers, Public Health Units, Public Hospitals
Audience	Public health unit and pharmacy departments staff within Local Health Districts
Distributed to	Public Health System, Government Medical Officers, NSW Ambulance Service, Ministry of Health, Private Hospitals and Day Procedure Centres
Review date	09-Aug-2017
Policy Manual	Not applicable
File No.	H16/38762
Status	Rescinded
Rescinded By	PD2016_035

Director-General

This Policy Directive may be varied, withdrawn or replaced at any time. Compliance with this directive is **mandatory** for NSW Health and is a condition of subsidy for public health organisations.

POLICY STATEMENT

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

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.

REVISION HISTORY

Version	Approved by	Amendment notes
August 2016 (PD2016_032)	Deputy Secretary, Population and Public Health and Chief Health Officer	Inclusion of medications for measles and annual review by NSW Therapeutic Advisory Group
October 2012 (PD2013_035)	Deputy Director, General Population and Public Health and Chief Health Officer	New statewide standing order for notifiable conditions applicable for public health response

ATTACHMENT

1. Statewide Standing Orders for the Supply or Administration of Medication for Public Health Response: Procedures.

Statewide Standing Orders for the Supply or Administration of Medication for Public Health Response

NSW GOVERNMENT Health

PROCEDURES

Issue date: August-2016

PD2016_032

CONTENTS

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 each medication administration / dispensing (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[1].

[1] 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

TITLE	Standing order for Influenza TREATMENT
Drug(s)	**Oseltamivir (TAMIFLU®)**
Presentation [1]	**30 mg, 45 mg and 75 mg** capsule **6 mg/mL** powder for oral suspension - **reconstitute with 55 mL water**
Indication	Oseltamivir is approved for use as treatment of Influenza in adults and children one year and older
Contraindications[1]	▪ 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.
Precautions[1]	Use with caution in pregnant or breastfeeding women Use with caution in adults with chronic renal impairment (reduce dosage)*
Dose[1]	**Recommended dose of oseltamivir for treating patients more than one year of age** Bodyweight in kg / Recommended dose / Equivalent volume for 6 mg/mL oral suspension 15kg or less — 30mg — 5mL More than 15kg to 23kg — 45mg — 7.5mL More than 23kg to 40kg — 60mg — 10mL More than 40 kg — 75mg — 12.5mL *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.
Dose frequency[1]	**TWICE** daily for five days
Administration[1]	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.
Drug Interactions[1]	Information derived from pharmacology and pharmacokinetic studies of oseltamivir suggest that clinically significant drug interactions are unlikely.
Adverse effects[1]	▪ 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.
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 Tamiflu® Patient Information Sheet for Tamiflu (section 8.4)

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 full manufacturers product info <accessible via CIAP: > If contraindications, precautions or interactions are present refer to MO before administration

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

TITLE	Standing order for Influenza TREATMENT
Drug(s)	**Zanamivir (RELENZA®)**
Presentation [2]	**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[1]	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.

TITLE	Standing order for Influenza PROHPYLAXIS
Drug(s)	**oseltamivir (TAMIFLU®)**
Presentation [1]	**30 mg, 45 mg and 75 mg** capsule **6 mg/mL** powder for oral suspension - **reconstitute with 55 mL water**
Indication	Oseltamivir is approved for use as prevention of Influenza in adults and children 1 year and older.
Contraindications[1]	▪ 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.
Precautions[1]	Use with caution in pregnant or breastfeeding women Use with caution in adults with chronic renal impairment (reduce dosage)*
Dose[1]	**Recommended dose of Tamiflu for patients more than one year of age** Bodyweight in kg — Recommended dose — Equivalent volume for 6 mg/mL oral suspension 15kg or less — 30mg — 5 mL More than 15kg to 23kg — 45mg — 7.5 mL More than 23kg to 40kg — 60mg — 10 mL More than 40kg — 75mg — 12.5 mL *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.
Dose frequency[1]	**ONCE** daily for 10 days
Administration[1]	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.
Drug Interactions[1]	Information derived from pharmacology and pharmacokinetic studies of oseltamivir phosphate suggest that clinically significant drug interactions are unlikely.
Adverse effects[1]	▪ 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.
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 Tamiflu® Patient Information Sheet for Tamiflu (section 8.4)

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)*		

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

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[13]	**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[13]	**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

TITLE	Standing order for meningococcal contacts - rifampicin
Drug(s)	**rifampicin**
Presentation	Capsules - 150mg, 300mg, Tablets - 600mg, Syrup - 100mg/5mL
Indication	Clearance of meningococcal carriage in close contacts of known cases. (Rifampicin is not indicated for the treatment of meningococcal infections.)
Contraindications [1]	Jaundice, history of hypersensitivity to any of the rifamycins, severe liver disease, pregnancy
Precautions[1]	▪ 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.
Dose[2]	**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]**:** **Note: Ciprofloxacin is preferred for children older than 6 years if able to tolerate tablets**
Dose frequency[2]	All dosages are TWICE daily (every 12 hours) for 2 days
Administration[1]	Rifampicin should be taken on an empty stomach at least 30 minutes before or two hours after food.
Drug Interactions[1]	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, 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.

Age	Recommended dose	Equivalent volume of 100mg/5ml oral liquid
0-2 months	20mg	1 mL
3-11 months	40mg	2 mL
1-2 years	100mg	5 mL
3-4 years	150mg	7.5 mL
5-6 years	200mg	10 mL

[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

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).

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

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

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[1]	Subcutaneous injection - Inject the total volume of the single dose vial (about 0.5mL) into skin of the deltoid muscle or the anterolateral thigh.
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)*		

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

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)

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)*		

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

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

TITLE	Standing order for adrenaline (epinephrine) for anaphylaxis subsequent to the administration of antibiotics or immunoprophylaxis under public health standing orders
Drug(s)	**adrenaline (epinephrine):1000**
Presentation [1]	Solution for injection (clear, colourless) 1 mg/1mL
Indication [1]	The drug of choice in the emergency treatment of acute severe anaphylactic reactions due to insect bites, drugs and other allergens.
Contraindications[1]	Nil relevant
Precautions[1]	▪ 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.
Dose[1 2]	**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**

Age	Weight (approx)	Adrenaline (epinephrine) 1:1,000
Less than 1yr	5-10 kg	0.05 - 0.1 mL
1-2 yr	10 kg	0.1 mL
2-3 yr	15 kg	0.15 mL
4-6 yr	20 kg	0.2 mL
7-10 yr	30 kg	0.3 mL
10-12 yr	40 kg	0.4 mL
more than 12 yrs and adult	More than 50 kg	0.5 mL

Dose frequency[12]	Make every effort to call for assistance after first dose **Repeat doses every 5 minutes until improvement occurs**
Administration[12]	Intramuscular injection preferably in the mid-anterolateral (upper outer) thigh (do not inject into buttocks).
Drug Interactions[1]	No drug interactions of particular concern
Adverse effects[1]	Fear; anxiety; restlessness; headache; tremor; weakness; dizziness; pallor; palpitation; respiratory difficulty; hypertension; injection site necrosis. See Product Information for full list.
Documentation	Adrenaline (epinephrine) recipients should be referred to hospital for further observation and treatment
Related Documents	Nil

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] 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

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 →If not provided, to be collected by……..……from……..	Yes ☐ No ☐

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:**

8.3 Record of supply / administration - medication records for groups

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:	First Name			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
Address:	MRN *(where applicable)*					
	DOB __/__/__	Age:	Sex M / F			
	Phone:					
Name: Designation:				Signature	Date	
Surname:	First Name			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
Address:	MRN *(where applicable)*					
	DOB __/__/__	Age:	Sex M / F			
	Phone:					
Name: Designation:				Signature	Date	
Surname:	First Name			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
Address:	MRN *(where applicable)*					
	DOB __/__/__	Age:	Sex M / F			
	Phone:					
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 <u>not</u> 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).

<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

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 <u>not</u> 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).

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

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.